



May 5, 2017

Nexio - tFLOW Integration

Overview

Primary Functionality

Connects Caldera Nexio and Aleyant tFLOW via tBOT to facilitate data exchange between the two applications. Through Nexio, tBOT can read Caldera printer configurations and publish them to tFLOW as virtual production queues, to which tFLOW users can send files to be printed. When a print file is sent to Caldera via the production queues, tBOT generates the JDF and JMF files used by Nexio to automate print setup in the RIP.

tBOT can also read the print log from Nexio such as print time, ink consumption, job state, etc., and send the information to another system such as an MIS.

Objective/Key Benefits

The JDF/JMF data exchange enables automated setup and print, speeding up the production process while decreasing the possibility for user error. Jobs can be defined upstream in the workflow and sent all the way through to print without user intervention.

Caldera connection requirements

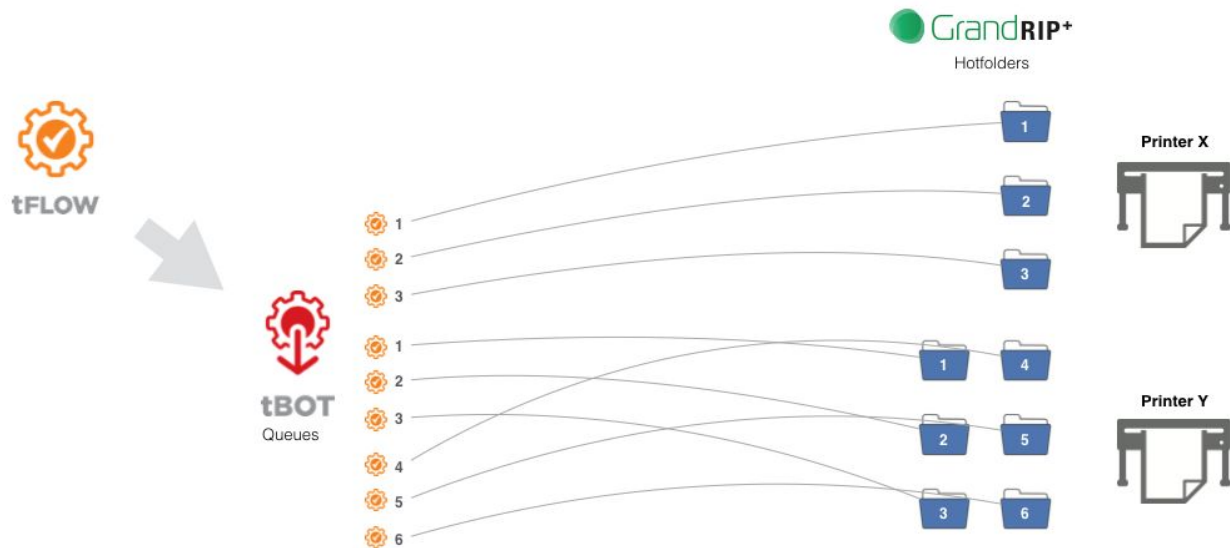
- Caldera RIP
- Nexio license
- Correctly configured Nexio plugin

tFLOW connection requirements

- tFLOW Enterprise
- tBOT
- Correctly configured tBOT production queue connected to Nexio

Workflow comparison

Standard Hot Folder Configuration (without Nexio)



Procedure

1. Hot Folders are created in the RIPs for each printer configuration
2. Queues are created in tBOT with 1 to 1 correspondence for each hot folder
3. tBOT queues become visible in tFLOW, allowing user to submit from tFLOW to a particular hotfolder

Limitations

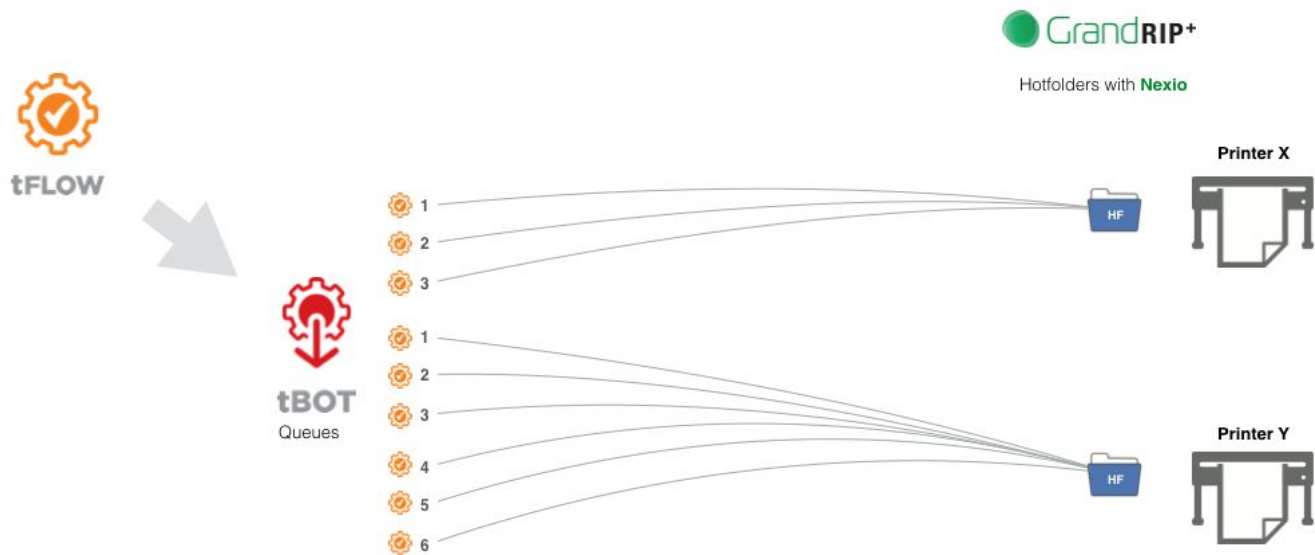
1. The number of hot folders/queues needing to be created can become quite large
2. Updates are manual - create hot folder, create queue and assign to hotfolder
3. Unidirectional data flow - No information from the RIP is visible to tFLOW
4. No additional information other than the print file is passed to the RIP - up to print operator to configure job correctly

Benefits

1. Works with any installation and little configuration required



Nexio Configuration



Procedure

1. One hot folder is created in each RIP
2. tBOT connects to the Nexio, reads printer configurations, and automatically creates queues
3. tBOT queues become visible in tFLOW, allowing user to submit from tFLOW to a specific printer configuration and parametrize RIP functionality on the fly

Limitations

1. Requires more setup than simple hot folder

Benefits

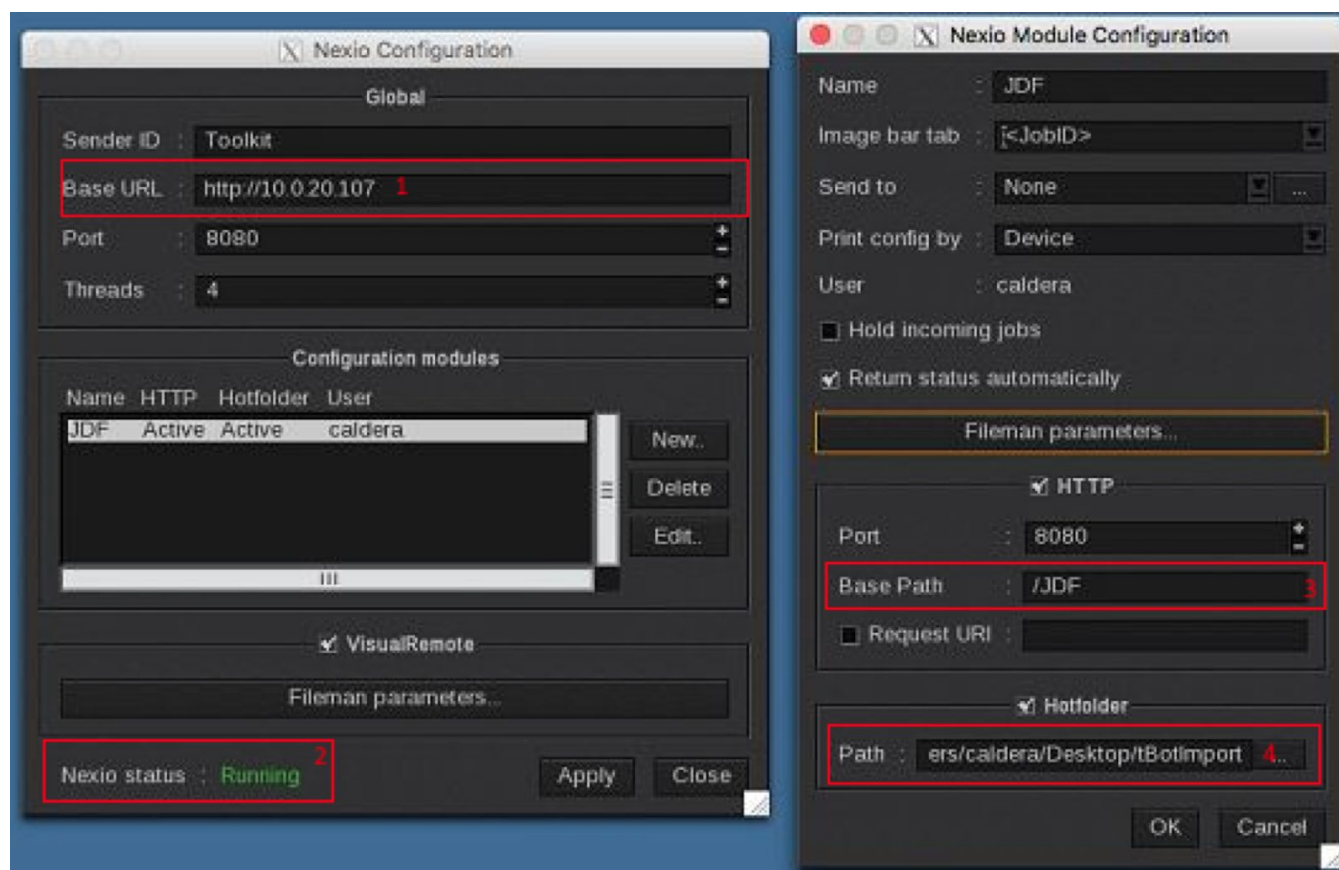
1. Only one folder is needed in each RIP
2. Job parameters can be configured on the fly - resolution, substrate, quantity, etc.
3. JDF or XML instructions that accompany the print file pre-program the RIP with instructions
4. New print configurations are updated as tBOT queues automatically
5. Full print automation
6. Bi-directional flow of information allows print data to be sent back upstream



Overview and Setup

Nexio

Nexio should be installed, licensed, and configured before setting up tBOT. See Nexio documentation for details, but below is a brief overview:



- Fill Field 1 "Base URL" with your Caldera RIP instance address
- Check Field 2 - Status should be "Running"
- Check field 3 "Base Path" (Field 3) - it will be needed later.
- Check field 4 "Path" (Field 4) - it will be needed later - this is the Nexio hot folder.



tBOT Overview

tBOT is a tFLOW tool for the automation of downloading, renaming, and routing files. Additionally, tBOT facilitates connections to other production tools, and provides seamless integration with existing workflows.

The tBOT main screen is divided into 5 areas:

1. Instance name
2. Version number
3. tBot tools and settings
4. Queue list and settings
5. Work area with list of files and status

The screenshot shows the tBOT main screen with the following components:

- 1**: A red box highlights the "TEST" button in the top right corner.
- 2**: A red box highlights the "Version 0.52" text in the top left corner.
- 3**: A red box highlights the top right corner containing icons for Settings, Log, and Profiles.
- 4**: A red box highlights the left sidebar containing the "Queues" section with a list of queues: "TFLOW->CALDERA->NS", "TFLOW UPLOAD", and "ZUND".
- 5**: A red box highlights the main work area, which includes a "File Processing" section with tabs for "Processing", "Completed", "Errors", and "All". Below the tabs is a table with columns: "File name", "Progress", "Size", "Start", "Finish", and "Step info". The table contains two rows of data, both marked as "done".

File name	Progress	Size	Start	Finish	Step info
F:\Work_tmp\tBot\UploadFolder\43102-5...	done	1MB/1MB	11/18/2016 01:47:30	11/18/2016 01:47:42	
F:\Work_tmp\tBot\UploadFolder\TESTCR...	done	402KB/402KB	11/18/2016 01:33:40	11/18/2016 01:33:49	



Connecting tBOT to tFLOW

1. Create a service user in tFlow

- Login to tFlow with admin rights and go to Users to create a new account.
- Name the User tBOT and set it as admin. Assign the tBOT user to the main instance company (Your company) and make sure the flags for "Auto assign this user to new Orders" and "Auto assign to new companies" are checked.
- In the email address field enter any email address like "tbot@yourdomain.com".
- Disable all email notifications for this user (Email alerts)!

Edit the "tBot" user account

Main Assigned Companies Email Alerts

User password confirmation:

User email:

User Role:

Instance Company Managers

Default Job View

Proof

Notification link type:

Public (no login required)

Language:

English (U.S.)

User phone:

☒ Auto assign this user to new Orders

☒ Auto assign to new companies

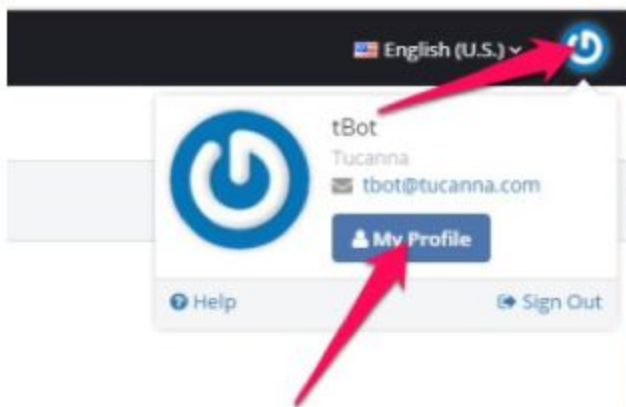
☒ Enabled

Save Cancel



2. Log out of tFLOW, then back in with the new tBOT user account

a. Once logged in, click on top right on the user avatar then select "My profile"

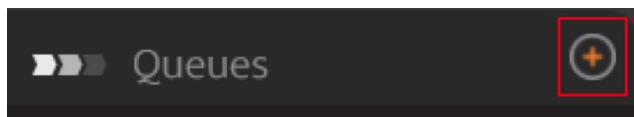


b. Scroll the profile page to the bottom and click "Show Api credentials"

c. Copy the 2 codes: API and Secret key (these will be used when setting up tBOT queues).

Adding queues in tBOT

1. Click the "Add" button at the top of the queue list

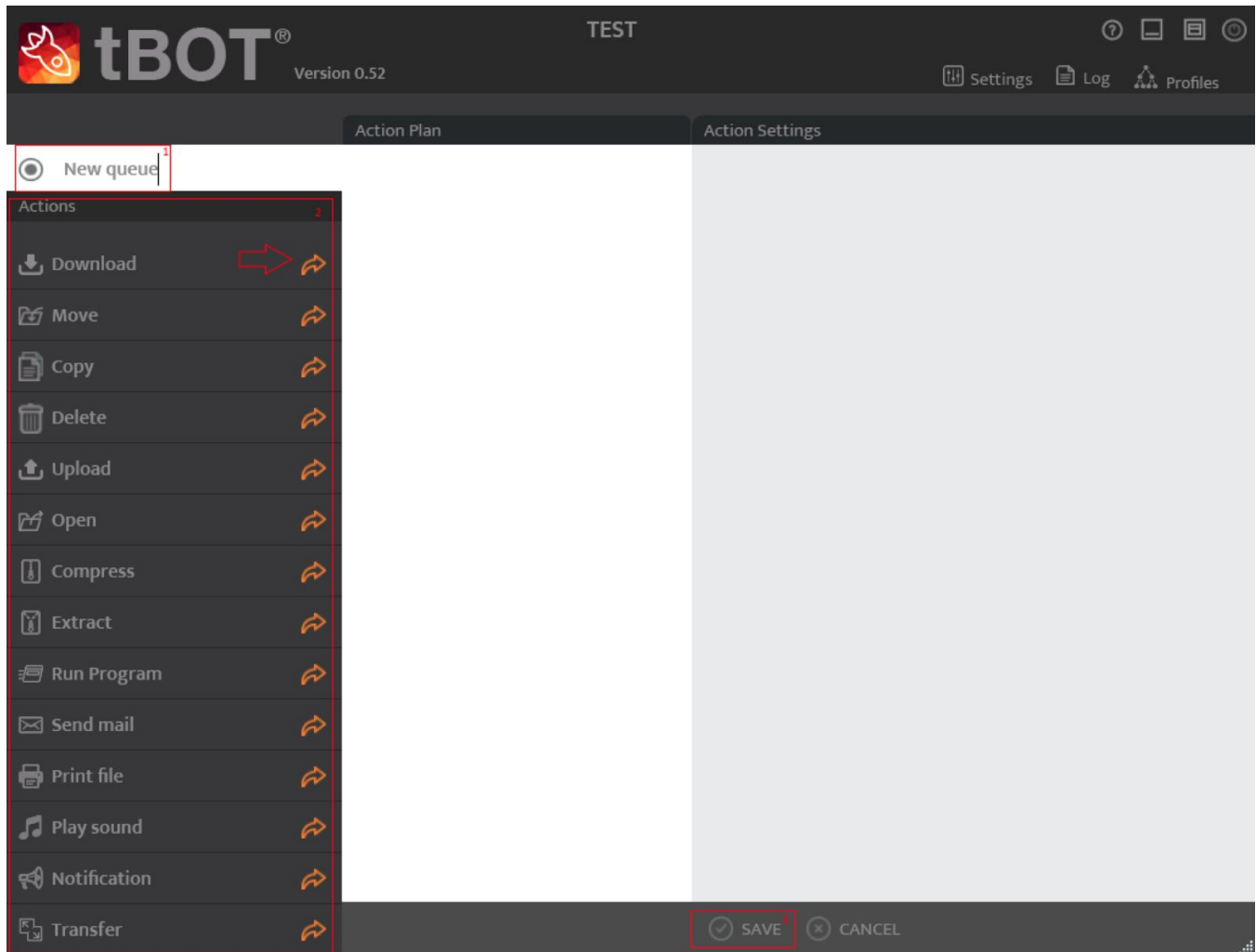


2. Give the queue a name (use something descriptive as this will appear in tFLOW)

Cont'd...



3. Add the Download action to the queue by clicking on the orange arrow to the right of the download action tool.





Actions: Download configuration

Choose tFLOW in Data Source Option

DATA SOURCE OPTION

☒ tFlow ☐ FTP **Test Connection**

Server address

API Key Secret Key

Print File Download folder

Group jobs by Check interval 10 minutes

1. Enter tFLOW URL (copy and paste from your browser - ex: : <http://testtflow.com:8080/> - only the root URL is needed)
2. Enter API key into the API Key field (See Connecting tBOT to tFLOW if you do not have this information).
3. Enter Secret key into the Secret Key field (See Connecting tBOT to tFLOW if you do not have this information).
4. Select the download folder where print files sent from tFLOW will be placed (your Nexio input folder).
5. Files can be grouped in the "Download folder" by Customer or by order number. When selected, tBot will create a folder for each customer or order in the "Download folder" and put related files to these directories.
6. Choose check interval to define how often tBOT will check tFLOW for new files to download.
7. Click Test Connection to make sure the data source has been configured correctly.

For a standard hot folder configuration, this is sufficient, but to connect with Nexio, see next section, Actions: Configuring tBOT with Nexio.



Actions: Configuring tBOT with Nexio

Check the Caldera (via Nexio) option in the Export Settings of the Download action (below).

1. Set URL address to Nexio: it should be a combination of “Base URL” and “Base path” from the previous Nexio section of this document.
2. Click “Load Devices” to get the list of printers.
3. Select the Nexio hot folder (the one you assigned in Step 4 of Actions: Download Configuration).
4. Click Save to create the queue.
5. tBot will create a “virtual queue” in tFLOW for each printer configuration. Format of queue will be: {Actual queue name} – {device name}

6. When a print file is downloaded from tFLOW, tBOT will generate a jmf file and place it in the selected Nexio folder.



Retrieving information from Nexio

In addition to sending print files and instructions to Nexio, tBOT can also retrieve print information and send it back upstream to tFLOW or an MIS system. The following example shows how to pass information from Nexio to NetSuite, a common ERP system.

1. Click “Profiles” in the upper right of tBOT’s main window to open the configuration screen.

The screenshot shows the tBOT configuration interface. The top bar includes the tBOT logo, version 0.50, and navigation links for Settings, Log, and Profiles. The Profiles tab is active, showing a list of profiles on the left and a configuration form on the right. The 'Calder->NS' profile is selected. The form has two main sections: 'Source system' and 'Destination system'. The 'Source system' is set to 'Caldera (Nexio)' and the 'Destination system' is set to 'NetSuite'. Below these, there is a table of parameter values and a field mapping section.

Parameter name	Parameter value
Email	Calderanexio@wsdisplay.com
Password	
Role Id	3
Account Number	1030411_SB2
Application Id	2838F161-23D0-4109-AA3F-C2C995C0A660
Report Id	1562

Select field:		Select field:
Print width	>	Print width
Print height	>	Print height
Media height	>	Media height
Media width	>	Media width
Cyan	>	Cyan

2. Click “Profile” button on main screen
3. Click “Add” button and set name for profile
4. Select source system (Caldera) and Destination system (NetSuite)
5. Fill required parameters for NetSuite
6. Select field mapping to define where values passed from Caldera will be placed in NetSuite.



Annex

Sample of JMF file generated by tBOT

```
<?xml version="1.0" encoding="utf-8"?>
<JMF SenderID="Production - Carlsbad" TimeStamp="2016-11-18T07:04:32-08:00" Version="1.4"
ResponseURL="file:///JMF_RESPONSE/2 FALSSB7G2 Falcon 7ft Spike Graphic Package.jmf"
xmlns="http://www.CIP4.org/JDFSSchema_1_1">
  <Command ID="C001" Type="SubmitQueueEntry">
    <QueueSubmissionParams URL="file:///JDF_INPUT/2 FALSSB7G2 Falcon 7ft Spike Graphic
Package.jdf" ReturnURL="file:///JDF_OUTPUT/2 FALSSB7G2 Falcon 7ft Spike Graphic
Package.jdf" GangPolicy="Gang" />
  </Command>
</JMF>
```



Sample of JDF file generated by tBOT

```
<?xml version="1.0" encoding="utf-8"?>
<JDF xmlns:cal="http://www.caldera.com/jdf"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://www.CIP4.org/JDFSchemas_1_1" ID="2 FALSSB7G2 Falcon 7ft Spike Graphic
Package" JobID="2 FALSSB7G2 Falcon 7ft Spike Graphic Package" JobPartID="1"
Status="Waiting" Activation="Active" Type="DigitalPrinting" Version="1.4"
ICSVersions="Base_L1-1.4" DescriptiveName="Production - Carlsbad: 2 FALSSB7G2 Falcon 7ft
Spike Graphic Package">
  <ResourcePool>
    <RunList Class="Parameter" ID="RL001" Status="Available">
      <LayoutElement>
        <FileSpec URL="file://FILES/1102110-4__HR.pdf" />
      </LayoutElement>
    </RunList>
    <DigitalPrintingParams Class="Parameter" ID="DPP001" Status="Available" />
    <Device Class="Implementation" ID="DEV001" Status="Available"
DeviceID="Rhotex-322:Stretch" />
    <Component Class="Quantity" ID="C001" Status="Unavailable"
ComponentType="FinalProduct" />
  </ResourcePool>
  <ResourceLinkPool>
    <DigitalPrintingParamsLink Usage="Input" rRef="DPP001" />
    <DeviceLink Usage="Input" rRef="DEV001" />
    <RunListLink Usage="Input" rRef="RL001" />
    <ComponentLink Usage="Output" rRef="C001" Amount="1" />
  </ResourceLinkPool>
  <AuditPool>
    <Created AgentName="Production - Carlsbad" AgentVersion="10.0"
TimeStamp="2016-11-18T07:04:32-08:00" />
  </AuditPool>
</JDF>
```



Sample of information extracted by tBOT for MIS system

```
<print_width unit="Inchs">12.000000</print_width>
<print_height unit="Inchs">24.400000</print_height>
<media_width unit="Inchs">126.000000</media_width>
<media_height unit="Inchs">24.400000</media_height>
<media_usage_ratio>0.095238</media_usage_ratio>
<job_id>5402</job_id>
<job_name>1102110-4__HR.pdf</job_name>
<job_state idx="7">Finished</job_state>
<job_error/>
<server_name>Rhotex-322</server_name>
<server_host>10.0.20.23</server_host>
<create_time timestamp="1478900221">Tue Nov 22 01:02:15 2016</create_time>
<job_mode idx="3">PDF</job_mode>
<cut_barcode>63905CFC</cut_barcode>
<nb_printed>8</nb_printed>
<begin_time timestamp="1478901971">Tue Nov 22 01:03:15 2016</begin_time>
<print_time_sec>13</print_time_sec>
<op_time timestamp="1478901971">Tue Nov 22 01:03:28 2016</op_time>
<ink_cons unit="ml" total="0.585580">
<ink name="Cyan" short="C" unit="ml">0.100731</ink>
<ink name="Magenta" short="M" unit="ml">0.126355</ink>
<ink name="Yellow" short="Y" unit="ml">0.138821</ink>
<ink name="Black" short="K" unit="ml">0.134930</ink>
<ink name="LightBlack" short="k" unit="ml">0.084743</ink>
```