

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

Release Notes

Version 3.0
3. September 2010

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1 Introduction

This documentation describes the differences of the releases of the Virtual Datacenter Control Framework (VDCF) for the Solaris Operating System. It explains how to upgrade to the newest release.

See these other documents for further information:

VDCF – Installation Guide for information about installing or upgrading this product
VDCF – Quick Reference for a short command overview

VDCF Base – Administration Guide for information about the VDCF Base usage
VDCF vServer – Administration Guide for information about the VDCF vServer product usage
VDCF LDom – Administration Guide for information about the VDCF LDom product usage

New in VDCF 3.0
VDCF – Monitoring for information about VDCF Monitoring

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

2 What's new in Release 3.0

2.1 New major feature: Monitoring

In this release we have implemented new Monitoring features. It's available as an Enterprise Extension to our customers holding an VDCF Enterprise License.

This feature consists of the new commands

rcmon (Resource Monitoring)

Collection and calculation of CPU/Memory usage data for your vServer, Guest Domains and Nodes.

hwmon (Hardware Monitoring)

Detection of hardware failures based on System Controller data and Alarming of such failures.

See the 'VDCF Monitoring Guide' and the manpages for more information.

2.2 Performance enhancements

We've invested some effort to optimize the performance of the VDCF commands and cronjobs.

It is required to update to new VDCF prerequisite software (libgcc 3.4.6 & sqlite 3.6.13)
See chapter 3 for more details about upgrading.

We've optimized most of the show commands and a lot of database statements.

2.3 New commands

`zfsadm` We've moved all zfs specific operations from the **vserver** command into the new **zfsadm** command. New operations will be added in the future. The zfs relevant operations are still available in the **vserver** command, but will be removed in a future release.

2.4 New operations

`cpool -c check` Checks one or all cpool's for consistency (Disk Visibility and Patch Level)

`diskadm -c modify` Disks got a new comment attribute in the VDCF database. Use the modify command to set it to your needs.

`serverconfig` Groups of configurations may now be bundled into supergroups. There are 3 new operations:

```
serverconfig -c create_group  
serverconfig -c modify_group  
serverconfig -c remove_group
```

See manpages for more information.

`vdcfadm -c show_node` Operation to display the Version of the VDCF client package installed on one or all nodes.

2.5 Enhanced operations

<code>dataset -c create</code>	new dataset type <code>RAW</code> . All disk devices of a RAW dataset are visible within the vServer. They may be used for Oracle ASM.
<code>dataset -c show</code>	New ' <code>node</code> ' search argument and the node is also displayed in dataset list. Mirrored datasets: For each disk the submirror (1st,2nd,...) is shown.
<code>diskadm -c deregister</code>	New argument ' <code>all</code> ' to deregister all Luns of the given node
<code>diskadm -c register</code>	Updates Lun size in VDCF database if it has changed on the Node. New argument ' <code>all</code> ' to check all nodes for new LUNS.
<code>node -c install</code>	WANBOOT configuration in OBP is set automatically by VDCF before installing a node, if a console definition exists.
<code>rcadm -c set</code>	To protect the global zone, VDCF reserves per default 10% of RAM. You can't assign more than 90% of the RAM to your vServers. (Configurable using <code>RESOURCE_NODE_RAM_MIN</code>)
<code>vserver -c addfs</code>	The ' <code>dataset</code> ' argument is optional if there is only one dataset
<code>vserver -c attach</code> <code>vserver -c migrate</code>	New ' <code>full</code> ' upgrade option, to include non-ALLZONES packages in the upgrade process.
<code>vserver -c show</code>	For better performance by default less details are displayed (Patchset, rState). See configuration variables for more information. Use the ' <code>verbose</code> ' flag to display zonecfg details.
<code>vserver -c shutdown</code>	New option ' <code>halt</code> ' to forcibly stop a vserver using zoneadm halt.

2.6 New configuration variables

VIRTUAL_BOOT_TIMEOUT

Timeout till VDCF waits for a vServer to reach 'running' state.
Default: 600 (seconds)

VIRTUAL_SHUTDOWN_TIMEOUT

Timeout till VDCF waits for a vServer to be stopped.
Default: 300 (seconds)

VIRTUAL_SHOW_PATCHSET_VERBOSE

Show detailed Patchset information in vserver details
(vserver -c show name=).
TRUE: display only in show verbose mode
FALSE: always show patchset details
Default: TRUE

VIRTUAL_SHOW_REFRESH_RSTATE_VERBOSE

Configure if rState of vserver should be refreshed (read from node)
before displaying vserver details (vserver -c show name=).
TRUE: refresh only in show verbose mode
FALSE: always refresh rState
Default: TRUE

VIRTUAL_SHOW_DETAILS

Define the granularity of vserver details. Possible options are
FULL: all columns displayed
SHORT: cPool and Patch-Level are left empty
Default: FULL

VIRTUAL_CANDIDATES_CDOM

Configure if Control Domains are allowed to have vServers attached
Default: FALSE

2.7 Deprecated operations

Don't use this operations anymore, they will be removed **in a future** VDCF release.

vserver -c zfs* replaced by **zfsadm** command

3 How to upgrade VDCF from a previous release ?

3.1 VDCF prerequisites

You must have VDCF Release 1.2.8 or later installed.
If you currently use an older Release, you need to migrate to VDCF 1.2.8 first.

Check your currently installed packages and versions:

```
$ vdcfadm -c show_version
```

Package	Version	Arch.	Install-Date	Name
JSvdcf-base	2.3.7	sparc	Feb 27 2010 11:15	VDCF - Base
JSvdcf-patch	2.3.7	sparc	Feb 27 2010 11:16	VDCF - Patch Management
JSvdcf-vserver	2.3.7	sparc	Feb 18 2010 22:00	VDCF - Virtual Server Management

3.2 Replace VDCF prerequisites and packages

Replace all installed VDCF packages (Base, Patch, vServer, LDom).

It is also **required** to replace vServer Enterprise Extensions (Resource Management) with the newest versions.

3.2.1 Remove packages

```
pkgrm JSvdcf-rm           (if installed ..)
pkgrm JSvdcf-ldom        (if installed ..)
pkgrm JSvdcf-vserver
pkgrm JSvdcf-patch JSvdcf-base
```

3.2.2 Replace VDCF prerequisites

If your previous VDCF version is older than version 3.0, you need to replace some of the VDCF prerequisites software using the installation script `install_vdcf_prereqs`.

```
SMClibgcc 3.3      is replaced by  SMClgcc346
SMCsqlite 3.3.6   is replaced by  SMCsqlite 3.6.13
```

A typical upgrade looks like this:

```
# cd <download-dir>/vdcf_prereqs

# ./install_vdcf_prereqs
Checking VDCF Prerequisites ...
Found old prerequisite SMClibgcc (Version: 3.3)
WARN: This package is not required by VDCF anymore.
WARN: You may remove this package, if no other software requires it.
Found old prerequisite SMCsqlite (Version: 3.3.6)
Removing this package now ...

Removal of <SMCsqlite> was successful.
```

```
Found SMCTk package
SMCTk tk
      (sparc) 8.4.9
VDCF skips installation of SMCTk (Version: 8.4.9)
Found SMCTcl package
SMCTcl tcl
      (sparc) 8.4.9
VDCF skips installation of SMCTcl (Version: 8.4.9)
Found SMCexpect package
SMCexpect expect
      (sparc) 5.40
VDCF skips installation of SMCexpect (Version: 5.40)
Found SMCncurs package
SMCncurs ncurses
      (sparc) 5.5
VDCF skips installation of SMCncurs (Version: 5.5)
Found SMCreadl package
SMCreadl readline
      (sparc) 5.2
VDCF skips installation of SMCreadl (Version: 5.2)
Installing SMClgcc346 ...
Installing SMCsqlite ...
Check /var/tmp/vdcf_prereqs.log for pkgadd details.
Finished
```

3.2.3 Install new packages

If you own a valid *VDCF vServer Enterprise* or a *VDCF LDom license* you may download and install the *VDCF LDom package* for managing Solaris Logical Domains. For the *VDCF Monitoring package* a *VDCF vServer Enterprise license* is required.

```
pkgadd JSvdcf-base JSvdcf-patch
pkgadd JSvdcf-vserver
pkgadd JSvdcf-ldom
pkgadd JSvdcf-rm
pkgadd JSvdcf-monitor
```

3.3 Update Client Package

It is **required** to update the VDCF client package on all nodes.
If a node is down, please boot it to update the client package.

```
vdcfadm -c update_node all
```

Verify that all nodes got the new VDCF client package:

```
vdcfadm -c show_node all
```

4 Known Issues

4.1 ZFS data filesystems

Due to the Solaris bug **6449301** it is currently not supported to create a new vServer with ZFS data filesystems.

The following workarounds are available:

First create a vServer with a root filesystem only. After a successful commit add your data filesystems.

If you need to re-create a vServer after a `vserver -c commit uninstall` command has completed you have to detach the ZPOOL dataset containing the ZFS data filesystems before you create the vServer using the commit operation. After the successful commit you attach the ZPOOL dataset and commit again.