

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

Veritas Cluster Guide

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1 Introduction

This documentation describes the Veritas Cluster Feature of the Virtual Datacenter Control Framework (VDCF) for the Solaris Operating System, Version 1.0 and explains how to use this feature.

See:

VDCF – Administration and VDCF – Manpages for detailed information about this product, the commands and arguments.

1.1 Overview

The Veritas Cluster product supports the failover of Solaris 10 Zones between Cluster Nodes. Using the VDCF Veritas Cluster Feature enables you to create Datasets and vServers including the Veritas Cluster configuration needed to use the automatic failover feature of Veritas Cluster.

1.2 Installation

1.2.1 Prerequisites

This VDCF Veritas Cluster Feature requires the following packages:

a) On VDCF Management Server

- JSvdcf-base package 1.3.2 or later
- JSvdcf-vxvm package 1.3.0 or later

b) On Cluster Nodes

- JSvdcf-client package 1.3.2 or later

1.2.2 Package Installation

a) sparc platform

```
cd </cdrom/cdrom0>/vdcf/sparc  
pkgadd -d ./JSvdcf-veritascluster_<version>_sparc.pkg
```

b) i386 platform

```
cd </cdrom/cdrom0>/vdcf/i386  
pkgadd -d ./JSvdcf-veritascluster_<version>_i386.pkg
```

2 Veritas Cluster Installation and Configuration

2.1 Overview

Currently the Veritas Cluster Software must be installed manually on a Node, which was previously installed using the VDCF framework. The VDCF Administration Guide contains information how to install a Node using the VDCF framework.

2.2 Requirements

None

2.3 Veritas Cluster Installation

None

3 VDCF Veritas Cluster - Configuration

3.1 VDCF Veritas Cluster – Configuration Variables

You may override the Default Cluster Resource postfixes with your own Naming Conventions by adding the following variables in `/var/opt/jomasoft/vdcf/conf/customize.cfg`

```
export VCS_POSTFIX_SERVICEGROUP=sg           (may be empty)
export VCS_POSTFIX_ZONE=zone                 (may be empty)

export VCS_POSTFIX_DATASET=dataset
export VCS_POSTFIX_ZONEPATH=zonepath
export VCS_POSTFIX_PREBOOT=preboot
export VCS_POSTFIX_POSTBOOT=postboot
```

3.2 Cluster Resource Definitions

VDCF defines the following Cluster Resources in the Cluster :

- ServiceGroup <vserver>_sg
- DiskGroup Resource for Datasets <dataset>_dataset
- Mount Resource for zonepath <vserver>_zonepath
 - VDCF Zone Preboot Resource <vserver>_preboot
 - Network Resource <vserver>_proxy_<interface>
VDCFnic_<interface>
 - Zone Resource <vserver>_zone
 - VDCF Zone Postboot Resource <vserver>_postboot

3.3 VDCF Resources

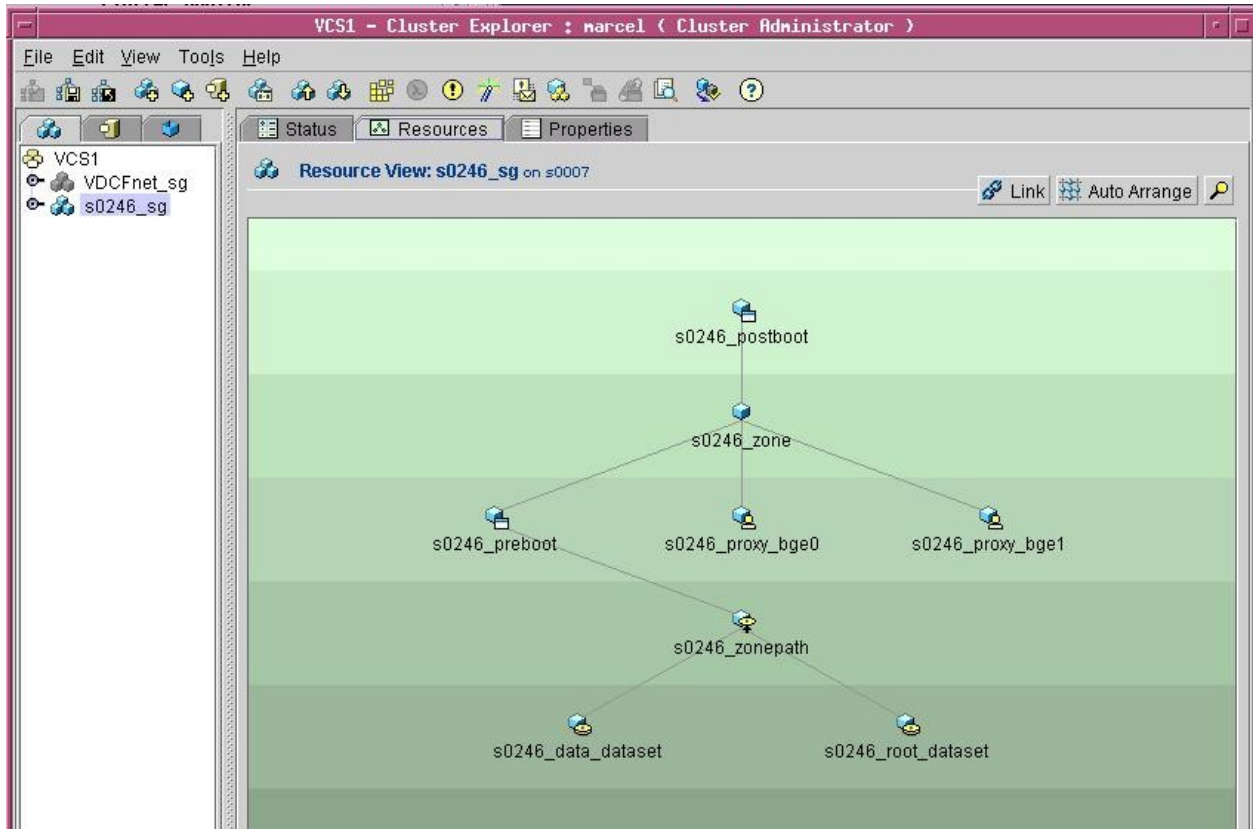
A) VDCF Zone Preboot Resource

This Resource currently adds routes to the Node, which are required by the vServer.

B) VDCF Zone Postboot Resource

This Resource updates the current vServer location in the VDCF Configuration Repository.

3.4 Cluster Resources Sample



4 VDCF Veritas Cluster - Administration

After the Veritas Cluster Software is installed and configured on a Node, run the command

```
node -c update name=<node>
```

This operation updates the VDCF Configuration Repository about the Cluster and the Cluster Nodes.

Check the Node using

```
node -c show name=<node>
```

If you create a Dataset or vServer on such configured Nodes, the Cluster is configured accordingly.

You may boot the vServer using `vserver -c boot, reboot or shutdown`.

To migrate the vServer to another Node use the VDCF command:

```
vserver -c migrate name=<vserver> node=<newnode>
```

or use the Cluster command on a Cluster Node:

```
/opt/VRTS/bin/hagrp -switch <vserver>_sg -to <newnode>
```

5 Patch Management

VDCF supports patching of Veritas Cluster Nodes, if the JSvdcf-patch (Patch Management Feature) 1.2.5 or later is installed on the VDCF Management Server.

PatchSet's of Type STANDARD may be installed without any special requirements in the Veritas Cluster environment.

Special handling is required for NON_STANDARD patches, which require installation in Single User Mode. Installation of patches in a Veritas Cluster environment using Zones requires to complete shutdown the Veritas Cluster.

Use the following sequence of commands to patch your cluster efficiently:

1. Make sure the vServer's are distributed evenly on the Cluster Nodes.

Use

```
vserver -c show to verify the vServer locations
```

and

```
vserver -c migrate to change the vServer locations.
```

2. Verify the Patch Target. It should be applied to all Cluster Nodes.

```
patchadm -c show_target name=xy
```

3. Shutdown the Veritas Cluster

Execute on one Cluster Node: `/opt/VRTS/bin/hastop -all`

4. Patch the Nodes using VDCF

```
patchadm -c install target=XY reboot
```

VDCF will mount all required filesystems for the vServer's on the Nodes and reboot the vServer's into Single User Mode. The Patches are then applied on the Nodes in parallel. After Patch Installation the Nodes stay in Single-User State. Once patching is complete manually reboot all Cluster Nodes back into cluster mode.

6 Open Issues / Restrictions

- None known