



## CHAPTER 2

# Cisco Digital Signs Failover Configuration

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**Revised: May 2011.**

This chapter describes how to configure failover on a Cisco Digital Signs installation. It covers both new installations and adding failover to an existing installation.

If your Cisco Digital Signs installation includes Cisco Show and Share, you must follow the instructions in [Cisco Show and Share Failover Configuration, page 3-1](#).

This chapter contains the following topics:

- [Prerequisites, page 2-1](#)
- [Pre-Configuration Worksheet, page 2-3](#)
- [Configuring Failover, page 2-4](#)
- [Back Up Your Cluster, page 2-11](#)

## Prerequisites

Before you can configure failover, you must meet the following requirements:

- [Licensing Requirements, page 2-1](#)
- [Hardware Requirements, page 2-2](#)
- [Software Requirements, page 2-2](#)

## Licensing Requirements

When licensing your failover cluster, you only need to install the feature, author, and failover licenses on the primary Cisco DMM appliance. The secondary pair of appliances only need the base licenses that come with the appliances. They will inherit the optional feature, device, and author licenses during the failover activation process.

Devices	Licenses Needed
Primary Cisco DMM appliance	<ul style="list-style-type: none"> <li>(Optional) Feature licenses (SNMP Notification Module, etc.)</li> <li>(Optional) Device Licenses</li> <li>Failover License</li> </ul>
Secondary Cisco DMM appliance	Base license

You must have a failover license installed on your primary Cisco DMM appliance to activate the failover configuration. You can enter the failover settings without the license, but you cannot activate failover until the license is installed. See the following for information about installing licenses:

[http://www.cisco.com/en/US/docs/video/digital\\_media\\_systems/5\\_x/5\\_2/dmm/user/guide/admin/licenses.html](http://www.cisco.com/en/US/docs/video/digital_media_systems/5_x/5_2/dmm/user/guide/admin/licenses.html) for information about installing licenses

## Hardware Requirements

Failover configuration is supported on the following DMS hardware platforms:

- DMM-SVR-C210-K9

You cannot configure failover for the following DMS hardware platforms:

- MCS-7835-H3

The primary and secondary appliance in a failover pair must be identical. [Table 2-1](#) shows the failover appliance part numbers that correspond to the primary appliances.

**Table 2-1 Failover appliance part number for Cisco DMM appliance.**

Primary Appliance	Secondary Appliance
Cisco Digital Media Manager DMM-SVR-C210-K9	DMM-FA-C210-K9

## Software Requirements

The appliances must be running Cisco DMS 5.2.3.

Configure NTP on the appliances before configuring failover.

# Pre-Configuration Worksheet

You will need the information in the following tables to complete the configuration. We recommend that you print out the table and fill in the information before you begin.

**Table 2-1 DMM Failover Pre-Configuration Worksheet**

Item	Value	Notes
<b>DMM</b>		
Primary Appliance FQDN		For existing installations, this is the FQDN of the existing appliance. For new installations, this is the FQDN users will use to access the DMM. This FQDN becomes the virtual FQDN for the Cisco DMM failover cluster.
Primary Appliance IP Address		For existing installations, this is the IP Address of the existing appliance. For new installations, this is the IP address users will use to access the DMM. This IP address becomes the virtual IP address for the Cisco DMM failover cluster.
Primary Appliance Alternate, Dedicated FQDN		This is the FQDN that will be applied to the primary appliance after the original FQDN becomes the DMM virtual FQDN.
Primary Appliance Alternate, Dedicated IP Address		This is the IP address that will be applied to the primary appliance after the original IP address becomes the DMM virtual IP address.
Secondary Appliance Dedicated FQDN		The FQDN for the secondary appliance.
Secondary Appliance Dedicated IP Address		The IP address for the secondary appliance
(Optional) Primary Appliance Replication Interface IP Address		If using a switch between the primary and secondary DMM appliance replication interfaces, the IP address used by that interface on the primary appliance.
(Optional) Secondary Appliance Replication Interface IP Address		If using a switch between the primary and secondary DMM appliance replication interface, the IP address used by that interface on the secondary appliance.

# Configuring Failover

To configure failover for your DMS installation, perform the following procedures in the order presented:

1. [Set Up the Primary DMM Appliance, page 2-4](#)
2. [Set up the Secondary DMM Appliance, page 2-4](#)
3. [Connect the Primary and Secondary Appliance Replication Interfaces, page 2-5](#)
4. [Configure the Secondary Cisco DMM Appliance, page 2-6](#)
5. [Configure the Primary DMM, page 2-7](#)
6. [Activate the Failover Cluster, page 2-9](#)
7. [Monitor Replication Status, page 2-10](#)

## Set Up the Primary DMM Appliance

If you have an existing DMM appliance, the existing FQDN and IP address will become the virtual FQDN and IP address for the failover configuration. Users will not need to change their bookmarks.

If you are setting up a new Cisco DMM appliance, set up the primary DMM as you would a standalone system. See the [Quick Start Guide for Cisco Digital Media Suite 5.2.x](#) for information about setting up the appliance.

When setting up the appliance, use the primary FQDN and IP address for the appliance. They will become the virtual FQDNs and IP address during the failover configuration process. In a later step, you will replace the primary FQDNs and IP addresses used here with the alternate, dedicated FQDNs and IP addresses.

**Before you continue to the next step, make sure you:**

- Install the failover license on the DMM. See the [Licenses](#) chapter in the *User Guide for Cisco Digital Media Manager 5.2.x*.
- Install third party certificates on your appliances if you are using them. See the [Manage Digital Certificates](#) chapter in the *Administration Guide for Cisco Digital Media Suite 5.2.x Appliances*.
- Enable NTP on the appliances. See the [Configure System Time](#) chapter in the *Administration Guide for Cisco Digital Media Suite 5.2.x Appliances*.

## Set up the Secondary DMM Appliance

Set up the secondary DMM Appliance as you would a standalone system. See the [Quick Start Guide for Cisco Digital Media Suite 5.2.x](#) for information about setting up the system.

Use the secondary appliance dedicated FQDN and IP address for the appliance.

The application interfaces for both DMM appliances must be on the same subnet as the primary DMM appliance.

Install the base licenses installed that came with the appliance. You do not need to install additional feature or device licenses on the secondary DMM appliance.

## Connect the Primary and Secondary Appliance Replication Interfaces

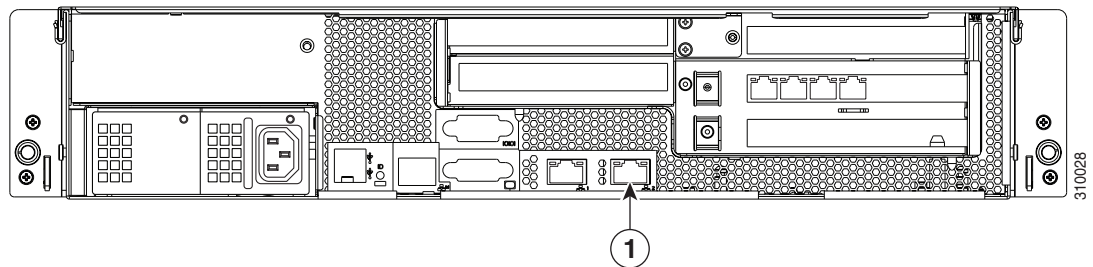
You have two options for connecting the primary and secondary appliance replication interfaces:

- Crossover cable directly connecting the appliances.
- Connecting the appliances through a switch.

If you are using a switch between the replication interfaces, the replication interfaces must be on a different subnet than the application interface.

GigabitEthernet 2 is the replication interface. [Figure 2-1](#) shows the location of the replication interface (marked by the arrow labeled 1) on a Cisco DMM-SVR-C210-K9 appliance.

**Figure 2-1** The replication interface on a DMM-SVR-C210-K9 appliance



## Configure the Secondary Cisco DMM Appliance

Configure the secondary appliance to recognize the primary Cisco DMM appliance as the cluster master.

Procedure

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- Step 1** Using the **secondary FQDN** to access the secondary DMM interface, log into DMM using the superuser or an administrator account.
- Step 2** From the home page, choose **Administration**.
- Step 3** Click the **Failover** tab.  
The Failover Configuration page appears.

- Step 4** Verify that **Master FQDN** is selected in the Digital Media Suite Cluster Settings area and enter the **primary appliance FQDN** in the Master FQDN field. **DO NOT** use the alternate FQDN.
- Step 5** Click **Save**.
- Step 6** Exit the DMM interface.
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## Configure the Primary DMM

To configure the primary DMM, follow these steps:

- Step 1** Using the **primary FQDN** to access the primary DMM interface, log into DMM using the superuser or an administrator account.
- Step 2** From the home page, choose **Administration**.
- Step 3** Click the **Failover** tab.  
The Failover Configuration page appears.

- Step 4** Set the primary DMM as the cluster master:
  - a. Choose **Set as Master** in the Digital Media Suite Cluster Settings
  - b. (Optional) Type a name for the cluster in the **Name** field. By default, the system assigns “DMS Cluster” as the cluster name.
- Step 5** Configure the DMM failover settings:



**Note** The original primary DMM FQDN is automatically entered into the Virtual FQDN field. You cannot change the Virtual FQDN.

- a. In the **Primary FQDN** field, replace the FQDN shown with the alternate primary FQDN.
- b. Enter the secondary FQDN into the Secondary FQDN field.

- Step 6** Do one of the following to configure the DMM replication interface:
- If using a crossover cable between the devices, verify that **Crossover** is selected.
  - If using a switch between the devices, select Switched and enter the following information:

Primary IP	The IP address of the replication interface (GigabitEthernet 2) of the primary DMM.
Secondary IP	The IP address of the replication interface (GigabitEthernet 2) of the secondary DMM.
Subnet Mask	The subnet mask of the addresses.

- Step 7** Click **Save**.

#### What to do next

Next, see [Activate the Failover Cluster, page 2-9](#).



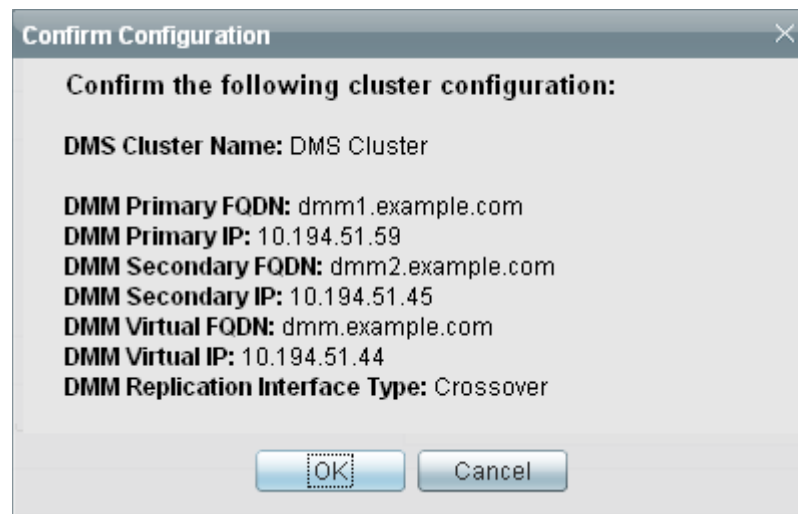
## Activate the Failover Cluster

When you activate the DMM cluster, the primary DMM configures and activates the other appliances in the failover cluster. Activation can take up to 20 minutes. After activation, the primary appliances are replicated to the secondary appliances. Replication process can take up to 15 hours. However, the primary appliances are available during replication and users can view and upload files as normal.

### Procedure

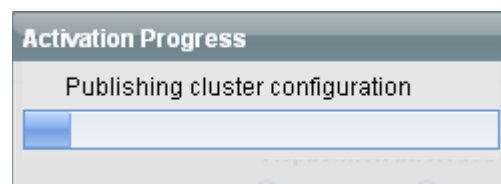
**Step 1** Click **Activate**.

A dialog displays a summary of the failover cluster settings.



**Step 2** Click **OK**.

The activation begins. A series of activation progress dialogs appear.



You cannot navigate away from this page by clicking in the interface while the activation is in progress. If you close the browser or use the browser navigation to move away from this page and then return, the Activate button appears to be enabled. However, if you attempt to activate again you will receive the message: **[FailoverConfig]: Another request already in progress.**

Activation can take up to 20 minutes. Once activation is complete, replication occurs. You can monitor replication progress on the Failover Status page. Replication can take up to 15 hours.

### What to do next

Monitor the replication progress and verify your configuration. See [Monitor Replication Status, page 2-10](#).

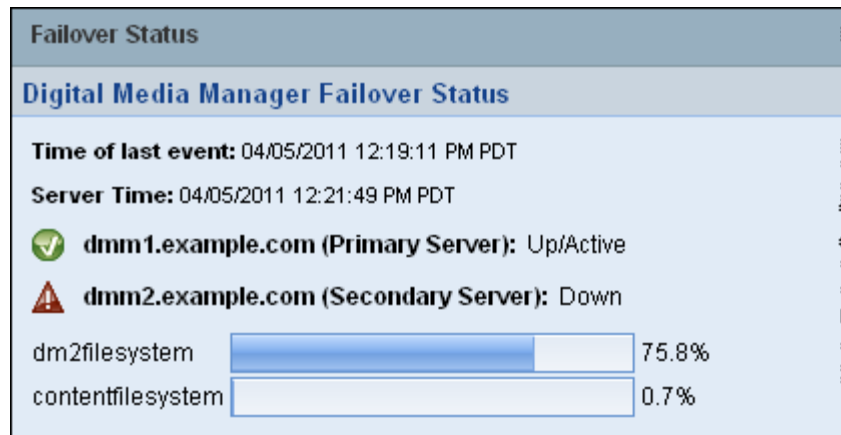
## Monitor Replication Status

Go to the Failover Status page (**Administration > Failover > Failover Status**).

While replication is in progress, the primary appliance will be in the Up/Active state and the secondary appliances in the Down state. This is normal. You will see status bars that show the percent complete of the replication.

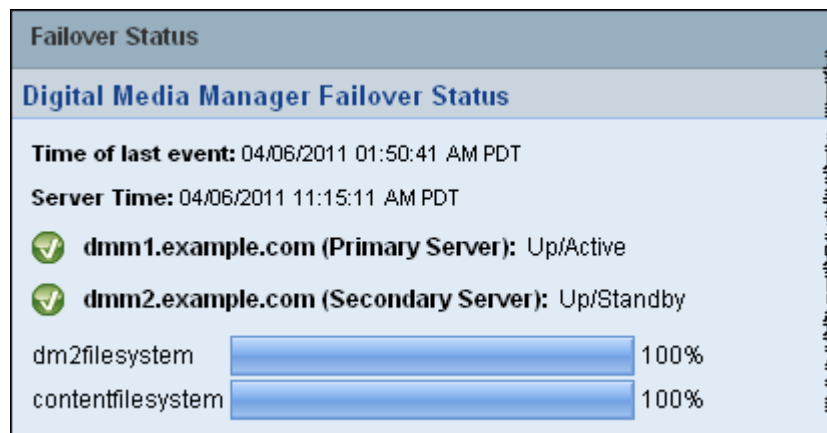

**Note**

This page will not contain any information until activation is complete and replication has started.



During replication, users can access and use the Cisco DMM GUI interface. However, performance will be degraded.

When replication is complete, you should see the primary appliances in the Up/Active state and the secondary appliances in the Up/Standby state.



If the secondary system is in the Down state when replication has completed, access the system AAI interface reboot the system. See the [Administration Guide for Cisco Digital Media Suite 5.2.x Appliances](#) on Cisco.com for information about using AAI.

# Back Up Your Cluster

You cannot restore backups taken from a standalone Cisco DMM appliance on a Cisco DMM appliance in a failover configuration. You should immediately back up the active appliance when activation and replication is complete.

See the [Backup and Restore Appliance Configurations](#) chapter in *Administration Guide for Cisco Digital Media Suite 5.2.x Appliances*.

