

VDCF - Virtual Datacenter Cloud Framework for the Solaris™ Operating System

VDCF Reporting - Disk Usage

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1 Introduction

This documentation describes the reporting features of the Virtual Datacenter Cloud Framework (VDCF) for the Solaris Operating System and explains how to use this features.

See these other documents for further information:

<i>VDCF – Release Notes</i>	for details about the new release
<i>VDCF – Quick Reference</i>	for a short command overview
<i>VDCF – Installation Solaris 11</i>	for VDCF installation on Solaris 11
<i>VDCF – Administration Guide</i>	for information about VDCF base
<i>VDCF – Resource Management</i>	for information about VDCF Resource Management
<i>VDCF – Monitoring</i>	for information about VDCF Monitoring (HW, Resource, OS)

These and all other VDCF documents can be found at:
<http://www.jomasoft.ch/products/VDCF/docs/>

1.1 Overview

The VDCF disk reporting can be used to display current and historical disk usage data.

The collected usage data shows for each system (Node and vServer):

- type of SAN storage (tier) used
- how much disk space in GB per storage tier

A cronjob should run periodically to summarize the disk usage data in the database and to write report files.

1.2 Disk Usage - Components

Reporting consists of two batch jobs and a command to display the collected usage information.

1.2.1 Cronjob: Disk usage report

This command is used to generate the disk usage summary for all systems and generates a report file. We recommend to execute this cronjob once a week or month.

Command: `/opt/jomasoft/vdcf/sbin/diskusage_update`

1.2.2 Cronjob: Import of disk information from input file

Each disk may have set a SAN storage tier identifier. This information comes normally from the SAN Storage subsystem. With this command VDCF imports this information into the VDCF database.

We recommend to execute this cronjob every time you get a new data file from your storage team.

Command: `/opt/jomasoft/vdcf/sbin/disktier_update -f <path to diskinfo file>`

This cronjob can also be used to update the disk **location** (add flag `-l`) and/or replace the disk serial by the EMC **serial** (add flag `-s`).

The Input-File must be a semicolon separated file (CSV) containing storage type, disk serial, tier and disk location.

Sample record:

```
EMC;000292600048.012C;2;MyLocation;
```

As the disk serials are translated into disk GUIDs we currently only support disks from EMC.

1.2.3 Show disk usage statistics

The diskadm command has a statistics operation to show the data collected by the 'Disk usage report' cron.

1.3 Requirements

VDCF 5.5 or greater must be installed on the management server.

To use the update serial feature VDCF 5.6.2 or greater is required.

And the reporting feature must be enabled.

2 Disk Usage - Configuration

2.1 Enable disk reporting

Disk reporting is enabled by default for all systems. Check/Update the configuration variable DISKS_REPORT_MODE to customize your environment.

The value of "11" means all Systems running on a Solaris 11 Control domain or installed with Solaris 11. "ALL" is used to generate a report for every system (nodes and vServer) in the VDCF database:

```
user@VDCF: $ vi /var/opt/jomasoft/vdcf/conf/customize.cfg

# disk report mode: NONE|11|ALL
export DISKS_REPORT_MODE="ALL"
```

2.2 Configure report file names

When running the disk usage report command two report files are generated. The filename of each report is defined with a Config Variable. These are the default values:

a) Disk Usage Report

```
# disk report file name: DATE will be replaced by current date
export DISKS_REPORT_FILE="$FR_DATA/report/diskusage-report.DATE.txt"
```

b) Systemlist of Disk Report

```
# disk report system-list file name: DATE will be replaced by current date
export DISKS_REPORT_SYSLIST_FILE="$FR_DATA/report/diskusage-system-list.DATE.txt"
```

(\$FR_DATA is /var/opt/jomasoft/vdcf/)

2.3 Enable storage tier attribute in show commands

By default the storage tier attribute of disks is not displayed in dataset and diskadm show commands. Add the config variable DISKS_SHOW_TIER to customize.cfg:

```
export DISKS_SHOW_TIER="TRUE"
```



3 Disk Usage - Output

3.1 Disk usage report

This report contains the total disk size at a specific time for system and tier.

```
$ more /var/opt/jomasoft/vdcf/report/diskusage-report.2015-02-05.txt
ReportTimestamp|Server|Tier|SizeInGB
2015-02-05 11:25:45|g0041|1|10
2015-02-05 11:25:45|g0041|2|30
2015-02-05 11:25:45|g0042|2|10
2015-02-05 11:25:45|g0043|4|10
```

3.2 System list of Disk report

System list contains all systems that were found in the disk usage report.

```
$ more /var/opt/jomasoft/vdcf/report/diskusage-system-list.2015-02-05.txt
g0041
g0042
g0043
```

3.3 diskadm -c statistics

Disk Usage Report
Current Disk Usage values in GB for all systems

Report Date	Server	-- Storage tiers ----		-----	-----	-----	-----
		1	2	3	4	local	n/a
2015-02-05 11:25:45	g0041	10	30	-	-	-	-
2015-02-05 11:25:45	g0042	-	10	-	-	-	-
2015-02-05 11:25:45	g0043	-	-	-	10	-	-