



# Maintaining Cisco Unity Failover

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## Overview: Failover

Automatic failover provides a simple redundancy that allows voice messaging functions to continue if the Cisco Unity server fails, or when you need to perform maintenance. To set up failover, you install and configure Cisco Unity on two servers, a primary server and a secondary server. Under normal circumstances, the primary server is active—Cisco Unity on this server answers phone calls and takes messages, sends message notifications, and turns message waiting indicators (MWIs) on and off. The secondary server is inactive—Cisco Unity is running, but it does not perform any voice messaging functions.

If the primary server fails or if the Cisco Unity service on the primary server stops, the secondary Cisco Unity server automatically becomes active and starts performing standard Cisco Unity operations. This shift from primary to secondary Cisco Unity servers is called failover. If you want to stop the primary Cisco Unity server for maintenance, you can also initiate failover manually.

You can set up failover so that, after failover has occurred, the secondary server tries daily to automatically fail back to the primary server. If failback succeeds (if Cisco Unity is running again on the primary server), the primary server becomes the active server again. Alternatively, you can set up failover so that failback only occurs manually.

Failover can be used in any supported Cisco Unity configuration.

Cisco Unity features work when the secondary server is taking calls the same way they do when the primary server is taking calls, except as noted here:

- For a few seconds after a failure occurs and before the secondary server becomes active, subscribers hear a fast-busy tone when they dial the internal phone number to access Cisco Unity.
- Reports can be generated only while the primary server is active.

For information on characteristics and limitations of failover on specific phone systems, see the Cisco Unity integration guide for your phone system.

Refer to the following sections in this chapter for additional information on failover:

- [Configuring Failover and Failback for the Cisco Unity System, page 7-3](#)—This section describes how to configure failover and failback.
- [Determining Which Server is Active, page 7-5](#)—This section describes how to determine whether the primary server or the secondary server is currently taking calls.
- [Manually Failing Over or Failing Back, page 7-6](#)—This section describes how to manually fail over to the secondary server when you want to perform maintenance on the primary server, and how to fail back to the primary server when it is ready to take calls again.
- [Disabling Automatic Failover and Failback, page 7-7](#)—This section describes how to disable automatic failover and failback for troubleshooting.
- [Data Not Automatically Replicated Between Servers, page 7-9](#)—This section lists the data that is not replicated between servers, and what you need to do to ensure that the two Cisco Unity servers function identically.
- [Accessing the Cisco Unity Administrator, Status Monitor, and ActiveAssistant on the Active Server, page 7-10](#)—This section explains how you access the Cisco Unity Administrator and ActiveAssistant when one of the servers is not available.
- [Using the Phone to Play and Record Messages in ViewMail for Outlook, page 7-10](#)— This section explains how to use the phone to play and record messages in ViewMail for Outlook when the secondary server is the active server.
- [Changing the IP Address on a Server, page 7-10](#)—This section describes what you need to do if you want to change the IP address on one of the servers.

# Configuring Failover and Failback for the Cisco Unity System

When you configure failover and failback, you can specify:

- The frequency with which the primary and secondary servers ping one another, and the number of missed pings before the secondary server starts taking calls. (Note, however, that if the primary server does not receive pings from the secondary server, the primary server does not attempt to fail over to the secondary. Likewise, if the secondary server is active, and it does not receive pings from the primary server, the secondary server does not attempt to fail back.)
- The frequency of file replication.
- Whether the secondary server automatically attempts to fail back to the primary server during a certain time period each day.

You only need to configure failover and failback on one server. Changes to failover configuration are automatically replicated to the other server.

Before you configure failover and failback, you must set up the Cisco Unity servers for failover. Refer to the “Setting Up Failover” section in the “Installing a Cisco Unity System” chapter in the *Cisco Unity Installation Guide*, available on Cisco.com at

[http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_unity/unity31/inst/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/unity31/inst/index.htm).

## To configure failover and failback

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- Step 1** On either server, on the Windows Start menu, click **Programs > Unity > Failover Monitor**.
- Step 2** Click **Configure**.
- Step 3** Change values as appropriate:

**Table 7-1 Failover Configuration Fields**

Field	Considerations
Ping Interval (ms)	<p>Specify the amount of time that elapses between pings. The default value is 1000 milliseconds (1 second).</p> <p>Increasing the interval between pings decreases network traffic. However, it also increases the amount of time before the secondary server begins answering calls if the primary server fails.</p>
Missed Pings Before Failover	<p>Specify the number of pings from the primary server that the secondary server must miss before it becomes the active server. The default is 30.</p> <p>Decreasing the number of missed pings before failover may cause a network glitch or abnormally high traffic on the network to trigger an unnecessary failover. Increasing the number increases the amount of time before the secondary server begins answering calls if the primary server fails.</p>
File Replication Interval (In Minutes)	<p>Specify the amount of time that elapses before the active server replicates changed files to the inactive server. The default is 10 minutes.</p> <p>Increasing the file replication interval causes the active server to replicate files to the inactive server less often, which decreases network traffic. However, if failover occurs, file replication must complete before the secondary server can begin taking calls. A shorter replication interval means failover is faster because most files, if not all, will already be up to date on the inactive server.</p>

**Table 7-1** Failover Configuration Fields (continued)

Field	Considerations
Failback Type	<ul style="list-style-type: none"> <li>Click Manual if you do not want the secondary server to automatically fail back to the primary server when the primary server becomes available. In this case, the secondary server fails back to the primary server only when you manually fail back by using the Failover Monitor.</li> <li>Click Scheduled and specify values for Scheduled Failback Start and Scheduled Failback End, if you do want the secondary server to fail back automatically.</li> </ul>
Scheduled Failback Start and Scheduled Failback End	Specify the time that the secondary server starts trying to fail back to the primary server and the time that the secondary server stops trying to fail back, if you selected Scheduled for Failback Type.

**Step 4** Click **OK** to close the Failover Configuration dialog box.

**Step 5** Close the Failover Monitor.

## Determining Which Server is Active

You can determine which server is active by viewing information in the Failover Monitor on either server. In the Services section, Local Status indicates the status of the current server, and Remote Status indicates the status of the other server. Possible values include:

**Table 7-2 Values of Local Status and Remote Status**

<b>Value of Local Status or Remote Status</b>	<b>Meaning</b>
Running; Active	The specified server is the active server.
Running; Inactive	The specified server is the inactive server.
Not running; Active	No server is currently active because a required service is not running, but the specified server will be the active server when you restart Cisco Unity.
Not running; Inactive	The specified server is the inactive server. However, if the active server fails, the specified server will not start taking calls because a required service is not running.  If you restart the server, the specified server will become the active server as long as you have not disabled automatic failover and failback, and the other server is not running.
Running Not running; Unknown	The failover service, AvCsNodeMgr, is starting on the specified server.
Other	Failover or failback is occurring.

## Manually Failing Over or Failing Back

You can manually fail over from the primary to the secondary server so that the secondary server will take calls while you perform maintenance on the primary server. When you have finished working on the primary server and you want it to start taking calls again, you can fail back from the secondary server to the primary server.

### To manually fail over to the secondary server

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- Step 1** On the primary Cisco Unity server, on the Windows Start menu, click **Programs > Unity > Failover Monitor**.
- Step 2** Click **Failover**.

- Step 3** Click **OK** to confirm that you want to fail over to the secondary server.
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#### To manually fail back to the primary server

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- Step 1** On the secondary Cisco Unity server, on the Windows Start menu, click **Programs > Unity > Failover Monitor**.
- Step 2** Click **Failback**.
- Step 3** Click **OK** to confirm that you want to fail back to the primary server.
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## Disabling Automatic Failover and Failback

When you disable automatic failover and failback, your only option for fail over or fail back is manually using the Failover Monitor. If you restart the failover servers while automatic failover and failback are disabled, both servers start as inactive, so Cisco Unity is not able to take calls. In addition, disabling automatic failover and failback also disables file replication (note however that it does not affect SQL replication).

Disable automatic failover and failback only during troubleshooting.

#### To disable automatic failover and failback

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- Step 1** On the primary Cisco Unity server, on the Windows Start menu, click **Programs > Unity > Failover Monitor**.
- Step 2** Click **Advanced**.
- Step 3** Check the **Disable Automatic Failover and Failback** checkbox.

**Caution**

If you disable automatic failover and failback, the primary server never fails over to the secondary server even if the primary server stops taking calls. In addition, the secondary server never fails back to the primary server even if you have specified a schedule for automatic failback.

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**To manually fail over to the secondary server while automatic failover and failback are disabled**

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- Step 1** On the primary Cisco Unity server, on the Windows Start menu, click **Programs > Unity > Failover Monitor**.
  - Step 2** Click **Force Inactive**.
  - Step 3** Click **OK** to confirm.
  - Step 4** On the secondary Cisco Unity server, on the Windows Start menu, click **Programs > Unity > Failover Monitor**.
  - Step 5** Click **Force Active**.
  - Step 6** Click **OK** to confirm.
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**To manually fail back to the primary server while automatic failover and failback are disabled**

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- Step 1** On the secondary Cisco Unity server, on the Windows Start menu, click **Programs > Unity > Failover Monitor**.
  - Step 2** Click **Force Inactive**.
  - Step 3** Click **OK** to confirm.
  - Step 4** On the primary Cisco Unity server, on the Windows Start menu, click **Programs > Unity > Failover Monitor**.
  - Step 5** Click **Force Active**.
  - Step 6** Click **OK** to confirm.
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# Data Not Automatically Replicated Between Servers

On a failover system, most changes that you make to Cisco Unity data are automatically replicated from the active server to the inactive server, regardless of which server is active. However, not all changes to Cisco Unity data are automatically replicated. Some changes must be manually entered on both servers, and some changes require that you restart the inactive server.

You must manually enter these settings on both servers:

- Settings on pages in the System section of the Cisco Unity Administrator
- Manual changes to the registry

In addition, if you change call routing rules or restriction tables, you need to verify that replication has occurred and then restart the inactive server.

## To change call routing rules or restriction rules on a failover system

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**Step 1** On the active server, change call routing rules or restriction tables as appropriate.

**Step 2** If you changed call routing rules, verify that the following file has the same date, time, and size on both servers:

CommServer\Support\Routing.rul

If the information is not the same, file replication has not finished. Continue checking until the date, time, and size match. Remember to refresh the view in Windows Explorer.

**Step 3** If you changed restriction tables, verify that the following file has the same date, time, and size on both servers:

CommServer\Support\Rejection.rul

If the information is not the same, file replication has not finished. Continue checking until the date, time, and size match. Remember to refresh the view in Windows Explorer.

**Step 4** Restart the inactive server.

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## Accessing the Cisco Unity Administrator, Status Monitor, and ActiveAssistant on the Active Server

You can use the Cisco Unity Administrator, Status Monitor, and ActiveAssistant to enter or change data on the active server, whether it is the primary or the secondary server, by specifying the appropriate URL on the active server. However, if you access the Cisco Unity Administrator or the ActiveAssistant on the inactive server, you are not allowed to save changes.

## Using the Phone to Play and Record Messages in ViewMail for Outlook

You can still use the phone to play and record messages in ViewMail for Outlook when the secondary server is the active server. On each client machine, you need to change the name of the server that ViewMail accesses and, when the primary server becomes the active server, you need to change the name back.

**To change the name of the server that ViewMail for Outlook accesses for playing and recording messages over the phone**


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- Step 1** On each client machine, on the Outlook menu, click **Tools > ViewMail Options**.
  - Step 2** On the General tab, in the Phone Record and Playback section, change the value of Server to the name of the active server.
  - Step 3** Click **OK**.
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## Changing the IP Address on a Server

If you want to change the IP address on one of the Cisco Unity servers, do the following procedure.

### To change the IP address on one of the failover servers

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- Step 1** Change the IP address. For more information, see Windows online Help.
- Step 2** On the server whose IP address did not change, in Windows Explorer, browse to the directory where Cisco Unity is installed (the default directory is C:\CommServer), and run **FailoverConfig.exe**.
- Step 3** Click **Next**.
- Step 4** Do one of the following:
- Click **Browse**, select the name of the other server, and click **OK**. The new IP address for the other server is filled in automatically.
  - Enter the name of the other server, and click **Find**. The new IP address for the other server is filled in automatically.
- Step 5** Click **Next**.
- Step 6** If you want to change the account that owns the failover service, click **Browse**, and double-click the name of the account. Otherwise, skip to [Step 7](#).
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**Caution** You must specify the account that owns the failover service on the other server.
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- Step 7** Enter the password for the account.
- Step 8** Click **Next**.
- Step 9** Click **Configure**.
- The Configure Cisco Unity Failover wizard verifies settings and then configures failover on the secondary server. If the wizard does not finish the configuration successfully, an error message appears and explains why the wizard failed. Correct the problem and click **Configure**.
- Step 10** Click **Finish**.
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