VDCF

Virtual Datacenter Cloud Framework
for the Solaris™ Operating System

JomaSoft GmbH
Falkensteinstr. 54a
9000 St. Gallen
Switzerland

The Virtual Datacenter Cloud Framework (VDCF) is a platform management framework for the Solaris Operating System. VDCF allows you to run a virtualized data center using Solaris 10 and Solaris 11 Zones and/or Logical Domains controlled by a centralized management server.

VDCF vServer is used to manage Solaris Zones (Containers). Deployment of Logical Domains available on Oracle and Fujitsu CMT Server is provided by VDCF LDom. To use both Virtualization technologies both components may be combined to get the most flexibility and benefit.

With VDCF, JomaSoft offers a tool to simply and effectively operate your Solaris based virtual data center. On a central management server you create definitions and configurations, which are stored in the Configuration Repository. This information is then used by VDCF to populate physical servers with a Solaris build from which vServers (Zones) and Logical Domains are created.

- ✓ **easy to use**
- ✓ **standardize**
- ✓ **save time**
- ✓ **deploy faster**
- ✓ **avoid errors**

Highlights

- ✗ Simplicity
  Using VDCF, a customer is able to deploy and manage Virtual Solaris Environments without a deep Solaris knowledge. The virtual data center is managed using only a handful of intuitive VDCF commands.
- ✗ Standardization
  Virtual Servers are deployed using supported Solaris technologies, managed in a standard way and able to be deployed and available for use in minutes rather than hours.
- ✗ Availability
  VDCF allows manually or automatically control of server migration or fail-over leading to improved options in availability and performance.
- ✗ Flexibility
  Freedom to use preferred technologies, VDCF integrates fully with ZFS, Solaris Volume Manager, Sun/Solaris Cluster and Symantec Foundation products all using the same standard VDCF commands. A modular approach allows bespoke and additional standard features to be added.
- ✗ Automation
  The framework design uses standard builds, reusable system configurations and automated software deployment that simplify production and maintenance.
- ✗ Central Management Server
  The Management Server provides a centralized place where a complete overview of the data center provides opportunities for more effective planning and control. Automated system configuration decisions that rely on the VDCF repository limits mistakes from human error.
- ✗ Security
  An enhanced security model that allows deployment of services without the need for root access. Security Compliance Assessments and Hardening included.

Key Features

- ✗ VDCF Base Framework

  Node Installation and Configuration
  Tools to install physical servers (Nodes) using WAN-Boot/ JumpStart/Flash-Archive or AI/IPS/Unified Archive technologies. Profiles and system configurations allow automated installation and configuration of Nodes part of a pool managed by VDCF.

  Patch Management (Solaris 10)
  For successful vServer Migration between Nodes a consistent Patch Deployment is absolutely necessary. Based on Oracle's Update Connection VDCF analyzes Nodes and downloads the required Patches. Patch Installation is based on Patch-Set definitions, is repeatable and even supports Cluster environments.

- ✗ VDCF vServer

  vServer Installation and Configuration
  All vServer elements like disks, filesystems and network interfaces are first defined in the VDCF Repository and later deployed to the Node using a commit operation. Resource consumption (RAM, CPU, etc) may be limited using Resource control definitions.

  vServer Availability
  A vServer may be migrated between compatible Nodes and Guest Domains, if they run at the same Patch-Level. This is even possible in Disaster Scenarios and High Available Cluster environments. Starting with Solaris 10 10/08 it is possible to upgrade a vServer while it is attaching to its new Node or Guest Domain.

- ✗ VDCF LDom

  Configure, install, manipulate Control and Guest Domains based on Oracle VM Server for SPARC (previously called Sun Logical Domains). Migrate Guest Domains (live or cold). High Available Guest Domains with the use of Solaris Cluster 4.

- ✗ VDCF Monitoring

  Hardware (physical Node), Resource usage and OS Monitoring (Filesystem, Dataset, SMF, SWAP, Disk Paths).
  VDCF hamon (High Availability / Automated Failover)

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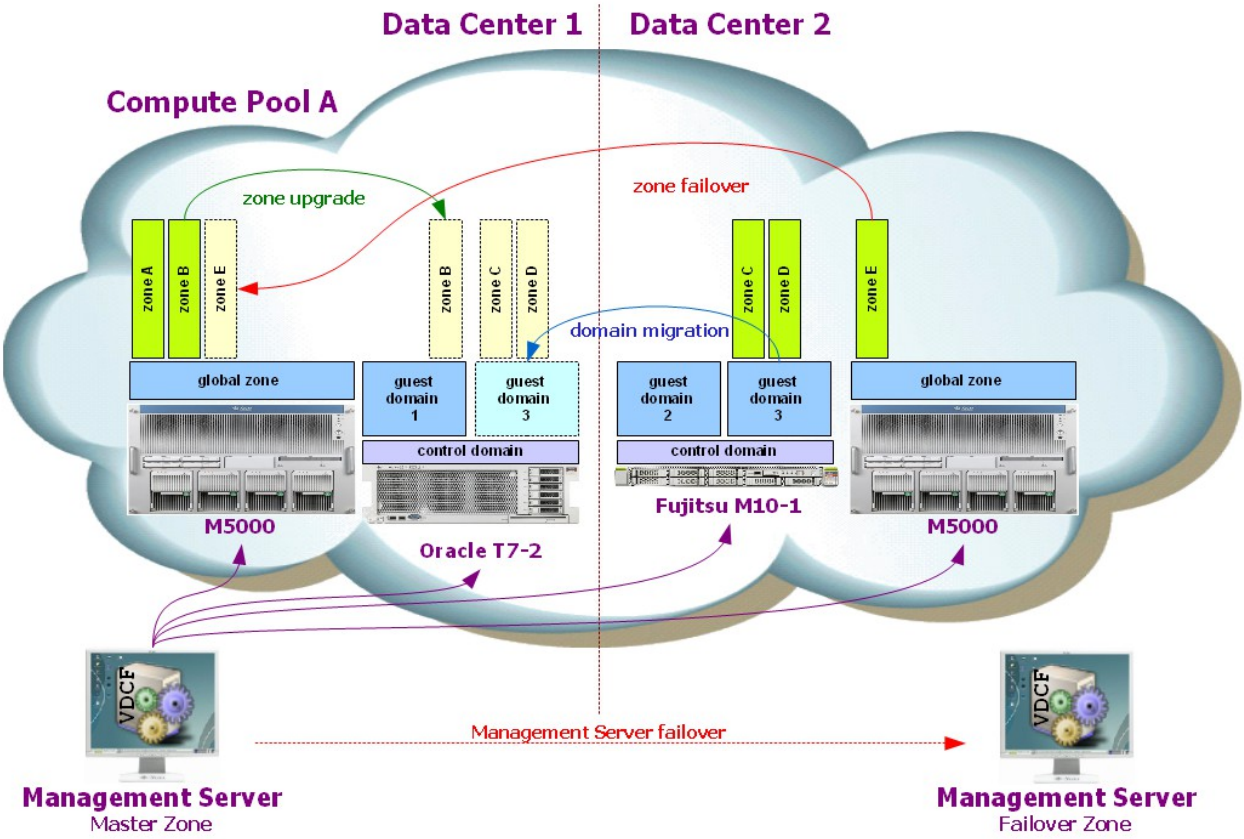
Availability and Flexibility in your Data Center

The following picture shows two data centers and the possibilities to migrate vServers and Guest Domains when using VDCF.



Supported Environments

- ✔ Server
  Oracle SPARC Server and x86 Server
  Fujitsu SPARC M10/M12 Server
- ✔ Solaris Operating System
  Solaris 11.1, 11.2, 11.3 and 11.4
  Solaris 10 Update1 (1/06) up to Update 11 (1/13)
  LDom: Version 1.1 up to 3.6
- ✔ Branded Zones: solaris8, solaris9, solaris10
- ✔ Volume Manager
  ZFS, Solaris Volume Manager (SVM),
  Veritas Volume Manager
- ✔ Filesystem
  ZFS, Solaris UFS, lofs, Veritas vxfs
- ✔ SAN / iSCSI
  Storage and HBA's compatible to
  SUN StorEdge SAN 4.4.x
  Multipathing using STMS/MPXIO
  iSCSI Targets compatible to Solaris iSCSI Initiator
- ✔ Networking
  Aggregation, Tagged VLAN, IPMP, exclusive IP-Stack
- ✔ System Controller
  ILOM, SC/ALOM, XSCF, RSC, SSC, 15K, ALOMCMT,
  ILOMx86
- ✔ High Availability
  VDCF hamon, Sun Cluster 3.2/3.3
  Solaris Cluster 4.1/4.2/4.3/4.4, Veritas Cluster 5.0

Detailed information about VDCF is available at: https://www.jomasoft.swiss/vdcf