XEROX®

FreeFlow™

Version 5.0, July 2006

FreeFlow™
VI PDF Originator
User's Guide

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Using VI PDF Originator

This User's Guide is designed to provide information about how to use a properly installed version of the FreeFlow VI PDF Originator (VIPO). For information about installing or updating the software refer to the *Variable Information Suite Installation Guide* (VISInstallation.pdf) provided as a part of the FreeFlow VI Suite Documentation CD included in the VI Suite Ship kit.

"Using VI PDF Originator" describes the VI PDF Originator, and explains how to use VIPO features, menus, and dialogs. These topics are covered:

- VI PDF Originator
- The VIPO Server and Client
- Using the VIPO Local Server
  - File menu options
  - Accounting file format
  - Job Selection menu options
  - Help menu options
- Using the VIPO Job Submission Client
  - Window elements
  - Job creation area field descriptions
  - Specifying PDF output file names
  - Specifying an index file
  - Template field descriptions
- Using the VIPO Watched Folders Client
  - Window elements
  - Adding watched folders
  - File ready check
- Bulk Processing

NOTE — SOFTWARE SUPPORT

The VI PDF Originator supports Acrobat Distiller 5.x, 6.x and Acrobat Distiller Professional 7.0. The VI PDF Originator does not support Acrobat Elements 7.0

Beginning with version 4.0, VIPO is not supported on Solaris systems.

NOTE

This book, which is part of the FreeFlow VI Suite Documentation, describes the VI PDF Originator and provides information on using VI PDF Originator and its features. For instructions on installing VI PDF Originator or any other VI Suite information, refer to the appropriate book, which can be located from the FreeFlow VI Suite Documentation "Master Table of Contents."

VI PDF Originator

VI PDF Originator is a client/server application that allows you to generate Adobe PDF documents from VIPP-based variable data applications and forward them to other processes within your environment. VIPO extends the VIPP workflow into electronic distribution and archive by providing the ability to generate Adobe PDF files from the same data files sent to a VIPP-enabled print device. The PDF files, along with information from the data record that produced them, can then be passed to a user defined process using the VIPO Dispatch module. The files can be integrated into processes within your environment, which can include E-mail servers or archive systems. In addition, the VIPO Server can forward the data submission file to an identified VIPP-enabled print device for hard copy output.

A standard VIPP application that is submitted to a VIPP-enabled print device can be submitted directly to the VI PDF Originator server. No changes in the data or VIPP resources are required. VIPP resources are installed on the VIPO Server just as they are installed on a printer disk. VIPO uses the same resource management structures.

VIPO operates like any other VIPP-enabled printer. A job submitted to the print device using lpr can use the VIPO lpr client to submit to VIPO. In addition, VIPO provides three other job submission clients:

- Watched Folder client
- Web submission client
- Job Submission client

A VIPP job processed by the VIPO Server results in the generation of an Adobe PDF file. This PDF file will be output to a named directory on the server. A print path can also be specified. The data file processed by VIPO will be forwarded to the print device after being processed by VIPO. This allows both electronic and hard copy printing from a single job submission.

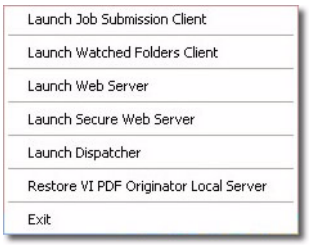
Any job that uses the VIPP BOOKMARK command can be further enhanced to create individual sets of PDF files. For example, a statement run containing 10,000 customer records can be split into 10,000 individual variable length customer PDF statements. These PDF files, along with additional information contained in the bookmark, can be dispatched to a "user defined" process that may include, but is not limited to, web presentment, archive or viewing systems, all without making any changes to the data or your workflow.

PDF Interactive features such as PDF Bookmarks, PDF notes, or URL's, can be added to the PDF output file using the VIPP SETPIF command. In the statement example above several additional PDF bookmarks can be set to guide the user to different sections within the statement. PDF notes can be placed in the PDF file and a URL can be inserted into the PDF that can link the user to additional web sites.

The VIPO Server and Client

A VIPO Server must be running and accessible by the Job Submission Client in order for VIPP jobs to be processed via VIPO. Each VIPO Server automatically starts when the workstation on which it is installed boots, and it subsequently runs as a background process.

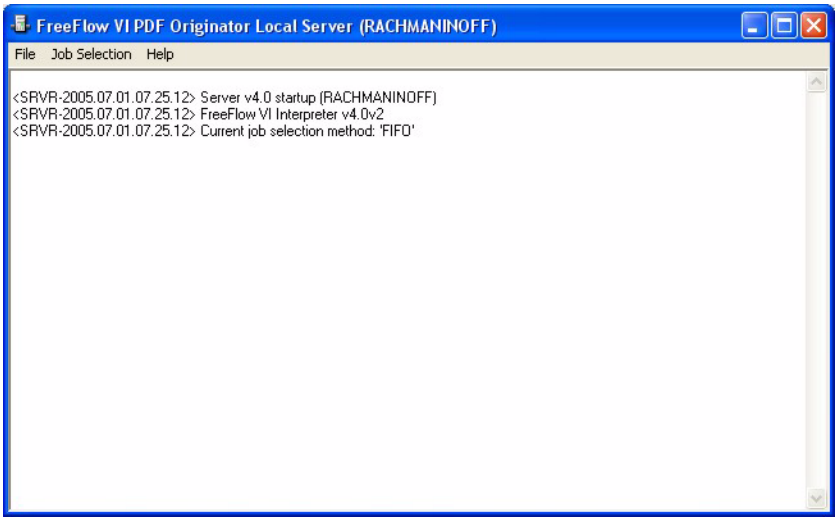
You can tell a VIPO Server is running by the presence of its icon in the Windows task bar (by default, this is in the lower-right corner of the desktop). Right-click the VIPO Local Server icon to display these options:



- **Launch Job Submission Client** — Select this option to open the VI PDF Originator Job Submission Client window.
- **Launch Watched Folders Client** — Select this option to open the VIPO Watched Folders Client window. For more information on the VIPO Watched Folders feature, see “Using the VIPO Watched Folders Client.”
- **Launch Web Server** — Select this option to open the VI PDF Originator Web Server Window. For information on the VIPO Web Server, see “Using VIPO Web.”
- **Launch Secure Web Server** — Select this option to open the VI PDF Originator Secure Web Server Window. For information on the VIPO Secure Web Server, see “Using VIPO Web.”
- **Launch Dispatcher** — Select this option to open the VI PDF Originator Dispatch Window. For information on the VIPO Dispatch option, see “Using VIPO Dispatch.”
- **Restore VI PDF Originator Local Server** — Select this option to maximize the VI PDF Originator Local Server window, allowing access to more Server options.
- **Exit** — Select this option to exit the Server. If you exit the Server, VIPO jobs will not be processed by that workstation until the Server is restarted. You can restart the Server from the workstation's Start menu (**Start > Programs > VI PDF Originator > Start VI PDF Originator Server**).

Using the VIPO Local Server

The VI PDF Originator Local Server window provides access to the File, Job Selection, and Help drop-down menu options.



You can maximize the VIPO Local Server window in one of two ways:

- By double-clicking its task bar icon
- By right-clicking its task bar icon, then choosing **Restore VI PDF Originator Local Server** from the menu

Clicking the **X** button in the upper right corner of the window does not cause the Server to exit; instead, it minimizes the Server (that is, it returns to the task bar icon). Jobs will still be processed.

To exit the VIPO Local Server, either select **Exit** from the File drop-down menu or select **Exit** from the task-bar icon's right-click menu.

File menu options

These options are available from the File drop-down menu:

- Hide Server — Returns the VIPO Local Server window to a task-bar icon.
- Pause Server — Pauses/unpauses the Server. You must pause the Server before dumping an accounting file.
- Save Logfile — Used when reporting software problems.
- Clear Logfile — Used when diagnosing software problems.
- Dump Accounting File — Saves accounting information to a file, then clears. See "Accounting file format" for a list of fields included in accounting files.
- Show Billing Meters — Tracks the number of pages distilled, pages split, and PDF files generated on the Server.
- Exit — Exits the Server; jobs will not be processed.

Accounting file format

The accounting file is a field delimited format file. There is no header on the accounting file. Each record in the accounting file is delimited with commas. These fields are included in each record:

- VIPO Server Name
- User Name
- Input Job Name
- Distill Start Date
- Distill End Date
- Distill Start Time
- Distill End Time
- Distill CPU Time Used — in seconds (this field is not yet available)
- Distill Result — "Completed" or "Failed"
- Distill Message — empty if Result is "Completed," otherwise within double quotes
- Number Distill Pages
- Distill PDF Name
- Split Start Date
- Split End Date
- Split Start Time
- Split End Time
- Split CPU Time used — in seconds (this field is not yet available)
- Split Result — "Completed" or "Failed"
- Split Message — empty if result is "Completed," otherwise within double quotes
- Number Split Pages
- Number Split Files

The following is an example accounting file record:

```
MYSERVER,John_Doe,bigjob.ps,2001-09-18,2001-09-18,16:35:39,16:36:19,0,
  Completed,,1060,bigjob.pdf,2001-09-18,2001-09-18,16:36:20,16:37:05,0,
  Completed,,1060,1060
```

In addition to the standard Server Accounting file created when you select **Dump Accounting File** from the File menu on the VIPO Local Server window, a corresponding XML-formatted Accounting file is also created automatically. Both accounting files have the same filename except for the file extension (*.*acct* and *.*xml*).

The following is an example of an XML-formatted Accounting file.

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
 <XVTPAF Version="0.1">
  <XVTPDOC>
    <XVTP_Server_Name>XRX-MAVILES-W2K</XVTP_Server_Name>
    <User_Name>maviles</User_Name>
    <Input_Job_Name>credit.vpc</Input_Job_Name>
    <Distill_Start_Date>2002-07-16</Distill_Start_Date>
    <Distill_End_Date>2002-07-16</Distill_End_Date>
    <Distill_Start_Time>01:14:45</Distill_Start_Time>
    <Distill_End_Time>01:14:53</Distill_End_Time>
    <Distill_CPU_Time_Used>0</Distill_CPU_Time_Used>
    <Distill_Result>Completed</Distill_Result>
    <Distill_Message />
    <Number_Distill_Pages>14</Number_Distill_Pages>
    <Distill_PDF_Name>credit.pdf</Distill_PDF_Name>
    <Split_Start_Date>2002-07-16</Split_Start_Date>
    <Split_End_Date>2002-07-16</Split_End_Date>
    <Split_Start_Time>01:14:53</Split_Start_Time>
    <Split_End_Time>01:14:53</Split_End_Time>
    <Split_CPU_Time_Used>0</Split_CPU_Time_Used>
    <Split_Result>Completed</Split_Result>
    <Split_Message />
    <Number_Split_Pages>14</Number_Split_Pages>
    <Number_Split_Files>8</Number_Split_Files>
  </XVTPDOC>
 </XVTPAF>
```

Job Selection menu options

Select one of these options from the Job Selection drop-down menu to determine the order in which the VIPO Server processes jobs:

- First In First Out (FIFO)
- Shortest Job First (SJF)
- Longest Job First (LJF)

The length of a job is based on the size of the VIPP file submitted for processing.

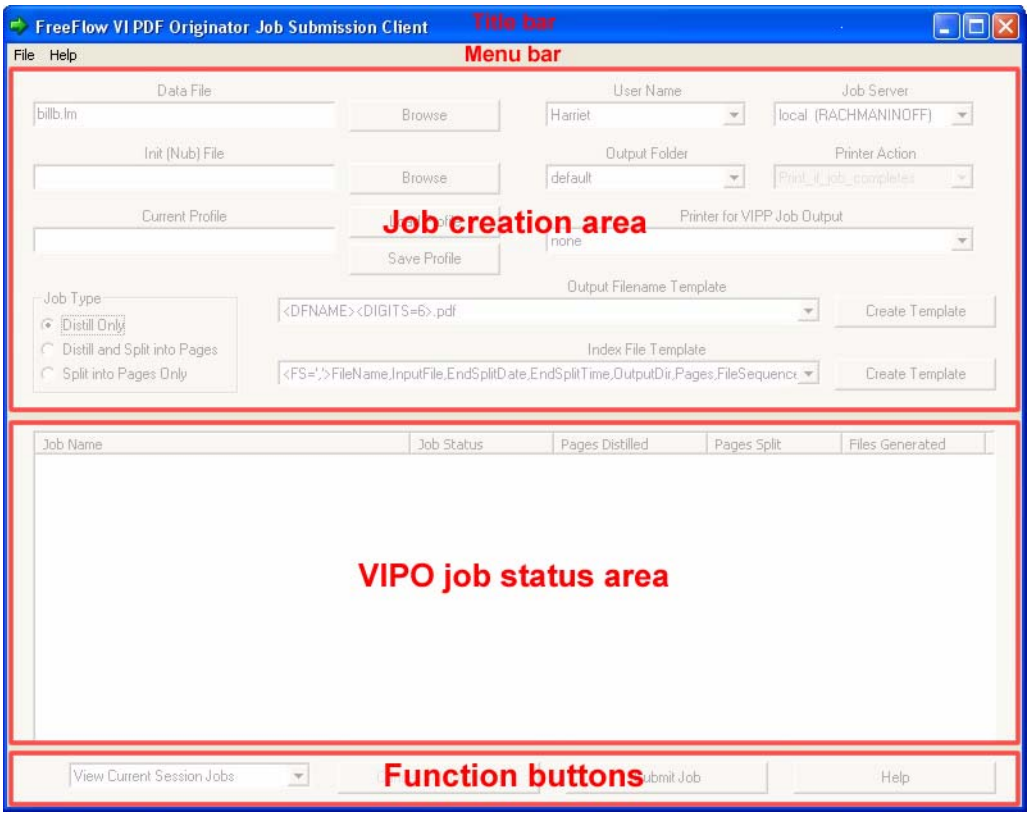
Help menu options

These options are available from the Help drop-down menu:

- VIPO Help — Provides access to the online help facility.
- About — Displays the VIPO Server version information.

Using the VIPO Job Submission Client

You can use the VI PDF Originator Job Submission Client window, shown below, to select and configure a job for submission.



Window elements

The VI PDF Originator Job Submission Client window consists of these elements:

Title bar

Displays the product name.

Menu bar

Provides access to the File and Help menus.

The File drop-down menu provides access to the Exit option. Select this option to close the Job Submission Client window. Closing this window while a job is in progress *will not* cancel the job; it will continue to process to completion unless explicitly canceled.

The Help drop-down menu provides access to the About option, which displays the version information of the VIPO Job Submission Client.

Job creation area

Contains the fields necessary to select and configure a job for submission. See "Job creation area field descriptions" for a description of each of the fields.

VIPO job status area

Provides the status of each job submitted, including the number of pages distilled and/or split, and the number of files split.

When a job submission has been successfully completed, the PDF documents generated can be found and viewed using Acrobat Reader by selecting the job folder entry in the Job Status list and double-clicking to invoke a File Selection dialog. If Acrobat Reader is not present or the file cannot be opened, an error message will be displayed.

NOTE

Acrobat Reader is not supplied with VIPO. It can be obtained from the Adobe website at *www.adobe.com*.

Function buttons

These buttons appear at the bottom of the VIPO Job Submission Client window:

- View Current Session Jobs/View All Pending Jobs/View All Jobs — Choose to view:
  - — Current session jobs that are submitted only within the current session
  - — All pending jobs from the currently selected user's folder that have not yet been processed and completed, or whose Cancel requests have not yet been acknowledged by the Server, whether the jobs were submitted before or after the current session began
  - — All jobs from the currently selected user's folder, whether they were submitted before or after the current session began
- Cancel Selected Job — Click this button to cancel your job during processing. Select your job in the VIPO job status area before clicking this button. Depending on the job processing status at the time of cancellation, the job may run to completion before the cancellation request is initiated by VIPO.

  Multiple jobs can be selected and a request to cancel them as a group can be submitted. By default, you can cancel only the jobs from your own folders and from the folders of the "default_user." Use one of these valid settings in the VIPO Configuration file (*xvtp.ini*) to change the default:

  - — ## User may cancel jobs ONLY from his own folders ##

    jsc_cancel_job_scope=1
  - — ## User may also cancel jobs from the folders of "default_user" ##

    jsc_cancel_job_scope=2
  - — ## User may also cancel jobs from any other users' folders ##

    jsc_cancel_job_scope=8

NOTE

Job cancellation requests are only submitted by the client; in order for jobs to be cancelled they must be processed by the VIPO Server. A cancellation request submitted by the client while the Server is not running, or is in a paused state, will not be processed until the Server is executing a VIPO job.

- Job Name and Job Status column headers — Left-click either of these headers to sort the list of jobs.
  - — Left-clicking **Job Name** sorts the job list by the job name or by the job date/time stamp, in ascending or descending order, one sorting type per mouse left-button click in the following sequence:
    - – Sort by Job Name, alphabetic ascending order (A to Z, from top)
    - – Sort by Job Name, alphabetic descending order (Z to A, from top)
    - – Sort by Date/Time stamp, ascending order (latest at the bottom)
    - – Sort by Date/Time stamp, descending order (latest at the top) (default)
  - — Left-clicking **Job Status** sorts the job list alphabetically based on the status string in ascending or descending order, one sorting type per mouse left-button click.
- Submit Job — Click this button to submit your job after completing the appropriate fields in the job creation area.
- Help — Click this button to access the VIPO online help facility.

Job creation area field descriptions

The following fields/buttons are located in the job creation area of the VIPO Job Submission Client window.

Data File

Enter the name of the data file, or use browse to locate the VIPP data file (or print file) to be submitted. This can be a VIPP line mode, database mode, native mode, or XML mode print file (.lm, .dbf, .nm, .xml); a VI Project Container (.vpc); or a PDF file with bookmarks.

Init (Nub) File

Enter the name of the init file to be used when processing the job. This file must be specified for each “raw” data file (one without a VIPP preamble such as STARTLM. For these jobs, the init (nub) file supplies the appropriate VIPP preamble.

Current Profile

Optional. Load or save a profile using the **Load Profile** or **Save Profile** buttons. Profiles are sets of previously used job submission options, which save you from re-entering the data. The default folder for loading and saving profiles is the Profiles folder belonging to

the current VIPO user (as selected in the Job Submission Client dialog). However, you may browse any other directories on the VIPO Client system for loading or saving profiles, including the virtual printers profile directory located in the VIPO<*server_root*>*/Profiles* folder.

For more information, see “Profile files.”

Job Type

Select one of these job types:

- **Distill Only**
- **Distill and Split into Pages** — Requires that bookmarks be present in the VIPP job (via the BOOKMARK command). If bookmarks are not present in the VIPP job, the job will be processed successfully, however, no splitting will occur.
- **Split into Pages Only** — PDF files that must contain one or more bookmark.

User Name

Enter the user name. This will most often be the logon name of the current user (default_user is used by lpr and is not normally used from within the Job Submission Client).

Job Server

Select either **local** (Server is installed on your local workstation and is using your workstation's CPU and disk resources) or **remote** (use a network VIPO Server's CPU and disk resources).

Output Folder

Select the destination folder for the job. These are “named” folders, meaning that you do not browse for a path on your disk(s), but choose from named directories that you or an administrator already created in a special pre-designated location under control of the VIPO Server.

Printer Action

Conditional action of optional job printing is selected. Select one of these options:

- **print_always** — Sends the job to the selected printer no matter what the outcome of the VIPO job submission.
- **print_if_job_completes** — Sends the job to the selected printer only if it successfully completes to VIPO.

Printer for VIPP Job Output

Specify the printer for printing the job that was submitted to VIPO for processing. If you do not want the job to print, select **none**.

Only PostScript printers will be listed. You must ensure that the VI Interpreter is installed on the printer selected for VIPP job output, as well as any resources the VIPP job may need.

Output Filename Template

Select a pre-defined Output Filename template from a drop down list or create an Output Filename template using the Output Filename template wizard. The template you select will be applied to the job being processed. The output file name of the PDF files being produced will be controlled via this Output Filename template.

This option is only available when the VI PDF Originator Job Type option is set to “Distill and Split into Pages” or “Split into Pages Only.”

For more information on this option, see “Specifying PDF output file names.”

Index File Template

Select the default index template or define an Index file template using the Index template wizard. The Index template will be applied to the job being processed. Use the Index Template wizard to add additional fields, from the VIPP BOOKMARK, to the index file generated by VIPO when the job type option is set to “Distill and Split into Pages” or “Split into Pages only.” VIPO generates a comma separated and an XML index file. The index files are used by VIPO Dispatch, or other third party components, to identify individual PDF records and additional data contained in the BOOKMARK for that record, for example, an e-mail address, location ID or printer address.

This option is only available when the VIPO Job Type option is set to “Distill and Split into Pages” or “Split into Pages Only.”

For more information, see “Specifying an index file.”

NOTE

The PDF filename is based on the name of the data submission file. When using the “Distill Only” Job Type, the output PDF filename uses the data submission filename as the output PDF filename. If a single “.” character is included as part of the data file filename, VIPO considers this a file extension and replaces this information with the .pdf file extension. If the “.” character is a part of the filename, you must include an additional “.” character followed by at least one other valid character. The second period character will be treated as the file extension. VIPO replaces this with the .pdf file extension, and maintains the first period in the filename.

For example, if the submission filename is:

- *P31199-SS.234*, the resulting PDF filename is *P31199-SS.pdf*
- *P31199-SS.234.xx*, the resulting PDF filename is *P31199-SS.234.pdf*

Using the other Job Type options allows you to use the Output Filename Template. When doing so, the value “DFNAME,” or the option “Add Data Filename,” result in the same filename as the job submission data file being used as part of the filename template.

Profile files

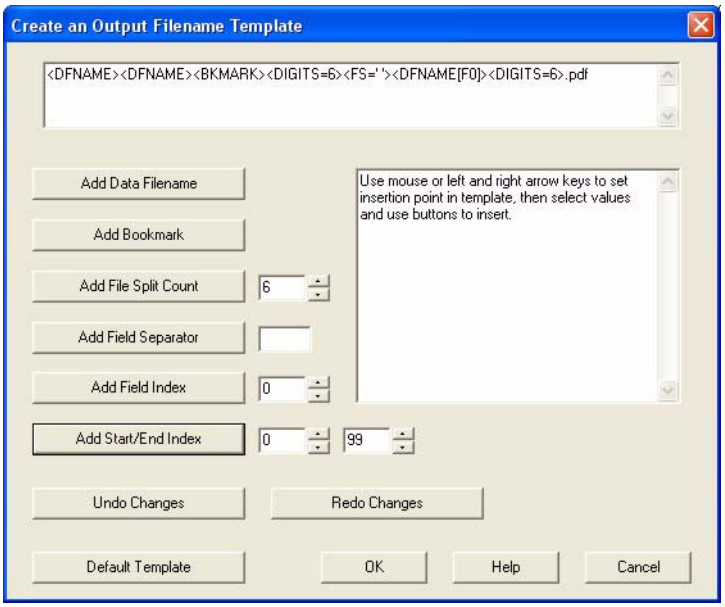
A Profile file must contain the necessary job parameters for the VIPO job submitted via lpr. The table below lists the valid job parameters.

Job parameter	Parameter default	Parameter description
InitFile=*text*	No default	(Optional) VIPP startup file that prepends to the submitted data file.
JobType=*text*	distill_only	Valid values are: • distill_only • distill_and_split into PDF files • split_only into PDF files
OutputFolderName=*text*	Default	Folder location of the VIPO job output.
OutputFilenameTemplate=*text*	<DFNAME><DIGITS=6>.pdf	Controls the name(s) created for the PDF output file(s).
IndexFileTemplate=*text*	<FS=':'>FileName:InputFile: EndSplitDate:EndSplitTime: OutputDir:Pages: FileSequence:Bookmark	Controls header creation and bookmark extraction in the index file that is generated as part of the VIPO file-splitting output.
PrinterName=*text*	None	Specifies the printer for printing the job submitted to VIPO for processing. If you do not want the job to print, select **none**. Ensure that VI Interpreter is installed on the printer selected for VIPP job output, as well as any resources the VIPP job may need. Only PostScript printers will be listed.
PrinterAction=*print-action*	print_if_job_completes	Conditional action if optional job printing is selected. Select one of these options: **print_always** — Sends the job to the selected printer no matter what the outcome of the VIPO job submission. **print_if_job_completes** — Sends the job to the selected printer only if it is successfully completed by the VIPO server.
DistillJobOptions=*filename*	Default	*filename* is an existing Acrobat Distiller job options file. See "Assigning a Distiller job options file"

The default location for loading and saving the profiles is your user *Profiles* directory. However, you may select any other directory on the Client for loading and saving profiles, including the virtual printers profile directory located in VIPO <*server_root*>/*profiles*.

Specifying PDF output file names

You can use a template to specify how PDF file names are formatted during the PDF split operation. To create a template, click **Create Template** next to the Output Filename Template field on the VIPO Job Submission Client window. The Create an Output Filename Template window appears.



Template syntax

Template syntax must be enclosed within matching < >. All other characters, other than characters that are invalid for file names and those described here, are treated as literal characters in the resulting output file name generated by VIPO.

By default, “strict filename checking” is performed on filename templates. These characters are considered invalid:

\ / : * ? " < > | ' ` ~ ! $ ^ & , ; [ ] { } ( ) % # = + @ tab and blank space

You can modify the default behavior by setting the following value in the VIPO configuration file (*xvtp.ini*):

```
output_filename_strict_checking=false
```

By setting the value to false, these invalid characters will be considered valid literals in the filename template:

[ ] { } ( ) % # = + @

NOTE

The square brackets, [ ] , must be “escaped” (preceded by a backslash character “\”) to be valid literals in the template syntax (for example: “filename_\[OK\].pdf”). Use the other characters without the “escape” backslash.

<DFNAME[*x..y*][F*n*]>

Uses the data file name. [*x..y*] and [F*n*] are optional. When producing multiple files, this is the first part of the file name.

<BKMARK[x..y][F*n*]>

Uses the bookmark field. [*x..y*] and [F*n*] are optional.

[*x..y*]

An optional range modifier that can appear in any order or number after a DFNAME or BKMARK; for example, [0..5] indicates to use character 0 through character 5 of DFNAME or BKNAME. Valid values for *x* and *y* are 0 through 99.

[F*n*]

An optional field number that can appear in any order or number after a DFNAME or BKMARK; for example, [F2] indicates to use field 2 of DFNAME or BKMARK. Valid values for *n* are 0 through 99.

<FS=‘*char*’>

A field separator character that must be specified if [F*n*] is used. Valid values for *char* are any printable ASCII character except: [ ] < >.

You can use more than one FS designation. If used within [ ], it only has an effect within those [ ]. If used outside of the [ ], it takes effect until the next FS is encountered outside of the [ ].

<DIGITS=*n*>

The number of digits to use in the output file names when multiple files are produced. If only a single PDF file is produced, no digits are used in the output file name. Valid values for *n* are 1 through 10.

<GET_INDEX_WITHOUT_SPLIT>

Indicates that the resulting PDF file will go through the split process without actually being split into smaller PDF child files. However, the corresponding CSV/XML index files will be generated, which then allows the job to be processed by the VIPO Dispatch server.

You can submit a “Distill Only” VIPP job with the non-split option to generate the job index files needed to process the distilled PDF file with the Dispatch module.

Examples

The following data file name and bookmarks will produce the named files in the table below when the indicated templates are used:

data file name = mybigjob.lm
pg1 bookmark = account number 01234:xyz
pg2 bookmark = account number 43210:abc

Template syntax	Output file names
<DFNAME><DIGITS=3>.pdf	mybigjob001.pdf mybigjob002.pdf ...
<DFNAME[0..4]><DIGITS=5>.pdf	mybig00001.pdf mybig00002.pdf ...
<FS=' '><BKMARK[F2][0..4]>_<DIGITS=4>.pdf	01234_0001.pdf 43210_0002.pdf ...

In the last example, the syntax specifies to extract field number 2 (zero based) from the bookmark using a space as the field delimiter, then extract digits 0 through 4 from that result and use that as the first part of the file name. Then append the literal character “_”, followed by 4 digits that increment with each file produced.

Template field descriptions

Use the buttons on the Create an Output Filename Template window to build your template; as you click the buttons, your selections appear in the display window. The default template is:

<DFNAME><DIGITS=6>.pdf

You can manually edit the template shown in the display window; just make sure you follow the template syntax rules.

Add Data Filename

Adds <DFNAME> to the displayed template at the current insertion point, if legal; otherwise adds it at the most logical insertion point.

Add Bookmark

Adds <BKMARK> to the displayed template at the current insertion point, if legal; otherwise adds it at the most logical insertion point.

Add File Split Count

Adds <DIGITS=*n*> to the displayed template at the current insertion point, if legal; otherwise adds it at the most logical insertion point. *n* is specified in the box to the right of the button.

Add Field Separator

Adds <FS='*char*'> to the displayed template at the current insertion point, if legal; otherwise adds it at the most logical insertion point. *char* is specified in the box to the right of the button.

Add Field Index

Adds <F*n*> to the displayed template at the current insertion point, if legal; otherwise adds it at the most logical insertion point. *n* is specified in the box to the right of the button.

Add Start/End Index

Adds [*x..y*] to the displayed template at the current insertion point, if legal; otherwise adds it at the most logical insertion point. *x* (start index) and *y* (end index) are specified in the boxes to the right of the button.

Undo Changes

Undoes your last change. You can undo multiple changes by clicking this button multiple times.

Redo Changes

Redoes your last change. You can redo multiple changes by clicking this button multiple times.

OK

Saves your changes and closes the template window. The template created appears in the window under the Output Filename Template field on the Job Submission Client window.

Help

Provides access to the online help facility.

Cancel

Closes the template window without saving any changes.

Specifying an index file

During the PDF splitting process, two index files are automatically created: an ASCII file formatted in Comma Separated Values (CSV) and a corresponding XML-formatted index file. Both have the same file name, except for the file extension (*.csv and *.xml).

This is a sample of output for an automatically generated XML-formatted index file:

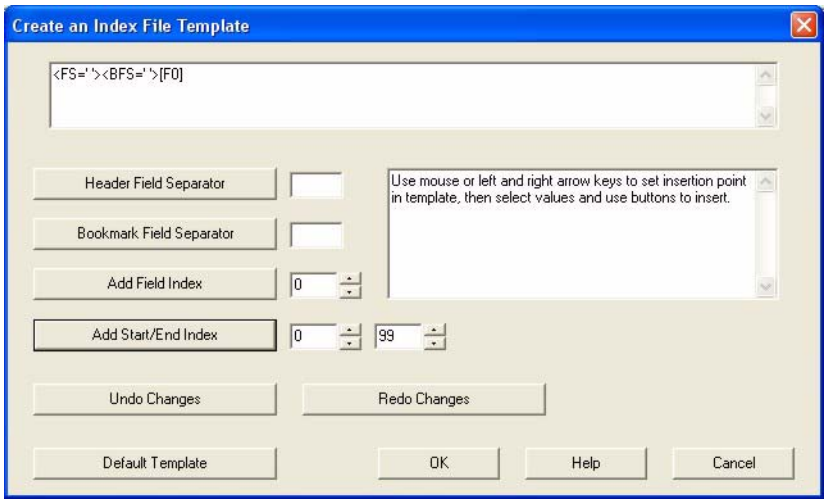
```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<XVTPIF Version="0.1">
 <XVTPDOC>
  <FileName>credit000000.pdf</FileName>
  <InputFile>credit.pdf</InputFile>
  <EndSplitDate>2002-07-15</EndSplitDate>
  <EndSplitTime>17:20:13:890</EndSplitTime>

<OutputDir>C:\xvtp\users\maviles\incoming\default\
   maviles_credit_vpc_2002_07_15_17_20_09</OutputDir>
  <Pages>2</Pages>
  <FileSequence>0</FileSequence>
  <Bookmark>David Kirk</Bookmark>
  </XVTPDOC>
 <XVTPDOC>
  <FileName>credit000001.pdf</FileName>
  <InputFile>credit.pdf</InputFile>
  <EndSplitDate>2002-07-15</EndSplitDate>
  <EndSplitTime>17:20:13:921</EndSplitTime>

<OutputDir>C:\xvtp\users\maviles\incoming\default\
   maviles_credit_vpc_2002_07_15_17_20_09</OutputDir>
  <Pages>1</Pages>
  <FileSequence>1</FileSequence>
  <Bookmark>Michael Sotelo</Bookmark>
  </XVTPDOC>
 <XVTPDOC>
  <FileName>credit000002.pdf</FileName>
  <InputFile>credit.pdf</InputFile>
  <EndSplitDate>2002-07-15</EndSplitDate>
  <EndSplitTime>17:20:13:968</EndSplitTime>

<OutputDir>C:\xvtp\users\maviles\incoming\default\
   maviles_credit_vpc_2002_07_15_17_20_09</OutputDir>
  <Pages>3</Pages>
  <FileSequence>2</FileSequence>
  <Bookmark>Carolyn Cliff</Bookmark>
  </XVTPDOC>
 </XVTPIF>
```

You can also use a template to specify the contents of the index file header and index file record. To create a template, click **Create Template** next to the Index File Template field on the VIPO Job Submission Client window. The Create an Index File Template window appears; the default template appears in the display window.



Additional checks are made when creating and supplying an Index File Template to make sure the field names have the appropriate syntax for XML tag creation. These characters are invalid for template field names:

\ / : * ? " < > | ( ) [ ] { } ' ` ~ ! @ # $ % ^ & + = , ; tab and blank space.

Template syntax

The Create an Index File Template window consists of the following eight fields (seven index file fields and a bookmark field). A defined character separates each field; see "Field separator" for more information.

1. FileName
2. InputFile
3. EndSplitDate
4. EndSplitTime
5. OutputDir
6. Pages
7. FileSequence
8. Bookmark

The first seven fields are names of corresponding fields in each line of the index file generated by VIPO. Only the names of these seven fields can be changed in the Index File Template.

The bookmark field (the eighth field) can be replaced with as many field names as needed, each separated by the defined field separator. For more information, see “Bookmark field.”

NOTE

All fields in the index file header and index file record are enclosed in double quotes. This feature cannot be turned off.

Field separator

A field separator is a single character that separates the index file fields and bookmark fields. The separator is used to generate the field separators in the index file header and in each index file record. You can change the field separator used in the template. The syntax for the field separator is:

<FS=‘*char*’>

where *char* is any printable ASCII character except: [ ] < >. The field separator in the default template is a comma (,).

Bookmark field

You can replace the bookmark field with an unlimited number of field names. Each bookmark field name appears in the index file header.

Use the following syntax with any bookmark field name in the template to control which portions of the bookmark are extracted and placed into the corresponding fields in each index file entry generated by VIPO.

NOTE

The default template places the entire bookmark into the last field of each index file.

[*x..y*]

Uses a substring of Bookmark from zero-based indices *x* to *y*. This is an optional range modifier that can appear in any order or number after the fixed fields in the template. Valid values for *x* and *y* are 0 through 99.

[F*n*]

Uses field number *n* of the bookmark according to BFS. This is an optional field number that can appear in any order or number after the fixed fields in the template. Valid values for *n* are 0 through 99.

<BFS='*c*'>

A bookmark field separator (BFS) that must be specified if [F*n*] is used. Valid values for *c* are any printable ASCII character except: [ ] < >.

You can use more than one BFS designation. If used within [ ], it only has an effect within those [ ]. If used outside of the [ ], it takes effect until the next BFS is encountered outside of the [ ].

Examples

The following bookmark contents will produce the index file headers and index file records below when the indicated templates are used:

bookmark contents = **John Doe 123-45-456**

Example 1:

Template	<FS=':'>Fld1:Fld2:Fld3:Fld4:Fld5:Fld6:Fld7:BookFld1|<BFS=' '>[F1]:BookFld2|[0..2]:BookFld3|[F2][0..2]
Index file header produced	Fld1:Fld2:Fld3:Fld4:Fld5:Fld6:Fld7:BookFld1:BookFld2:BookFld3
Index file record produced	outfile_001.pdf:infile:10-2-01:“23:56:34”:“c:\user\...”:5:1-50:Doe:Joh:123

Example 2:

Template	<FS=':'>FldA:FldB:FldC:FldD:FldE:FldF:FldG:Bookfield1|<BFS=' '>[F1]:Bookfield2|[F2][<BFS='-'>[F2]]
Index file header produced	FldA:FldB:FldC:FldD:FldE:FldF:FlgG:Bookfield1:Bookfield2
Index file record produced	outfile_003.pdf:infile:10-2-01:“13:06:14”:“c:\user\...”:7:3-80:Doe:456

Example 3:

Template	<FS=','>Fld1,Fld2,Fld3,Fld4,Fld5,Fld6,Fld7,FirstNam|<BFS=' '>[F0],LastNam|[F1],Num|[F2][<BFS='-'>[F0]]
Index file header produced	Fld1,Fld2,Fld3,Fld4,Fld5,Fld6,Fld7,FirstNam,LastNam,Num
Index file record produced	file_xyz.pdf,infile,10-7-01,14:29:14,c:\user\...,4,10-100,John,Doe,123

Template field descriptions

Use the buttons on the Create an Index File Template window to build your template; your selections appear in the display window. The default template is:

<FS=':'>FileName:InputFile:EndSplitDate:EndSplitTime:OutputDir:
Pages:FileSequence:Bookmark

NOTE

You can manually edit the template shown in the display window; just make sure you follow the template syntax rules.

Header Field Separator

Adds the index field separator to the displayed template at the current insertion point, if legal; otherwise, adds it at the appropriate insertion point. Specify the field separator in the box to the right of the button.

Bookmark Field Separator

Adds the bookmark field separator to the displayed template at the current insertion point, if legal; otherwise, adds it at the appropriate insertion point. Specify the field separator in the box to the right of the button.

Add Field Index

Adds <F*n*> to the displayed template at the current insertion point, if legal; otherwise adds it at the most logical insertion point. *n* is specified in the box to the right of the button.

Add Start/End Index

Adds [*x..y*] to the displayed template at the current insertion point, if legal; otherwise adds it at the most logical insertion point. *x* (start index) and *y* (end index) are specified in the boxes to the right of the button.

Undo Changes

Undoes your last change. You can undo multiple changes by clicking this button multiple times.

Redo Changes

Redoes your last change. You can redo multiple changes by clicking this button multiple times.

OK

Saves your changes and closes the template window. The template created appears in the window under the Index File Template field on the Job Submission Client window.

Help

Provides access to the online help facility.

Cancel

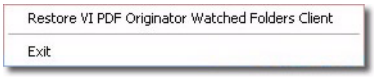
Closes the template window without saving any changes.

Using the VIPO Watched Folders Client

The VIPO Watched Folders Client (WFC) allows you to specify one or more directories where VIPP jobs can be placed for automatic submission to VIPO. A VIPO user (remote or local) and an optional profile are associated with each watched folder, which controls the processing of all jobs submitted from that folder. Submitted jobs can be monitored using the Job Submission Client in the same manner as for lpr-submitted jobs. All VIPP jobs found in each watched folder are checked at each watch interval to determine file readiness.

Start the Watched Folders Client either from the VIPO program folder or from the right-click menu of the VIPO Local Server icon. The Client runs as a background process. A VIPO Server must be running in order for watched folders to be processed.

You can tell the Watched Folders Client is running by the presence of its icon in the Windows task bar. Right click the VIPO Watched Folders Client icon to display these options:

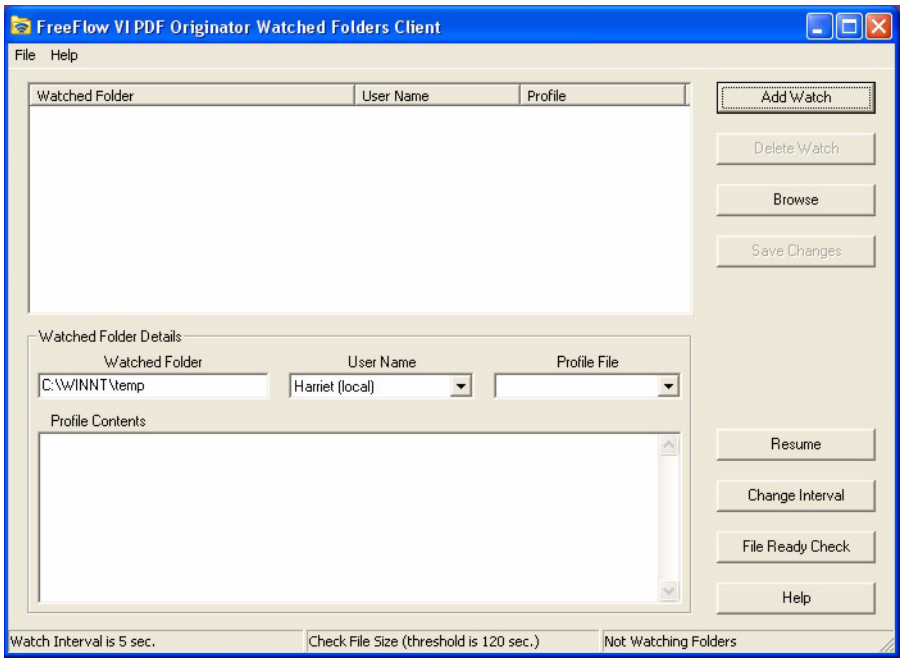


- **Restore VI PDF Originator Watched Folders Client** — Maximizes the VIPO Watched Folders Client window.
- **Exit** — Exits the Watched Folders Client. If you exit the Client, folders will not be watched until the Client is restarted.

The VI PDF Originator Watched Folders Client window is used to control and monitor watched folders.

NOTE

When the Client is invoked, the watch process is inactive.



Window elements

The VIPO Watched Folders Client window consists of these elements:

Title bar

Displays the product name (VI PDF Originator Watched Folders Client).

Menu bar

Provides access to the File and Help menus. These options are available from the File drop-down menu:

- Hide Watched Folders Client — Returns the VIPO Watched Folders Client window to a task-bar icon.
- Input File Disposition — Controls what happens to watched jobs after they are submitted to VIPO. There are two sub-menu choices:
  - — Delete Input File: Deletes the job from the watched folder (default).
  - — Move Input File to Saved Jobs Folder: Moves the job to the Saved Jobs folder contained under each watched folder.
- Exit — Exits the Watched Folders Client; folders will no longer be watched.

The Help drop-down menu provides access to the About option, which displays the version information of the VIPO Watched Folders Client.

Watched folders list

Lists the folders currently defined for watching.

Watched folder details area

Shows the details for the selected watched folder (folder name, VIPO user associated with the folder, and profile file (optional)) in the watched folders list. If a profile file is specified, the contents of the file display in the Profile Contents box.

Status area

Displays the current watch interval, which can be changed using the Change Interval button, and the current method used to check file readiness. It also indicates if folders are currently being watched.

Function buttons

These buttons appear on the right side of the VIPO Watched Folders window:

- Add Watch — Allows you to add a folder to the watched list.
- Delete Watch — Allows you to delete the selected folder from the watched list.
- Browse — Allows you to browse for the folder you want to add to the watched list.
- Save Changes — Saves the current changes for the selected folder.
- Resume/Pause — Resume starts or resumes watched folder processing; Pause pauses processing.
- Change Interval — Changes the current watch interval. When you click this button, a Change Watched Folders Interval pop-up window appears, which allows you to change the interval in seconds. The status area on the VIPO Watched Folders window shows the watch interval.
- File Ready Check — Used to select the method used to determine when a file is actually ready for job submission, thus preventing processing and submitting files that are not yet ready for job submission. This selection is indicated in the Status area of the window. See “File ready check” for more information.
- Help — Provides access to the VIPO online help facility.

Adding watched folders

To add a new watched folder:

1. Click the **Browse** button and select the new folder. The folder appears in the Watched Folder box in the watched folder details area.

2. Select the user from the XVTP User selection box in the watched folder details area. This will be the user for all the jobs submitted from that new watched folder.

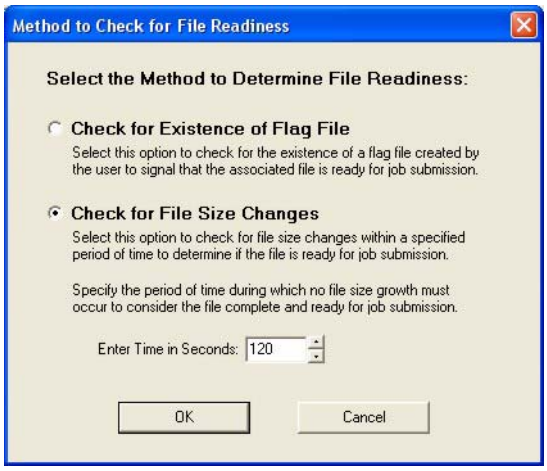
3. Select the profile file from the Profile File selection box for the jobs that will be submitted to this watched folder.

4. Click the **Add Watch** button to add the new watched folder to the current list of watched folders.

File ready check

The file ready check feature allows you to choose the method you want VIPO to use to determine if a file is ready for use in a VIPO application. Using this feature prevents problems that may occur when the WFC encounters a file that may not be ready for submission. For example, a very large file that is still being transferred or copied from a remote location or files being built “on the fly” by an automated process.

The File Ready Check button invokes this dialog:



The dialog offers two choices to check for file readiness before a file is actually picked up for job submission:

- Check for Existence of Flag File — Used to directly signal the WFC when a file is ready for job submission by creating a “flag” file. The flag file is an empty file you create. In addition to having the same name as the job file, this file must have the additional extension: ._File_Ready_For_Submission_.

  Thus, the flag file for *myVIProject.vpc*, becomes:

  myVIProject.vpc._File_Ready_For_Submission_

  You must create the flag file associated with the job file in the watched folder after the file is ready for submission. If no flag file is found while this option is active, the job file will not be processed for job submission and is ignored by the file search at every watch interval.

- Check for File Size Changes — This is the default setting in which the WFC checks and monitors changes in the file size at every watch interval. If the size of the file to be submitted does not change at all within the specified period of time, the file is considered to be ready for job submission and is processed at that time, whether or not a flag file exists. The range of time is from 5 to 1800 seconds, the default threshold is 120 seconds.

When using the Check for File Size Changes option, if very large files are transferred or copied from a remote location to the watched folder, and the time it takes for the file transfer to be completed is longer than the current watch interval, the file size changes during the transfer are monitored and the file will not be picked up for job submission until file size growth is not detected within the specified time. You must choose a period of time for the watch interval, taking this information into consideration:

- The file size changes to be detected by the operating system
- The speed of file transfer or copy

When the Check for File Size option is active, files may no longer be picked up and submitted for processing when found at every watch interval. The effective submission rate is based on the file size check threshold as well as the watch interval. Even for small files, job submission takes place after the threshold is reached, assuming the watch interval is smaller than the threshold time.

A very small threshold (for example, five seconds) can be used for very small files, but for large files this might not be long enough; change the threshold accordingly.

Command line options for the VIPO Watched Folders Client

The VIPO Watched Folders Client has two command parameters:

```
v2vwatch  autostart  noshow
```

These parameters are optional and can appear in any order or case on the command line.

- autostart — the VIPO Watched Folders Client will start watching folders immediately. Normally, you need to press the **Resume** button on the Watched Folders Client dialog.
- noshow — the VIPO Watched Folders Client will start in iconized size (minimized).

Both of these options are to facilitate automatic command-line starting of the VIPO Watched Folders Client.

NOTE

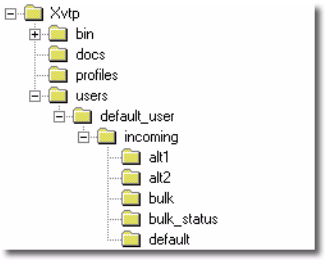
The full path name of the VIPO Watched Folders Client executable may need to be specified depending on the system environment (e.g., *C:\xvtp\bin\v2vwatch.exe param1 param2*).

Bulk Processing

Bulk Processing allows a VIPO user to direct the PDF output of multiple jobs to a single “bulk” directory, typically to facilitate batch or other automated post-processing of the VIPO-generated output.

The VIPO system administrator must ensure that your system is upgraded to a VIPO software version that supports Bulk Processing. If you do not upgrade, jobs submitted to the bulk folder will be processed in the same manner as non-bulk jobs and the results will be generated in individual subfolders on a per-job basis.

To enable Bulk Processing, if not automatically created during installation, each user must create two additional directories, *incoming\bulk* and *incoming\bulk_status*, as shown:



Jobs sent to a bulk destination folder will have their PDF output sent to *user\incoming\bulk*, while the status folders and files for those jobs accumulate in *user\incoming\bulk_status*. All PDFs generated using Distill Only, Distill and Split, and Split Only options, and the index file for each submitted job, are placed in *user\incoming\bulk.*

NOTE

Ensure that your job and file naming conventions and split templates do not cause output file name clashes that result in overwritten files.

Using VIPO Web

VIPO Web allows you to use your web browser to:

- Submit VIPP jobs
- Create new or additional VIPO user accounts
- Administer VIPO Servers remotely
- Administer VIPO Web passwords and other security functions

Instructions are based on sessions using Internet Explorer; you may have to make adjustments to the instructions if you are using Netscape or other web browser.

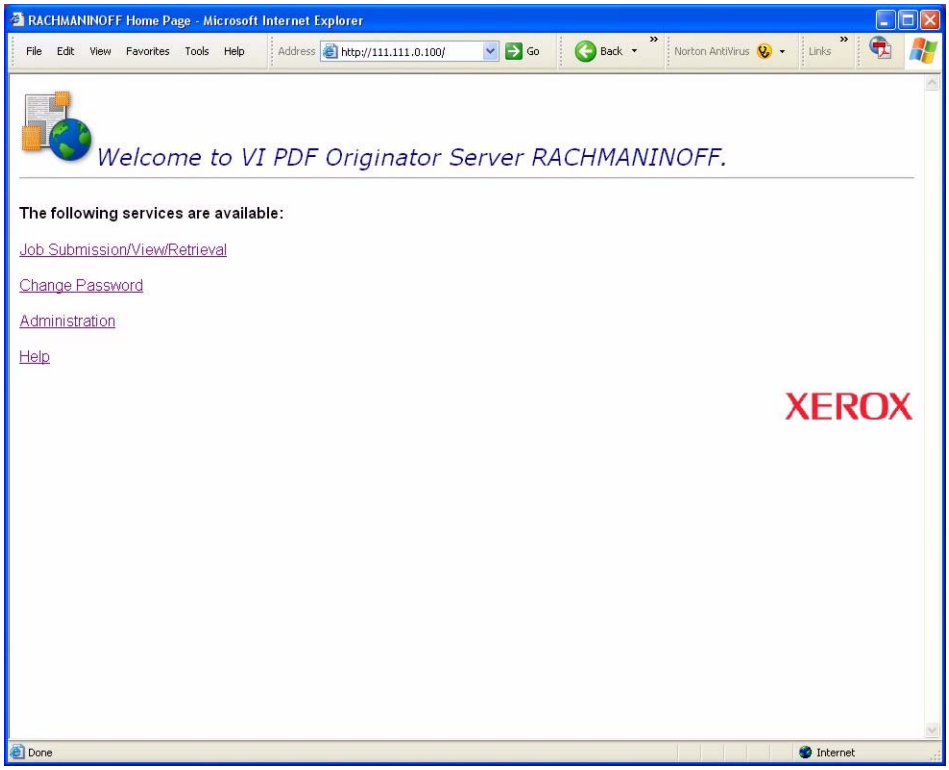
Accessing VIPO via your web browser

For instructions on web-enabling your VIPO Server and obtaining the Server's IP address, see "Web-enabling your VIPO Server" in the *Variable Information Suite Installation Guide*.

To begin using VIPO Web to administer your VIPO jobs:

- Open your web browser.
- Enter the IP or web address (URL) of the web-enabled VIPO Server in the address field.
- Click on **Go**.

VIPO Web finds your server and opens a session.



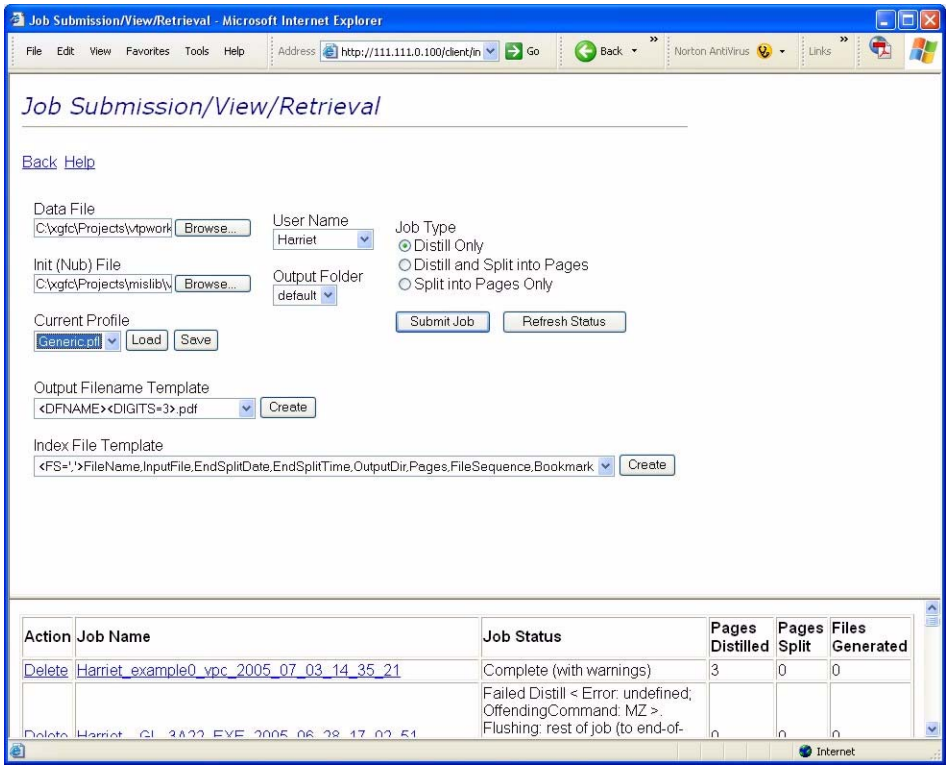
The Welcome to VI PDF Originator Server page provides these options:

- Job Submission/View/Retrieval — Provides access to VIPO jobs and functions.
- Change Password — Allows you to change your password.
- Administration — Provides access to these administrative tasks:
  - User Administration
  - Server Administration
  - Cluster Administration
  - Basic Authentication Quick Step
  - Disable Basic Authentication
- Help — Provides access to the online VIPO Web Help.

Job Submission/View/Retrieval

The Job Submission/View/Retrieval page provides access to the VIPO job submission functions. The page contains two frames. The upper frame provides access to the VIPO functions you will need to submit your job. The lower frame contains system-generated information about the jobs you have submitted.

Job Submission - upper frame

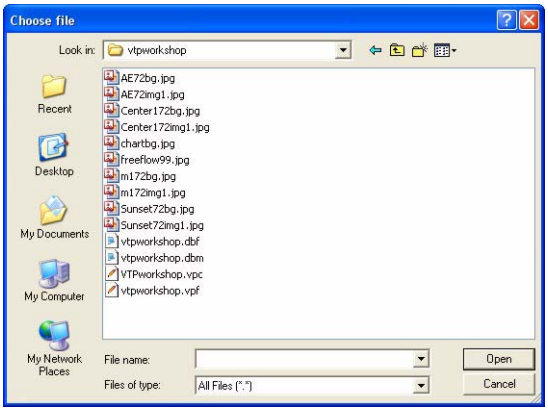


For descriptions of the files and templates found on this page, see "Job creation area field descriptions." Use these options to submit a job to VIPO:

Data File

Allows you to Browse for the file to be submitted to VIPO. When you click **Browse**, the Choose File window will open. Use this window to browse for and select the file or job for submission.

Retrieved files are pulled from VIPO Web as the result of dynamic queries, and NOT by direct links to files on the VIPO Server. This means that if your browser prompts you with a choice to either open or save a file, you should always choose to **open** the file rather than save it. Once the file is open you can save it using the **Save** option in the application your browser used to open the file. If you inadvertently choose **Save**, the web page that generated the query may be saved, rather than the file itself. When saving files, make sure the destination path and type are appropriate for the file.



Init (Nub) File

Allows you to Browse for the appropriate init file for your job. When you click **Browse**, the Choose File window will open. Use this window to browse for and select the file.

Current Profile (Load/Save)

The Current Profile drop-down contains a list of the available profiles. Choose the appropriate profile, then click **Load** to load the selected profile or **Save** to save the profile name entered. The profile file is located in your *profiles* directory (the same one used by the Job Submission Client). Only the file name, not any path information, is entered in the *name* field. See "Profile files" for more information on these files.

Output Filename Template (Create)

Select from the drop-down list of existing options or create a new Output Filename Template. For more information on creating these templates, see "Specifying PDF output file names."

Index File Template (Create)

Select from the drop-down list of existing options or create a new Index File Template. For more information on creating these templates, see "Specifying an index file."

User Name

Select the user name appropriate for this job. If you have administrative privileges, all user names will appear, as the job can be submitted for another user.

Output Folder

Choose one of the available directories as a repository for your completed job files.

Job Type

Click one of these three options for your job type:

- Distill Only
- Distill and Split into Pages
- Split into Pages only

These options are discussed in “Job creation area field descriptions.”

Submit Job

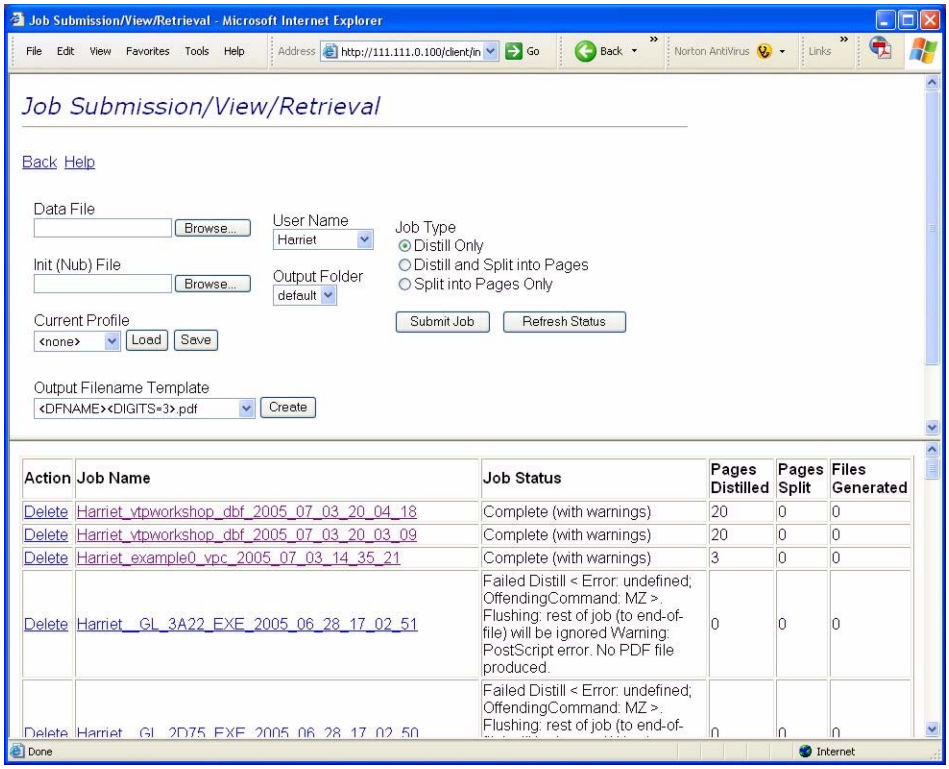
Submits your job to the VIPO Server.

Refresh Status

Refreshes the entries in the Job Status column of the table on the lower frame of this page.

Job Submission - lower frame

When a job is submitted to the VIPO Server, the table on the lower frame of the Job Submission page is filled with information on the submitted job.



This information is produced for each submitted job:

Action

You will be able to Cancel a pending job or Delete a completed job using the option displayed in this column. Clicking **Delete** deletes the entire job, including the output and the folder.

Job Name

The name of the job you submitted. When the job is complete, you can display the job files generated via VIPO Web by clicking the Job Name link for the desired job. Clicking a displayed file link causes the file to be displayed on your system; how it is displayed depends on how your system is configured to handle the various file types.

Job Status

The Job Status of your submitted job is displayed in this part of the table. If the job failed or did not process properly, this entry will contain an explanation of the failure, including information about errors and how VIPO handled the job.

Pages Distilled

The total number of pages created in PDF format.

Pages Split

The number of pages split in the job. A split file may have more than one page within it. For example, an original PDF containing three bookmarks is split into three PDF files. If each split PDF file consists of four pages, the total of the split pages is twelve.

Files Generated

The number of files generated by your job.

Change Password

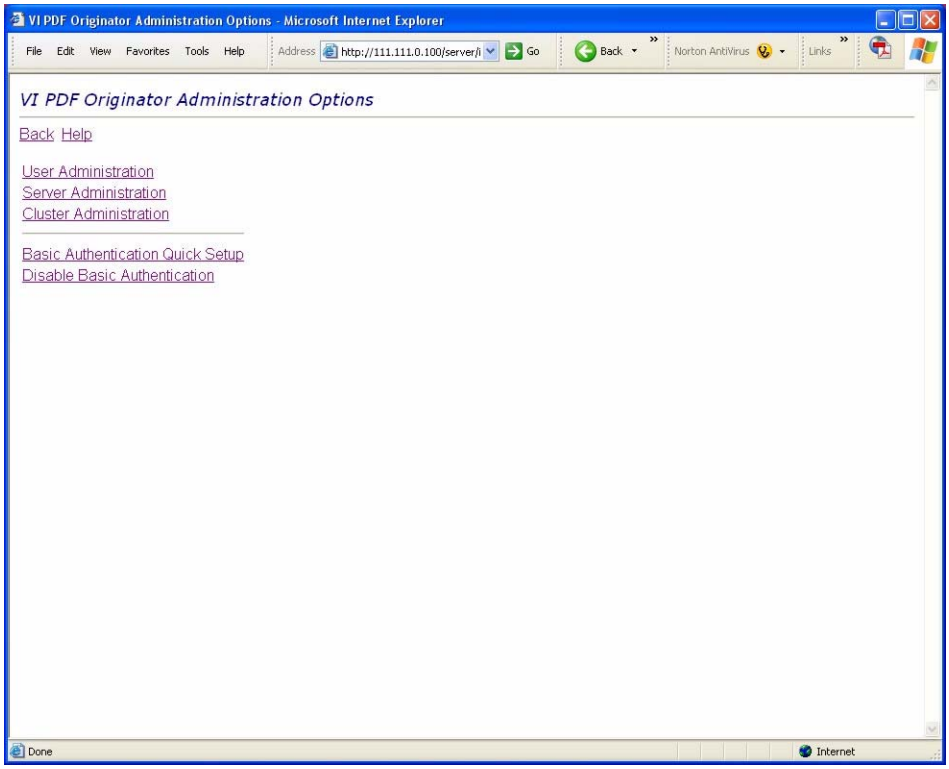
The Change Password option allows you to change your password, the password associated with the user name under which you logged into the system. Use the "User Administration" option to change passwords other than your own.

Administration

The VI PDF Originator Administration Options page provides access to these administrative functions:

- User Administration
- Server Administration
- Cluster Administration
- Basic Authentication Quick Step
- Disable Basic Authentication

For a discussion on the four available security levels supported by VIPO, see "Defining the VIPO Web security levels" in the *Variable Information Suite Installation Guide*. Xerox strongly recommends setting security levels for this application.



User Administration

VIPO Web allows the creation of new or additional VIPO user accounts. The default incoming folders produced for each user are:

- alt1
- alt2
- bulk (mandatory)
- default (mandatory)

Additional incoming folders can be added manually for any user on the User Administration page, or the VIPO Web administrator can add an additional line to the *X:\Winnt\xvtp.ini* file in the following format:

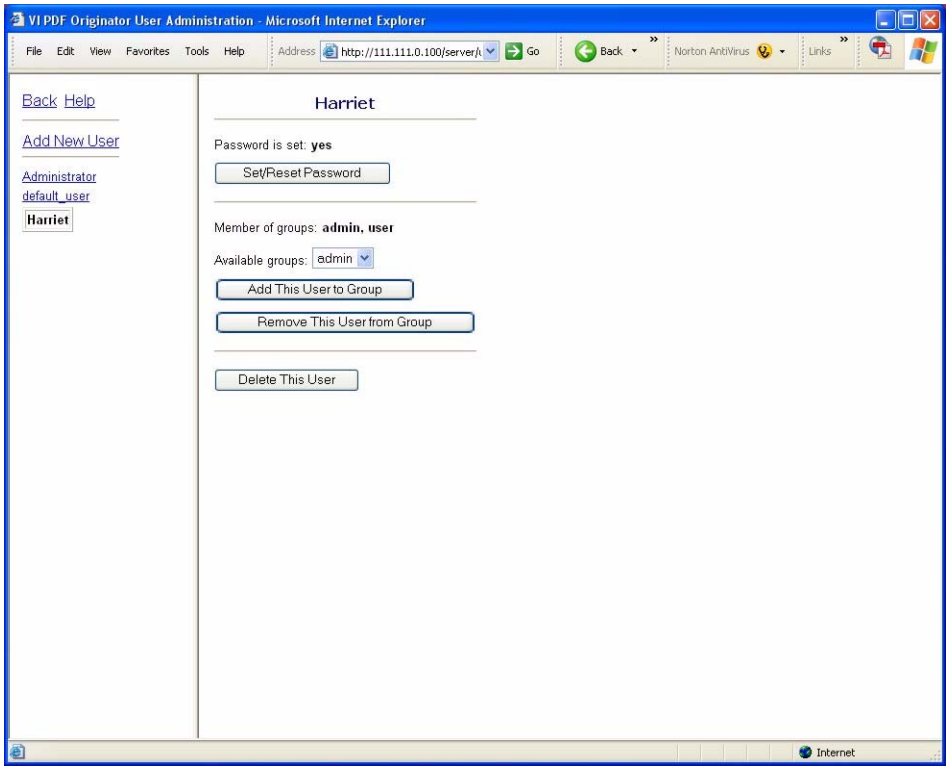
```
vtpw_addtl_user_folders=first_directory_name|second_directory_name|...
```

As an example, after adding this line to the *xvtp.ini* file:

```
vtpw_addtl_user_folders=example1|example2|example3
```

adding a new user via the VIPO Web User Administration Add New User option will result in the creation of these directories for that user:

- example1
- example2
- example3
- bulk
- default

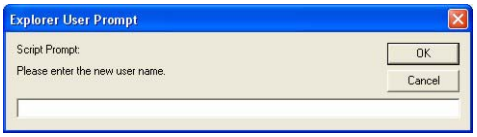


Changing passwords

To change a user's password, double-click the user name on the left frame, then click the **Set/Reset Password** button. Enter the new password in the New Password window, then enter the same password in the Repeat new password window. Once entered, click the **Set Password** button. A message giving the status of the password change will be generated in the right frame of the page.

Adding new users

To enter a new user, click the **Add New User** link in the left frame of the page. A pop-up is produced. Enter the new user name in the New User field and press **OK.**



The new user name will appear in list of user names in the left frame.

When a new user is created, the new user does not belong to a group and must be explicitly added to the *user* group (to be able to submit jobs) or to the *admin* group (to perform administrative functions) by the Administrator.

Assigning users to groups

The User Administration feature allows you to classify each user into one or both of the defined user groups, *admin* and *user*. Users associated with the *admin* group are able to access and complete the administrative tasks found on the VI PDF Originator Administration Options page. Users associated with the *user* group can submit jobs to the VIPO Servers accessible from VIPO Web.

To assign a user to one or both groups, double-click the user name on the left frame, then click the **Available groups** drop-down and highlight the name of the group to which the user will be added. Next, click **Add This User to Group**. Repeat this process to add the user to a second group. As the groups are assigned, the "Member of groups:" list will be updated.

To remove the user from a specified group, select the user, highlight the group you want the user removed from, and click **Remove This User From Group**.

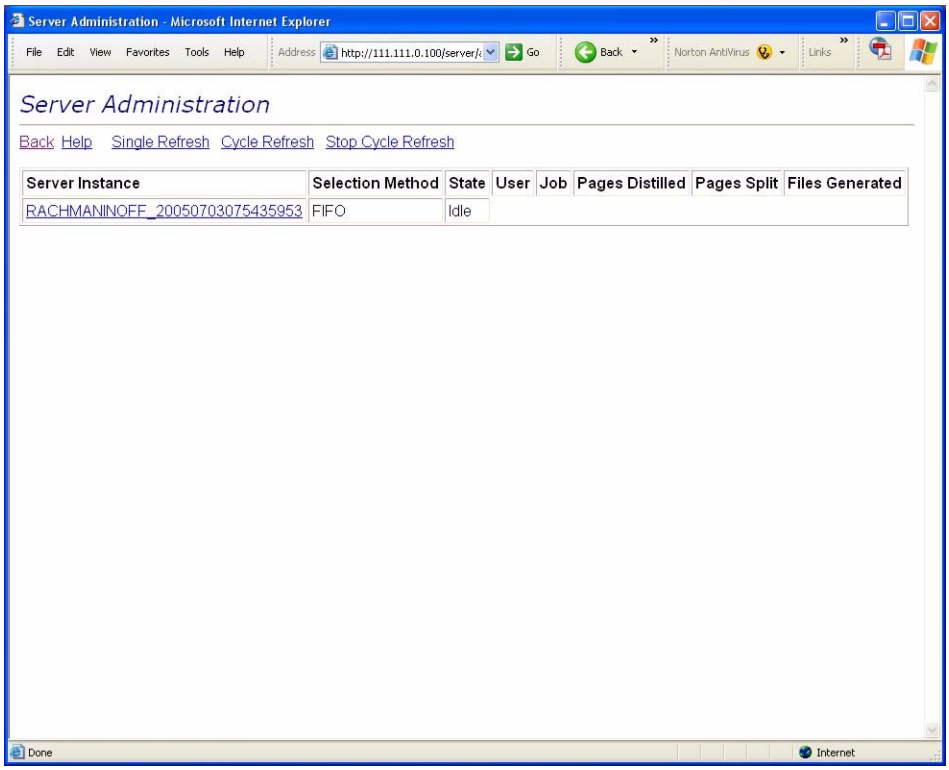
Server Administration

The Server Administration feature of VIPO Web allows you to set preferences for the Servers that are part of the cluster of servers accessible from your VIPO Web Server. The primary Server Administration page contains this information:

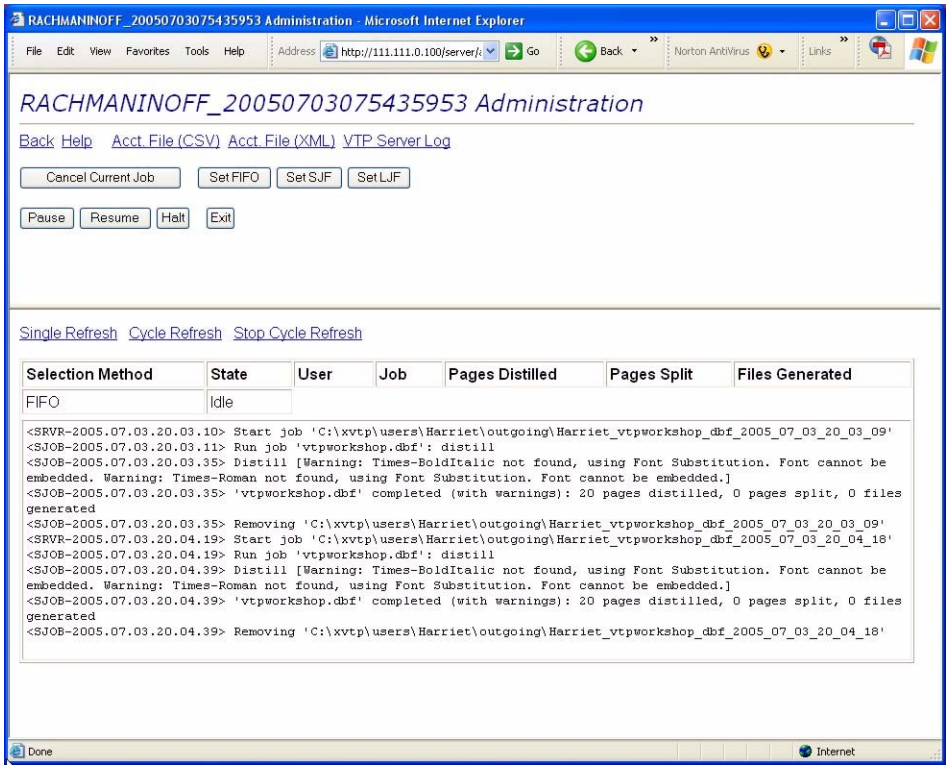
- **Server Instance** — the names of the servers in the cluster.
- **Selection Method** — the way job submission order is determined on each server.
- **State** — usually idle or active, the activity state of each server.
- **User** — the user assigned to the currently processing job.
- **Job** — the name of the currently processing job.
- **Pages Distilled** — total number of pages distilled in the currently processing job.
- **Pages Split** — total number of pages split in the job that the Server is presently processing.
- **Files Generated** — total number of files generated in the job that the Server is currently processing.

In addition to the above information, you can choose to:

- **Single Refresh** — refresh (reset) the job information for the selected Server.
- **Cycle Refresh** — poll the Server(s) for its status at a short, fixed interval.
- **Stop Cycle Refresh** — stop the polling of the Cycle Refresh option. Click **Cycle Refresh** to return to continuous polling.



To view information specific to a Server in the cluster, click the Server name link in the Server Instance field. A new Server Administration page will open.

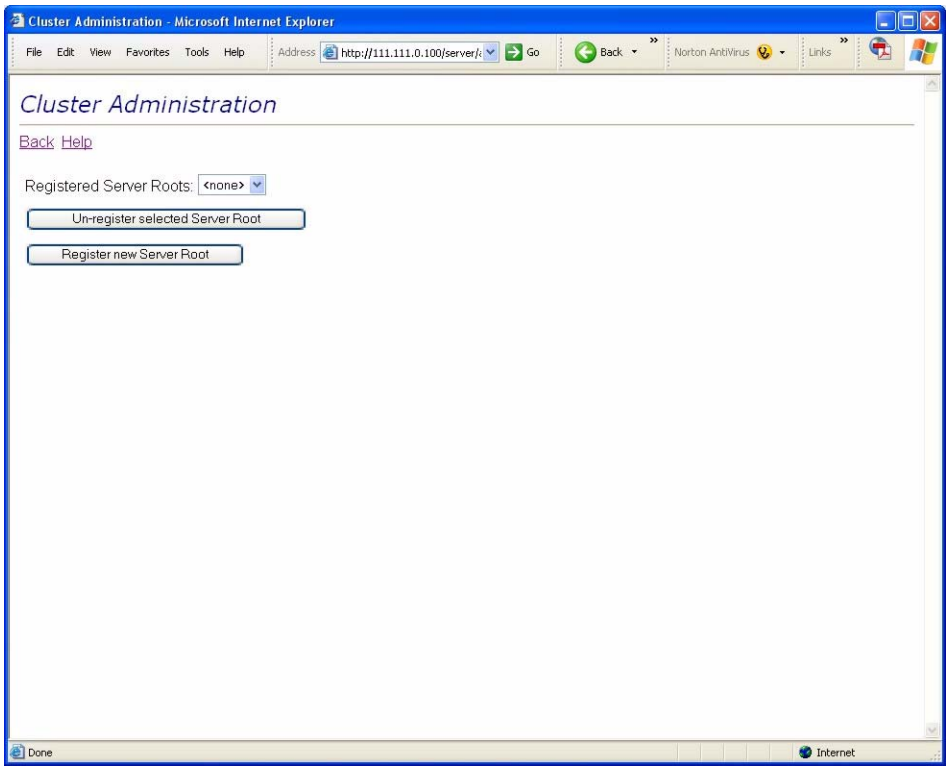


From the Server Administration page, you can:

- View the VIPO Server Log.
- View the accounting file in CSV or XML format.
- Cancel the current job.
- Set the Server's selection method to:
  - FIFO (First In First Out)
  - SJF (Shortest Job First)
  - LJF (Longest Job First)
- Pause processing on the Server (if the Server is in a busy state, the pause will not occur until it becomes idle).
- Resume processing on the Server.
- Halt (cancel) the current job and place the Server in a paused state.
- Exit the current job and terminate the process for the Server. You will not be able to restart the Server via VIPO Web; it must be restarted by someone with physical access to the Server.

Cluster Administration

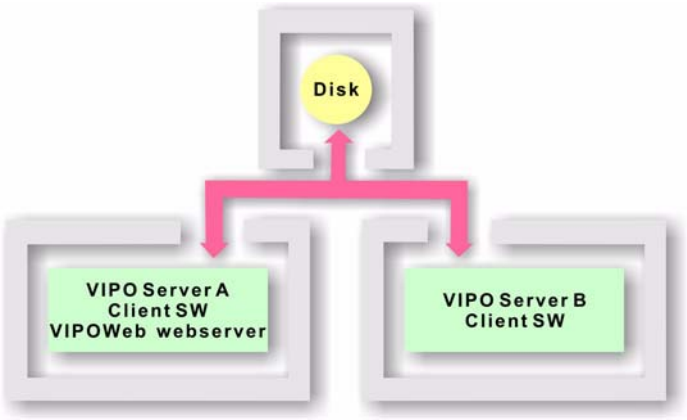
The VIPO Web Cluster Administration window allows you to register the paths of drives that have been mapped or mounted in order to allow access to the root path(s) of VIPO Servers. VIPO Web displays these additional Cluster Servers on the VIPO Web Server Administration window, where they can be administered in the same way as the primary VIPO Server administered by VIPO Web.



When you click the **Register New Server Route** button, the system will prompt you to enter the path of the new Server Root. Once entered, click **OK** to add the new Server root to the drop-down list.

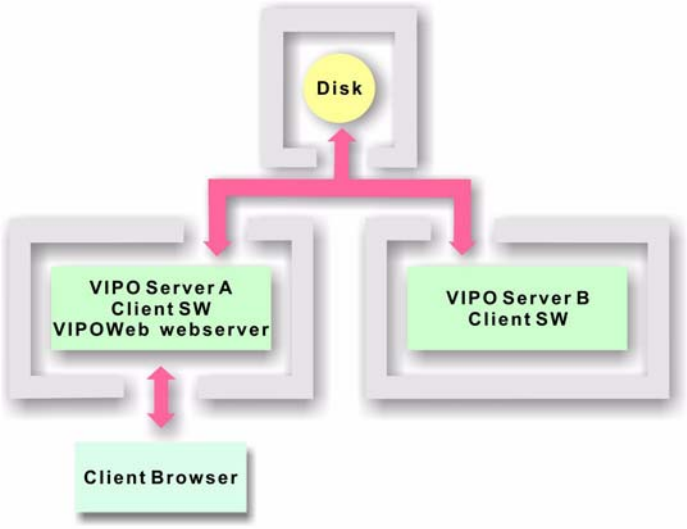
Refer to "VIPO configuration options" in the *Variable Information Suite Installation Guide* and use the following discussion to help determine how to set up your VIPO Web Server Clusters:

Assume that you have a two-node cluster set up as follows:

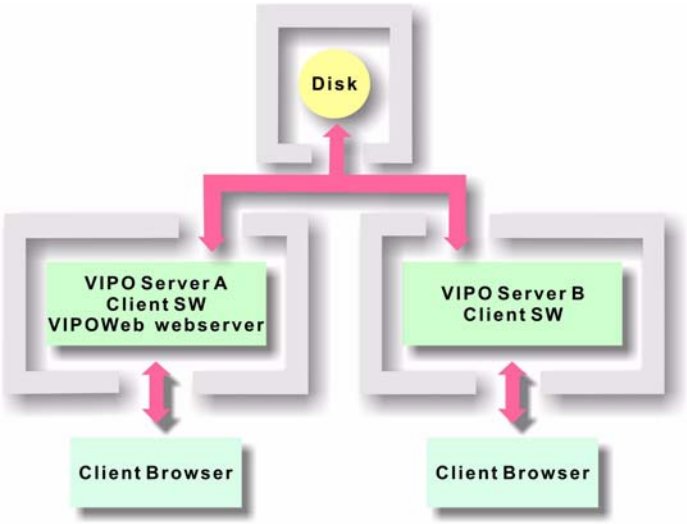


In this configuration, both VIPO Servers service a common job pool resident on a disk, which is shared over a network. Before VIPO Web, administering the VIPO Server nodes (server pause, server resume, examining logs, etc.) required physical access to the individual VIPO Servers.

With the addition of VIPO Web, VIPO Server A can now be administered via your web browser:



Without Cluster Administration, however, the only way to remotely administer VIPO Server B is to run an additional VIPO Web Server where:



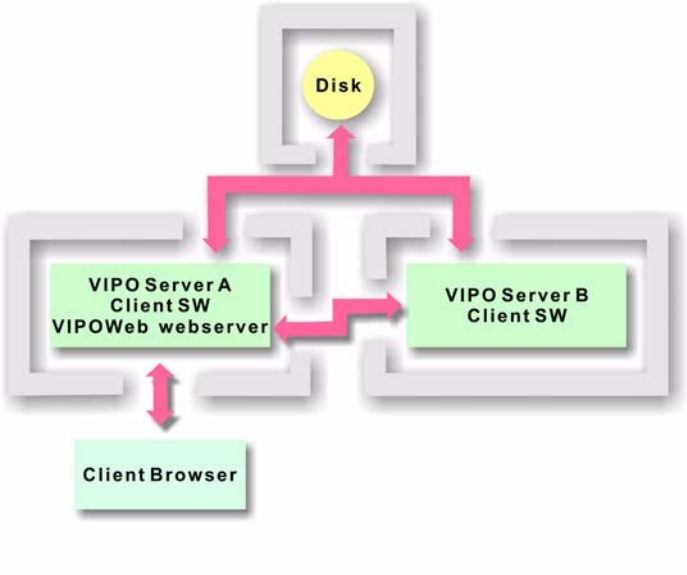
This configuration is inconvenient for several reasons:

- VIPO Web administration with regard to SSH Certificates
- User account passwords
- Multiple access points to monitor with regard to network security, etc.

The complexity and issues multiply in direct proportion to the number of additional nodes added to the cluster.

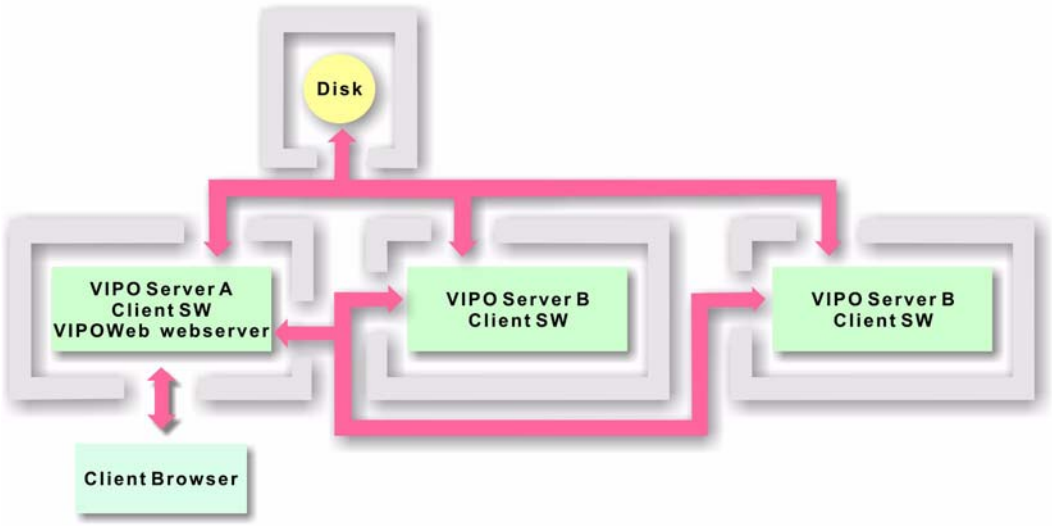
Cluster Administration via VIPO Web addresses these issues. To enable Cluster Administration for VIPO Server B, the administrator makes VIPO Server B's *X:\xvtp* directory (or VIPO Server B's server root directory) sharable or mountable by VIPO Server A.

Then, from the Cluster Administration window of the VIPO Web web server hosted by VIPO Server A, VIPO Server B is added to the Cluster Server Root list of the VIPO Web web server hosted by VIPO Server A, which results in:



VIPO Server B can be remotely administered over the HTTP connection to the VIPO Web web server hosted by VIPO Server A, which acts as an intermediary and interacts with VIPO Server B on behalf of the client browser session.

Even if additional nodes are added to the cluster, as long as their server root paths are accessible by the VIPO web server hosted by VIPO Server A, and added to its cluster server root list, they can all be administered remotely from the single client browser session:



Basic Authentication Quick Step

The Basic Authentication Quick Step process allows user-account level security with user passwords, as well as group security on an area-by-area basis. If your site requires a higher level of security, refer to "Defining the VIPO Web security levels" in the *Variable Information Suite Installation Guide* for more information.

A description of the Basic Authentication Quick Step, "HTTP Basic Authentication," can be found in the *Variable Information Suite Installation Guide*.

Disable Basic Authentication

You can disable the HTTP basic authentication level on your web server by choosing **Disable Basic Authentication** on the Administration page, then clicking the **Disable** button. You will receive confirmation of the change.

Xerox strongly recommends that you maintain an appropriate level of security on your VIPO Server network.

Web browser notes

When using Internet Explorer, be aware of these notes:

- PDF files — When Acrobat Reader is installed, clicking on a PDF file link causes the PDF file to be displayed in Acrobat Reader. PDFs encountered as the result of dynamic queries disable the **Save As** option in Acrobat. To save the PDF file from within Acrobat Reader:
  - — Use the **Shift-Ctrl-S** command
  - — Click the small floppy icon on the upper left of the IE-embedded Acrobat display
- XML files — Unless some other tool is associated with XML files, they will be opened in a new Internet Explorer window.
- CSV files — CSV files will be opened in Notepad, or other tool associated with plain text.

When using Netscape, be aware that when a file type is opened for the first time, Netscape will prompt you to select the application to use to open that file type.

Using VIPO and Adobe Distiller

"Using VIPO and Adobe Distiller" explains how to use VIPO with Acrobat Distiller. These topics are covered:

PDF security options

The PDF Splitter module supports PDF Security features.

You can set one of these password options in PDF documents generated with Acrobat Distiller:

- User passwords
- Owner or Master passwords

A User password "locks" the file and restricts file open and read access. If this password is set, the document cannot be opened unless the password is supplied.

An Owner or Master password "locks" all of the PDF document security settings in the file. If this password is set, none of the document's security options can be changed unless the password is supplied.

To configure Acrobat Distiller to generate PDF files with security settings and optional password protection, the passwords must be supplied to VIPO so that the original file can be processed and split into smaller PDF "child" documents.

A User password must be defined in the VIPO Configuration file for VIPO to use it to open and read the PDF files that have file open and read access restrictions. The User password is used only to open and read PDF documents for splitting purposes; VIPO will not transfer this password to any PDF file generated as a result of the split process. This means that while the original PDF file may have been produced with a User password, none of the split files generated will have the User password set.

This allows you to generate "parent" PDF files using Distiller, which contains a site-specific "global" User password for security purposes; however, the generated split files will not inherit the password.

If an Owner/Master password is defined in the VIPO Configuration file, VIPO will use this password to process the original PDF file and will transfer the password to each of the split files generated. Thus, all "child" PDF documents will inherit not only all the security settings of the "parent" PDF file, but will also have the Owner/Master password set (security settings passed on to "child" PDF documents do NOT include the User/Open password). Those security settings are "locked;" regular users cannot change the settings unless they know the password.

If you choose not to set any passwords in Acrobat Distiller but define an Owner/Master password in the VIPO Configuration file, VIPO will still transfer this password to all files generated during the split process. This means that while the original file may not have an Owner/Master password set, all the split files generated will. However, in order to transfer the Owner/Master password, the original PDF file must have at least one of the other security options set. If a parent PDF file has no security restrictions defined, no password will be transferred to any generated split files.

To inform VIPO to use a User and/or Owner Password when processing PDF files, the following entries must be defined in the VIPO Configuration file (*C:\WINNT\xvtp.ini* for Windows 2000, or *C:\Windows\xvtp.ini* for Windows XP):

```
## User/Open Password Entry Example ##
pdf_user_password=ExampleOfUserOpenPwd

## Owner/Master Password Entry Example ##
pdf_owner_password=ExampleOfOwnerMasterPwd
```

VIPO will not use the password when processing PDF files if an entry is:

- left blank
- commented out (by using # character)
- completely removed

The password string(s) defined above must exactly match the corresponding password(s) set for Acrobat Distiller, if any. These password strings can contain any printable ASCII characters except for blank spaces. Currently, encryption/decryption of passwords is not supported in VIPO.

Adobe Distiller and fonts

All the fonts required for your VIPP job must be in a location where Distiller can find them. Failure to do so will result in font substitution warnings in the VIPO Server log and console display.

Example:

```
<SJOB-2002.03.14.10.26.13> Run job 'billb.lm': distill
<SJOB-2002.03.14.10.26.17> Distill Warning: Helvetica-Condensed not found,
      using Font Substitution. Font cannot be embedded.
<SJOB-2002.03.14.10.26.17> 'billb.lm' complete (with warnings):1 pages
      distilled, 0 pages split, 0 files generated
```

Even though the VIPP job may have been processed successfully, any font substitution can affect the appearance of your finished job.

Acrobat Distiller versions prior to 6.0

Specify where Distiller will look for fonts via the Distiller graphical user interface (GUI). Select **Start>Programs>Acrobat Distiller x.x** to invoke the Distiller GUI, then choose **Font Locations** from the Settings drop-down menu. More information about Distiller options can be accessed through the Distiller GUI; select **Acrobat Guide** from the Help drop-down menu.

Acrobat Distiller 6.0 and later

With version 6.0 the Distiller Server installer no longer installs fonts in the *C:\Program Files\Adobe\Acrobat x.x\Resource\Font* directory as in previous versions. Instead, fonts are installed in *C:\Program Files\Adobe\Acrobat 6.0\Distillr\Data\Fonts*, and Asian fonts in *C:\Program Files\Adobe\Acrobat 6.0\Distillr\Data\psdisk\fonts*.

This change in font setup can cause some VI PDF Originator job submissions to fail for one of these reasons:

- The Distiller installation does not set these font folders as part of the “Font Locations” setting; it sets the default font location to the *..\Resource\Font* directory. The fix for this is to manually add the two new font locations using the Distiller GUI menu.
- There may be references in your job to the Symbol font (/NSY), which does not exist in the Distiller 6.0 fontset, and has no font substitution. The references to the Symbol font may cause job submission failure even after adding the new font locations. A simple fix for this problem is to copy the Symbol font files from the Acrobat Reader fontset.

Job submission failures due to the change in font setup will not occur if Acrobat Reader is installed in the same program folder as Acrobat Distiller because the *..\Resource\Font* directory installed with Acrobat Reader is shared with Distiller.

Assigning a Distiller job options file

You can assign a particular Distiller job options file to be used for generating a PDF document when submitting a VIPP job to the VI PDF Originator. The *DistillJobOptions* entry found in a Profile file is set by default to use whatever job options file has been set as the default in the Distiller GUI.

When the VIPO Profile file is set to

DistillJobOptions=<default>

VI PDF Originator will use the default job options file set in the Distiller GUI Default Settings" selection. This Profile entry can be modified to specify an existing Distiller job options file, which VI PDF Originator will use when invoking Distiller.

For instance, the following entry in the Profile file will use the High Quality job options file for distillation:

DistillJobOptions=High Quality.joboptions

The Profile entry must exactly match one of the option files available in the Distiller GUI Default Settings menu options.

Using BOOKMARK, PDF features, and Project Containers

Descriptions of using VIPO with the BOOKMARK command and Project Containers are found in these sections:

Using the VIPP BOOKMARK command

The VIPP BOOKMARK command can be used in any VIPP mode to generate a bookmark on the PDF document. The syntax is:

(bookmark contents) BOOKMARK

Where:

bookmark contents
is the text that will appear on the PDF bookmark generated by VIPO. Variables are allowed.

The following example will create a PDF bookmark containing “John Doe 687863456” (John Doe’s name and social security number) on the specified page.

DBF file:

```
%!
XGF
FNAME:NAME:SS#
John:Doe:687863456
```

DBM file:

```
600 300 MOVETO
($$FNAME. $$NAME. $$SS#.) VSUB BOOKMARK
PAGEBRK
```

Extended bookmarks

An extended bookmark is a transparent PDF note, which is usually visible from the “Comment” section of the completed PDF only. Extended bookmarks are only used with the Dispatch function of VIPO.

Extended bookmarks can contain information up to 64K in size, regular bookmarks contain up to 256 characters. The contents of the extended bookmark is:

- appended to the contents of the regular bookmark
- always linked to a regular bookmark
- created after the regular bookmark

Several extended bookmarks may be created in a sub-document (between two consecutive regular bookmarks).

This syntax is used to create an extended bookmark:

```
(bookmark contents) [ /EX opt1 opt2 ] BOOKMARK
```

Where:

/EX
tells BOOKMARK to create an “extended bookmark” rather than a regular bookmark.

opt1
is an integer that tells the VIPO splitter how to handle the child PDF file:

- 0 — Do not produce the child PDF file
- 1— Produce the child PDF file but do not include bookmark in it.
- 2— Produce the child PDF file and include bookmark in it. This is the default.

All extended bookmarks within a sub-document must carry the same *opt1* value

opt2
is an integer that tells the VIPO splitter how to handle the extended bookmark:

- 0 — Do nothing with this extended bookmark
- 1 — Merge the extended bookmark with the associated regular bookmark (for index file processing), but do not include it in the child PDF
- 2— Merge the extended bookmark with the associated regular bookmark (for index file processing) and include it in the child PDF

opt2=0 can be used to insert comments or instructions in the main PDF file present only in this file.

The combination *opt1*=0 and *opt2*=2 is irrelevant. It will act as *opt2*=1.

This example creates an extended bookmark that instructs the VIPO splitter to produce a child PDF that does not contain the extended bookmark. However, this extended bookmark will be included in the VIPO index file and, with appropriate VIPO Dispatch and mail server settings, will trigger an e-mail to John Smith with the child PDF attached.

```
(John Smith@isp.com:April invoice:Dear John,\nAttached you will find your
invoice for April.\nBest regards,\nPaul Martin) [ /EX 2 1 ] BOOKMARK
```

Using VIPP PDF interactive features

A complete set of VIPP PDF Interactive Features (PIF), available in VIPP 4.0 and later, allow you to create interactive elements when the VIPP job is rendered into a PDF document. For an overview of VIPP PIF and details about each related command, refer to the *VIPP Language Reference Manual*.

Using VI Project Containers

VI Project Containers (VPC or .vpc) are a convenient way to archive, exchange, and deploy VIPP applications. VPCs are created with VI Designer.

When creating an application with VI Designer, you typically work with a sample print file containing a limited number of records (the sample print file is shown as a local resource in the notebook display; it is the one with the blue gear icon). By definition, this is sample data and is not intended for use in a production run.

However, VIPO is intended for use in a production environment; it knows about VI Project Containers and will not use the VPCs sample data.

NOTE

A VPC sent to the VIPO Server must contain a production submission file; any VPC submitted to the VIPO Server with only a sample data file will be rejected.

Follow these steps to add a production submission file to your VI Project from within VI Designer:

1. From the notebook display, right click on the **Local folder** icon. A pop-up menu appears.

2. Select **Add Resource To Project** from the pop-up menu to add your production submission file to the project (submission files must have an extension of .lm, .nm, or .dbf). Your submission file will have a small number “1” in its icon, indicating that it is submission file 1.

NOTE

VI Designer allows you to add multiple submission files to your project, but the VIPO Server only processes submission file 1.

3. Export your project as a VPC from VI Designer by clicking the **Export** VI Project **Container** button on the VI Designer tool bar.

Using lpr to submit VIPO jobs

"Using lpr to submit VIPO jobs" provides the lpr command syntax for Windows 2000.

Also included are:

- Parameter definitions
- Parameter defaults
- Example lpr job submissions

NOTE

Job files to be submitted through an lpr command cannot contain blank spaces, pound signs (#), equal signs (=), or colons (:) in their names.

NOTE

In order to use lpr printing, the TCP/IP Print Server must be installed and started.

When submitting jobs to VIPO through lpr commands the VIPO Server console will show the job names with extra numeric tags, or IDs, appended to the file extension. Because all lpr jobs are sent to a common spool area, the extra tags are needed to avoid file name collisions and guarantee unique name identifiers. The unique tags generated by the system are appended to the original files before file submission and processing by the VIPO Server. The resulting files do not have the extra numeric tags.

lpr command syntax for Windows 2000

```
lpr –S servername –P printername printfilename
```

Windows 2000 does not accept the -T option or parameters on the lpr command line. Any lpr jobs will only be able to use the defaults as described in "Parameter defaults."

For submission of .pdf, .vpc, or other non-text type jobs, be sure to use the **-o l** option on the lpr command line as the last parameter before the job file name as in this example:

```
lpr -P HostName -P XVTPrinterName -o l BinaryJobFile
```

For more information on lpr command parameters, type **lpr** on the command line.

Parameter definitions

VIPO_user [:local|remote]

Defines the scope of the VIPO user, either local or remote.

- ***VIPO_user*** :local — a local-scope VIPO user defined on the lpd print server associated with *printername*.
- ***VIPO_user*** :remote — a remote-scope VIPO user reachable from the lpd print server associated with *printername*.
- If neither local nor remote is specified, local scope is searched first; if the user is not found, then remote scope is searched. If the user is not found in either, the job receives a submission error.

profile_name

Specifies the name of a profile belonging to the VIPO_user on the lpd print server associated with *printername*.

print_file_name

Specifies the same name as the *printfilename* parameter of the lpr command. This parameter is required if any -T options are present. This duplicated name is an artifact of the non-standard Windows 2000 lpd implementation.

NOTE

If the –T option is omitted, this parameter is not needed and printfilename is passed correctly to lpd.

printername

This is an lpr-to-VIPO printer defined on a VIPO Client on Windows 2000 running an lpd server.

NOTE

The initial printername must be created using the Install VI PDF Originator LPR Option in the VIPO program folder or by checking the lpr option when installing VIPO.

servername

This is an IP address or hostname of a VIPO Client running lpd. The host name is defined in the file *winnt/system32/drivers/etc/hosts*.

Parameter defaults

If any or all of the –T or –C parameters are omitted from the lpr command, the following defaults are used:

- If user= is undefined in the lpr command, then the VIPO_user defaults to default_user (local-scope) on the lpd server associated with *printername*.
- If profile= is undefined in the lpr command, the following defaults are tried in this order:

  1. The user defined default lpr profile (lpr_default.pfl) belonging to the *VIPO_user[:scope]* as defined on (local-scope) or reachable from (remote-scope) the lpd server associated with *printername*.

  2. The profile *printername.pfl* in the XVTP <*server_root*>*/Profiles* directory (virtual printer profile) as defined by the lpd server associated with *printername*.

- Virtual printer and user default lpr profiles must be supplied by the VIPO user, and can be created and modified using the VIPO Job Submission Client (Load and Save Profile functions).
- If printfile= is undefined and other –T options are supplied, then no print file name is supplied and the job receives a submission error. If no -T options are present, then printfile= is not necessary.

Example lpr job submissions

This section provides three examples of jobs submitted via lpr.

- This job prints the *xyz.lm* file using *lpr_default.pfl* of the *default_user* if a profile exists; otherwise it uses *xvtprinter.pfl* from the generic profile directory:

```
lpr –P XVTPrinter xyz.lm
```

- This job prints the *xyz.lm* file using *lpr_default.pfl* of the user johndoe if a profile exists; otherwise it uses *xvtp3.pfl* from the generic profile directory:

```
lpr –P XVTP3 –T “user=johndoe printfile=xyz.lm” xyz.lm
```

- This job prints the *xyz.lm* file using *newjob.pfl* of the user johndoe:

```
lpr –P XVTPrinter –T “user=johndoe profile=newjob.pfl printfile=xyz.lm”    xyz.lm
```

Using VIPO Dispatch

VIPO Dispatch (VIPOD) is the generic mechanism by which VIPO jobs that have been distilled and split, or split into pages are sent, or dispatched, to other programs or functions such as:

- E-mail
- Fax
- DocuShare repository

VIPOD monitors VIPO output and performs post-processing via a customer-specified back-end. Post-processing is completed in accordance with parameters and other data embedded in a job, and is communicated to the dispatch mechanism via the index file (specifically the splitfile index record field names and values) of completed VIPO jobs.

Because different applications require different workflows, VIPOD handles these types of workflow simultaneously:

- Jobs in which the entire VIPO-to-VIPOD process runs automatically, such as an interface with a DocuShare repository
- Jobs that require verification of the VIPO output before the dispatch proceeds, such as an interface with an e-mail disbursement system

VIPOD inspects, or polls, the VIPO *Incoming Folders* directories in the context of a user-specified filter and compares the field names of the first record from the VIPO job's splitfile index against a repository of Dispatch Rules. If a completed VIPO job is associated with a single Dispatch Rule, it is considered eligible for dispatch and becomes a VIPOD job. If a VPTD job is either manually approved for processing or meets the user-specified criteria for autorun (via another filter), VIPOD resolves and applies the appropriate Dispatch Rule for each record of the VIPO job's splitfile index.

Each of the VIPOD job's splitfile records in the context of a Dispatch Rule effectively defines a subtask of the VIPOD job. Processing of each subtask first (optionally) writes the contents of one or more splitfile index records to disk and then performs a single invocation of a rule-specified external program (for example, an e-mail client interface). The results of subtask processing are accumulated in a log file in the VIPO job's *Incoming* directory and represent the results of the overall VIPOD job.

Dispatch filters

A filter file can have up to 100 user/folder pair entries, with a maximum of 2048 characters for each entry. Only one AutoRun filter and one IncomingFolders filter can be active during a current invocation of the application. The active filter(s) can be set with the **Set Active Filter** button found in the Editing dialog panel. This button is greyed out when the currently active filter is displayed.

All filter files must have a file extension of .filter and must be placed in the corresponding directory shown below for the application to find them and be available for editing:

- The *AutoRun* filter files must be in:*X:**xvtp**dispatch**filters**AutoRun*\
- The *IncomingFolders* filter files must be in: *X:**xvtp**dispatch**filters**IncomingFolders*\

Where *X* is the disk drive where VIPO was initially installed.

To edit Dispatch Filter files, click the **Edit** drop-down menu and select either **AutoRun** or **IncomingFolders** filters.

One default AutoRun filter and one default IncomingFolders filter are provided with this installation.

NOTE

Always use the GUI editing facilities to modify filter files; manual edits may introduce errors in the file that can result in unpredictable behavior.

A filter entry of *all* or *none* for either the “user” or “folder” key will effectively disable all other options from being selected. To change an *all* or *none* setting, either delete or clear the entry before selecting a new option. In addition, filter entries such as the following are special filter entries that are allowed as the only single entry in a filter. No other entries can be found along with it in the same filter file.

```
user=all
folder=all
```

or

```
user=all
folder=none
```

or

```
user=all
folder=rule-based
```

NOTE

All, *none*, and *rule-based* are reserved words used for special filter entries. Do not use these words to define a user name or an incoming folder name. If you do, VIPO Dispatch will interpret the reserved words as special filter entries rather than a user name or an incoming folder name, and unexpected results will occur.

Dispatch Rule files

All rule files must have a file extension of .rule and must be placed in the *X:\xvtp\dispatch\rules* directory for the application to find them and for editing. *X* is the disk drive where VIPO was initially installed.

To edit Dispatch Rule files, click the **Edit** drop-down menu and select the **Dispatch Rules** option. Some sample rule files are provided with this installation and can be used as a template to create your own customized rule files.

NOTE

Always use the GUI editing facilities to modify rule files because doing manual edits may introduce errors in the file that can result in unpredictable behavior.

The following are defaults and limits imposed on Dispatch Rule settings.

Key name	*Factory defaults*	*Maximum length or value*
RuleName	Rule Filename	**75 characters** Invalid characters: \ / : * ? < > | ' ` ~ ! $ ^ & , ; % # = + @ ”
RuleVars	<empty> (optional)	**Variable Name: 25 characters** Invalid characters: \ / : * ? < > | ' ` ~ ! $ ^ & , ; % # = + @ ” blank space **Variable Value: 70 characters** Invalid characters: * ? < > | ' ` ~ ! ^ & , ; = + (There is a maximum of 25 Name/Value sets)
DataFileTemplate	<empty> (optional)	**Field Name: 25 characters** Invalid characters: \ : * ? < > | ' ` ~ ! $ ^ & , ; % # = + @ ” blank space **Destination File Path: 90 characters** Invalid characters: * ? < > | ' ` ~ ! ^ & , ; = + @ " blank space (There is a maximum of 20 FieldName/FilePath sets)

Key name	Factory defaults	Maximum length or value
CommandTemplate	NO default and NOT optional (must be defined by user)	1024 characters
TimeOut	0 (ZERO=infinite wait)	32,400 sec. (~9.0 hours)
LogStdOut	true (boolean)	
LogStdErr	true (boolean)	
FailOnWarning	false (boolean)	
FailOnError	true (boolean)	
RetValTriggerTrumpsStdOutStdErr	true (boolean)	
RetValTrigger	<empty> (optional)	100 characters for each of the three integer triggers Valid characters: 0 1 2 3 4 5 6 7 8 9 < = > - | * blank space
StdOutTrigger	<empty> (optional)	256 characters for each of the three string triggers Invalid characters: \ / ;
StdErrTrigger	<empty> (optional)	256 characters for each of the three string triggers Invalid characters: \ / ;
AutoRun	false (boolean)	
RunPostProcessCmd	false (boolean)	
PostProcessCommandTemplate	<empty> (optional)	1024 characters

Dispatch Rule entries are defined as follows:

RuleName

The user-specified name by which the rule is identified to the user. Examples might be “E-mail via Exchange” or “Submit to DocuShare.”

RuleVars

A set of name-value pair definitions that define the specified field names for use in the CommandTemplate. When a RuleVars name is the same as a field name encountered in a VIPOD job's splitfile index record, the field name contents of the splitfile index record takes precedence over the RuleVars value.

Example:

```
RuleVars=(profileName="Bill Walker-Test2" | password=wazoo)
```

The RuleVars entry can be empty, indicating that no RuleVars name or value pairs are defined for the given Dispatch Rule.

DataFileTemplate

The template from which the data file preprocessing step(s) are defined.

These steps specify the writing to disk of zero or more files containing the contents of one or more splitfile index fields. This is required to support external programs like some batch e-mail clients, where the body of an e-mail message must be specified as a file name on the client's command line.

The template consists of a set of rules internally delimited by the “|” character and interstitially delimited by the “;” character of the form:

```
FieldName|DestinationFilePath|deleteOnExit;...
```

where the *fieldName* is the name of a field in the splitfile index (i.e., “body” or “mailtext”), the path resolves to the full path of a destination file. The boolean *deleteOnExit* indicates whether the destination file is deleted by VIPOD upon successful processing of the subtask. An example:

```
DataFileTemplate=(body | c:\xvtp\bin\bodytemp.txt | 1)
```

results in the contents of the body field of the splitfile index record being written to the file *c:\xvtp\bin\bodytemp.txt,* which would then be deleted after the execution of the rule's command. This example:

```
DataFileTemplate=(body | c:\xvtp\bin\$(destFilename) | 0)
```

where *destFilename* is a field of the splitfile index record having the value “jones.txt,” results in the contents of the body field of the splitfile index record being written to the file *c:\xvtp\bin\jones.txt*. The file is not deleted after the execution of the rule's command.

A DataFile Template can be empty, indicating that no file creation is to take place.

CommandTemplate

The template from which the command (passed to the operating system representing the execution of the subtask) is derived. An example:

```
blat c:\xvtp\bin\bodytemp.txt -t $mailto
```

where mailto is a field of the splitfile index record or RuleVars name having the value jones@ip.com would result in the file *c:\xvtp\bin\bodytemp.txt* being mailed to jones@ip.com via the SMTP batch tool, blat, (assuming that *blat.exe* was somewhere on the execution path of the VIPOD process).

The command template is preprocessed to produce the actual command string that is passed to the OS. Command template fields that begin with the reserved character “$” are substituted by the respective splitfile index record field or RuleVars value. VIPOD assumes that a single target executable will be called when the command is executed. Multi-step executions are not supported by VIPOD. If a multi-step subtask is desired for a given VIPOD job, it should be realized by calling a single batch process, which is responsible for executing the multiple steps and reporting status back to VIPOD.

A command template cannot be empty and to be valid, must contain at least one index file record fieldname reference beginning with the reserved character “$.” Otherwise, the Dispatch Rule will not be associated with any job when evaluating the job's eligibility against the Dispatch Rule's CommandTemplate definition.

TimeOut

Specifies the length of time between when the OS command is executed and a timeout error is declared, in seconds. A timeout value of “0” indicates an infinite waiting period. An OS command that triggers a timeout should be terminated by VIPOD and treated as having returned with an error return value.

LogStdOut

A boolean (.INI false: 0, or true: 1) indicating whether the stdout of the executing OS command should be appended to the log file for the VIPOD job associated with this Dispatch Rule.

LogStdErr

A boolean (.INI false: 0, or true: 1) indicating whether the stderr of the executing OS command should be appended to the log file for the VIPOD job associated with this Dispatch Rule.

FailOnWarning

A boolean (.INI false: 0, or true: 1) indicating whether detection of a warning during execution of the OS command should cause the VIPOD job to halt processing (transition from “current” to “complete,” with a status of “failure”) at the record that generated the warning.

FailOnError

A boolean (.INI false: 0. or true: 1) indicating whether detection of an error during execution of the OS command should cause the VIPOD job to halt processing (transition from “current” to “complete,” with a status of “failure”) at the record that generated the error.

RetValTriggerTrumpsStdoutStderr

If true (.INI true: 1), indicates that the RetValTrigger value takes precedence over any return value indication returned by either StdOutTrigger or StdErrTrigger. If false (0), then the return value indication from either StdOutTrigger or StdErrTrigger takes precedence over that returned by RetValTrigger.

RetValTrigger

The definition of the integer value(s) returned by the executed OS command, which are interpreted in the context of success, warning, or failure. These are presented as a set of rules internally delimited by the “|” character and interstitially delimited by the “;” character of the form:

```
trigger(s);trigger(s);trigger(s)
```

where the first set (highest precedence) defines those return values that indicate success, the second set defines those that indicate warning, and the third (lowest precedence) defines those indicating failure. In a trigger definition, the “*” (asterisk) character indicates any value that causes a trigger, except those values defined in a trigger with higher precedence. An empty value indicates that no triggers exist at that precedence. A simple example:

```
RetValTrigger=(0 ; ; *)
```

indicates that a zero return value indicates success, that no values indicate warning, and that any value other than those values defined for success or warning indicates failure.

Within a trigger definition, multiple sets of conditions can be separated by the “|” character, as in:

```
RetValTrigger=(0 ; 1 | 2 ; <0)
```

meaning that a zero return value indicates success, a one or two value indicates a warning, and any negative value indicates failure.

Within a trigger definition, the following operators are recognized:

<, <=, >, >=.

For example:

```
RetValTrigger=(0 ; >0 ; <0)
```

meaning that a zero return value indicates success, values greater than zero indicate a warning, and values less than zero indicate failure.

A RetValTrigger definition may be empty, indicating that return values are ignored - the OS command is assumed to have completed with “success” regardless of the return value (unless trumped by the stdout or stderr triggers, see below).

Any value returned by the OS command not covered by the RetValTrigger definitions shall be treated as a “warning” return value.

If RetValTrumpsStdOutStdErr is false, the RetValTrigger return value indication is trumped by those detected via either a StdOutTrigger or a StdErrTrigger. A trumped RetValTrigger return value indication should not preclude the RetValTrigger value from being considered for inclusion in the log file.

StdOutTrigger

The definition of substring value(s) whose presence in the stdout stream emitted by the executed OS command are interpreted in the context of success, warning, or failure.

These are presented as a set of rules internally delimited by the “|” character and interstitially delimited by the “;” character of the form:

```
trigger(s);trigger(s);trigger(s)
```

where the first set (highest precedence) defines those substrings whose presence indicates success, the second set defines those that indicate warning, and the third (lowest precedence) defines those indicating failure. In a trigger definition, an empty value indicates that no triggers exist at that precedence. A simple example:

```
StdOutTrigger=(; ; "Error:")
```

means that the presence of the substring “Error:” in the OS command's stdout indicates an error.

Another example:

```
StdOutTrigger=(; "Warning:" ; "Error:" | "Fatal:")
```

means that the presence of the substring “Warning:” in stdout indicates a warning, while the presence of either “Error:” or “Fatal:” indicates an error.

A StdOutTrigger definition may be empty, indicating that the contents of the stdout stream is ignored for purposes of determining the return status of the OS command.

A StdOutTrigger return value indication is trumped by those detected via a StdErrTrigger, or by a RetValTrigger return value indication if RetValTrumpsStdOutStdErr is true. A trumped StdOutTrigger return value indication should not preclude the StdOutTrigger value from being considered for inclusion in the log file.

StdErrTrigger

The definition of substring value(s) whose presence in the stderr stream emitted by the executed OS command are interpreted in the context of success, warning, or failure.

These are presented as a set of rules internally delimited by the “|” character and interstitially delimited by the “;” character of the form:

```
trigger(s);trigger(s);trigger(s)
```

where the first set (highest precedence) defines those substrings whose presence indicates success, the second set defines those that indicate warning, and the third (lowest precedence) defines those indicating failure. In a trigger definition, an empty value indicates that no triggers exist at that precedence. A simple example:

```
StdErrTrigger=(; ; "Error:")
```

means that the presence of the substring “Error:” in the OS command's stderr indicates an error.

Another example:

```
StdErrTrigger=(; "Warning:" ; "Error:" | "Fatal:")
```

means that the presence of the substring “Warning:” in stderr indicates a warning, while the presence of either “Error:” or “Fatal:” indicates an error.

A StdErrTrigger definition may be empty, indicating that the contents of the stderr stream is ignored for purposes of determining the return status of the OS command.

A StdOutTrigger return value indication is trumped by a RetValTrigger return value indication if RetValTriggersStdoutStdErr is true. A trumped StdErrTrigger return value indication should not preclude the StdErrTrigger value from being considered for inclusion in the log file.

AutoRun

If the current AutoRun filter is set to give rules control of automatic job processing, the AutoRun entry in Dispatch Rules allows you to control automatic processing of eligible jobs on a rule-by-rule basis. For example, if the AutoRun filter entry for “folder” has been set to “rule-based” value, automatic job processing is controlled by the setting of the “AutoRun” rule entry.

NOTE

The AutoRun setting in Dispatch Rules is completely ignored if the AutoRun filter has not been set to yield control to Dispatch Rules. The AutoRun filter setting acts as a global on/off switch that can take or give control of the automatic processing of all jobs.

RunPostProcessCmd=[true/false]

This boolean entry indicates whether to execute the command string found in the PostProcessCommandTemplate entry (if not empty). Use this entry to turn the “post-processing” command on and off without having to remove or comment out the actual command string.

PostProcessCommandTemplate=(...command string...)

This optional free-format rule entry can specify a command string that will be executed after the job has been processed successfully by the VIPO Dispatch server. Use this entry to perform post-processing tasks on a per-job basis. The post-processing command string has a maximum length of 1024 bytes, and can include field name variable references and built-in macros that will be resolved before the command is sent for execution.

NOTE

Once the command string is sent to the operating system for execution, VIPO Dispatch does not wait for success or failure; it simply sends the post-processing command string to execute and moves on to process the next job.

System built-in macros

Use these built-in macros as variables in a rule file for *DataFileTemplate* and *CommandTemplate* definitions:

- PDF_DIR_PATH — Full path of the directory location where the distilled PDF file associated with the job can be found.
- PDF_FILE_PATH — Full path of the individual split PDF file associated with the index file record currently being processed.
- PDF_FILE_NAME — File name only of the individual split PDF file associated with the index file record currently being processed.
- USER_NAME_ID — User ID associated with the job being processed.
- JOB_NAME_ID — Job Name ID associated with the job being processed.

Rule file variable references

The *DataFileTemplate*, *CommandTemplate*, and *PostProcessingCommandTemplate* definitions allow the use of variable references. The variable names used can be field names from the header of the job index file, variable names defined within the rule file itself (RuleVars) or system built-in macros. The reserved character "$" is used to indicate a variable reference. Only these two syntax forms are supported:

```
$varname
$(varname)
```

Examples:

The following are examples only and are not intended to work in all conditions.

These *DataFileTemplate* definitions have variable references:

```
body | C:\xvtp\bin\$(TempFolder)\bodytemp.txt | 0
```

```
body | C:\xvtp\bin\temp\$(BodyFileName) | 0
```

These *CommandTemplate* definitions have variable references:

```
blat C:\xvtp\bin\$(TempFolder)\bodytemp.txt -t $mailto
```

```
blat C:\xvtp\bin\$(TempFolder)\$(BodyFileName) -t $mailto
```

```
xcopy $(OutputDir)\$(FileName) C:\xvtp\dispatch\MyArchiveFolder /y
```

```
xcopy $(PDF_FILE_PATH) C:\xvtp\dispatch\MyArchiveFolder /y
```

Special Character Sequences in CSV and XML Index Files

All new line characters (<CR> and <LF>) found in bookmark fields extracted from the distilled PDF file are first converted to a special sequence of characters before placing the bookmark string in the CSV and XML index files.The character sequence *
* is used to replace all new line characters found in the bookmark fields. This allows the index files to carry line break information within the bookmark contents without breaking the format of the index file record, and to pass the information to any utility being used to parse and extract information from the index file records.

All double quotes (") found in the bookmark fields are also converted to a special sequence of characters before placing the bookmark string in the CSV file. For consistency, the standard XML character sequence *"* is used to replace all double quotes in CSV index files.

The following INI entries can be modified to change the default character sequences used to convert new lines and double quotes in a CSV index file:

- csv_newline_char_seq=(
)
- csv_dquotes_char_seq=(")

NOTE

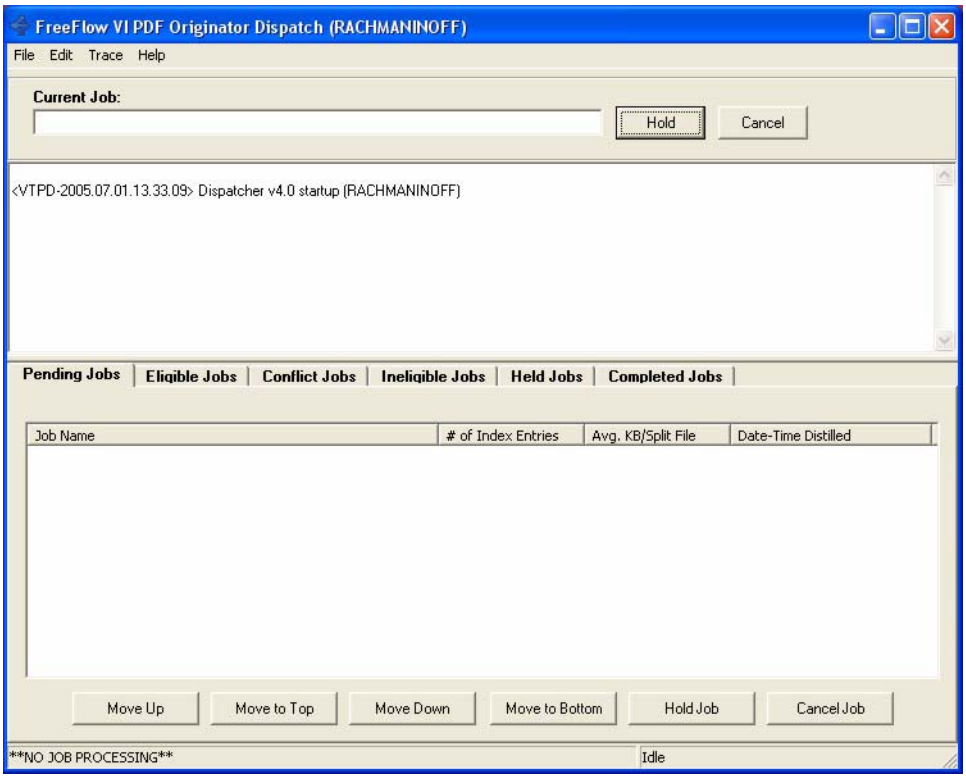
These settings apply only to CSV index files; they do not change the character sequences used in the XML index file. Be careful when redefining these character sequences as some characters are invalid and may corrupt the format of the CSV file. These characters should not be used in the special character sequences: < > ' " and blank space.

CAUTION

Some sequences that appear to be valid may in fact prevent the index file from being processed by VIPP. For instance, the following sequence appears as if it is a place holder delimiter for the VSUB command: [=...=]. Do not modify the default character sequences unless absolutely necessary.

VIPO Dispatch window

The VI PDF Originator Dispatch window provides access to dispatch functions.



The upper portion of the Dispatch window consists of these elements:

Title bar

Displays the name of the program and your computer's name. It also contains the standard minimize, maximize, and cancel buttons.

Menu bar

Provides access to these functions, which are described in more detail below:

- File menu
  - Pause Dispatcher
  - Save Logfile
  - Clear Logfile
  - Hide Dispatcher
- Edit menu
  - IncomingFolders Filters
  - AutoRun Filters
  - Dispatch Rules

- Trace menu
  - Clear Display
  - Job Selection Loop
  - Job Selection Trace
- Help menu
  - Help
  - About

Current Job

Lists the job currently being processed.

Hold

Places the current job on hold.

Cancel

Cancels processing of the current job.

Log file window

Contains the logged information for the VIPO jobs being processed.

The lower portion of the VI PDF Originator Dispatch window consists of these six tabs, with corresponding windows and buttons for each function:

- Pending Jobs
- Eligible Jobs
- Conflict Jobs
- Ineligible Jobs
- Held Jobs
- Completed Jobs

Pending Jobs

When the Pending Jobs tab is selected, VIPO produces a window containing a list of all VIPO jobs pending processing.

When any entry in the Pending Jobs list is highlighted, these buttons can be used to alter how the selected job will be processed:

Move Up

Moves the selected file up one position on the Pending Jobs list. This affects the processing order of your jobs.

Move to Top

Moves the selected file to the top of the Pending Jobs list. The selected job will be the next job processed.

Move Down

Moves the selected file down one position on the Pending Jobs list. This affects the processing order of your jobs.

Move to Bottom

Moves the selected file to the end of the Pending Jobs list. The selected job will be the last job processed.

Hold Job

Holds the selected job. Once placed on hold, the job appears on the Held Jobs window until you choose to release or cancel that job.

Cancel Job

Cancels the selected job. Once selected for cancellation, the job is removed from the list and placed in the Completed Jobs queue with a “Cancelled” status.

Eligible Jobs

When the Eligible Jobs tab is selected, VIPO produces a window containing a list of all VIPO jobs eligible for processing.

When any entry in the Eligible Jobs list is highlighted, these buttons can be used to alter how the selected job will be processed:

Preview Job File

Previews the PDF file. Adobe Acrobat Reader is launched and the original, unsplit, distilled master PDF will be previewed. This option is used to visually inspect and verify the job before submitting it to the Pending Jobs queue.

Submit Job

Submits the selected job for processing. Once selected the job will appear on the Pending Jobs window.

Hold Job

Holds the selected job. Once placed on hold, the job appears on the Held Jobs window until you choose to release or cancel that job.

Cancel Job

Cancels the selected job. Once selected for cancellation, the job is removed from the list and placed in the Completed Jobs queue with a “Cancelled” status.

Conflict Jobs

When the Conflict Jobs tab is selected, VIPO produces a window containing a list of all VIPO jobs with conflicts. Conflict jobs are jobs where more than one Dispatch Rule can be applied.

When any entry in the Conflict Jobs list is highlighted, these buttons can be used to alter how the selected job will be processed:

Select Dispatch Rule

Allows you to select the appropriate Dispatch Rule from a list.

NOTE

It is possible that one or more of the listed Dispatch Rules may not apply because of modifications made between the time the conflict was identified and the time at which the Dispatch Rule file is selected. In this situation, the job may remain in the Conflict Jobs queue or be moved to the Ineligible Jobs queue.

Cancel Job

Cancels the selected job. Once selected for cancellation, the job is removed from the list and placed in the Completed Jobs queue with a “Cancelled” status.

Ineligible Jobs

When the Ineligible Jobs tab is selected, VIPO produces a window containing a list of all ineligible VIPO jobs. Ineligible jobs are jobs for which no existing Dispatch Rules could be applied at the time the job was accessed by VIPO Dispatch.

When any entry in the Ineligible Jobs list is highlighted, these buttons can be used to alter how the selected job will be processed:

View IndexRecord Field Names

Allows you to inspect the field names in the CSV index file header to determine why no existing Dispatch Rule can be applied.

Cancel Job

Cancels the selected job. Once selected for cancellation, the job is removed from the list and placed in the Completed Jobs queue with a “Cancelled” status.

Held Jobs

When the Held Jobs tab is selected, VIPO produces a window containing a list of all VIPO jobs on hold.

When any entry in the Held Jobs list is highlighted, these buttons can be used to alter how the selected job will be processed:

Release Job

Releases the selected job from the “Hold” status. The job’s eligibility is re-evaluated against the current set of Dispatch Rules, which may result in the job moving to the “Ineligible,” “Eligible,” or “Conflict” state.

Cancel Job

Cancels the selected job. Once selected for cancellation, the job is removed from the list and placed in the Completed Jobs queue with a “Cancelled” status.

Completed Jobs

When the Completed Jobs tab is selected, VIPO produces a window containing a list of all completed VIPO jobs.

When any of the entries in the Completed Jobs list is highlighted, these buttons can be used to alter how the selected job will be processed:

Review Job Status

Provides the status of the selected job.

Resubmit Job

Resubmits a job for processing, at which point the job’s eligibility is re-evaluated against the current set of Dispatch Rules. This may result in the job moving to the “Ineligible,” Eligible,” or “Conflict” state.

File menu

The File menu provides drop-down access to these functions:

Hide Dispatcher

Minimizes the VIPO Dispatch window. The window can be reopened by double-clicking the VIPO Dispatch icon on the lower right menu bar.

Pause Dispatcher

Pauses the VIPO Dispatch program. To restart VIPO Dispatch, remove the check mark. The status of the program is displayed in the upper logfile window.

Save Logfile

Saves the current logfile to your disk. You will be prompted to browse for the directory in which to save the logfile.

Clear Logfile

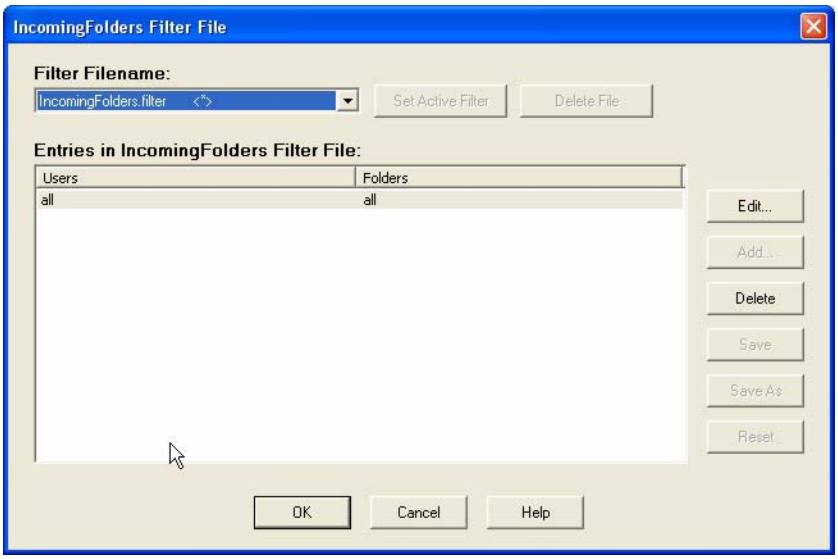
Clears the entries that appear on the logfile window.

Edit menu

The Edit menu provides drop-down access to the following functions.

IncomingFolders Filters

Selecting this option produces a pop-up window that allows you to select and edit the IncomingFolders Filters. These filters are used to decide which VIPO jobs will make it into the VIPO Dispatch for evaluation against the Dispatch Rules.



These options are available on the IncomingFolders Filter File window:

Filter Filename

Contains a list of all defined IncomingFolders Filter files found in the VIPO Dispatch Server *IncomingFolders* directory. Highlight the file name you want to edit; the entries in the highlighted filter file will appear in the lower dialog.

Set Active Filter

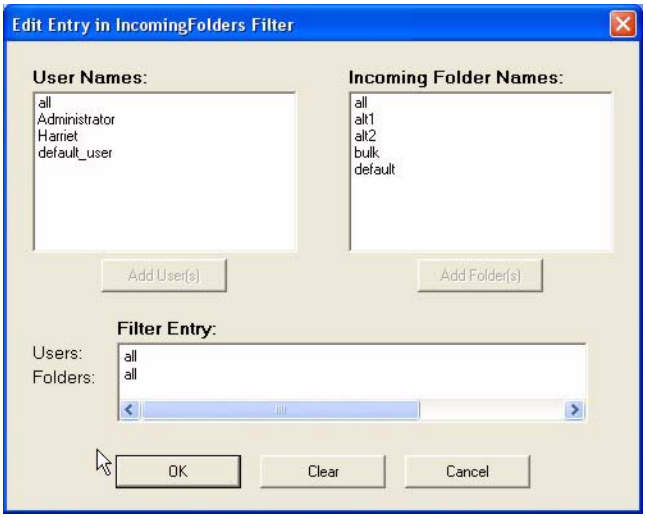
Sets the highlighted filter to active status to get potential VIPO jobs into the dispatcher.

Delete File

Deletes the selected filter file from the list and from the disk.

Edit

Produces a dialog that lists user names and incoming folder names for the selected filter file. Use the entries to select new users and/or folder file names. When the correct settings for your filter appear in the Filter entry field, select **OK** to edit the selected entry and store it in memory; it will not alter the filter file on the disk. The filter file is only modified and stored on the disk when the **Save** or **Save As** buttons are pressed.



Add

Adds new users and folders for processing. Adding information and selecting **OK** stores the change in memory only. Select the **Save** or **Save As** button after making changes to store the addition to disk.

Delete

Deletes an entry in the Incoming Folder filter list. You cannot leave the list empty. Deleting information and selecting **OK** stores the change in memory only. Select the **Save** or **Save As** button after making changes to store the deletion to disk.

Save

Saves all the modified entries (not just the selected information) into the existing file on disk.

Save As

Saves all the entries into a new Filter file.

Reset

Resets the values of the selected entries to their original state (not the factory defaults).

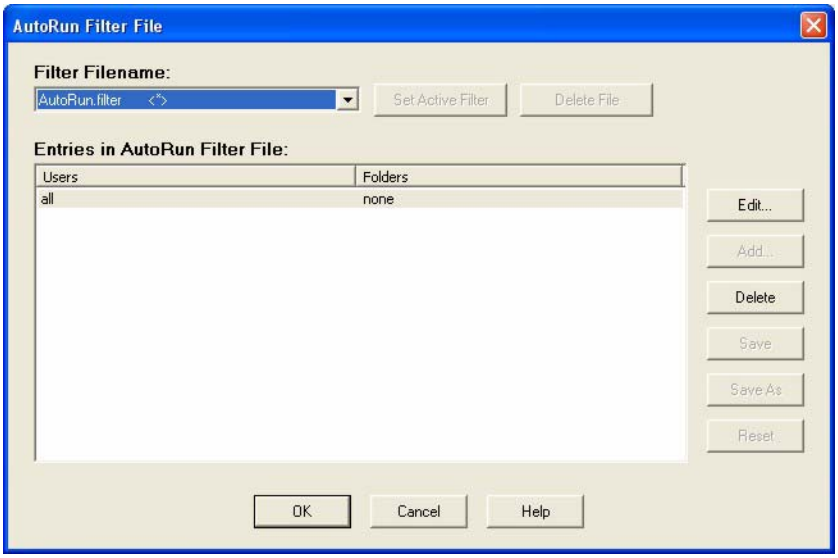
OK/Cancel

Approves or cancels your changes. Unless you select **Save** or **Save As**, the changes are stored in memory only, not to the filter file saved on disk.

Pressing **OK** after making changes to filter entries without saving them invokes a pop-up window prompting you to approve all changes and then to confirm overwriting the file with the modified entries. Pressing **Yes** will store the changes into the file on disk. Pressing **No** aborts all changes from memory and leaves filter file unchanged.

AutoRun Filters

Selecting this option produces a pop-up window that allows you to select and edit the AutoRun Filters, which are used to automatically determine which jobs are moved from the eligible job queue to the pending jobs queue. When the correct settings for your filter appear in the Filter entry field, press **OK** to edit the selected entry and store it in memory. It does not alter the filter file on the disk; the filter file is only modified and stored on the disk when the **Save** or **Save As** buttons are pressed.



These options are available on the IncomingFolders Filter File window:

Filter Filename

This drop-down contains a list of all defined AutoRun filters. Highlight the file name you want to edit; the entries in the highlighted filter file will appear in the lower dialog.

Set Active Filter

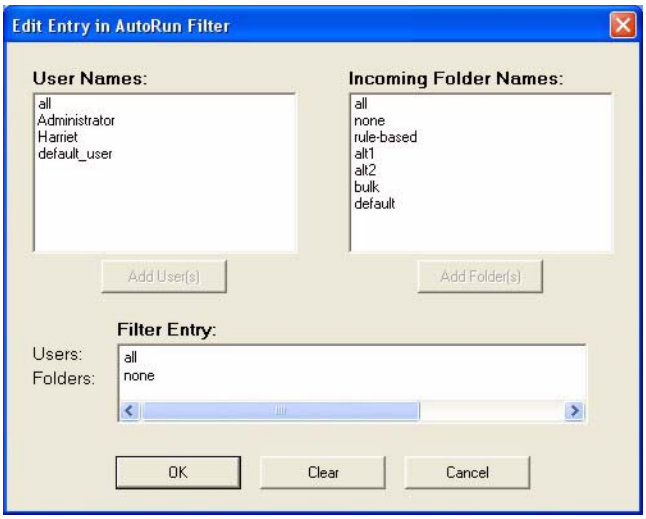
Sets the highlighted filter to active status.

Delete File

Deletes the selected filter file from the list and from the disk.

Edit

Select a filter file name and click **Edit** to produce a dialog that lists user names and incoming folder names. Use the entries to select new users and/or folder file names. When the correct settings for your filter appear in the Filter entry field, select **OK** to save the setting to memory without altering the actual filter file.



Add

Adds new users and folders for processing. Adding information and selecting **OK** stores the change in memory only. Select the **Save** or **Save As** button after making changes to store the addition to disk.

Delete

Deletes an entry in the Incoming Folder filter list. You cannot leave the list empty. Deleting information and selecting **OK** stores the change in memory only. Select the **Save** or **Save As** button after making changes to store the deletion to disk.

Save

Saves all the modified entries (not just the selected information) into the existing file on disk.

Save As

Saves all the entries into a new Filter file.

Reset

Resets the values of the selected entries to their original state (not the factory defaults).

OK/Cancel

Approves or cancels your changes.

Pressing **OK** after making changes to filter entries without saving them invokes a pop-up window prompting you to approve all changes and then to confirm overwriting the file with the modified entries. Pressing **Yes** will store the changes into the file on disk. Pressing **No** aborts all changes from memory and leaves filter file unchanged.

Dispatch Rules

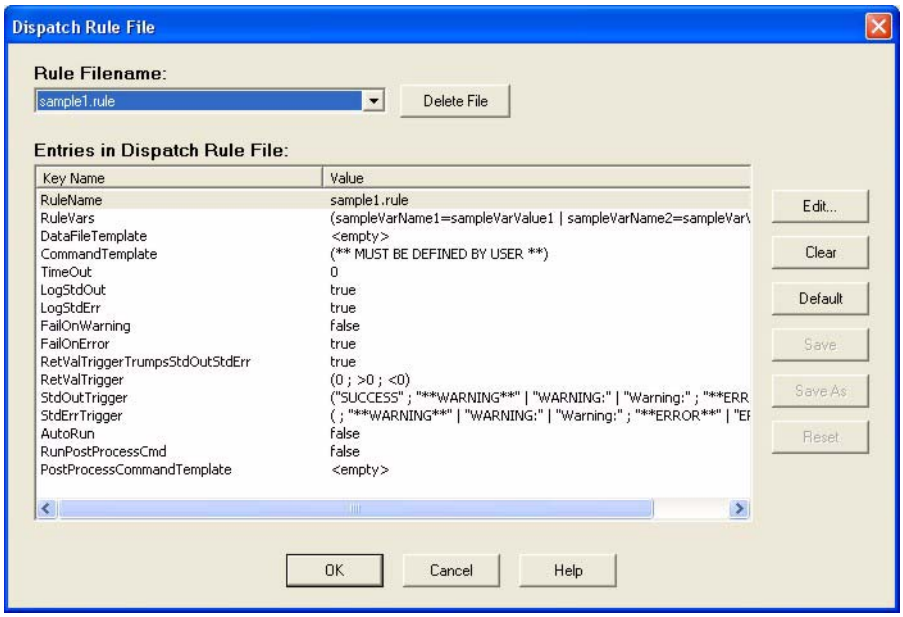
Select this option from the Edit drop-down menu to edit the DispatchRule File.

Rule Filename

The primary Dispatch Rule file window contains a drop-down box from which you can select any of the Rule files found in the VIPO Dispatcher *rules* directory. When a Rule file name is highlighted, the lower window will display a list of all the entries found for the selected rule file.

Delete File

Select this option to delete the selected Rule file from the disk.



These options are available on the Entries in Dispatch Rule File window:

Edit

When a Rule file name is selected, a key name is highlighted. Click **Edit** to produce a dialog where you can edit the saved values for the selected key name. Each dialog varies according to the type of key name (string, boolean, value, etc.). The dialogs produced contain a description of the key name being edited, helpful information such as invalid characters for that field, and a description of how VIPO Dispatch will work when settings are changed.

Clear

Clears all selected entries.

Default

Sets the values of the selected entries to the “factory defaults.”

Save

Saves all the modified entries (not just the selected information) into the existing file on disk.

Save As

Saves all the entries into a new Dispatch Rule file.

Reset

Resets the values of the selected entries to their original state (not the factory defaults).

OK/Cancel

Approves or cancels your changes.

Pressing **OK** after making changes to rule entries without saving them invokes a pop-up window prompting you to approve all changes and then to confirm overwriting the file with the modified entries. Pressing **Yes** will store the changes into the file on disk. Pressing **No** aborts all changes from memory and leaves rule file unchanged.

Trace menu

Trace menu options allow you to see more detailed information regarding the job selection process. It can be especially useful to determine why a job is ineligible for processing.

The Trace menu has three options:

Clear Display

Clears the log console window of all current messages. It does not delete messages placed in the log file.

Job Selection Loop

Displays trace messages generated within the scanning portion of the job selection process where jobs are searched to be picked up for processing.

Job Selection Trace

Displays trace messages generated during the job eligibility portion of the job selection process where each job is reconciled with every existing dispatch rule to determine if it's eligible for processing.

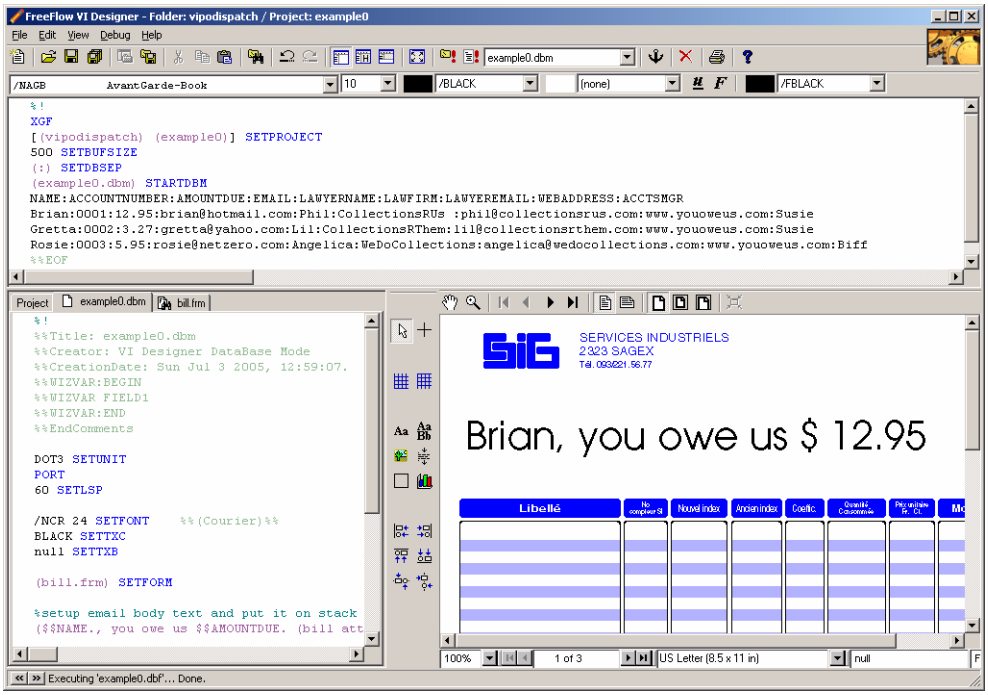
Using VIPO Dispatch - a simple example

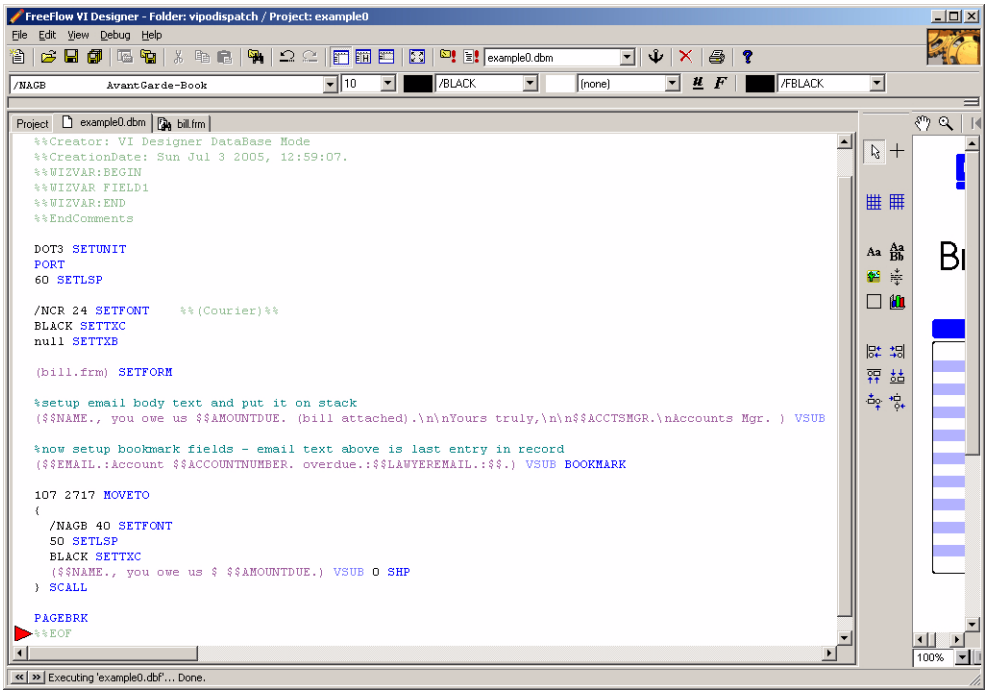
Acme Telephone company (a fictitious company) uses VIPO to generate their delinquent account notices in PDF format. They want to have the notices e-mailed to their delinquent customers, as well as to the lawyer at the collection agency nearest the customer's location.

Acme uses a batch file interface to their e-mail program called *mymailprog.bat*. Currently, after VIPO generates their PDF files, someone must manually look up the customer data in their database, collect the generated PDF's, generate the mail note bodies, and finally invoke their e-mail front-end to send each e-mail, attachment, and copy. The interface to their e-mail program looks like this:

```
mymailprog path_of_email_body -t to_address -cc cc_address -s subject
   -a path_of_attachment
```

With VIPO Dispatch available, you can extend the VIPO job that generates the PDF files to produce the e-mail bodies and other information required to have the e-mails sent automatically.





The first step in using VIPOD is to add some additional fields (like e-mail addresses, and other things that may be useful as their application becomes more sophisticated) to their .dbf file:

```
%!
XGF
[(vtpdispatch) (example0)] SETPROJECT
500 SETBUFSIZE
(:) SETDBSEP
(example0.dbm) STARTDBM
NAME:ACCOUNTNUMBER:AMOUNTDUE:EMAIL:LAWYERNAME:LAWFIRM:LAWYEREMAIL:WEBADDRESS    :ACC
TSMGR
Brian:0001:12.95:brian@hotmail.com:Phil:CollectionsRUs
   :phil@collectionsrus.com:www.youoweus.com:Susie
Gretta:0002:3.27:gretta@yahoo.com:Lil:CollectionsRThem
   :lil@collectionsrthem.com:www.youoweus.com:Susie
Rosie:0003:5.95:rosie@netzero.com:Angelica:WeDoCollections
   :angelica@wedocollections.com:www.youoweus.com:Biff
%%EOF
```

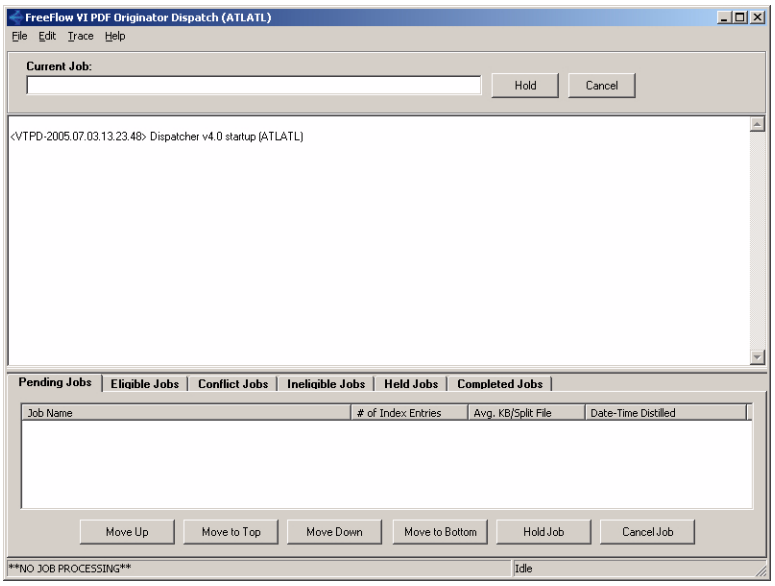
Next, in the .dbm, compose the additional information required to process each record, which is placed in the PDF's bookmark via the BOOKMARK command:

```
%setup email body text and put it on stack
($$NAME., you owe us $$AMOUNTDUE. (bill attached).\n\nYours truly,\n\n$$ACCTSMGR.\n
Accounts Mgr. ) VSUB

%now setup bookmark fields - email text above is last entry in record
($$EMAIL.:Account $$ACCOUNTNUMBER. overdue.:$$LAWYEREMAIL.:$$.)
   VSUB BOOKMARK
```

Verify that the job looks as expected in VI Designer and generate a VI Project Container containing the production data.

Start up VIPO Dispatch to build a Dispatch Rule that will handle the job.



Begin editing a new rule by selecting **Edit>Distpatch Rules** from the top menu.

Edit one of the sample rules by selecting it in the Rule Filename drop-down box.

The contents of the “mailtext” field for each record needs to be placed into a temporary file so that *mymailprog* can read it, therefore, double-click on the **DataFileTemplate** line and add a new entry:

```
Field Name: mailtext
Destination File Path: c:\temp\temp.txt
Delete-On-Exit Setting: True
```

then choose **OK** twice.

Next, format the invocation of *mymailprog* by double-clicking on the **CommandTemplate** entry of the Dispatch Rule. Enter the following for the CommandTemplate:

```
c:\mymailprog.bat c:\temp\temp.txt -t "$mailto" -cc "$cc" -s "$subject"
   -a $(PDF_FILE_PATH)
```

In the entry shown above, the first parameter is the path of the program that will be handling the record information. This “back-end” program is not supplied by Xerox; it could be an off-the-shelf program or an application developed by the customer or a third party.

The other parameters are those required by the (fictitious) *mymailprog*, as follows:

c:\temp\temp.txt
: the path where the e-mail body for each e-mail record is written.

-t
: a flag indicating that the next entry is the recipient's e-mail address.

"$mailto"
: indicates that the “mailto” field of the record will be placed here.

-cc
is a flag indicating that the next entry is the e-mail address of the person being carbon-copied.

"$cc"
indicates that the “cc” field of the record will be placed here.

-s
is a flag indicating that the next entry is the subject line of the e-mail.

"$subject"
indicates that the “subject” field of the record will be placed here.

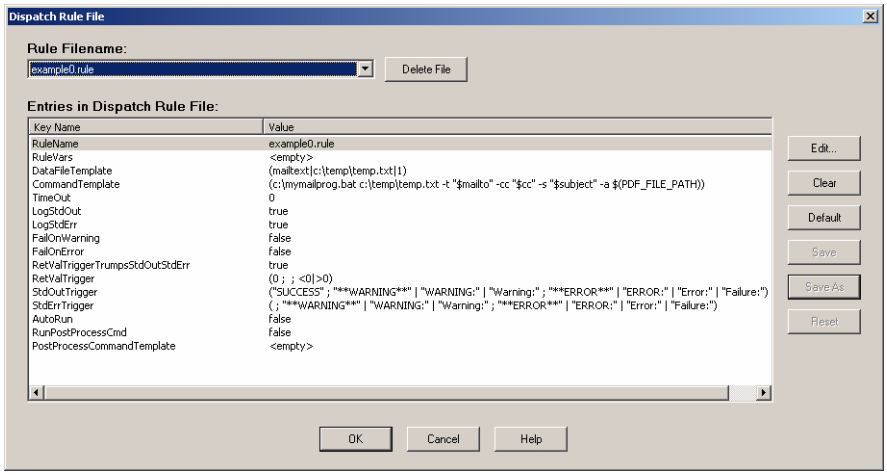
-a
is a flag indicating that the next entry is the path of the PDF file to be attached.

$(PDF_FILE_PATH)
is the VIPOD macro indicating to place the PDF file associated with the record here.

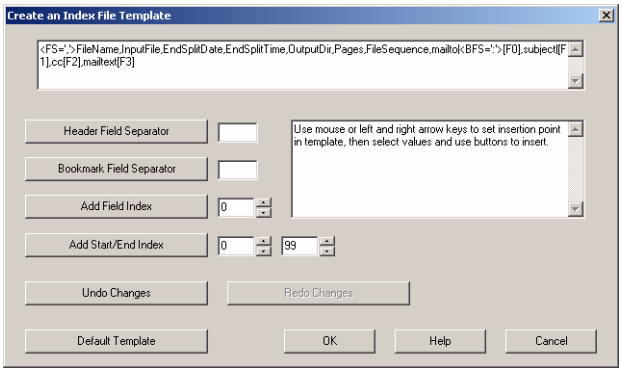
All that *mymailprog* does is echo its command arguments to stdout in order to verify that what was passed was, in fact, intended to pass.

Once the CommandTemplate is built, click **OK** and **Save As** to save the Dispatch Rule. It is saved as *example0.rule*.

The rule should look as follows.

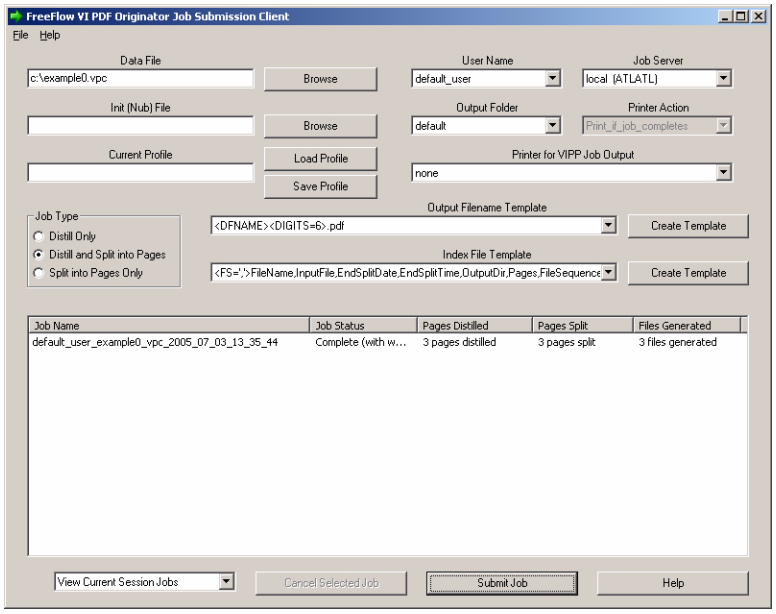


The job is almost ready to submit to VIPO. The next step is to start up the VIPO Job Submission Client and create the index file template for the job:

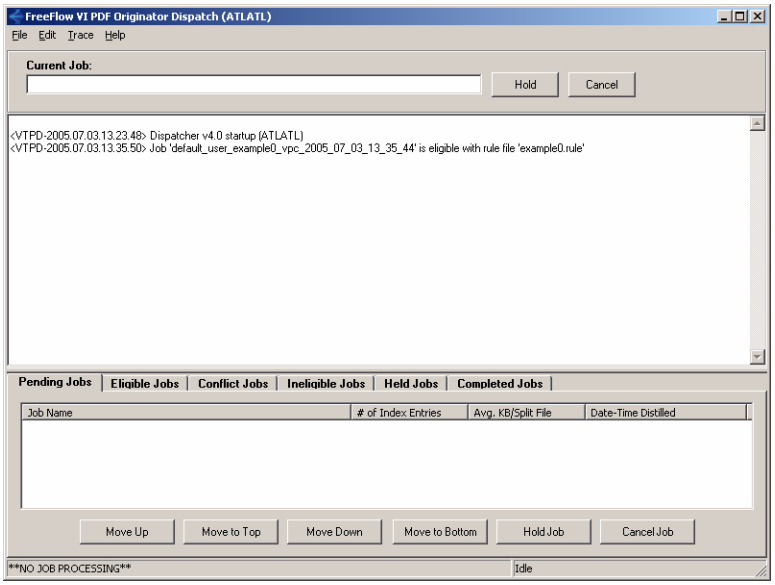



```
<FS=','>FileName,InputFile,EndSplitDate,EndSplitTime,OutputDir,Pages,
   FileSequence,mailto|<BFS=':'>[F0],subject|[F1],cc[F2],mailtext[F3]
```

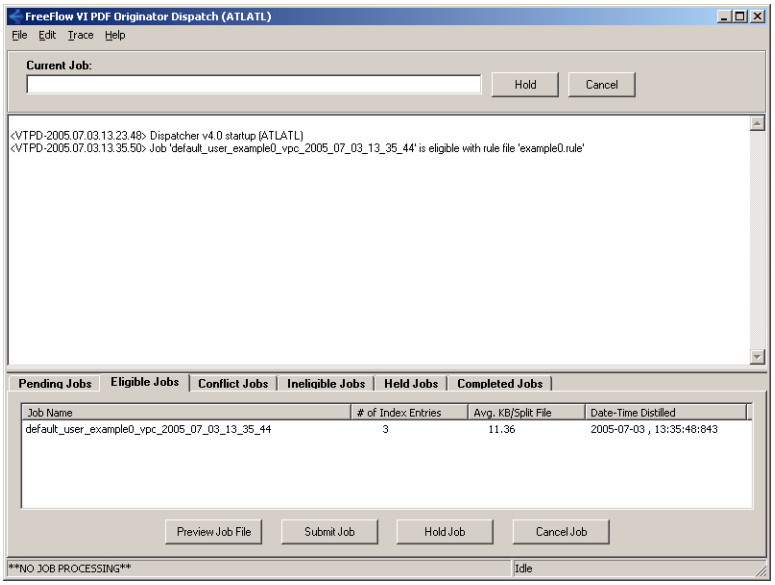
After entering the information shown above, click **OK** to submit the job for Distill and Split:



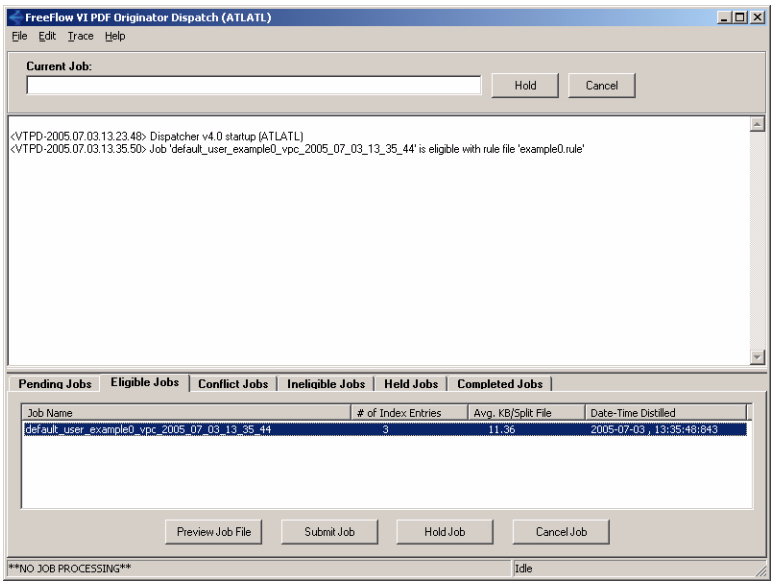
VIPO Dispatch, meanwhile, is monitoring VIPO jobs for those that complete and match a Dispatch Rule; because of this, VIPO Dispatch picks up the job and indicates that it is eligible for processing.



Click the **Eligible Jobs** tab on the VI PDF Originator Dispatch window to show the list of eligible jobs:

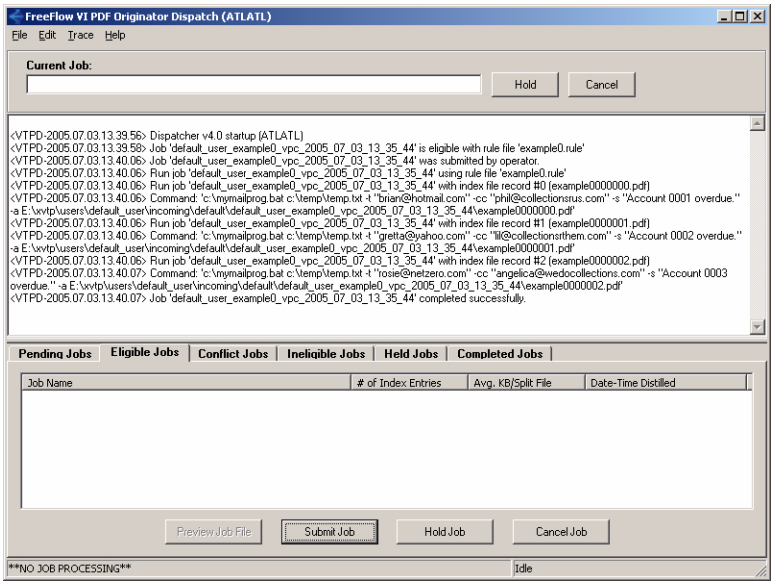


Highlight the job and then click to select it:

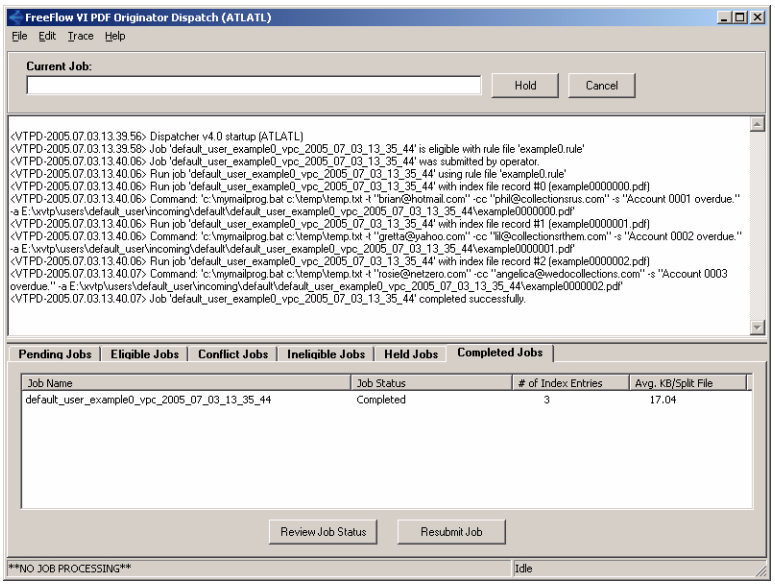


Finally, click the **Submit Job** button to submit the job.

The job is processed and displayed in the dialog. The display allows you to verify that the arguments were passed to *mymailprog* correctly.



Click on the **Completed Jobs** tab to see that the job is now in the “Completed” category.



Had *mymailprog* been a real e-mail front-end, the PDF's would have been e-mailed as attachments to each delinquent account holder and the appropriate collection agencies. The body of each e-mail, its subject, and all other information would have been generated from within the VIPP application itself.

You can replace the fictitious *mymailprog* with whatever custom back-end you desire, as long as it has a definite path in your file system and has a command-line interface.

Some back-end programs cannot be accessed directly via command-line, or require extensive startup time per record if accessed in that fashion. In these cases, a custom “bridge” and/or session entity must be placed between VIPO Dispatch and the back-end program.

Using VIPO Services

VIPO and VIPO Servers can be initiated from a Windows Service, which allows the various servers to be initiated and to perform operations without requiring a manual logon. Launching and activating VIPO and VIPO servers when the system is booted up allows a “hands-off” VIPO system.

Use of VIPO Services depends entirely upon the proper installation of the functionality. For a complete description of the installation process, and related background information, refer to the *Variable Information Suite Installation Guide*.

Definitions

In the context of VI PDF Originator, a server is the component that performs some sort of VI PDF Originator work and/or function, and its associated service performs the startup and shutdown operations appropriate for a Windows Service.

VI PDF Originator Server

A VI PDF Originator Server is one of the following VI PDF Originator components:

- FreeFlow VI PDF Originator
- FreeFlow VI PDF Originator Watched Folders Client
- FreeFlow VI PDF Originator Dispatch
- FreeFlow VI PDF Originator Secure Web Server
- FreeFlow VI PDF Originator Web Server

These components, once running, perform various operations related to VI PDF Originator.

VI PDF Originator Service

A VI PDF Originator Service is one of the following service components:

- FreeFlow VI PDF Originator Service
- FreeFlow VI PDF Originator Watched Folders Service
- FreeFlow VI PDF Originator Dispatch Service
- FreeFlow VI PDF Originator Secure Web Service
- FreeFlow VI PDF Originator Web Service

These components are Windows Services, which in turn are responsible for starting and stopping their associated VI Originator Servers.

Constraints

Windows Services must not rely on a user interface for their normal operation because for a “hands-off” configuration there will not be anyone logged into the machine, thus no desktop is available for displaying a user interface.Therefore, when initiated by their associated VI PDF Originator services, the VI PDF Originator servers will suppress their user interfaces entirely.

As a consequence of running in this manner, access for control or configuration of the servers is reduced. For example, the user interface for job selection and activation or rule editing and configuration for VI PDF Originator Dispatch is not available. Therefore, only jobs that successfully meet the qualifications of the AutoRun specifications in effect at startup will be processed.

Some remote configuration and control functionality for the VI PDF Originator server is available if one of the VI PDF Originator Web Servers is running. In general, if direct interaction with a server user interface is required, it will be necessary to first shut down the associated Windows Service and then start the server application manually from the desktop. After the required interactions are performed the server application should be shut down (exited), and then the associated Window Service can be restarted.

FreeFlow VI PDF Originator Secure Web Service

The VI PDF Originator Secure Web Service requires a PEM Passphrase as part of its startup procedure (this is a kind of password, and is required to validate use of the web server's SSL certificate). Normally, this is entered via a dialog box when the web server starts up, however, that option is not available when the web server has been initiated by its associated Windows Service. When the web server is initiated by a Windows Service, upon startup it will instead look for a file named *vtpws_service.pphrase* in the *bin* directory, and use those contents as the passphrase. A default passphrase file is included with the VI PDF Originator distribution, and it already contains the default passphrase (*pass*). If you are using your own SSL certificate, alter the contents of that file to contain the correct passphrase.

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