

EMC® DOCUMENTUM® CONTENT SERVER LOAD BALANCE AND FAILOVER

Abstract

This white paper explains how load balancing is performed on Content Server and how users can set up two Content Servers for load balancing on two clean host machines. The content in this paper is organized as a set of procedures that must be followed in the specified sequence.

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Audience

This white paper is intended for EMC customers, partners, developers, and engineers. Content in this paper is organized as a set of procedures that are easy to follow. Appropriate reference to the relevant published Documentum guide is provided to avoid duplication of information in this paper.

Documentum Content Server Load Balancing and Failover

Load balancing is a methodology used to distribute workload evenly across two or more computers. Failover is a technique that involves automatic switching over when one computer fails, to a computer that is set up as a redundant or standby computer.

Documentum Content Server load balancing means that subsequent client requests are distributed to two or more Content Servers to distribute the load. The sequence in which the requests are forwarded to the Content Servers is selected randomly. In a failover scenario, if one Content Server has failed, all the client requests are switched to the second Content Server working in parallel with the first Content Server. In the current load balance setup we will provide instructions for performing load balance and failover, simultaneously.

In the context of Documentum Content Server load balancing and failover, the methodology you choose to accomplish load balancing and *failover depends on the architecture*.

Use the information available in this document to achieve load balancing and failover for a single repository in a general case, where there are no previous Documentum installations on either of the host machines.

In a special case, you can have two Document Content Servers installed on the two hosts. Each Content Server serves the repository installed on the respective host. You must ensure that the Content Server installed on the second host points to the repository on the first host. However, this special case is out of the scope of this document and is covered in a separate guide.

General Case

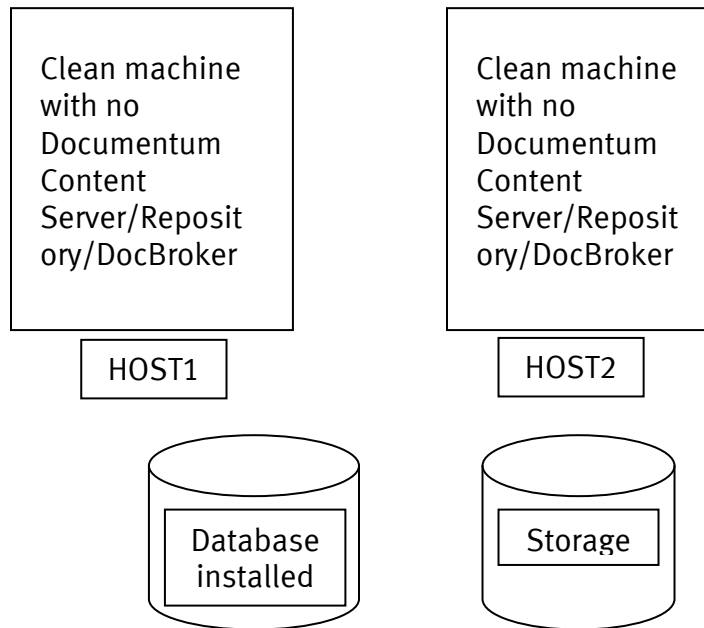


Figure 1. Before load balance setup

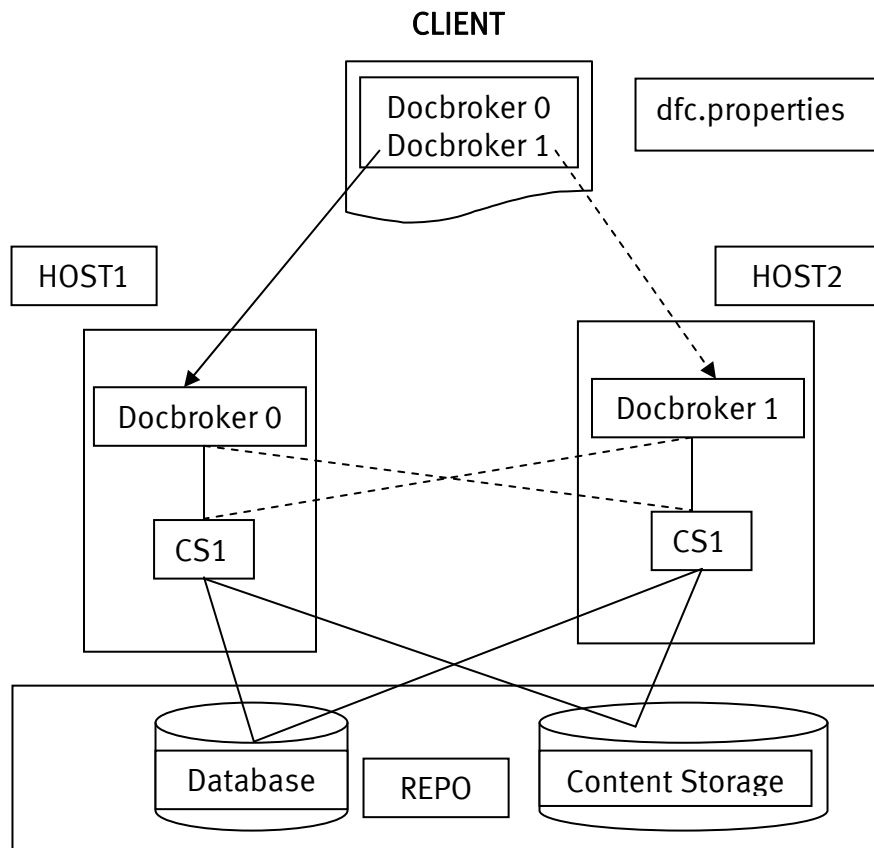


Figure 2. After load balance setup

Let us configure two Contents Servers for load balancing. The first Content Server, CS1, is the primary server, and the second Content Server, CS2, is the secondary Content Server.

CS1 and its repositories are installed and configured like any Content Server repository configuration. CS2 is installed as usual and is configured using a special utility called “CFSConfiguration”.

The CFSConfiguration Utility

This program is used to configure the content-file server and the remote Content Server. This utility creates the second server configuration object, and copies the required files such as aek.key, dmpassword.txt, server.ini, webcache, and so on.

Overview of the setup process

Before you start the setup process, ensure the following criteria to achieve load balancing and fail-over, are met:

- The Content Servers must share the Content Storage. Content Storage must not be distributed.
- Proximities must be identical.
- Use the CFSConfiguration utility to install additional instances of Content Server.

The process of setting up Content Servers for load balancing and fail-over includes the following tasks:

1. Installing Content Server on CS1.
2. Configuring the repository on CS1.
3. Installing Content Server on CS2.
4. Running the CFSConfiguration utility on CS2.

The CFSConfiguration Utility installs Content Servers with a proximity value of 9000 or more. Proximity decides the distance between the docbroker and the server. Proximity must be less than 9000 to achieve failover. Proximity values of the connection broker must be equal to achieve load balance. If the servers have identical proximity values, clients pick one of the servers, randomly. If the proximity values are different, clients will always choose the server with the lowest proximity value.

Requirements for load balancing Content Server and configuring fail over on the server

1. The database client software must be installed on the content-file server hosts.
2. The values used on the primary and remote hosts for database connectivity must be identical and must be valid on the remote hosts.
3. Content Server and the file store must be in the same domain. The installation user account of Content Server must be available on the domain.
4. The installation user account must have full access control to the file store.

5. Ensure that the installations of the primary and secondary servers are completed by a domain user account.

Installing CS1 and configuring the connection broker and the repository on CS1

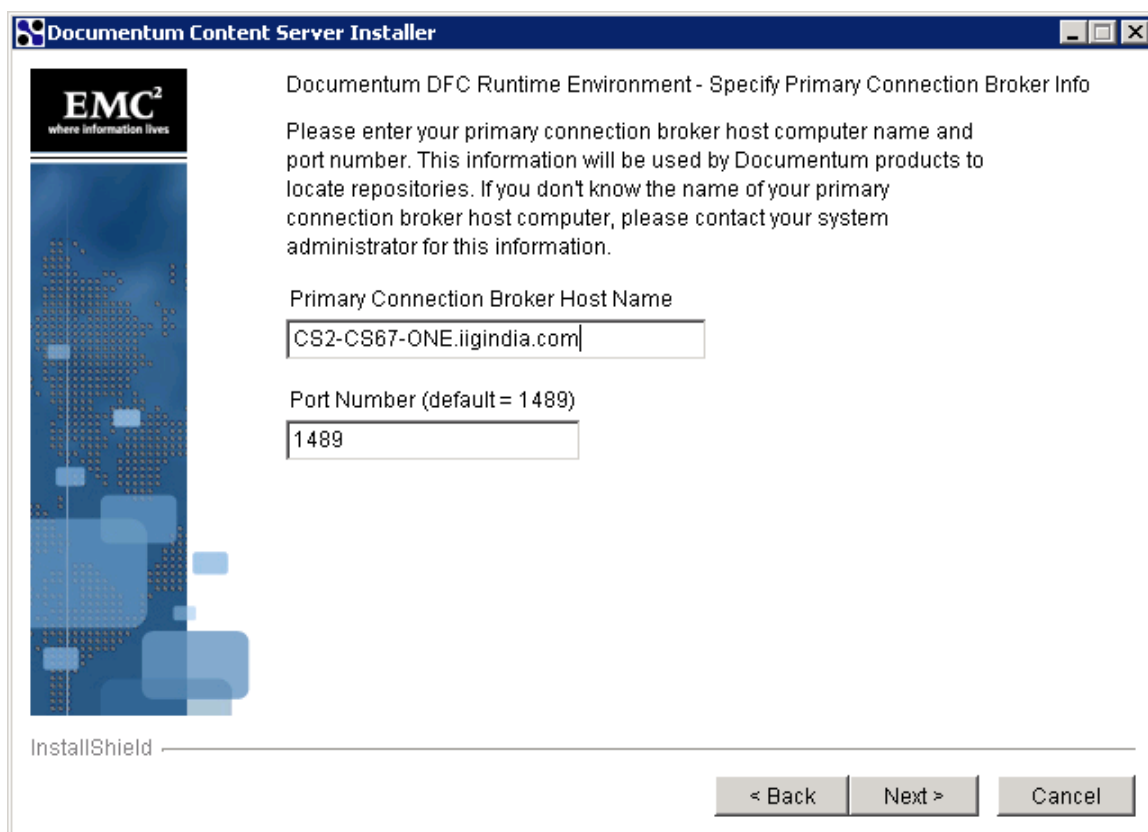
CS1 and its repositories are installed and configured like any Content Server repository configuration. Follow the instructions provided in the *Documentum Content Server Installation Guide* to install and configure Content Server. Decide if you want to set up the load balance environment. Both Content Servers must share the same content storage. So, content storage must be shared and not distributed. Ensure that you choose a network location for the content storage while installing the first Content Server. Do not choose local storage because additional Content Servers will not be able to access it. If you forget to choose the network location for content storage, you must choose the network location for content storage separately later for each dm type or custom type.

Installing Content Server software on CS2

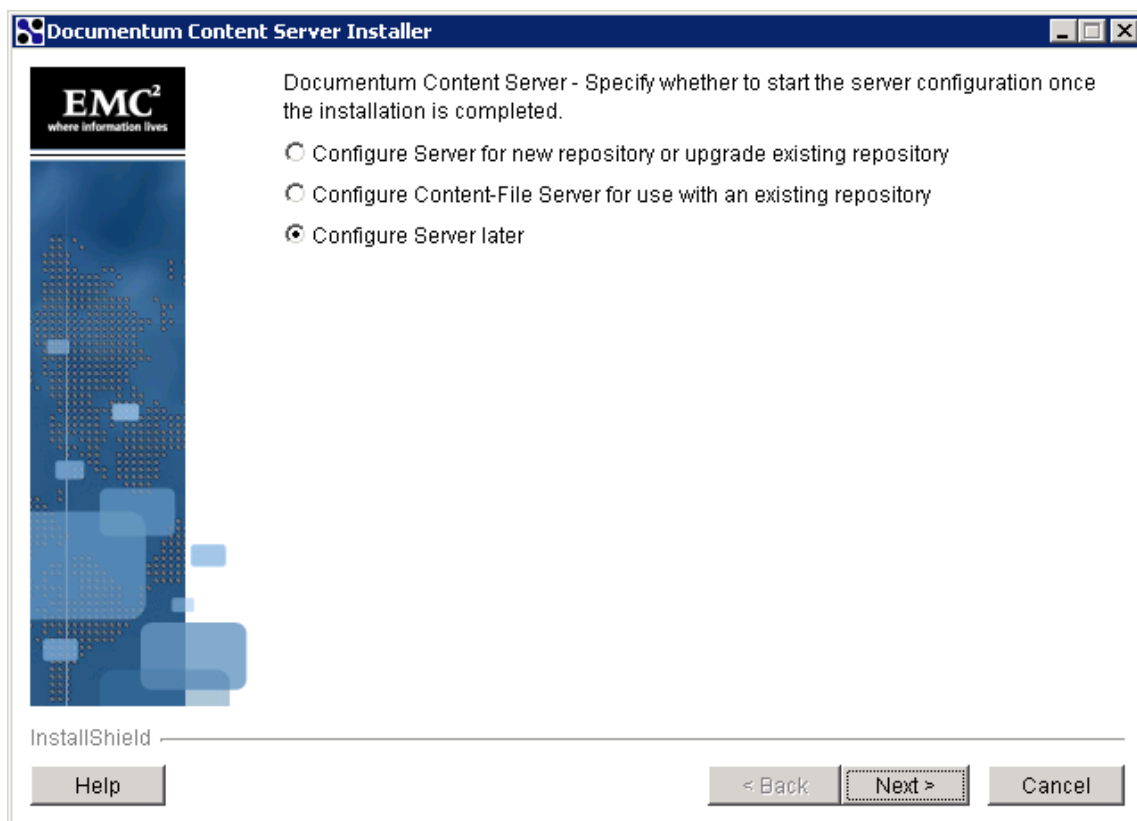
CS2 is installed as usual using the serverWinSuiteSetup.exe utility and it is configured using a special utility called CFSCConfiguration. Follow the instructions provided in the *Documentum Content Server Installation Guide* to install CS2 on the second host.

Note the following details while following the procedure documented in the *Documentum Content Server Installation Guide*:

1. Type the host name and port number for the existing primary connection broker. The default port number is **1489**.



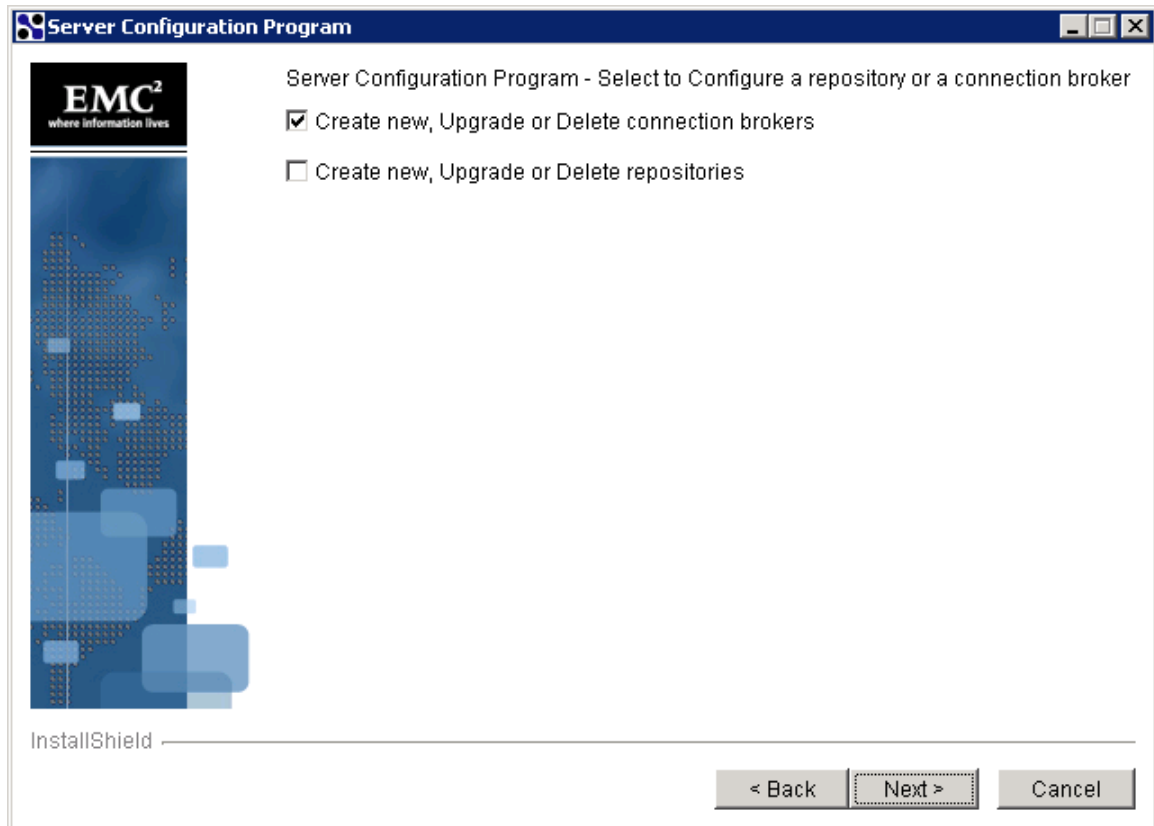
2. Click **Next**.



3. Choose the **Configure Server later** option.

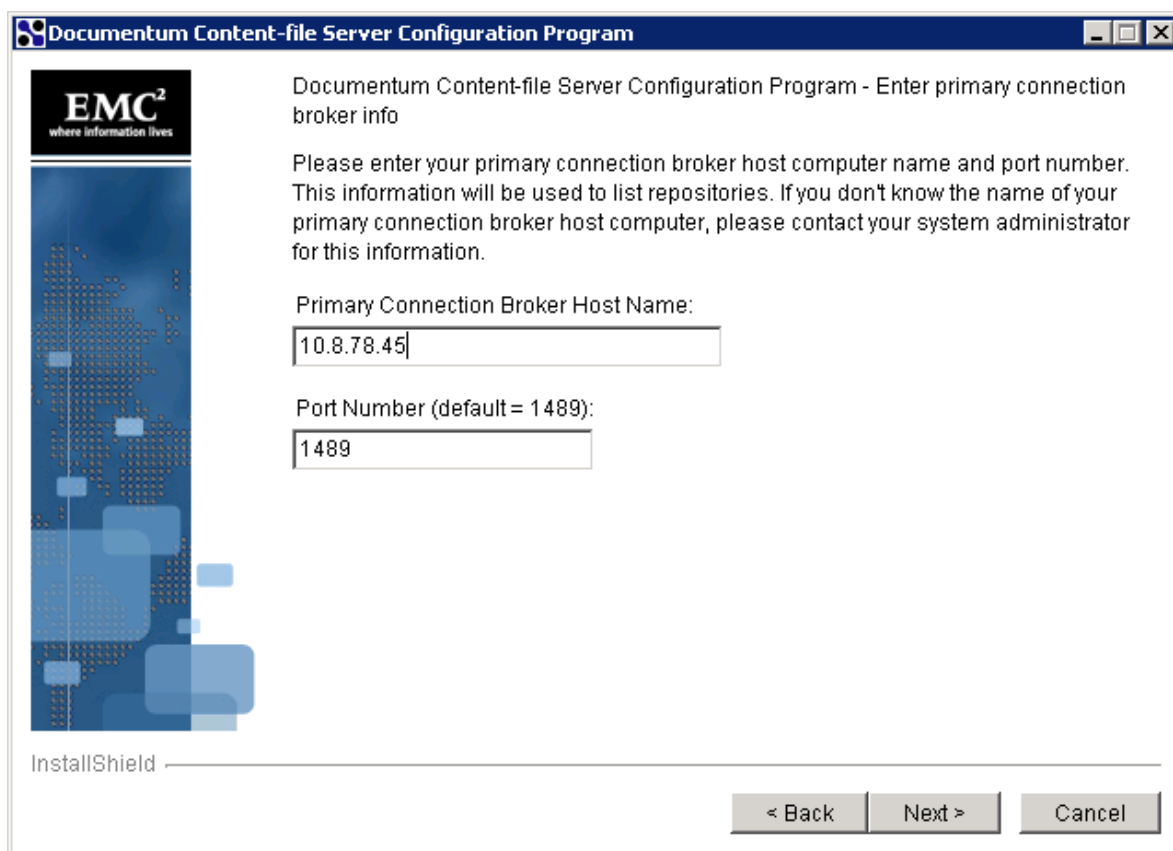
Configuring Docbroker on CS2

- Run `server_configuration_program` to configure the docbroker. For instructions, see the *Documentum Content Server Installation Guide*.

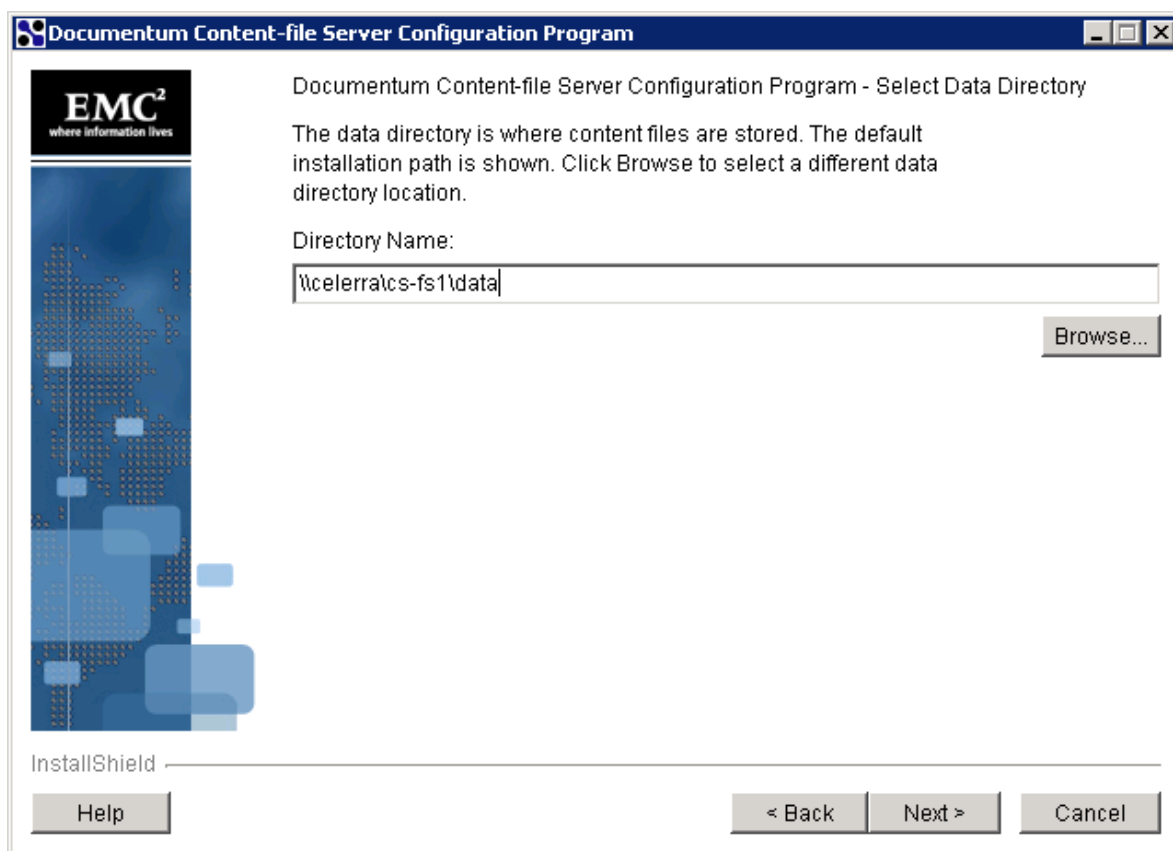


Configuring Content File Server on CS2

1. Start the content-file server configuration program.
2. Navigate to `%DM_HOME%\install`.
3. Double-click `cfsConfigurationProgram.exe`.
4. Click **Next**.
5. Type the password of the installation owner and click **Next**.
6. Type the hostname of the primary connection broker for the repository, and verify or type the port number on which the connection broker listens, and click **Next**.



7. Select the repository for which you are installing the content-file server, type the username and password for a super user in that repository, and click **Next**.
8. Browse to select a UNC path to store data. Use the same path as the Content Server installation path. You must use the network location instead of using the local data directory. Otherwise, problems can occur when one of the servers goes down, and users try to access content files.



9. Accept the default location of the share directory or browse to a different location and click **Next**. The share directory comprises clients, example code, and required libraries.
10. Accept the default service name for the new content-file server or type a different name click **Next**.
11. Click **Finish**. The content-file server is configured and running.
12. In server.ini change the proximity to less than 9000 and identical to the first Content Server. In general you can select 1.
13. On the client side, add the docbroker information of both Content Servers in the dfc.properties file.
14. On the server-side, register both Content Servers with both docbrokers. This is important to achieve failover. Add the second dockbroker host and port in server.ini on the primary Content Server host.

To start the application server instance that is running the Java method server and Content Server, restart content server after the installation on Windows hosts.

Conclusion

There is no documentation available for performing a complete load-balanced setup. Use the information in this white paper to understand the complete procedure for achieving load balance. The instructions in this white paper are intended to make the Content Server load balance setup easy and quick to achieve, eliminating a lot of confusion.

References

- Documentum Content Server 6.7 Installation Guide