

# File Processing Agent

## Installation and Setup Guide

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## Overview

Perceptive Content File Processing Agent manages the background file processing operation for flattening Perceptive Content forms. Using the File Processing Agent, you can create automated system queues in your workflow that convert a form from an HTML to a TIFF output without requiring customization or scripting. You can define an unlimited number of form sets within a conversion ASQ. The system appends the created TIFF form to the document as a new page. The TIFF page allows annotations, digital signatures, emailing, and exporting.

For product technical specifications and system requirements, refer to the *Product Technical Specifications* for your product version.

**Note** Before you use File Processing Agent to convert a form, ensure that you thoroughly test all aspects of the form, particularly forms that utilize JavaScript.

## Secure environment recommendations

The following recommendations are intended to help secure the installation environment and apply to all product installations. These recommendations should be followed as a minimum requirement for all Hyland products. The policies of your organization may have additional or more robust requirements that should also be followed.

Hyland products may have additional recommendations described in the specific documentation for that product. In some cases, the recommendations may change or may only apply when using certain Hyland products together in a solution.

- Use TLS for all HTTP traffic, including private network segments. TLS ciphers have to be maintained to stay current over time.
- Use Secure FTP instead of standard FTP for all FTP traffic.
- End-to-end encryption is recommended for all data in transport, independent of a network segment. Note that some regulatory compliance requirements may require end-to-end encryption.
- Change all default passwords before activation of the production system. This applies to Hyland products as well as third-party products used by Hyland products (such as a database server).
- Authorization rules should be configured and tested before activation of the production system. This applies to Hyland products as well as to file system folders and database user accounts.
- Use database encryption for all sensitive data persisted in the database.
- Use file system encryption for all sensitive data and content persisted on the file system.
- Enable encryption when available as part of a subsystem configuration. For example, since ODBC provides the capability to use strong encryption for data, it is recommended to have that option enabled.

## Side-channel risks

Consider the following to mitigate side-channel risks:

- Ensure the latest application and operating system patches are applied.
- Ensure the latest firmware patches are applied for any hardware on-premises.

## Install File Processing Agent

The following sections explain how to install File Processing Agent. Complete the procedures in order.

- Download the appropriate files.
- Run the installation wizard.
- Turn off data execution prevention for File Processing Agent.

### Download the File Processing Agent files

To obtain Perceptive product installation files, contact the Hyland Software Technical Support group. For a list of Technical Support phone numbers, go to [hyland.com/pswtscontact](http://hyland.com/pswtscontact).

### Verify remote Perceptive Content shared directory access

When the installer accesses a remote location it accesses the location in both the current user and SYSTEM context. You must verify both users have access to the shared directory. You can use the **net use** command to create sessions in the current context. You can also create a session in the SYSTEM context by using Microsoft's **PsExec** command to run the **net use** command in the SYSTEM context.

**Note** The **net use** command only adds the session for the current context. **PsExec** allows you to run the command in the SYSTEM context, which then adds the session in the SYSTEM context.

### Run the File Processing Agent installation wizard

The installation wizard pages prompt you for the information it needs to install File Processing Agent.

1. Double-click the EXE file you downloaded.
2. On the **Welcome to the Installation Wizard for ImageNow File Processing Agent** page, click **Next**.
3. On the **License Agreement** page, review the terms in the license agreement, scroll to the end of the agreement, click **I accept the terms in the license agreement**, and then click **Next**.
4. On the **Destination Folder** page, you may change locations for **ImageNow File Processing Agent** and the **ImageNow File Processing Agent shared files** using the following substeps.
  1. To change the location for the **ImageNow File Processing Agent**, click **Browse**. In the **Change Current Destination Folder** page, browse to the destination folder where you want to install **ImageNow File Processing Agent** and then click **OK**.
  2. To change the location for **ImageNow File Processing Agent shared files**, click **Browse**. In the **Change Current Destination Folder** page, browse to the destination folder where you want to install the **ImageNow File Processing Agent shared files** and then click **OK**.
5. On the **Destination Folder** page, click **Next**.
6. On the **ImageNow Server Information** page, under **ImageNow Server**, enter the **Server IP** and **Port Number** for the Perceptive Content Server computer.
7. Under **Additional Configuration**, enter the **Initial instance name** and click **Next**.

**Note** The instance name allows for multiple instances of the same agent or server to run in parallel in an active-active environment. You can enter a maximum of 40 characters, and the following characters are invalid: \ / : \* ? " < > |.

8. On the **Token authentication** page, configure the authentication token used for agent token authentication and then click **Next**.  
**Note** Selecting **Skip agent authentication token configuration** will leave the agent's authentication.token setting unset.
9. On the **RabbitMQ Configuration** page, configure the settings according to your RabbitMQ instance and click **Next**.
10. On the **Ready to Install the Program** page, click **Install**.

## Configure the File Processing Agent service

The following steps explain how to set initialization values for the File Processing Agent service.

1. In the Perceptive Content shared etc directory `$(IMAGENLOWDIR6)\etc`, locate the **inserverFP.ini** file and open it in a text editor.
2. Under **[General]**, set **min.width** to the number of pixels that determines the minimum width of your TIFF form output.
3. Optional. Under **[Logging]**, set debug levels for auditing or troubleshooting. The default is 0 (no logging). Unless you are debugging an issue, set minimal logging.
4. To set up File Processing Agent to be remotable, under **[Remote]**, configure the remote settings with the IP address or name and the port number for the Perceptive Content Server.
5. Save and close the file and restart the File Processing Agent service by completing the following substeps:
  1. Open the **Computer Management** dialog box.
    - For Windows7 version: From the **Start** menu, right-click **Computer** and select **Manage**.
    - For other Windows versions: On the Windows Desktop, right-click the **My Computer** shortcut and select **Manage**.
  2. In the **Computer Management** dialog box, click **Services and Applications**.
  3. Click **Services**.
  4. In the right pane, locate and select the service titled **Perceptive Content File Processing Agent**. In the upper left-hand corner of the right pane, click **Start**.

## Configure agent token authentication

Configure File Processing Agent to use token based agent authentication by completing the following steps.

1. On the Perceptive Content Server machine, generate an authentication token for File Processing Agent by running the following command.
 

```
intool --cmd create-authentication-token --lictype FP Agent --file FileProcessingAgent.txt
```
2. On the File Processing machine, navigate to the **etc** directory in the File Processing installation directory.
3. Using a text editor, open the **inserverFP.ini** file.

4. In the **[Remote]** section, set the **authentication.token** setting to the contents of the **FileProcessingAgent.txt**, as shown in the following example.

```
authentication.token=[authentication token]
```

5. Save and close the **inserverFP.ini** file.

## Appendix: Server Configuration Files

This section describes the settings you configure in INI files that are associated with the File Processing installation and setup. They are listed in alphabetical order for quick reference.

### inserverFP.ini

The following table provides definitions and sample data for the settings in the inserverFP.ini configuration file. This table displays the INI settings under group headings in brackets, for example, [General], in the order the groups appear in the INI file. Each setting offers two or more options, which appear in the table below along with a description of each setting and its options. Use this table as a guide when customizing the file.

**Note** For information on configuring RabbitMQ arguments for unattended installations, see the Perceptive Content Server Installation Guide.

Group	Setting	Options	Description
Forms	FlattenerUseWebXMLTransform	TRUE FALSE	Specifies whether to use Internet Explorer for XML Transformation in Forms Viewer as done prior to Foundations EP2.  The default is FALSE.
General	min.width	Any integer	Specifies the number of pixels that determines the minimum width for a TIFF form output.  The default is 800.
	script.timeout	Any positive integer	Specifies the amount of time, in milliseconds, File Processing Agent waits to load the form when JavaScript is enabled.  The default is 1000.
	remove.old.service	1 0	Specifies whether File Processing Agent removes old services.  1 = File Processing Agent removes services.  0 = File Processing Agent does not remove services.  The default is 0.

Group	Setting	Options	Description
Logging	debug.level.file	0 through 6	<p>Specifies the level File Processing Agent uses to log errors for troubleshooting.</p> <p>Set minimal logging unless you are debugging an issue. If you increase the logging, make sure that you set the logging level back down after you finish debugging. Failure to do so can greatly affect performance and hard disk space.</p> <p>0 = Logging is off.</p> <p>1 through 6 = Logging is on. The higher the number, the more verbose the logging. For example, 1 offers minimal logging, whereas 6 returns the most information.</p> <p>The default is 0.</p>
	socket.level.file	0, 1	<p>Specifies whether to log communication between Perceptive Content Server and File Processing Agent.</p> <p>1 = File Processing Agent logs communication.</p> <p>0 = File Processing Agent does not log communication.</p> <p>The default is 0.</p>
Remote	authentication.token	Any valid token	Specifies the authentication token to use for authentication with Perceptive Content Server.
	heartbeat.interval	Any positive integer	<p>Specifies how many seconds File Processing Agent continues the connection to Perceptive Content Server.</p> <p>The default is 60.</p>
	socket.login.timeout	Any positive integer	<p>Specifies how many seconds File Processing Agent waits for successful login before terminating the connection.</p> <p>The default is 60.</p> <p><b>Note</b> Do not change this value without first consulting Perceptive Software Product Support.</p>



Group	Setting	Options	Description
	socket.default.timeout	Any positive integer	<p>Specifies how many seconds File Processing Agent waits for APIs.</p> <p>To override this setting for an individual Perceptive Content Client, add this setting to the Remote group in imagenow.ini and restart the client.</p> <p>The default is 60.</p> <p><b>Note</b> Do not change this value without first consulting Perceptive Software Product Support.</p>
	server.ip.address	Any valid IP address	<p>Specifies the IP address of Perceptive Content Server.</p> <p>The default value is 127.0.0.1</p>
	server.ip.port	Any valid IP port	<p>Specifies the port number of the Perceptive Content Server.</p> <p>The default value is 6000</p>
	force.server.validation	1, 0	<p>Specifies whether File Processing Agent forces the server to validate the user ID and password.</p> <p>1 = File Processing Agent forces the server to validate user ID and password.</p> <p>0 = File Processing Agent does not force the server to validate user ID and password. The default is 0.</p> <p><b>Note</b> Do not change this value without first consulting Perceptive Software Product Support.</p> <p>The default value is 0.</p>
	reconnect.interval	Any positive integer	<p>Specifies how many seconds File Processing Agent continues to try to reconnect to Perceptive Content Server after a lost connection.</p> <p>The default is 60.</p>
XML	xml.msxml.forms.client.validateonparse	TRUE FALSE	<p>For more information, refer to MSXML documentation for the XML DOM property ValidateOnParse.</p> <p>The default is TRUE.</p>
	xml.msxml.forms.client.allofdocumentfunction	TRUE FALSE	<p>For more information, refer to MSXML documentation for the XML DOM property AllowDocumentFunction.</p> <p>The default is TRUE.</p>

Group	Setting	Options	Description
	xml.msxml.forms.client.allowxsltscript	TRUE FALSE	For more information, refer to MSXML documentation for the XML DOM property AllowXSLTScript.  The default is FALSE.
	xml.msxml.forms.client.maxelementdepth	Any positive integer	For more information, refer to MSXML documentation for the XML DOM property MaxElementDepth.  The default is 256.
	xml.msxml.forms.client.maxxmlsize	0 to 4194303	Specifies the XML size in 1024 character blocks. Zero (0) is unlimited.  For more information, refer to MSXML documentation for the XML DOM property MaxXMLSize.  The default is 0.
	xml.msxml.forms.client.prohibitdtd	TRUE FALSE	For more information, refer to MSXML documentation for the XML DOM property ProhibitDTD.  The default is TRUE.
	xml.msxml.forms.client.resolveexternals	TRUE FALSE	For more information refer to MSXML documentation for the XML DOM property ResolveExternals.  The default is FALSE.
	xml.msxml.forms.client.useinlineschema	TRUE FALSE	For more information, refer to MSXML documentation for the XML DOM property UseInlineSchema.  The default is FALSE.