

Oracle® VueLink for Documentum

Clustering Guide

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Oracle VueLink for Documentum/Clustering Guide, Release 19.3.2

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Preface

This preface contains these sections:

- "Audience"
- "Related Documents"
- "Conventions"

Audience

The *Oracle VueLink for Documentum Clustering Guide* is intended for administrators, developers, third-party integrators and others whose role is to deploy and manage Oracle VueLink for Documentum.

Related Documents

For more information, see these Oracle resources:

- *Oracle VueLink for Documentum System Administrator Manual*
- *Oracle AutoVue, Client/Server Deployment Planning Guide*
- *Oracle AutoVue, Client/Server Deployment Installation and Configuration Guide*
- *Oracle Fusion Middleware High Availability Guide*

The most up-to-date versions of these documents may be found at the Oracle Technology Network (OTN) Web site:

<http://www.oracle.com/technetwork/indexes/documentation/index.html>

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Overview

This document outlines the recommended deployment configuration of Oracle VueLink for Documentum in a clustered environment. Two cluster deployments are available: active-active and active-passive. Currently, active-active is the only supported cluster deployment.

Note: Specific instructions for installing and deploying VueLink for Documentum are found in the *Oracle VueLink for Documentum System Administrator Manual*.

What is Clustering?

Clustering is a key requirement for any Enterprise Deployment. A cluster is a group of processes that run on single or multiple machines that is viewed functionally as a single entity by the client. Clustering is a set of processes that provide redundancy for a system, in addition to improving the performance and availability. In the event of a failover during a transaction, the session data is retained as long as one instance is functional in the cluster.

For more information on clustering in Oracle AutoVue, refer to the *Oracle AutoVue, Client/Server Deployment Planning Guide*.

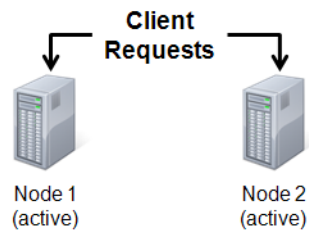
Clustering Solutions

There are two possible solutions when configuring a clustered system: active-active clusters and active-passive clusters (currently not supported).

Active-Active Cluster

Currently, active-active topology is the only supported deployment. The active-active deployment consists of two or more active system instances (nodes) and may be used to improve scalability. In this deployment, all instances handle requests concurrently.

Figure 1–1 Active-Active Cluster

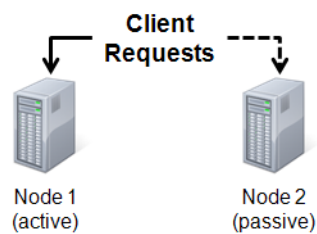


For more information on active-active deployment refer to section "[Active-Active Configuration for Documentum WebTop](#)".

Active-Passive Cluster (Not Supported)

It consists of an active instance (Node1) that handles requests and a passive instance (Node2) that is in standby mode. A heartbeat mechanism manages and monitors failover between these two instances.

Figure 1–2 Active-Passive Cluster



Oracle VueLink for Documentum Cluster Architecture

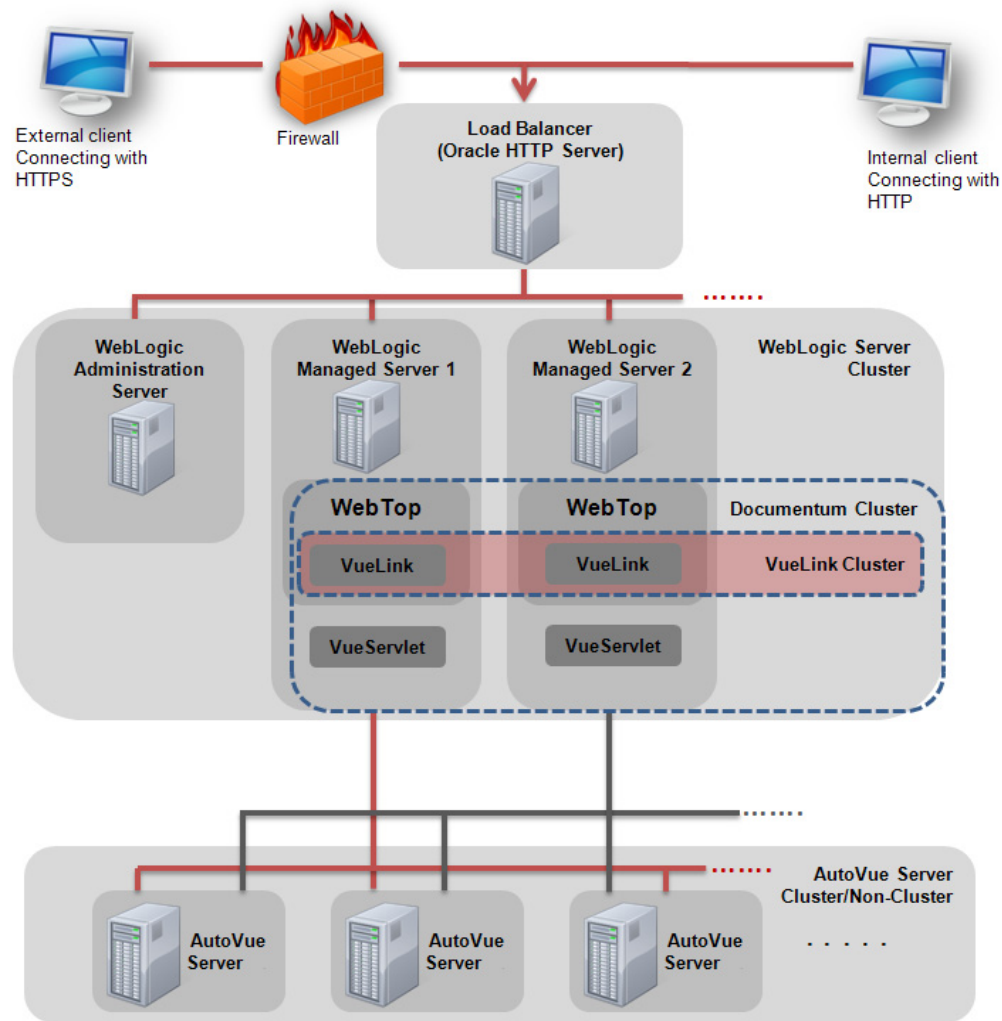
This section provides an overview of the Oracle VueLink for Documentum cluster architecture.

As shown in the following figure, an Oracle VueLink for Documentum cluster architecture includes the following components:

- Load balancer (for example, Oracle HTTP Server)
- WebLogic Server
- VueServlet
- VueLink
- AutoVue servers
- Documentum WebTop

The following sections provide more information on these components.

Figure 2–1 VueLink for Documentum Cluster Architecture



Take note of the following:

- It is good practice to have a cluster of AutoVue servers in parallel with the WebLogic cluster on a different set of physical machines.
- The number of AutoVue servers in the cluster depends on the visualization demands of the users. An AutoVue Deployment Expert can provide appropriate server sizing guidelines.
- If an AutoVue server cluster is used, all VueServlet instances in the WebLogic cluster must point to the main AutoVue instance that acts as a gateway to the AutoVue server cluster. For information on how to setup the AutoVue cluster, refer to the "Configuring AutoVue Server Farm for High Usage" section of the *Oracle AutoVue, Client/Server Deployment Installation and Configuration Guide*.
- It is recommended to use Oracle HTTP Server (OHS) as the gateway for the WebLogic cluster. The OHS takes care of load balancing the requests among the WebLogic instances.
- The connection between the VueLink and the AutoVue server can be SSL or non-SSL. The choice will have an impact on failover. Refer to [Failover](#) for more information.

Load Balancer (Oracle HTTP Server)

A load balancer distributes workload across multiple computers in a cluster. In active-active mode, all instances are running. If an instance fails, the load balancer detects the failure, and automatically redirects the request for the failed member to the surviving instances. Refer to section "[Oracle HTTP Server](#)" for more information.

WebLogic Server

WebLogic Server is the application server of choice for setting up the Documentum WebTop/VueLink cluster. The Administration Server acts as the main control entity by distributing changes and requests to the managed servers. Managed servers host application components (Documentum WebTop, VueLink for Documentum) and VueServlet. When a managed server starts up it connects to the domain's Administration Server in order to synchronize.

For detailed information on how to setup a cluster of WebLogic managed servers through the administration console and configuration wizard, refer the *Oracle® Fusion Middleware Using Clusters for Oracle WebLogic Server* document at http://download.oracle.com/docs/cd/E21764_01/web.1111/e13709/toc.htm.

VueServlet

The VueServlet acts as the main entry point for communication between AutoVue clients and the AutoVue server. The VueServlet must be configured for access through a firewall when used by external AutoVue clients to communicate with the AutoVue server. For more information, refer to the "VueServlet Configuration Options" section of the *Oracle AutoVue, Client/Server Deployment Installation and Configuration Guide*.

VueLink

Oracle-developed integration solution that integrates AutoVue with popular content management systems (Documentum WebTop).

There is no special clustering configuration required for the VueLink for Documentum as it is part of the Documentum WebTop cluster. You must follow the installation steps as outlined in the *Oracle VueLink for Documentum System Administrator Manual* and then redeploy the Documentum WebTop into its cluster.

AutoVue Servers

The AutoVue server is the core of the AutoVue solution. Note that AutoVue servers should always have their own dedicated physical machines. For information on clustering AutoVue Servers, refer to the *Oracle AutoVue, Client/Server Deployment Planning Guide*.

Documentum WebTop

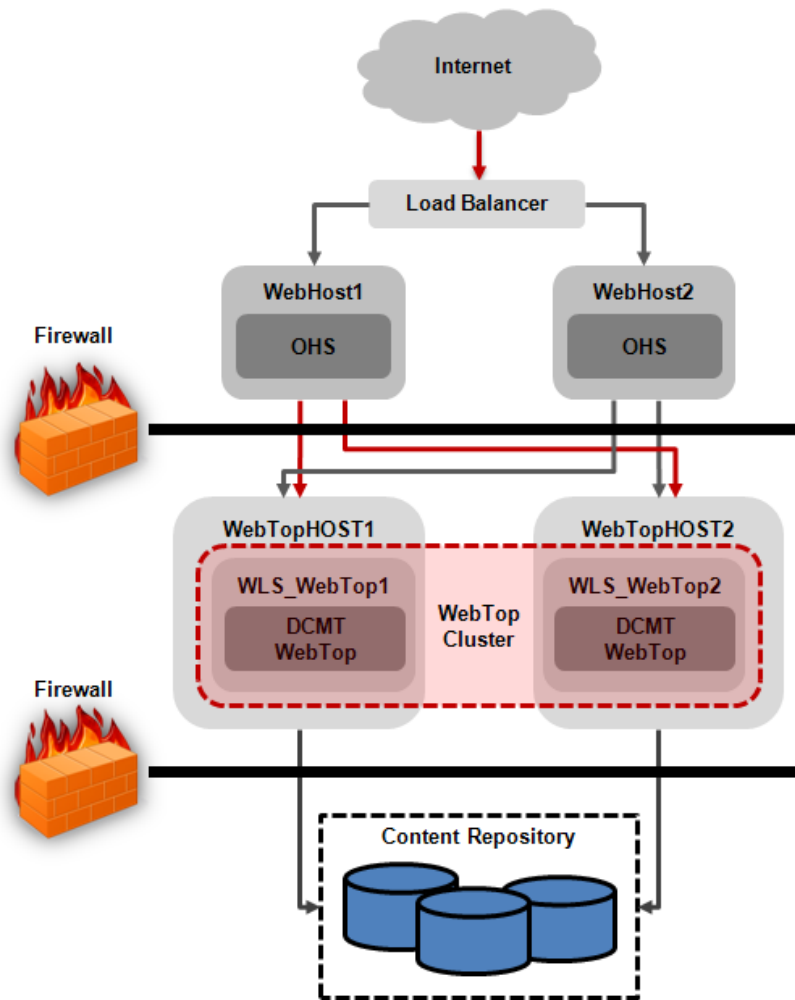
The cluster of Documentum WebTop must be set up on top of the cluster of WebLogic managed servers. For information on clustering Documentum WebTop, refer to "[Documentum WebTop Clustering](#)".

Documentum WebTop Clustering

This section provides an introduction to Documentum WebTop and how to design and deploy a clustered environment for Documentum WebTop.

Active-Active Configuration for Documentum WebTop

Documentum WebTop has a Web application that runs within an Oracle WebLogic Manager server environment. As shown in the following figure, it is recommended to deploy the Documentum WebTop cluster in an active-active configuration.

Figure 3–1 Two-node Active-Active Documentum WebTop cluster

Note the following:

- WebTopHOST1 and WebTopHOST2 are both active and handle all requests concurrently. In the event one of them fails, the other system handles all requests.
- This cluster deployment consists of two or more active system instances (nodes) and may be used to improve scalability. In this deployment, all instances handle requests concurrently.
- A WebLogic Server cluster or external load balancer can be run with Documentum.

Oracle HTTP Server

Incoming HTTP requests are received by the Web tier. The Web tier acts as a load balancer between the end user and the cluster. Oracle HTTP Server (OHS) is the preferred Web tier for the Documentum WebTop cluster. OHS is the Web server component for Oracle Fusion Middleware. The Oracle HTTP Server uses a session-based round-robin load balancing mechanism. While the load balancer attempts to rotate between all nodes, it maintains an established session to a single node (all requests with that session ID are directed to the same node).

For detailed information refer to the "Configuring High Availability for Web Tier Components" section of the *Oracle Fusion Middleware High Availability Guide*.

Since VueLink for Documentum is deployed within Documentum WebTop, there is no need to define the VueLink cluster inside the OHS. The same configuration for Documentum WebTop handles the access to VueLink addresses.

Example 4-1

The following example shows how Documentum WebTop is load balanced in the OHS:

```
<Location /webtop>
    SetHandler weblogic-handler
    WebLogicCluster server1:16200,server2:16200
    WLCookieName JSESSIONID
</Location>
```

General Recommendations

This section provides general cluster deployment recommendations.

Active-Active Cluster Deployment

The active-active topology is the recommended cluster deployment for Oracle VueLink for Documentum.

Note: VueLink for Documentum does not require any special configuration for active-active clustering and works based on the recommendations from the ["Oracle HTTP Server"](#) section.

The Oracle HTTP Server distributes requests between both active nodes.

Secure Socket Layer (SSL)

Secure Socket Layer (SSL) is an industry-standard protocol for securing network connections. It is recommended to enable SSL communication between the AutoVue server and Documentum WebTop so that communication is configured using HTTPS protocol.

Take note of the following when configuring SSL:

- VueLink
 - VueLink must be deployed on the same node as Documentum WebTop.
- Application Server
 - WebTop session stickiness must be set. Specifically, the JSESSIONID cookie must be sticky.

For detailed information on how to deploy the VueLink in an SSL environment, refer to section "Enabling HTTPS/SSL" in the *Oracle VueLink for Documentum System Administrator Manual*.

Failover

The following points have to be noted for the cluster set-ups:

- Non-SSL Cluster set up – When the Application Server which AutoVue is connected to times out depending on whether the request is redirected to the same server or not, the behavior matches one of the following:

- If the request is redirected to the same application server, an authentication dialog is displayed. After you enter the correct user credentials, you can carry out the DMS-related action.
- If the request is redirected to the other application server, the error message "Connection times out. Please close the applet and reopen" is displayed, and the DMS-related actions will not happen.
- Non-SSL Cluster set up – When the Application Server which AutoVue is connected to shuts down, depending on whether HttpSession times out or not, the behavior matches one of the following:
 - If the HttpSession times out, the error message "Connection times out. Please close the applet and reopen" is displayed and the DMS-related actions does not happen;
 - If the HttpSession does not time out, the authentication dialog is displayed. After you enter the correct user credential, you will be able to carry out the DMS-related action.
- SSL Cluster set up – When the Application Server which AutoVue is connected to times out or shuts down, irrespective of whether the request is redirected to the same server or not, authentication dialog is displayed. After you enter the correct user credential, you can carry out the DMS-related action.

Passing Cookies to AutoVue Server and VueLink for Documentum

The `DMS_PRESERVE_COOKIES` parameter can be set so that cookies can be passed from the AutoVue client to the AutoVue sever and VueLink. This parameter is defined in the applet launch page (`csiAutoVue4webtop.jsp`) and includes the following value:

- `JSESSIONID`: Documentum WebTop session identifier. This value is used so that the load balancer can maintain sticky sessions.

`DMS_PRESERVE_COOKIES` ensures that `JSESSIONID` is passed from the applet to the AutoVue server and then onto the VueLink.

For more information on `DMS_PRESERVE_COOKIES`, refer to the *Oracle AutoVue, Client/Server Deployment Installation and Configuration Guide*.