Cluster Resource Monitor

Installation and Setup Guide

Perceptive Content Version: 7.1.x

Written by: Product Knowledge, R&D
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perceptivesoftware
from Lexmark

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Perceptive Content Server Cluster Resource Monitor

Perceptive Content Server Cluster Resource Monitor improves the reliability of Perceptive Content Server by proactively detecting and reporting unresponsive (hung) worker threads. When an unresponsive thread is detected, Cluster Resource Monitor determines, based on how it is configured, if the Microsoft Cluster Server should try to restart the Perceptive Content Server or failover the Perceptive Content Server to another node in the cluster. When used with an active-active server system, this minimizes performance impacts and allows potential server issues to be quickly addressed before they become severe.

Requirements for Perceptive Content Server Cluster Resource Monitor

You must install Microsoft Cluster Server before installing Cluster Resource Monitor. The Perceptive Content Server must be installed and running.

Perceptive Content Server Cluster Resource Monitor installation process

During this installation, you perform the following procedures:

- Download the Cluster Resource Monitor installation file.
- Install Cluster Resource Monitor.
- Configure monitoring for the service instance.

Download the Cluster Resource Monitor file

1. Go to the Perceptive Software website at www.perceptivesoftware.com and log in to the Customer Portal.
2. In the **Product Downloads** page, search for all downloadable items for the specific product and version you want to use. These files may include a product installer, product documentation, or set of supporting files.
3. Download the relevant files to a temporary directory on your computer.

Obtain the license files

To obtain the hardware information for the Perceptive Content Server, you must be the admin user on Windows.

1. Generate a system fingerprint using the following substeps.
    1. Click **Start**, click **All Programs > Perceptive Content > Perceptive Content Management Console**.
    2. In the **Login** page, click **License Manager**.
    3. In the **License Management** dialog box, select **Save system fingerprint** and click **OK**.
    4. In the **Save As** dialog box, enter a name for the file and then navigate to the location where you want to save the report. Click **Save**.
2. Contact your Perceptive Software representative for instructions on where to send the system fingerprint file to obtain your license. The system fingerprint file has a SYSFP extension.
3. When you receive the license files, store the license files in a temporary directory on the Perceptive Content Server computer.

Install Perceptive Content product licenses

Before entering your licenses, you must have installed the Perceptive Content Server and at least one Perceptive Content Client. You must have Service Administrator privileges to install Perceptive Content licenses. The Perceptive Content Client must be available on a Windows machine in order to install the Perceptive Content product licenses.

1. When you receive the license files from your Perceptive Software representative, copy them to a temporary folder where you can access them with a Perceptive Content Client.
2. Upload licenses, as explained in the following substeps:
    1. Click **Start**, click **All Programs** > **Perceptive Content**.
    2. In the login page, click **License Manager.**
    3. In the **License Management** dialog box, select **Upload Licenses** and click **OK**.
    4. Navigate to the folder where you stored the Perceptive Content license files, select the LIC files to upload, and click **Open**.
    5. Enter the **User Name**, **Password**, and **Server Location** and click **OK**.
    6. Optional. The **License Upload** dialog box lets you view the type name, actual license code, and status of each license upload. To display detailed information for a specific license, select the appropriate row.
3. Click **OK**.

Run the Cluster Resource Monitor Service installation

Use the following procedures to run the Cluster Server plug-in installation wizard. Perform this procedure for all of the nodes in the cluster.

We recommend that you install both the resource and extension. However, if you want to administer the cluster remotely, you only need to install the extension DLL.

1. Double-click the Perceptive Content Server Cluster Resource Monitor **file** you downloaded.
2. In the **Welcome to the ImageNow Installation Wizard** page, click **Next**.
3. On the **License Agreement** page, review the terms in the License Agreement, scroll to the end of the agreement, click **I accept the terms in the license agreement**, and then click **Next**.
4. On the **Setup Type** page, choose **Complete** to install the resource and extension, or choose **Custom** to install the extension only. Click **Next**.
5. On the **Ready to Install the Program** page, click **Install**.
6. On the **Installation Wizard Completed** page, click **Finish**.
7. Optional. If the **Show the Windows Installer log** check box appears, you can select it to view the log file.

Cluster Resource Monitor Configuration

After you install Cluster Resource Monitor, you must configure the Perceptive Content Server Monitor resources and local agents. Configure the Perceptive Content Server resources first, and then configure any additional local resources.

To configure Cluster Resource Monitor, complete the following procedures in order:

- Configure a generic service
- Add a new resource
- Attach the extension DLL to the resource type
- Add the new resource to an application

Configure a generic service

1. Stop all of the Perceptive Content Server nodes in the cluster.
2. Open the **Microsoft Failover Cluster Manager**.
3. Configure a generic service.
4. Add a new resource in the **Failover Cluster Manager** window, in the left pane, right-click the cluster, and then click **Properties**.
5. In the **<*Cluster name*> Properties** dialog box, on the **General** tab, type a name in the **Name** field.
6. On the **Resource Types** tab, click **Add**.
7. In the **Add resource type** dialog box, perform the following substeps.
    1. In the **Resource DLL path and file name** field, type the path for the resource DLL file or browse to the installation location. The default DLL file installation location is [*drive*:]\Windows\Cluster\inserviceresource.dll during installation.
    2. In the **Resource type name** field, type `ImageNow Service`.

        Note You must type this exactly as stated for the Cluster Resource Manager to work properly.
    3. In the **Resource type display name** field, type a display name for the resource and click **OK**.
8. In the **<*Cluster name*> Properties** dialog box, click **Apply**.

    Note If **(Resource Type Unavailable)** appears in the **Resource type display name** field, verify **ImageNow Service** appears in the Resource **type name** field.

Attach the extension DLL to the resource type

1. In the **Properties** dialog box, on the **Resource Types** tab, select the **ImageNow Service** resource and click **Properties**.
2. In the **ImageNow Service Properties** dialog box, in the **Health check intervals** field, set the following health check intervals.
    - **Basic check time period (mm:ss).**
    - **Thorough check time period (mm:ss).**

    Note The basic health check interval verifies whether the service is running, and the thorough health uses the setting for the specific ImageNow Service properties.

3. Under **Extensions**, click **Add**, and then open the extension DLL. The default installation path is %WINDIR%\Cluster\extensions\INServiceAdminExtension.dll. Click **Apply** and then click **OK**.

4. In the **ImageNow Service Properties** dialog box, click **OK**.

Add the new resource to an application

1. In the **Failover Cluster Manager** window, in the left pane, right-click the service, point to **Add a resource**, click **Add [*resource type display name*]**, and then click **Add ImageNow Service**.

   Note The **[*resource type display name*]** is the name you entered in the **Resource type display name** field during the **Add a new resource** procedure.

2. Left-click the service to display the resource. Then right-click the resource and click **Properties**.

3. On the **General** tab, in the **Resource Name** field, give the instance a unique name.

4. On the **Dependencies** tab, specify the resources that must be brought online before this resource. If this is the ImageNow Server resource, click and select the **Name** resource. Any other ImageNow service should select the ImageNow Server resource.

5. On the **Policies** tab, select **If resource fails, attempt restart on current node**, then set the time period for the restarts and the maximum restarts for the specified time period.

6. Select **If restart is unsuccessful**, **fail over all resources in this service or application** check box.

7. Select **If all the restart attempts fail, begin restarting again after the specified period**, and then set the time period in the list box.

8. In the **Pending timeout** list, set the time.

9. On the **Advanced Policies** tab, for both Basic and Thorough resource health check intervals, select **Use this time period** and then set the time period in the list box.

10. Optional. Select the **Run this resource in a separate Resource Monitor** check box.

11. On the **ImageNow Properties** tab, complete the following substeps.

    1. In the **Service name** list, select a service.

    2. In the **Service communications time-out** list, set the time.

    3. In the **Idle data time-out** list, set the time.

    4. In the **Maximum number of unresponsive threads** list, set the number of unresponsive threads.

12. To save the settings, click **OK**.

Cluster Resource Monitor Logging

The log files for Cluster Resource Monitor contain information related to the ImageNow Service resource and the cluster management system. To retrieve the Cluster Resource Monitor log file, run the following command from any node in the cluster.

```
cluster log /g /copy:<dir>
```

Where `<dir>` is the directory into which you want to copy the log files. After you run this command, you can find a log file for each node in the cluster.

Another option, `/span:<min>`, limits the results to the supplied number of minutes. Occasionally, using `/span:<min>` does not limit the results and returns the entire log file, even though activity occurred within the given timeframe.

The following lines show examples of Cluster Resource Monitor messages found in the log file.

```
[RES] ImageNow Service <New ImageNow Service>: INServiceResource_Close
[RES] ImageNow Service <New ImageNow Service>: Close request
```

Where ([RES]) contains the name given when the resource is created in Cluster Resource Monitor and the name of the resource that was added to the General tab in the resource properties appears inside of the <> (brackets).