



ITS Product
Guides

INFO TECHNOLOGY SUPPLY LTD.

DocSlide Print Auditing Service - Microsoft Windows Installation and configuration Procedure 2.0.0.

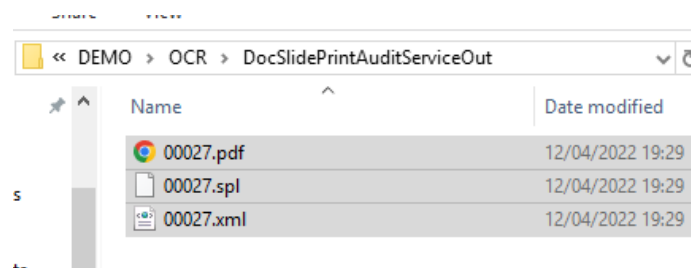
Contents

Contents	2
General information about DocSlide Print Auditing Service.....	3
Requirements	3
Operating System	3
Components.....	3
Installation Procedure	4
Installation of the Microsoft Net 6.0 hosting bundle	4
Installation of the Ghost trap.....	4
Installation of the DocSlide Print Audit Service	5
Configuration of DocSlide Print Auditing with permanent blocking.	8
Setting up printing	8
DocSlide Print Audit job configuration with permanent blocking of print jobs with keywords.	9
Configuration of DocSlide Print Auditing with offline silent monitoring.....	14
Setting up printing	14
DocSlide Print Audit job configuration with offline silent monitoring of print jobs with keywords.....	15

General information about DocSlide Print Auditing Service

DocSlide Print Auditing Service is helping us to convert all PS or PCL jobs to Tiff, also is creating XML file with all metadata which we need to get for Print Auditing process in DocSlide and we have still original spool file .spl. We are storing this in folder where DocSlide OCR processor will take tiff and convert to PDF searchable. PDF and xml, .spl will stay in this folder. DocSlide will process it with print audit processor. When we do not find any keywords we will send original .spl to configure printer or print queue. When we find forbidden keywords we will send pdf to admin, send notification to user, and delete original print job. In xml file we have all metadata we need in this process.

```
<?xml version="1.0"?>
<AuditJob>
  <Files>
    <File>[converted-file-path]</File>
    <File>[job-spool-file-path]</File>
  </Files>
  <Owner>[job-owner]</Owner>
  <DocumentName>[job-document-name]</DocumentName>
  <PrinterName>[job-printer-name]</PrinterName>
</AuditJob>
```



Requirements

Operating System

1. Windows 10, Windows Server 2012 or newer
2. 40 GB of free hard disc space
3. 4 GB of RAM

Components

1. Download and install Net 5.0 hosting bundle (required by Print auditing) from <https://dotnet.microsoft.com/en-us/download/dotnet/thank-you/runtime-aspnetcore-6.0.22-windows-hosting-bundle-installer>

2. Working DocSlide 2.6.1.0 installation,
3. Working Umango installation,
4. PaperCut Ghost Trap installation (<https://github.com/PaperCutSoftware/GhostTrap>)
5. Link for Ghost trap download:

<https://cdn1.papercut.com/files/open-source/ghost-trap/ghost-trap-installer-1.3.9.27.exe>

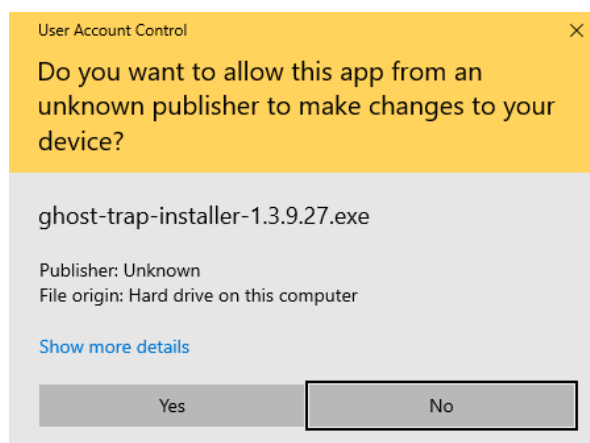
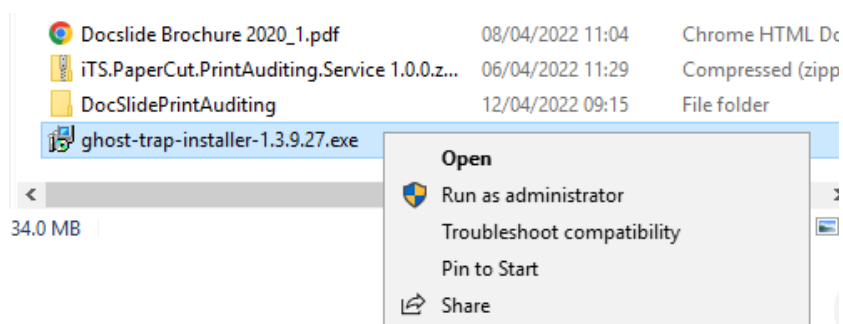
Installation Procedure

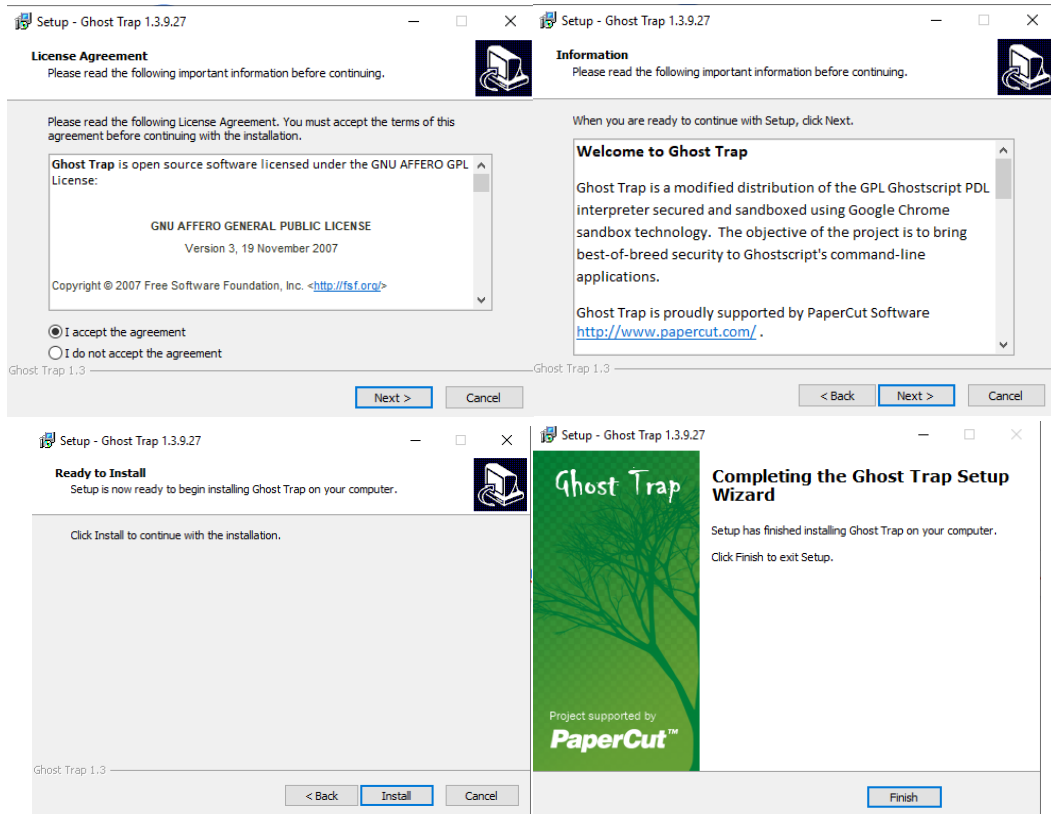
Installation of the Microsoft Net 6.0 hosting bundle

Run the installation binary as administrator and follow the installer's instructions.

Installation of the Ghost trap

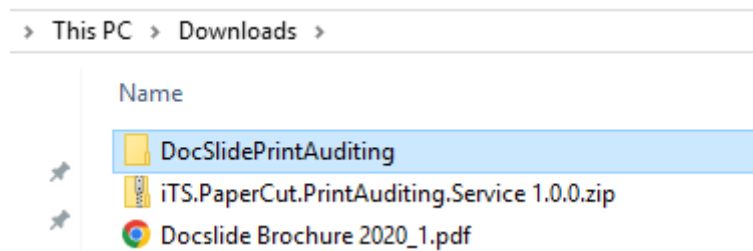
1. Run Ghost Trap installer as administrator and follow instructions



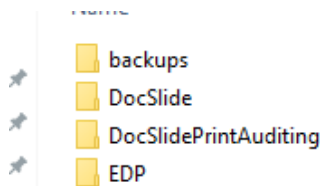


Installation of the DocSlide Print Audit Service

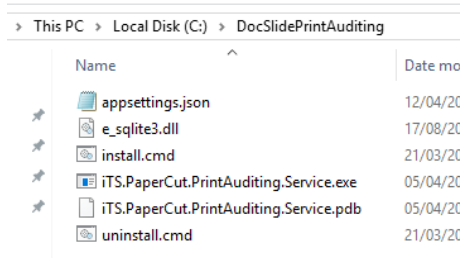
1. Unzip the installation package and rename it to ex. DocSlidePrintAuditing



2. Copy the DocSlidePrintAuditing folder to the local hard drive.



3. Edit file appsettings.json:



- Adjust location of your Ghost Trap installation in ConversionProgramPath parameter, adjust executable according to driver used in auditing queue: for PCL use *pcl6.exe*, for PS *gsc-trapped.exe*,
- **Set Conversion Output File Extension to: tiff**

```

    },
    "ConvertSpoolStepOptions": {
      "ConversionProgramPath": "C:/Program Files/GhostTrap/bin/gsc-trapped.exe",
      "ConversionProgramArgs": "-dNOPAUSE -dBATCH -sDEVICE=tiff24nc -sCompression=lzw -r300 -sOutputFile=[output] [input]",
      "ConversionOutputFileExtension": "tiff"
    }
  },
  ...
}

```

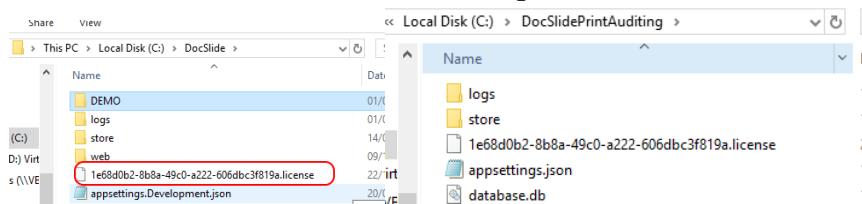
- Adjust Output folder which will be input for DocSlide OCR processor workflow for ex. **C:\DocSlide\DEMO\OCR\DocSlidePrintAuditServiceOut**

```

  },
  "CreateJobSummaryStepOptions": {
    "OutputFolderPath": "C:/DocSlide/DEMO/OCR/DocSlidePrintAuditServiceOut/"
  }
},

```

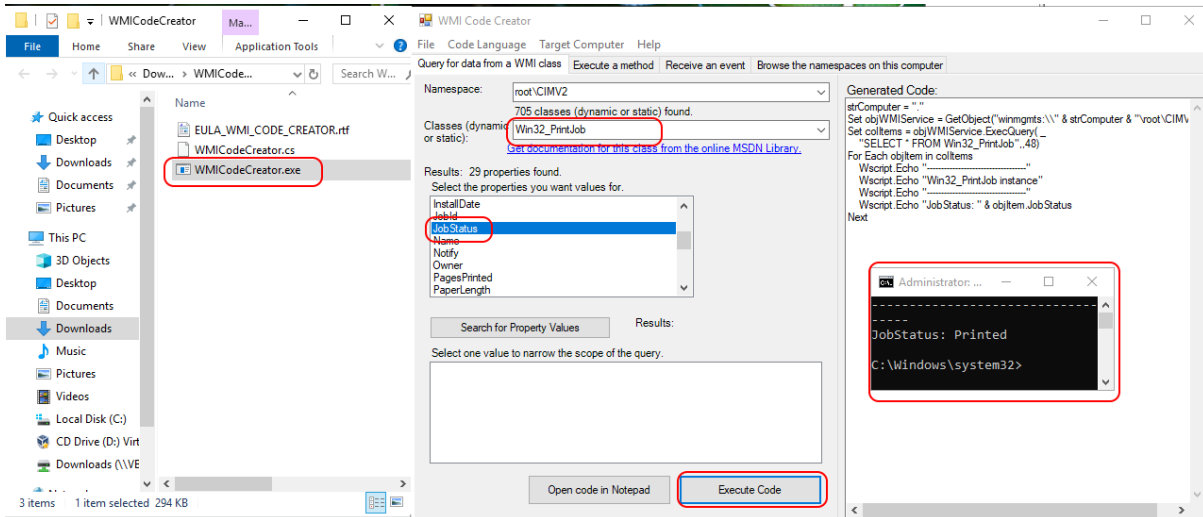
4. You need to use same license file which you are using for DocSlide and place it in DocSlide Print Audit Service folder before starting service.



5. If your server language is different than English you need to find our what is status of safe spool print jobs. To that you need download this tool.

<https://www.microsoft.com/en-us/download/details.aspx?id=8572>

Unzip it. Run as administrator **WMICodeCreator.exe**, select classes to **Win32_PrintJob** and properties to **JobStatus** like in picture and press Execute Code. Copy local language status text.



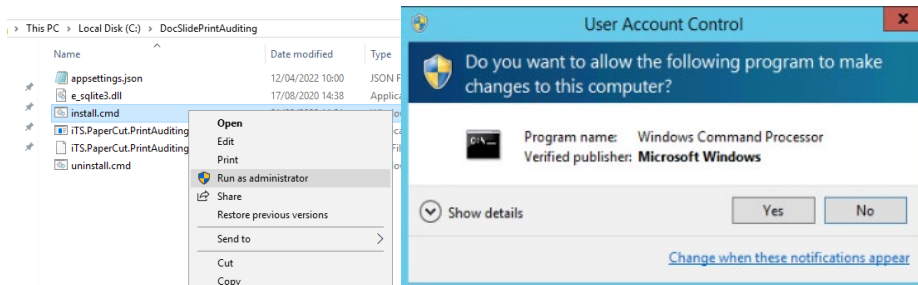
You need to put this to appsettings.json file, default is English text, overwrite this with your local language text and save json file.

```

    "SpoolerJobOptions": {
      "PrintedStatusName": "Printed"
    }
  }
}

```

6. In the DocSlide folder you will find install.cmd, run this as administrator.



```

C:\Windows\System32\cmd.exe
Administrative permissions required. Detecting permissions..
Administrative permissions confirmed.
Installing service
[SC] CreateService SUCCESS
Service installed

```

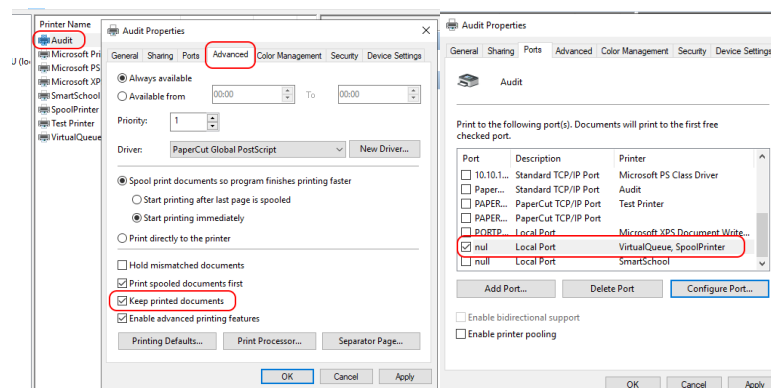
7. Start the ITS PrintAuditing Service

Name	Description	Status	Startup
IP Helper	Provides tu...	Running	Automat
IPsec Policy Agent	Internet Pro...	Running	Manual
iTS EasyDocPrint		Running	Automat
iTS PrintAuditing Service		Running	Automat
KDC Proxy Server service (K...	KDC Proxy S...		Manual
KtmRm for Distributed Tran...	Coordinates...		Manual
Link-Layer Topology Discov...	Creates a N...		Disablen
Local Session Manager	Core Windo...	Running	Automat
Message Queuing	Provides a ...	Running	Automat

Configuration of DocSlide Print Auditing with permanent blocking.

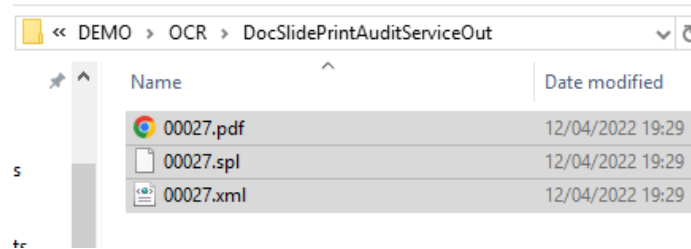
Setting up printing

1. Install **PaperCut LPD service**. LDP can be install from this PaperCut folder: *C:\PaperCut MF\providers\lpd\win\pc-lpd-installer.exe*
2. If you want to audit all print jobs and permanently block receiving them by user you need to create shared queue which will work as share queue for all users, ex. named **Audit** on port **NULL** and with selected option **Keep printed documents** on Advanced tab.



3. Exclude it from PaperCut print provider by adding it to IgnoredPrinters list: open the file [app_dir]\providers\print\win\print-provider.conf in a text editor such as Notepad. Locate the line IgnorePrinters= and enter the full name of the printer on the right-hand-side of he equals line. For example: **IgnorePrinters=Audit**

- Print Audit Service is going to watch all queues with **Keep printed documents** flag and produce pdf and xml file and leave original spool file. In xml we have all metadata for this auditing process. All those 3 files will be store in folder where Umango has a job to do.

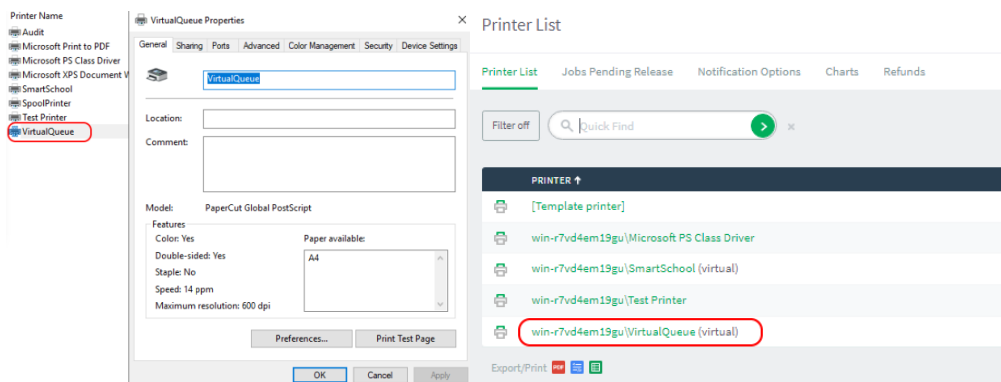


```
<?xml version="1.0"?>
<AuditJob>
  <Files>
    <File>[converted-file-path]</File>
    <File>[job-spool-file-path]</File>
  </Files>
  <Owner>[job-owner]</Owner>
  <DocumentName>[job-document-name]</DocumentName>
  <PrinterName>[job-printer-name]</PrinterName>
</AuditJob>
```

DocSlide Print Audit job configuration with permanent blocking of print jobs with keywords.

- Create a new destination which will be LPR printer.

We need to create LPR printer destination in DocSlide. We will use in this example **VirtualQueue** which is virtual input queue for find me PaperCut feature. We will send here all jobs where we will not find forbidden keywords.



Edit destination

Destination type: tolp

Destination name
Print Audited Printer

Lpr server or host name
127.0.0.1

LPR Queue name
VirtualQueue

Port
515

Job owner
[user_login]

Document name
[DocumentName]

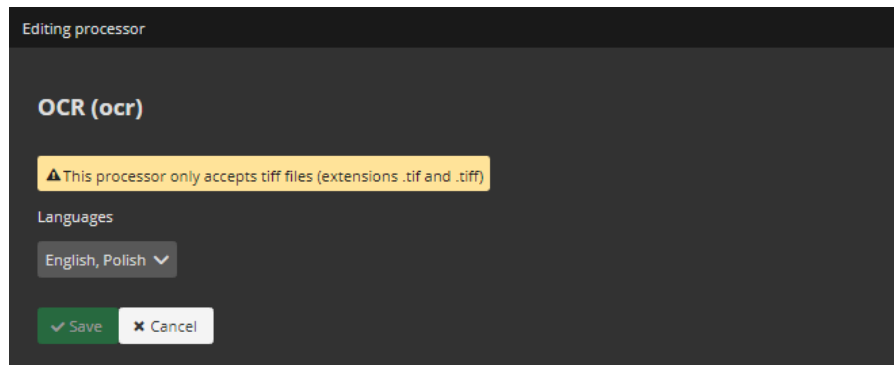
Allowed file extensions which are accepted by LPR server (with dot, ex. .pdf), confirm with [ENTER]
.spl

Save Cancel

- Destination name - *Name of destination*
- LPR server or host name - *ip address or host name of LPR printer or shared queue*
- LPR Queue name - *Name of LPR queue*
- Port - *LPR port, in most cases 515*
- Job owner - *[user_login] – we should use this metadata*
- Document name - *[DocumentName] – we should use this metadata*
- Allowed files extensions which are accepted by LPR server - *we should use .spl for print auditing case*

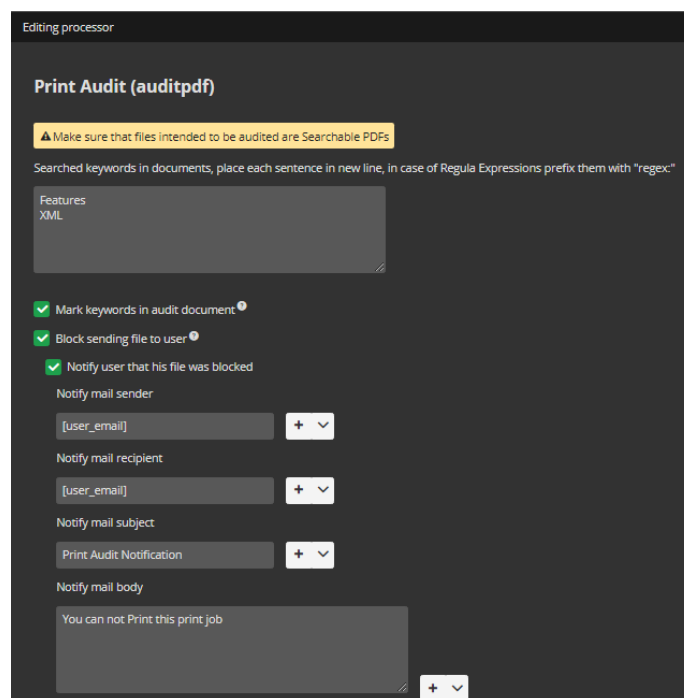
2. Creating DocSlide OCR processor

Here we are creating an OCR processor which will be added to flow. This OCR processor will take Tiff file created by ITS Print Audit Service and convert it to PDF searchable. DocSlide audit processor needs just PDF searchable.



3. Create Print Auditing processor with print blocking.

Here we are creating an audit processor which will be added to flow. We want to search for some forbidden keywords to audit all documents processed by this flow. In this processor we want to block the user to print job after found keywords. We will mark keywords in pdf create and send them to admin, we will notify users that they will not print this job.



- Destination name - *Name of destination*
- Searched keywords in documents, place each sentence in new line, in case of Regula Expressions prefix them with "regex:" - *Keywords you want to search in docs, you can use regex*
- Mark keywords in audit document - *Marking of keyword in document send to admin*
- Block sending file to user - *Blocking of sending job to user when we find keywords*
- Notify user that his file was blocked - *This setting when you want notify user*
- Notify mail sender - *[user_login] – we should use this metadata*
- Notify mail recipient - *[user_login] – we should use this metadata*
- Notify mail subject - *Email subject*
- Notify mail body - *Email body*
- PDF files in jobs are only metadata - *we want pdfs to be just metadata files*
- Audit mail sender address - *[user_login] – we should use this metadata*
- Audit mail recipient address - *[user_login] – we should use this metadata*
- Audit mail subject - *Email subject*
- Audit mail body - *Email body*

4. Create Print Auditing flow.

We need to create xml folder flow, where DocSlide will get all files from ITS Print Audit Service. It should be an original spool file, xml with metadata and tiff file. In xml we have all metadata to process this auditing, including path to original spool files, name of printer, user login and document name. We need of course to add to this flow in the first position OCR processor which will produce pdf searchable and just under auditing processor which will audit this document. In the end we need to choose lpr printer destination.

Editing flow Print Audit

Folder path

Add wrapping root element

Additional file patterns, confirm with [ENTER]

XPath to owner login

XPath to filenames

Additional metadata:

DocumentName : /AuditJob/DocumentName

PrinterName : /AuditJob/PrinterName

Add metadata to be extracted from XML:

Meta name	Meta XPath
<input type="text"/>	<input type="text"/>

Processors

Available processors	Selected processors
Merge	OCR
Image to Tiff	Print Audit
Word to PDFs	
PDF to Tiff	

Details of selected destination:

Print Audit Papercut Virtual Queue

Scan files will be printed.

- Delivery will send to print all files with extension/.spl
- To LPD server: 127.0.0.1:515/VirtualQueue
- Setting owner of the job to be [user_login]

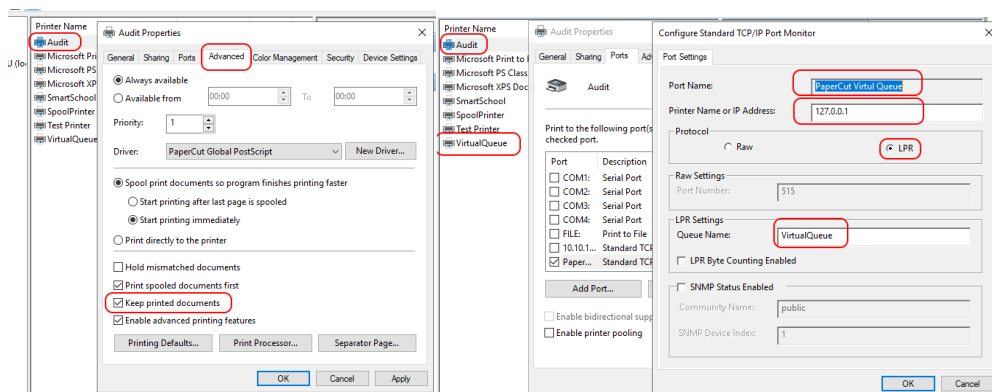
- Destination name - *Name of destination*
- Folder path - *this folder where we need to get pdf searchable with xml from Umango*
C:\DocSlide\DEMO\OCR\DocSlidePrintAuditIn
- Additional file patterns, confirm with [ENTER] - *we want to get just pdfs*
- XPath to owner login - */AuditJob/Owner – we will take user info from xml*
- XPath to filenames - */AuditJob/Files/File – we will take file name from xml*
- Additional metadata: - *we can configure here xml metadata*

- DocumentName - */AuditJob/DocumentName – this is document name from xml*
- PrinterName - */AuditJob/PrinterName – this is printer name*
- Add metadata to be extracted from XML: - *We can add here more metadata*
- Processors - *here we need to choose Print Audit Processor*
- Deliver to - *here we need to create LPR Printer Destination*

Configuration of DocSlide Print Auditing with offline silent monitoring.

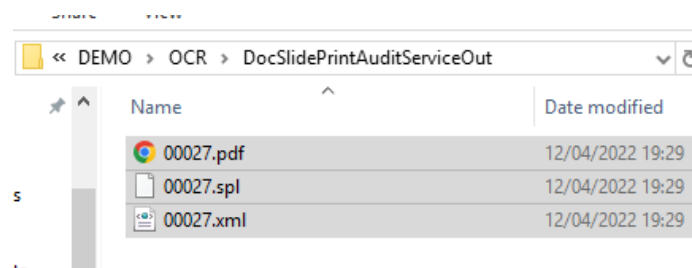
Setting up printing

1. Install **PaperCut LPD service**. LDP can be install from this PaperCut folder: *C:\PaperCut MF\providers\lpd\win\pc-lpd-installer.exe*
2. If you want to do just silent monitoring of all print Jobs and user will always print all print job immediately you need to create shared queue which will work as share queue for all users, ex. named **Audit** on port **should be real server ip and LPR output queue name** (in this example this is PaperCut Virtual Queue with all devices connected to find me printing) and with selected option **Keep printed documents** on Advanced tab.



3. Exclude it from PaperCut print provider by adding it to IgnoredPrinters list: open the file [app_dir]\providers\print\win\print-provider.conf in a text editor such as Notepad. Locate the line `IgnorePrinters=` and enter the full name of the printer on the right-hand-side of the equals line. For example: **IgnorePrinters=Audit**

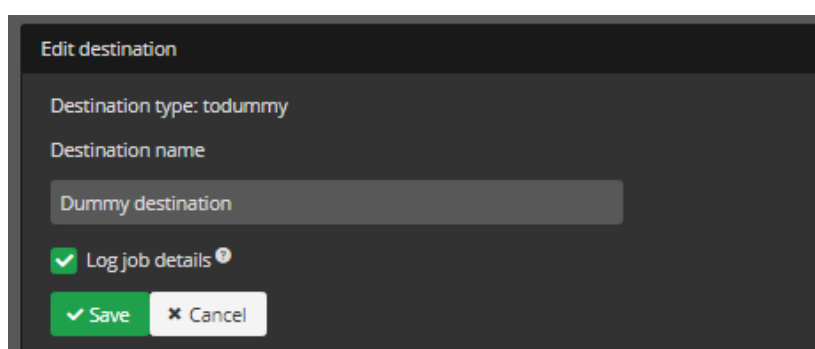
- Print Audit Service is going to watch all queues with **Keep printed documents** flag and produce pdf and xml file and leave original spool file. In xml we have all metadata for this auditing process. All of those 3 files will be store in folder where Umango has a job to do.



```
<?xml version="1.0"?>
<AuditJob>
  <Files>
    <File>[converted-file-path]</File>
    <File>[job-spool-file-path]</File>
  </Files>
  <Owner>[job-owner]</Owner>
  <DocumentName>[job-document-name]</DocumentName>
  <PrinterName>[job-printer-name]</PrinterName>
</AuditJob>
```

DocSlide Print Audit job configuration with offline silent monitoring of print jobs with keywords.

- Create new dummy destinations. We don't want to print any job at the end of this process because it was already printed. We want to do silent monitoring of already printed jobs.



- Destination name - *Name of destination*
- Log job details - *We want just to get info about job but delete it in the end of flow*

2. Create Print Auditing processor with offline silent monitoring.

Here we are creating an audit processor which will be added to flow. We want to search for some forbidden keywords to audit all documents processed by this flow. In this processor we want to do offline silent monitoring of all print jobs already printed by user. We will mark keywords in pdf created and sent to admin, we will not notify user, because he already printed his print job. DocSlide will use dummy destination to just not deliver files anywhere.

Editing processor

Print Audit (auditpdf)

⚠ Make sure that files intended to be audited are Searchable PDFs

Searched keywords in documents, place each sentence in new line, in case of Regula Expressions prefix them with "regex:"

Features
XML

Mark keywords in audit document ⓘ

Block sending file to user ⓘ

PDF files in jobs are only metadata ⓘ

Audit mail sender address
[user_email] + ▾

Audit mail recipient address
[user_email] + ▾

Audit mail subject
Print Audit Job + ▾

Audit mail body
This document contains sensitive key word:
[words] + ▾

- Destination name - *Name of destination*
- Searched keywords in documents, place each sentence in new line, in case of Regula Expressions prefix them with "regex:" - *Keywords you want to search in docs, you can use regex*
- Mark keywords in audit document - *Marking of keyword in document send to admin*
- PDF files in jobs are only metadata - *we want pdfs to be just metadata files*

- Audit mail sender address - *[user_login] – we should use this metadata*
- Audit mail recipient address - *[user_login] – we should use this metadata*
- Audit mail subject - *Email subject*
- Audit mail body - *Email body*

3. Create Print Auditing flow.

We need to create xml folder flow, where DocSlide will get all files from ITS Print Audit Service. It should be an original spool file, xml with metada and tiff file. In xml we have all metadata to process this auditing, including path to original spool files, name of printer, user login and document name. We need of course to add to this flow in the first position OCR processor which will produce pdf searchable and just under auditing processor which will audit this document. In the end we need to choose lpr printer destination.

- Destination name - *Name of destination*

- Folder path - *this folder where we need to get pdf searchable with xml from Umango*
C:\DocSlide\DEMO\OCR\DocSlidePrintAuditIn
- Additional file patterns, confirm with [ENTER] - *we want to get just pdfs*
- XPath to owner login - **/AuditJob/Owner** – *we will take user info from xml*
- XPath to filenames - **/AuditJob/Files/File** – *we will take file name from xml*
- Additional metadata: - *we can configure here xml metadata*
- DocumentName - **/AuditJob/DocumentName** – *this is document name from xml*
- PrinterName - **/AuditJob/PrinterName** – *this is printer name*
- Add metadata to be extracted from XML: - *We can add here more metadata*
- Processors - *here we need to choose Print Audit Processor*
- Deliver to - *here we need to create LPR Printer Destination*

If you have any questions about this release of DocSlidePrintAuditing then please do not hesitate to contact ITS Support via email at helpdesk@its-group.com or call +44 (0)20 8869 1960.