How to load balance printers

Load balancing is used to distribute the workload between two or more identical printers.

The granularity of the workload distribution is per document. That is, a single document will be distributed to one printer or another, but will not be split up.

Using APM, a printer can be configured to offload incoming documents to another printer whenever it is too busy.

APM Load Balancing distributes documents based on a user specified threshold. For example, a printer might be configured to load balance to a second printer when the first printer had 3 or more documents already waiting to be printed.

APM load balancing can also be configured redirect documents to a second printer only when the first printer is printing a large document that will take a long time.

APM allows distribution between several print servers, whereas Windows NT™ print pooling only works between printers on the same print server.

Using APM Load Balancing

1. Select a printer from the PrintFolders View.

2. Click the **Printer** menu, or right-click the selected printer.

3. Select the **Automated Printer Management (APM)…** menu item.

4. Click [Next] on the **Introduction** page.

5. From the **When to enable** page, select **Enable APM for load balancing**, and then click [Next].

6. From the **Load Balancing Options** page, select the load balancing options that best suites your needs, and then click [Next].

7. From the **Select Destination Printer(s)** page, click [Add].

8. From the **Browse for Printer** dialog box, select a destination printer. When the load balancing conditions have been met, new documents will be redirected to the printer selected in this dialog box.

9. NOTE: Although you can select multiple printers from the **Browse for Printer** dialog box, load balancing works best if each printer has only one destination printer. If multiple destination printers are selected, then load-balanced documents will be printed on each destination printer causing several copies to be printed. This has the same effect as print broadcasting.

10. Follow the remaining directions displayed by the **Automated Print Management Wizard**.

Using Printer Pooling

APM load balancing may be used in conjunction with Windows NT™ print pooling.

How to redirect documents when a printer goes down, or has an error

When a printer goes down, or has an error that prevents it from printing any further, APM can automatically move existing documents in the queue to a backup printer. APM will also redirect any new documents to the backup printer. The owners of the print job can optionally be notified that their document was printed on an alternate printer.

Using APM to redirect documents from non-working printers, to working printers.

1. Select a printer from the PrintFolders View.

2. Click the **Printer** menu, or right-click the selected printer.

3. Select the **Automated Printer Management (APM)…** menu item.

4. Click [Next] on the **Introduction** page.

5. From the **When to enable** page, select **Enable APM only when the printer is down or has an error**, and then click [Next].

6. Click the **Apply an action to all documents** checkbox, click **Move to another printer**, and then click [Next].

7. From the **Select Destination Printer(s)** page, click [Add].

8. From the **Browse for Printer** dialog box, select one destination printer. When the source printer goes down, all documents will be redirected to the printer you select from this **Browse for Printer** dialog box. Click [Next].

9. NOTE: Although you can select multiple printers from the **Browse for Printer** dialog box, this option works best if the source printer has only one destination (backup) printer. If multiple destination printers are selected, then documents will be redirected to each destination printer causing several copies to be printed. This has the same effect as print broadcasting.

10. From the **Notifications and Alerts** page, select the appropriate notification options.

11. Follow the remaining directions displayed by the **Automated Print Management Wizard**.

Automated Printer Management (APM) Wizard

Introduction

Automated Printer Management (APM) automates tasks that would normally require human intervention. Tasks that can be automated include:

- Rerouting documents from busy printers to less busy printers (load balancing)

- Rerouting documents from printers that are down to working printers.

- Being notified when a printer goes down or has an error.

- Making copies of everything printed to one printer, on another printer.

- Print Broadcasting

- And more…

To configure a printer to use APM

1. Select a printer from the PrintFolders View.

2. Click the **Printer** menu, or right-click the selected printer.

3. Select the **Automated Printer Management (APM)…** menu item.

4. Follow the remaining directions displayed by the **Automated Print Management Wizard**.

When to enable

- Disable APM

  If this option is selected, APM will not be active for the specified printer.

- Enable APM for all new jobs

  If this option is selected, APM will act on all documents in the queue (waiting to be printed). Furthermore, APM will act on all incoming documents, and will continue to do so until this option has been disabled.

  The action that is performed on each document is specified by your selection in the **Select APM Action** dialog box.

- Enable APM only when the printer is down or has an error

  This feature works like the **Enable APM for all new jobs** feature, with the following exception.

  If this option is selected, APM will only act on documents after the printer goes down or has an error. Error conditions include:

1. General Error

2. Paper Jam

3. Paper Out

4. General Paper Problem

5. Not Available

6. No Toner

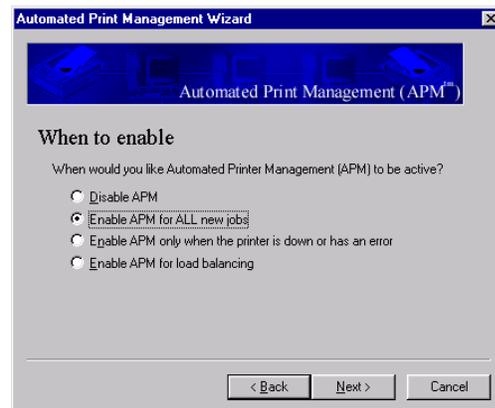7. User Intervention Required

8. Out of Memory

9. Door Open

   Note: APM depends on the notification sent by the printers in order to detect error conditions. Some printer manufactures do not report all error conditions; therefore, APM may not work correctly with these printers.

- Enable APM for load balancing

  If this option is selected, APM will only act on documents after the criteria have been met, as specified in the **Load Balancing Options** dialog box.

  In order to see the **Load Balancing Options** dialog box, you must first select this option.

  See: How to load balance printers

Select APM Action

The APM Action dialog box allows you to specify which action will be applied to each document.

- Move to another printer

  This causes documents to be rerouted to another printer, as specified in the **Select Destination Printer(s)** dialog box. The document then be printed on the selected destination printer, but will **not** be on the APM source printer.
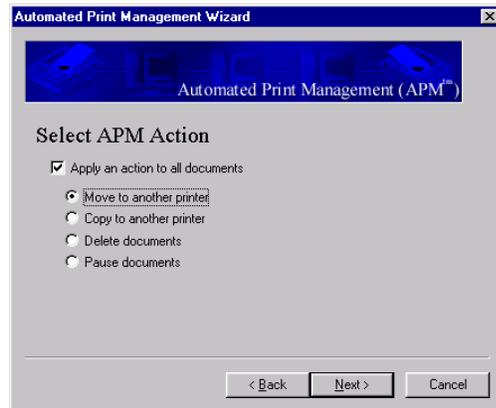
- Copy to another printer

  This causes documents to be copied another printer, as specified in the **Destination Printer(s)** dialog box. The document will then be printed on the selected destination printer, as well as the APM source printer. Consequently, more than one copy of the document will be printed.

- Delete documents

  This causes documents to be deleted before they are printed.

- Pause documents

  This causes documents to be paused before they are printed. Documents must then be un-paused manually.
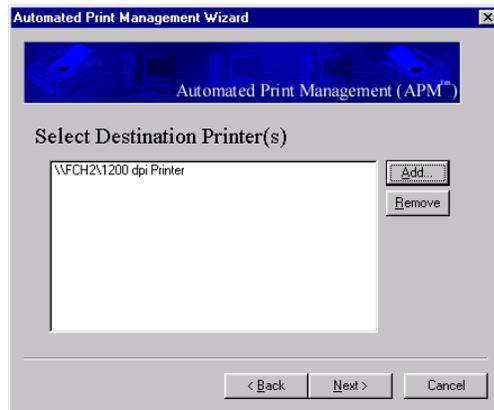
Select Destination Printer(s)

The **Select Destination Printer(s)** dialog box allows you to specify destination printers. Documents will be copied, or moved to the destination printers you select

Add printers by clicking the [Add] button.

Remove printers by selecting the printer the list, then clicking the [Remove] button.

NOTE: If multiple destination printers are selected, then documents will be copied or moved to each destination printer causing several copies to be printed. This has the same effect as print broadcasting.
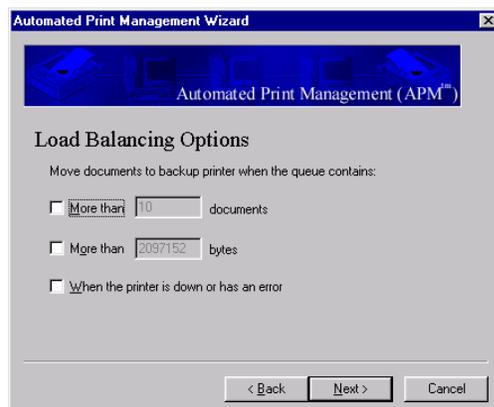
Load Balancing Options

The **Load Balancing Options** dialog box allows you to specify the criteria that APM will use for load balancing.

See: How to load balance printers

- More than _____ documents

  This option tells APM to reroute incoming documents only if the queue has more than the number of documents specified. Documents will be rerouted to the destination printer specified on the **Select Destination Printer(s)** page.

  For example, if **10** were entered into this field, APM would allow this printer to have up to 10 documents in the queue. When the 11th document is sent to this printer, APM would reroute it to the destination printer.

  More than _____ bytes

  This option tells APM to reroute incoming documents only if the combined total bytes of all the documents in the queue, are more than the bytes specified. Documents will be rerouted to the destination printer specified on the **Select Destination Printer(s)** page.

  For example, if **10000** were entered into this field, APM would allow this printer to have any number of documents in the queue, as long as the total bytes in the queue did not exceed 10K. Whenever the queue has enough documents to total 10K or more, any new document sent to this printer, will be rerouted to the destination printer.

- When the printer is down or has an error.

  If this option is selected, APM will reroute documents after the printer goes down or has an error. This is in addition to the other load balancing options displayed in this dialog box.

Notifications and Alerts

If APM reroutes a users document, APM can be configured to notify the user which printer the document has been rerouted to. This notification can be turned on for any action that APM takes, whether it is moving a document, pausing a document, or just notifying the user that the printer is down.

Confirmation

The confirmation dialog box explains that actions APM will be taking when the [Finish] button is clicked.