
Minisoft® eFORMz™ Director

Version 10.0

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eFORMz 10.0 - January 2014

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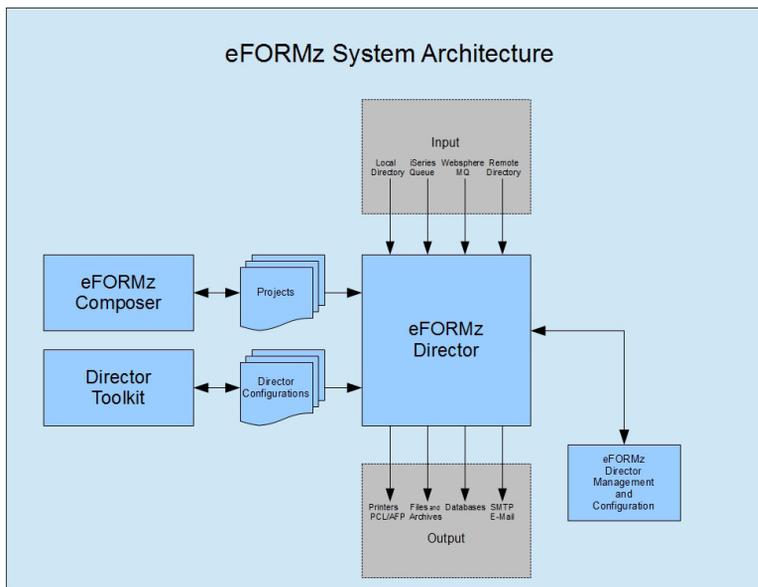
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eFORMz Director

The eFORMz Director is the automation process that works in conjunction with eFORMz. The Director allows you to configure eFORMz to process incoming files from multiple sources to be merged with an eFORMz project and outputted in the manner to which you designate.

The Director consists of a main component called the Director Toolkit. The Director Toolkit can be customized to monitor multiple types of input directories for output to be merged through eFORMz. A simple diagram showing the eFORMz architecture with the Director:



The Director functions on all platforms eFORMz is capable of being installed on.

Director Components

Director Toolkit

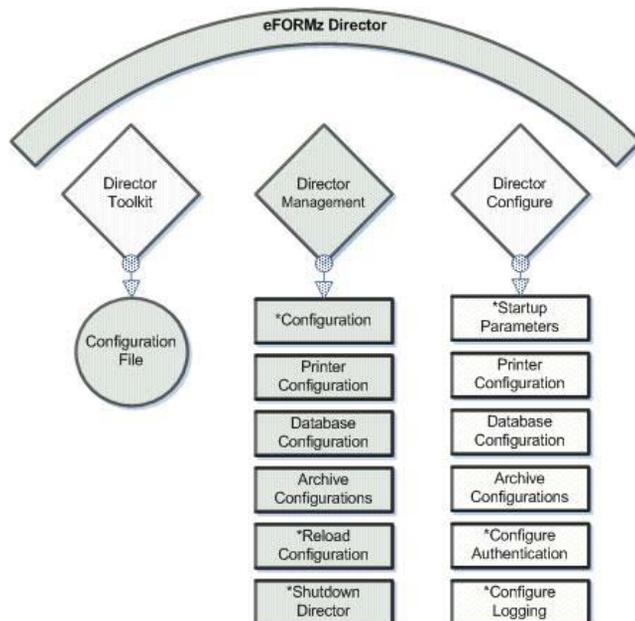
The Director Toolkit allows you to create and edit configuration files for eFORMz/ eDIRECT+ processing. Configure your Windows, iSeries, or Unix box for eFORMz processing using the Director Toolkit.

Director Management

The Director Management utility can manage configuration file(s), printer(s), database(s), archiving and the shut down of the Director locally or on remote host locations.

Director Configure

The Director Configure manages the Director Authentication as to user access to the Director and logging of the Director.



Section 1

Director Toolkit for Windows

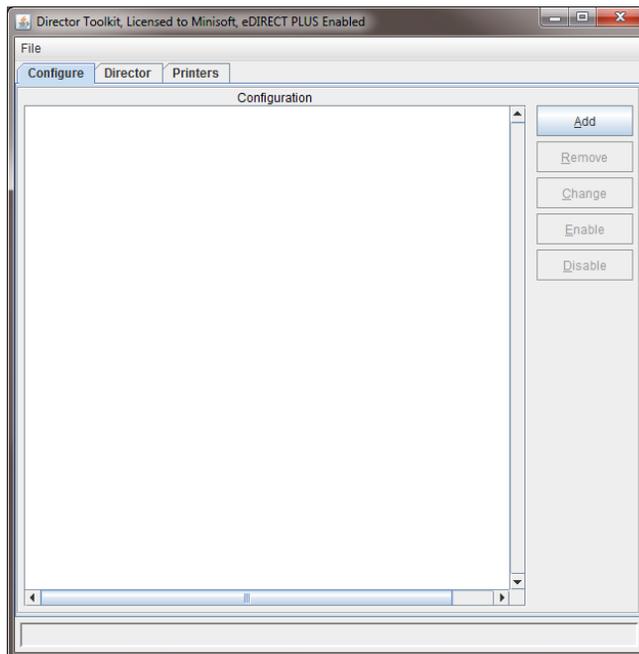


Director Setup for Windows

The Director Toolkit is utilized to configure the automated merge process using toolkit configurations. One or multiple configuration can be setup and monitored by the Director. To setup the automation process you must configure a configuration file to determine which source files will be picked up by eFORMz and how that source file will be handled.

To setup a configuration file the Director Toolkit is utilized to configure the process. To start the Director Toolkit:

1. From your Windows desktop select the Director Toolkit shortcut icon:

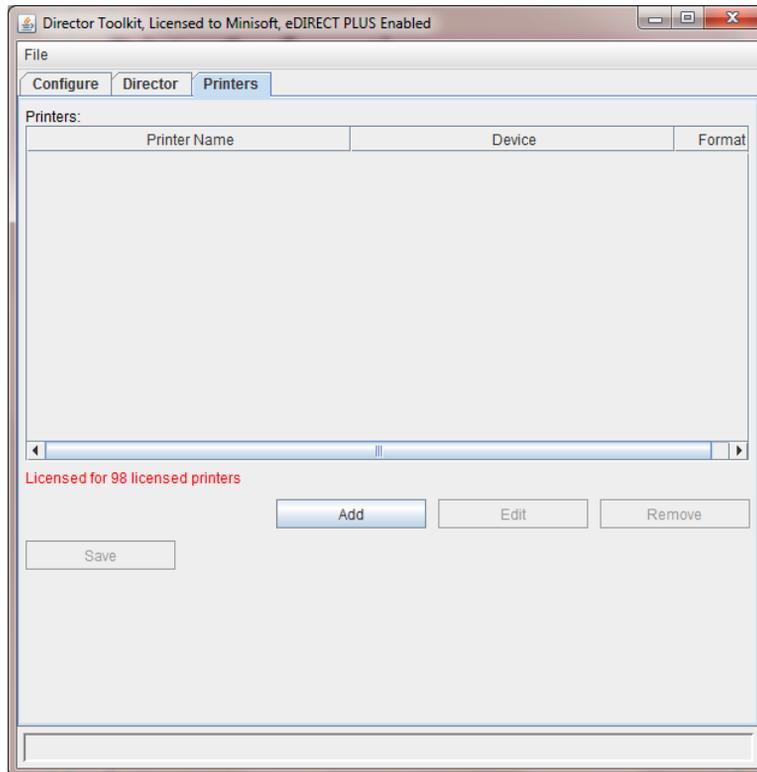


Another startup option is from the Windows Start menu select, *All Programs > eFORMz 10 > Management > Director > Director Toolkit*. Once Director has started, select Host type of *Local*.

Printer Configuration Setup

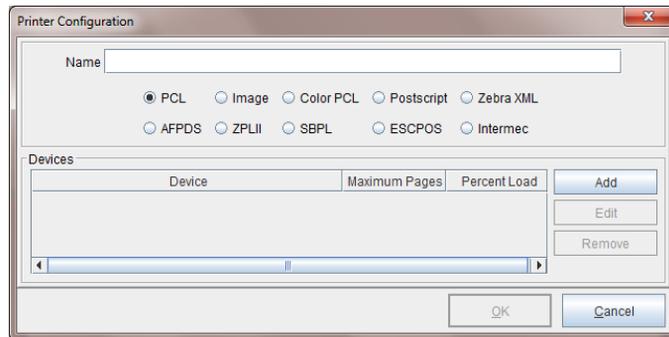
Note: The Customer's eFORMz Printer License Purchase Agreement determines the number of printer devices that can be specified. The default is a 2-printer license. Should you need to increase the number of printers an updated license is necessary. Please contact Minisoft Sales at sales@minisoft.com or 800-682-0200..

Once the Director Toolkit has started, select the Printers tab, configure your network printers for use in your automation setup. Printers will need to be defined for use on the Configure tab:



To configure a new printer:

1. From the Printers configuration tab select *Add*.
2. The Printer Configuration dialog box appears. From Devices select *Add*:



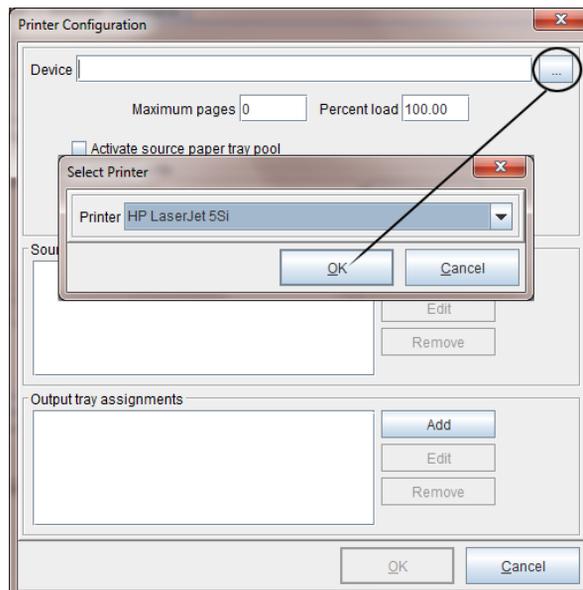
Options include:

Name a descriptive title assigned to a printer to better identify it.

Printer language PCL, Image, Color PCL, Postscript, Zebra XML, AFPDS, ZPLII, SBPL, ESCPOS, Intermecc.

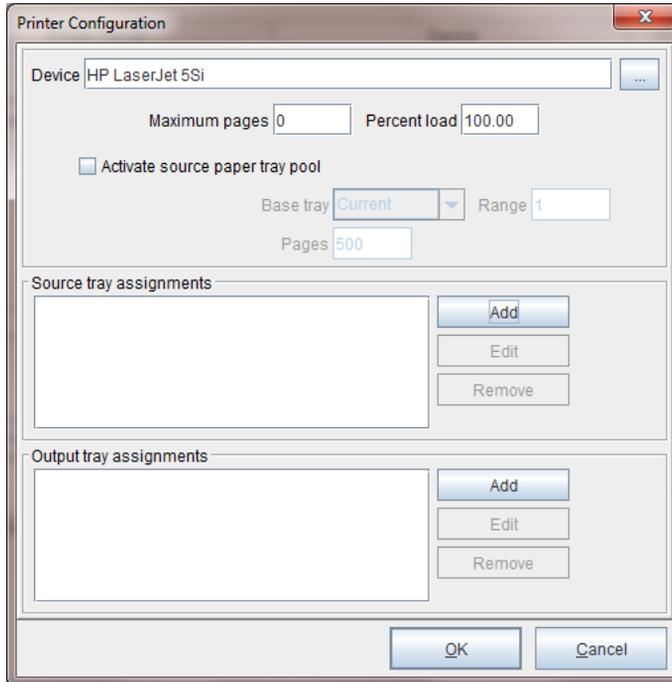
Devices allows you to add multiple devices to one name descriptor, for example, used with print pooling.

3. Select the optical button to select (...) a networked printer:

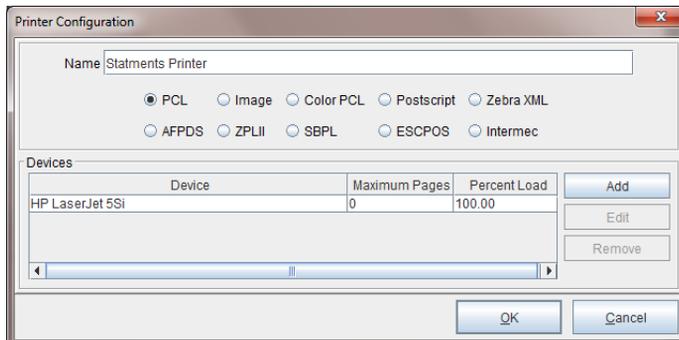


NOTE: The Director is designed to run as a service. As such, printers added to the Director should not be user defined. If printers from your systems devices does not appear in the Director listing, please keep in mind this printer(s) may not qualify to be used as a printer for a service, configuration changes of the printer maybe needed.

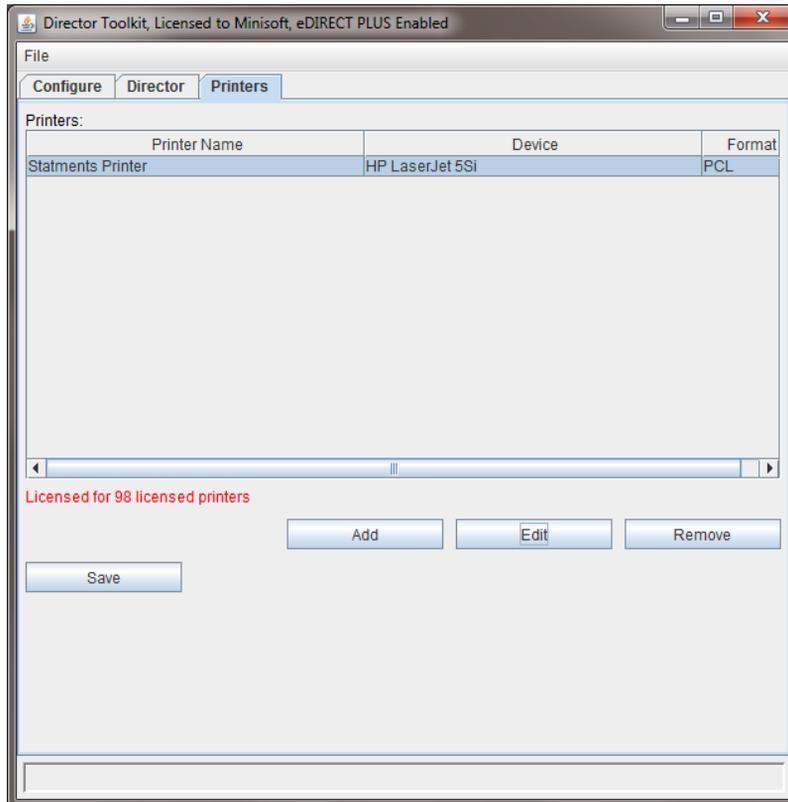
4. Your selected Device will then appear, select *OK*.



5. The selected printer will appear under Devices from the Printer Configuration dialog box. Select *OK*.



- Your newly added printer will appear. Once you have completed adding all the necessary printers, select *Save* to save your printer configuration:



Printer configurations are stored in the Printer.xml file located in the default directory C:\Minisoft\eFORMz_6\.

Configuring the Process

When the Director Toolkit is initially started you will notice on the Configure tab a preset Input Directory configured:

C:\Minisoft\eFORMz_6\Input

The *Input Directory* is the directory by which your source print file or data files will reside and be pulled to be merged with an eFORMz project. Available options include:

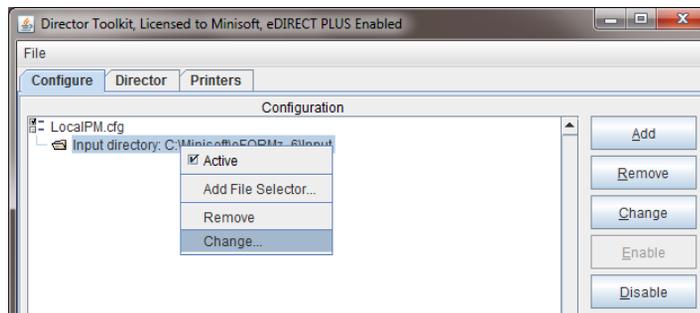
- Local directory
- Remote directory
- Local iSeries queue (*AS400 only*)
- Remote iSeries queue
- MQ message queue

For a full description of each input directory type, see *Source Directory*. For the purpose of this documentation we will focus on using the *Local Directory* option.

Input Directory

To edit the options of the Input Directory:

1. Right click the Input Directory and select *Change*:



2. The *Input Directory* dialog box will display:

TIP: If the eFORMz Director will be monitoring for files or sending files across a network, you must use UNC paths. For example:

```
\\ServerName\minisoft\eFORMz_6\Input\
```

Asterisk (*) or question mark (?) can also be used as wild card entries in the source Input Directory.

3. Once you have your Input Directory configured, if necessary, set other available options:

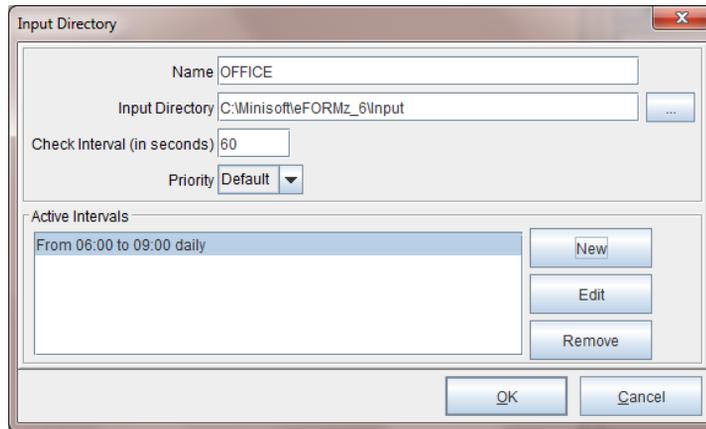
Name a descriptive title assigned to an input directory to better identify the selection location of print files to be processed by eFORMz.

Check Interval indicates the number of seconds the Queue Monitor will wait before checking the input directory for new print files.

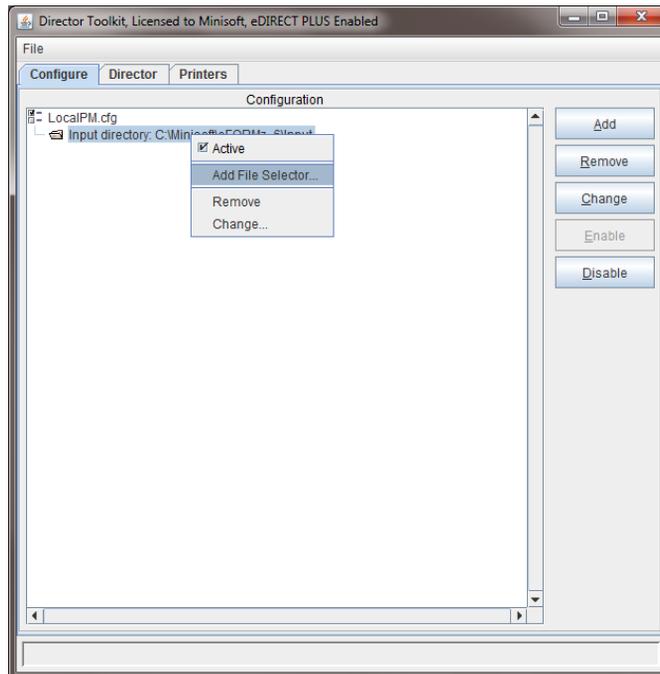
Priority sets the priority setting for the individual input directories. Each input queue executes a queue monitor in a separate thread. Control the execution priority of each thread individually based on the priority. The higher the priority (1-10) the more execution time is given to a thread in relation to other threads and processes.

Active Intervals sets timed interval checks on the Input Directory. Timed intervals can be set based on the day and time of week.

4. Once complete, click *OK*.

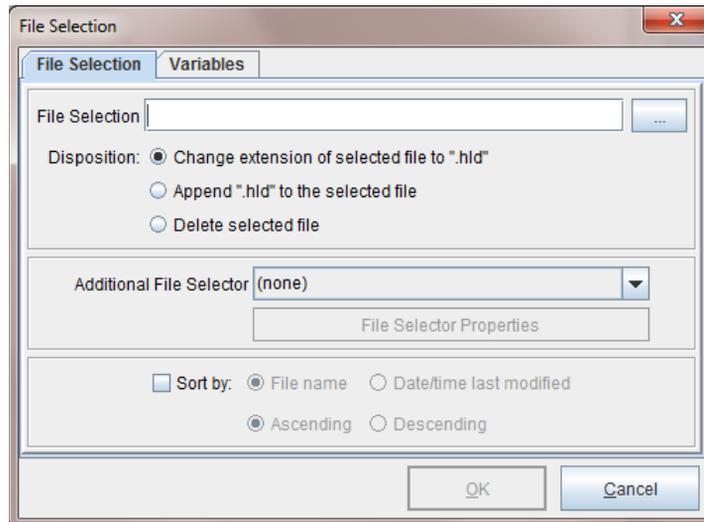


5. Next, *right click* the *Input Directory* field and select *Add File Selector*:

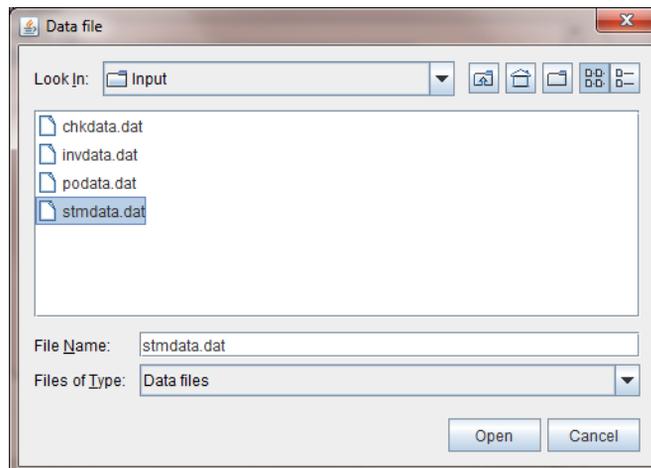


Each Input Directory can have multiple file selections if an input directory contains multiple file types or naming conventions for an array of files.

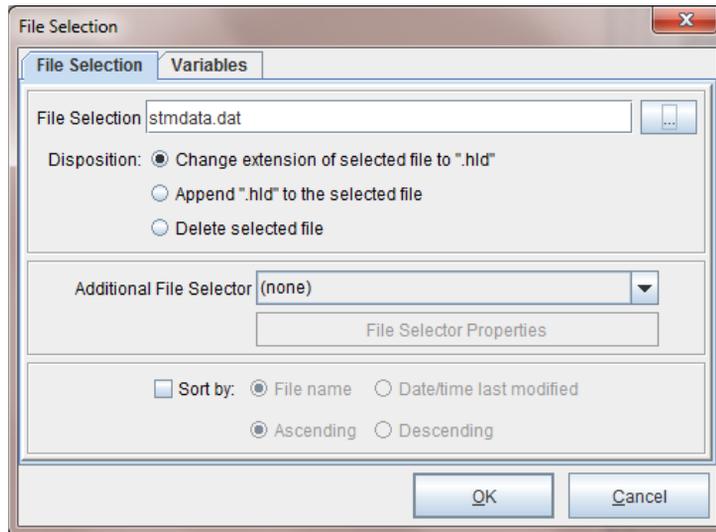
- From the *File Selection* dialog box use the browse button to select a print file to be merged with an eFORMz project from the input directory:



- From the input directory folder select the print file to be merged with an eFORMz project file and click *Open* from the *Data File* dialog box:



- The *File Selection* field will now display with the specified print file to be merged with an eFORMz project.



File Disposition Options:

- If you would like the print file to remain in the input directory after a merge has taken place, select *Change extension of selection file to ".hld"*.
- If you would like the print file to maintain its original extension select *Append ".hld" to the selected file*. This will cause the *.hld* to append to the end of the original extension.
- If you would like to delete the print file from the input directory after a merge has taken place, select *Delete selected file*.

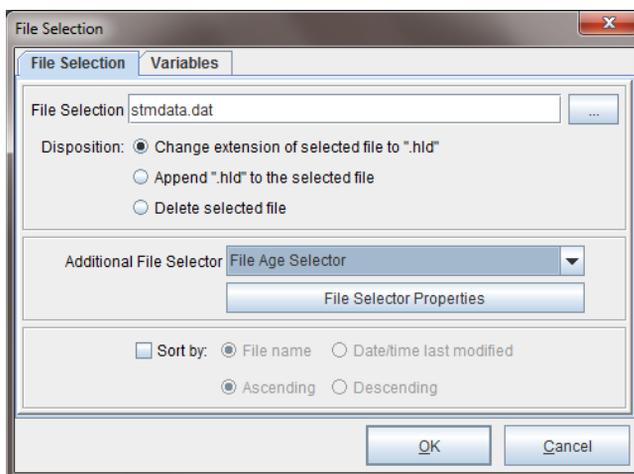
TIP: An asterisk (*) or question mark (?) can also be used as wild card entry in the source print file name. For example:

```
stmdata*.dat   stm??12*.dat   ???data.*
```

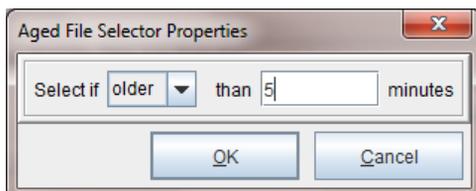
The 'File Selection' option also allows for multiple file selection criteria. The delimiter between each file selection can be a space, comma, plus, or minus. If the delimiter is a space, comma, or plus the next file selection goes in an 'include' list. If the delimiter is a minus, the next file selection goes in an 'exclude' list. A data file must match one of the selections in the include list and not match any of the selections in the exclude list to be processed. For example:

```
File select = PO*.DAT - PO1.DAT - PO2.DAT
              PO01*.DAT + PO?1*.DAT - PO2*.DAT
```

9. (Optional) Add additional file selectors. If using the *File Age Selector*, the most likely uses would be to clean up files older than a specific interval or delay processing for a specific interval in order for something else to process first.



Once you have selected an Additional File Selector option you can then set the properties for the selector using the *File Selector Properties*.



10. (Optional) A Director variable can be added and be accessible from a project by using an xml node of:

QMVariables/<variablename>

Example:

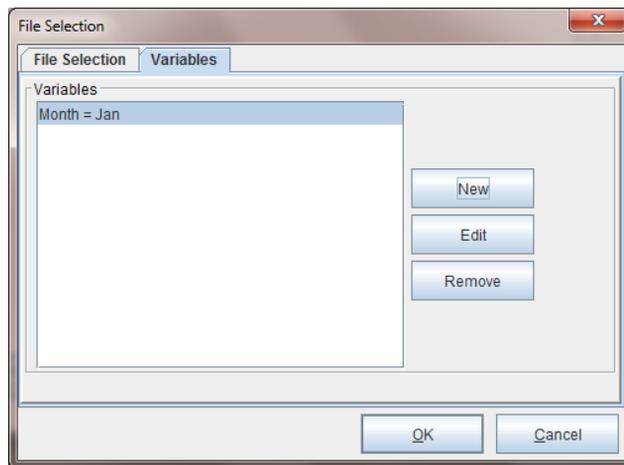
QMVariables/Month

If the data file is an xml file the value will come from an xml node named:

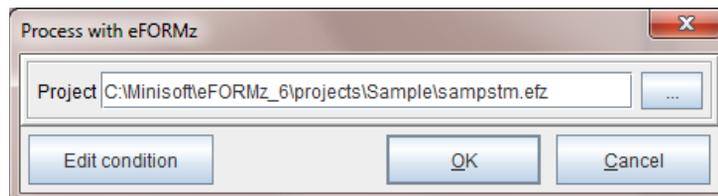
<datafileroot>/QMVariable/<variablename>

Example:

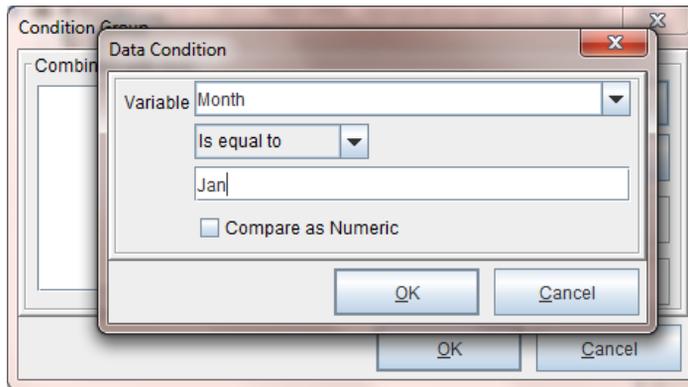
Statements/QMVariables/Month



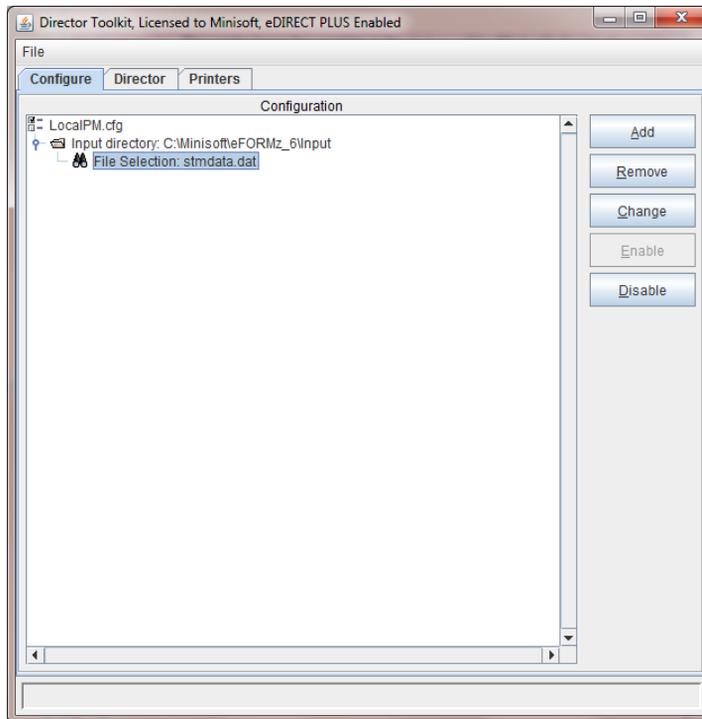
Variables in the Director Toolkit can be used for convenience when setting up conditions on projects. For example, lets say you have one project that sets a global variable to be passed back to the queue monitor. Then you want to use that variable in a condition on another project to determine whether to execute that project or not. When setting up the condition within the *Process with eFORMz* dialog box:



The combo boxes for variables in the dialogs will be filled with the list of variables defined in the file selection. By naming all the variables in the file selection, you can just select them when setting up the project conditions, rather than typing the variable name in:



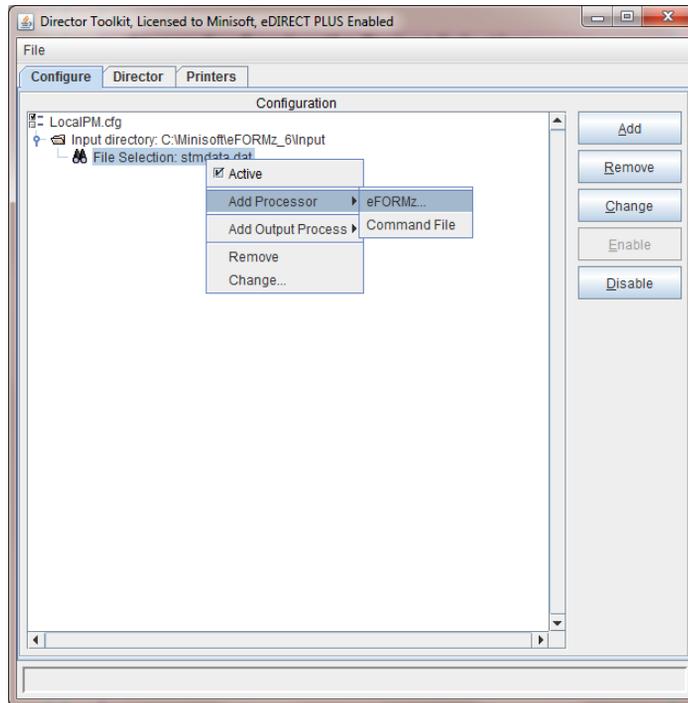
11. Once complete, select OK and your file selection will appear in the Director configuration:



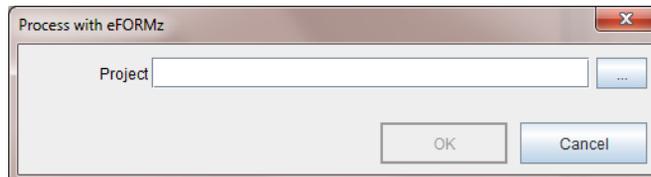
Configuring the Project Selection

Once a file selection has been completed the next step is to decide what will occur with this source file. In the example below we will configure the data file to be merged with and eFORMz project file:

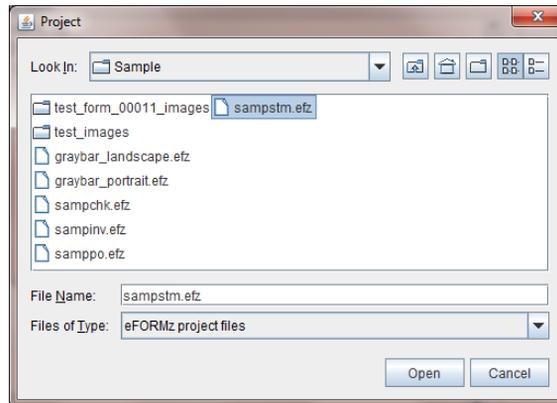
1. *Right click* the file selection field and select *Add Processor > eFORMz* to specify a project to be merged with your file selection:



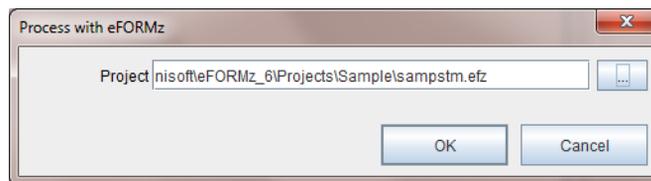
2. From the *Process with eFORMz* dialog box use the browse button (...) to select the project file you would like your file selection to be merged with:



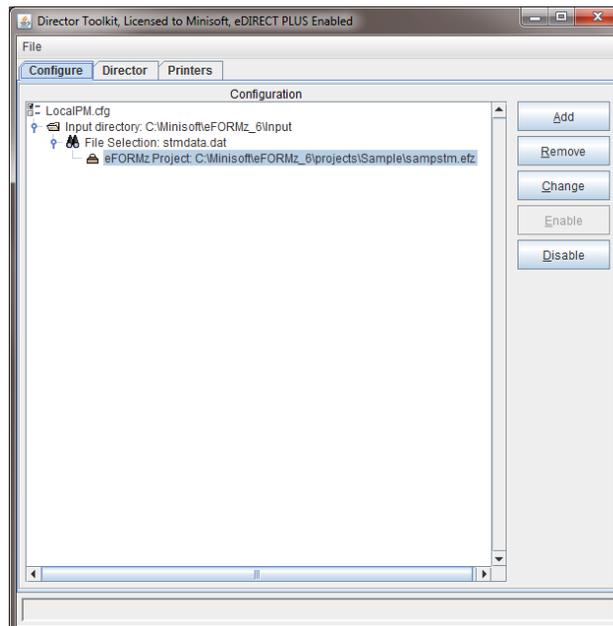
3. Once the project file has been located using the *Project* dialog box click *Open*.



4. The project and project path will appear in the *Project* field. Click *OK*.



5. The Project selected will then appear under the File Section.



Feature: eFORMz Project Reference File (.efr) allows one to perform ‘table-formatted’ lookups on project names based on the name of the print file. For example:

efr text file:

```
<ProjectReference>
<Ref Datafile="P2310201_*"Project="/minisoft/projects/sampstm.efz" />
<Ref Datafile="P5310201_*"Project="/minisoft/projects/sampstm_d2.efz" />
</ProjectReference>
```

Toolkit Project File reference:

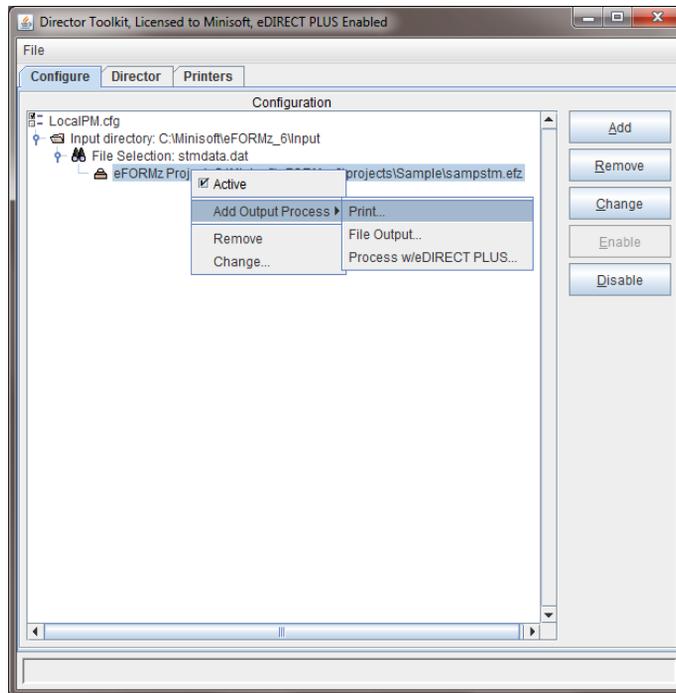
```
/minisoft/projects/projectable.efr
```

- Using your mouse, right click the eFORMz Project field and select Add Output Process, select:

Print

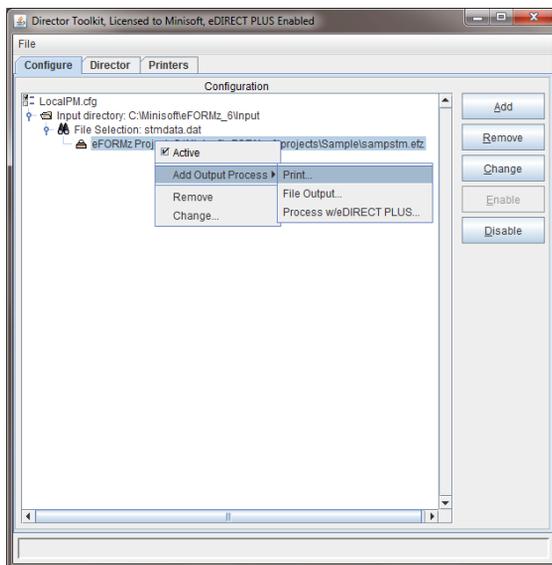
File Output

Process w/eDIRECT or eDIRECT+



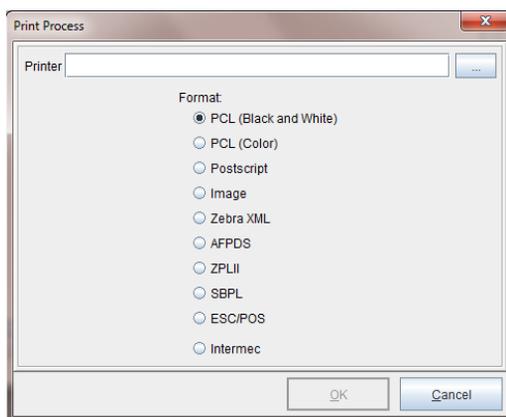
Selecting the Output Options

As a source file is being picked up to be merged with an eFORMz Project a decision must be made as to what you would like to do with the merged output. The following Output options are available:



Print

Allows you to select the printer you would like to print your output to. Select the browse button to select a printer from the printer list.

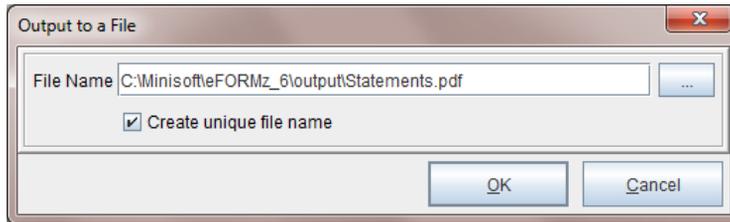


File Output

Implements the *Output to a File* dialog box. Use the browse icon to locate the directory you would like the file output to be placed. The output file name can either match a pre-defined variable or a static naming convention. Output file name variables include:

<directory>, <datafilename>, <datafileext>, <project>

Example: C:\outputdirectory*<datafilename>*.pdf



Creates a unique file output name every time a process is ran. The unique file name must contain at least 3 characters. For example:

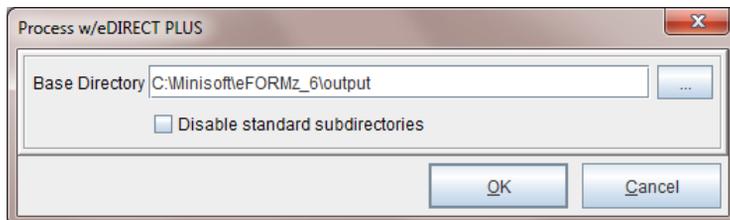
invoice_{system date/time stamp}.pdf

Unchecked causes the output file name to consistently remain the same for every time a process is run. For example:

invoice.pdf

Process with eDIRECT(+)

Implements the eDIRECT Process if a project file has been configured for eDIRECT. The *Base Directory* represents the directory where you would like your output to reside. eDIRECT by default creates sub directories under the base directory for the standard output. If you do not wish the subdirectories to be built, select *Disable standard subdirectories*.



NOTE: Unless disable option is checked, new subfolders are automatically created under the base directory for each eDIRECT output process:

```

email - /email
print - /print
fax   - /fax

```

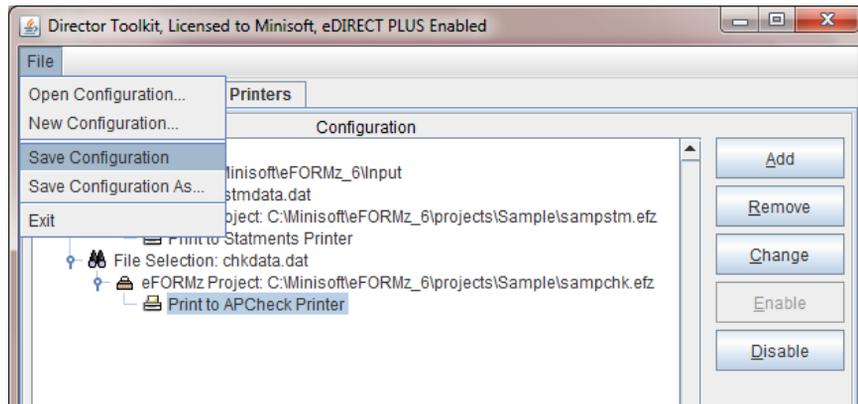
(Optional) Post Processing

Each output process can also have multiple post processing commands:

Print Files
Copy Files
Delete Files
External Commands

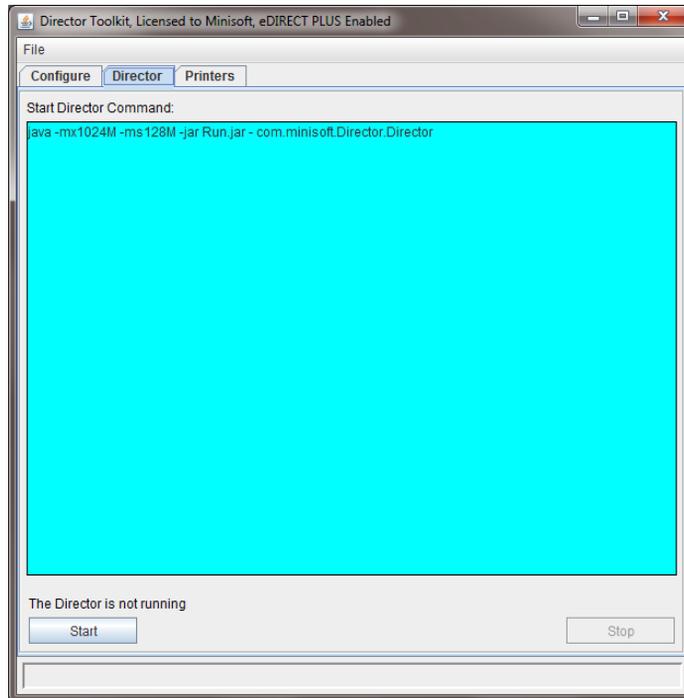
Save your Configuration

Once your configuration file is complete, save your changes by selecting *File > Save Configuration*.

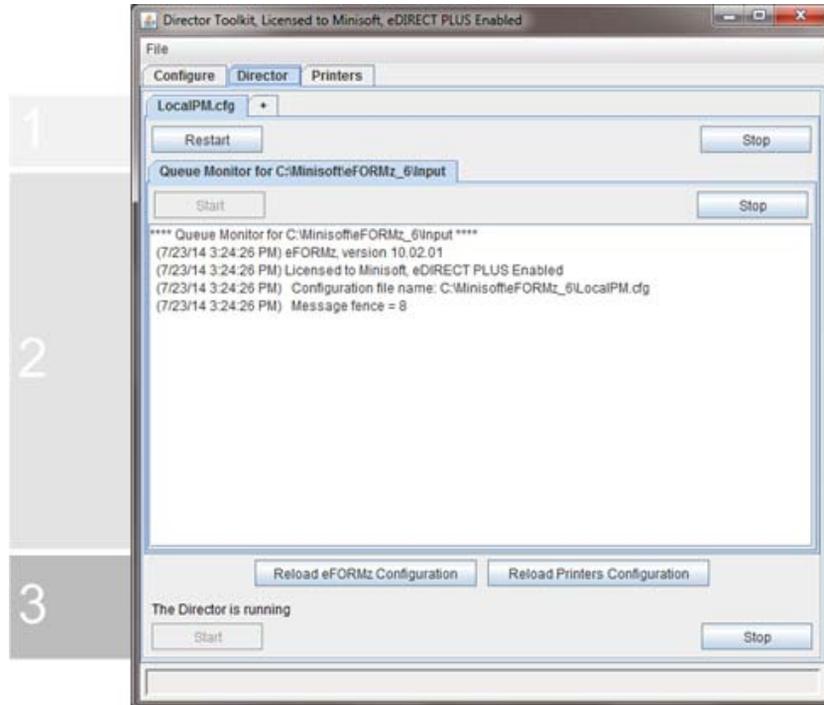


Submitting the Automated Process

1. Select the Director tab:



2. From the Director select *Start*.
Start Job - Submits the job.
Stop Job - Stops the Director process.
3. The Director will startup displaying the active configuration file.
4. The Director tab contains multiple levels in which each level contains a function to control the Director as it is monitoring:



(Level 1) Controls the *Restart* or *Stop* of a Configuration file that has been setup to monitor specific queues. If the Director is setup to run multiple configuration files, each configuration file can be restarted or stopped individually. By default, a restart would occur if changes to your configuration have occurred and you would like to have those changes implemented. Selecting *Stop* will cause the Director to no longer monitor the specified configuration file.

(Level 2) Controls the Stopping or Starting of a Queue that is being monitored by the configuration file. Note, a Queue can be inactive within the Configure tab but can be started or stopped from the Directors tab if wanted.

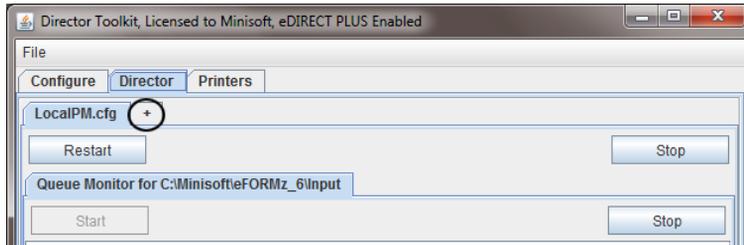
(Level 3) Controls the Director as a whole. You can *Stop/Start* the Director using the stop and start buttons. Once you stop the Director you will need to resubmit the job.

Reload eFORMz Configuration allows you to reload the eFORMz_cfg_User.xml if any changes were made to this file externally without having to stop and restart the service.

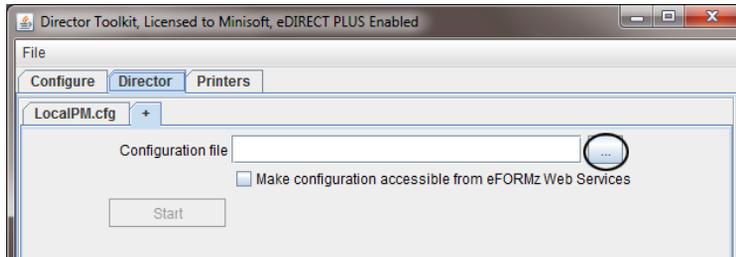
Reload Printers Configuration allows you to reload the Printers.xml file if changes have been made without having to stop and restart the service.

The Director can also monitor multiple configuration files in a single job process. To add another configuration file to the job process:

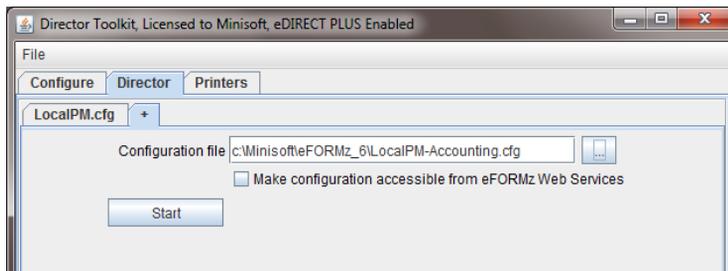
1. Select the (+) located beside the existing configuration tab:



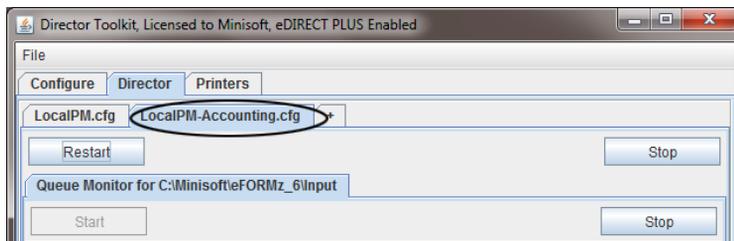
2. Use the browse button (...) on the Configuration file field to select another configuration file:



3. Once selected, *Start* the configuration:

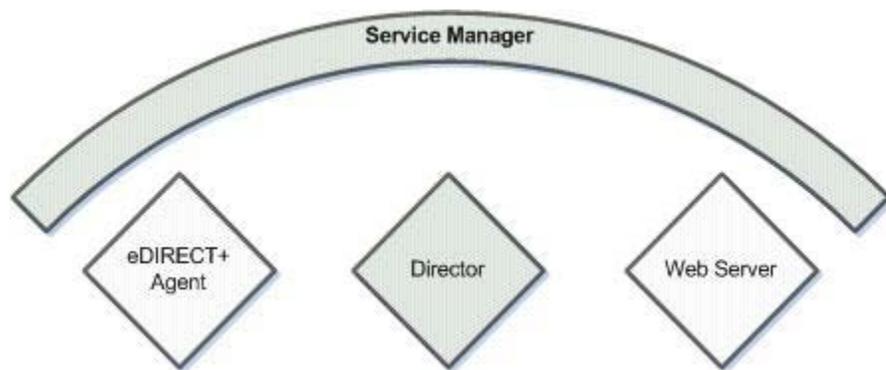


4. Your configuration will appear under the Director tab.



Automating the Director on Windows

The Director can be setup as an automated Service for Windows under the umbrella of the Service Manager provided by the eFORMz install. The following instructions will step you through the set up process of running the Director as a service utilizing the eFORMz Service Manager.

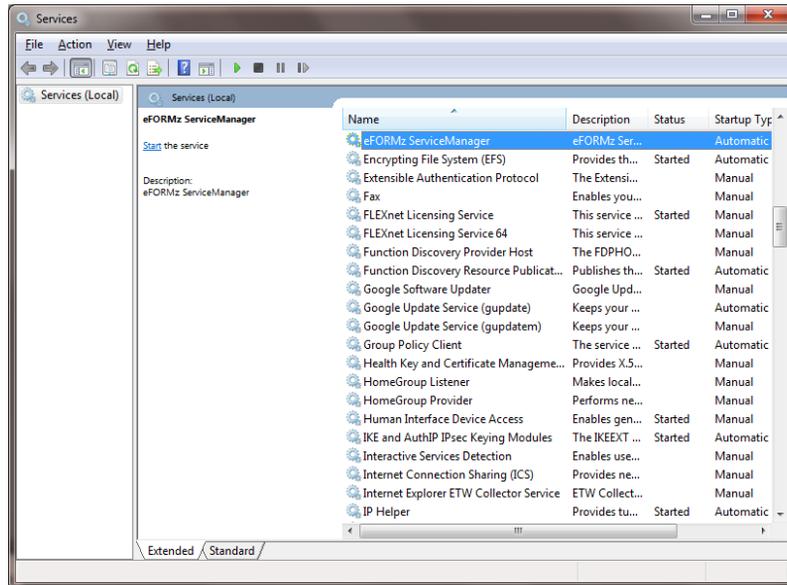


To install the Service Manager under Windows Services:

1. From the Windows Start Menu select All Programs > eFORMz 10 > Windows Service:
Service Manager - Create (32bit)
Service Manager (64 bit) - Create

NOTE: If you are running on a 64-bit environment we would highly recommend running the Service Manager (64-bit). In order to do so, check your system Java to confirm 64-bit Java has been installed. From a command prompt enter: `Java -version`
If Java is not recognized, install java from www.java.com site. Select a 64-bit version.

2. Check to confirm the Service has been installed under Windows Service, if so, the eFORMz Service Manager will appear:



3. Confirm that the service is set to *Automatic* startup.
4. When the eFORMz Service Manager is started the default Director configuration file (LocalPM.cfg) is automatically started.

To Manage the Director under the Service Manager see *Director Management*.

Section 2

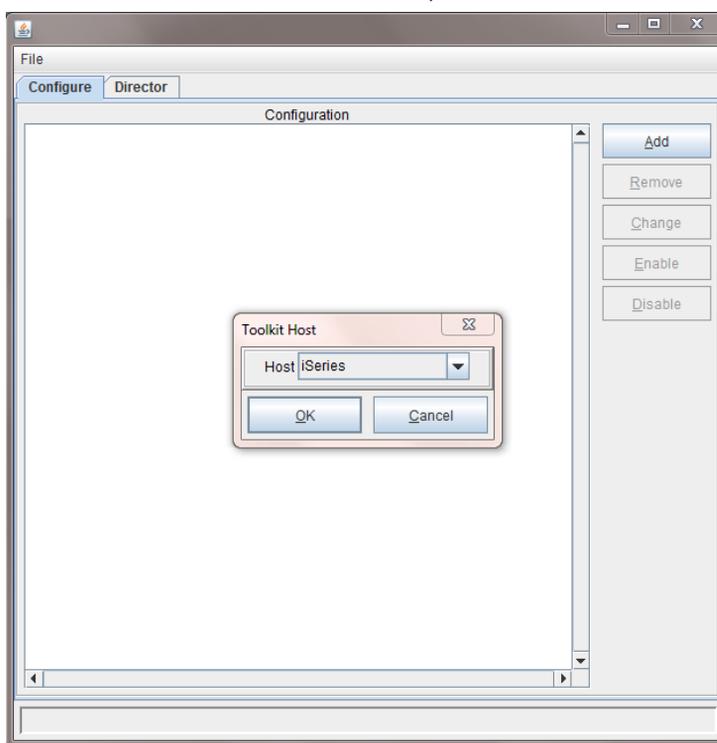
Director Toolkit for AS400



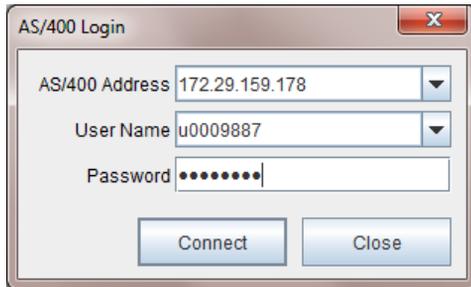
Director Setup for AS400

The Director Toolkit is utilized to setup the automated print process. To setup the automation process you must configure a configuration file to determine which source files will be picked up by eFORMz and how that source file will be handled. To setup a configuration file, start the Director Toolkit utility installed with a Windows install:

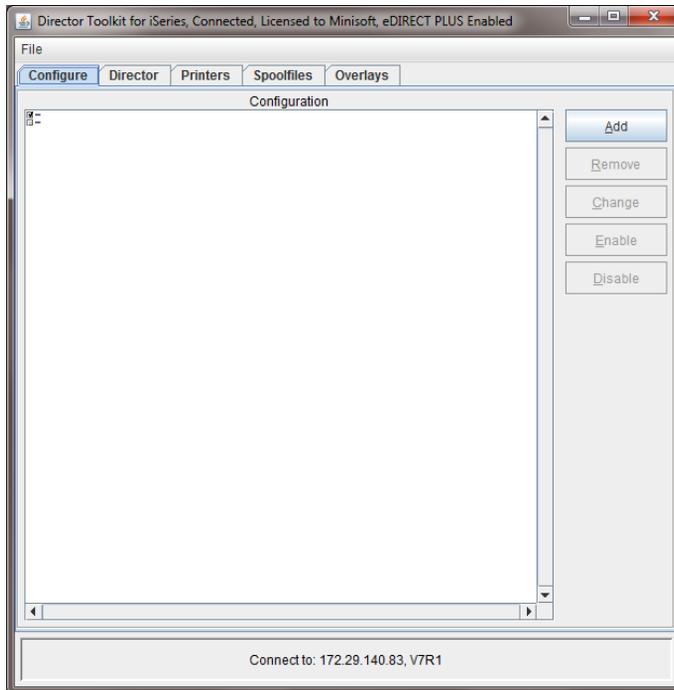
1. From the Windows Start Menu select eFORMz 10 > Management > Director > Director Toolkit. From the list of Host options select *iSeries*:



2. The AS400 login dialog box will appear, enter your *Host IP Address* or name along with *User Name* and *Password*. Then select *Connect*:



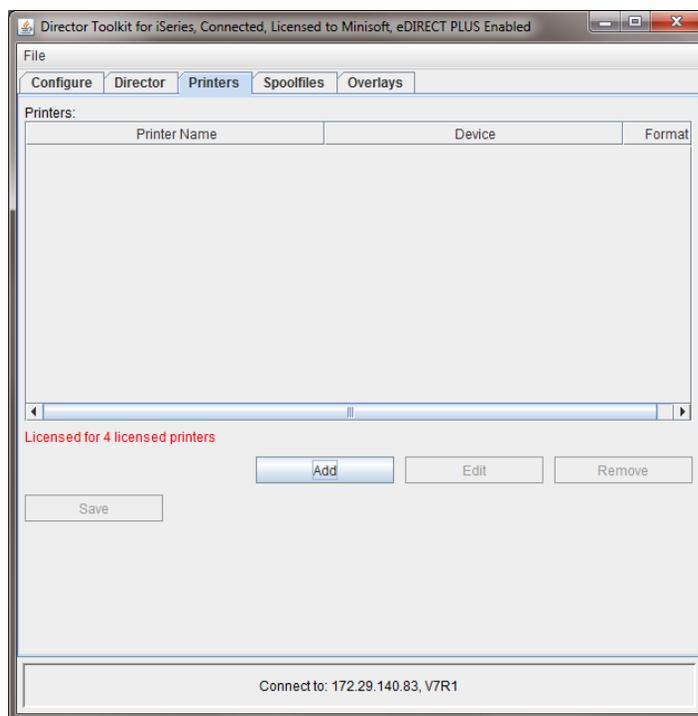
2. Once connected the Director Toolkit for iSeries will appear:



Printer Configuration Setup

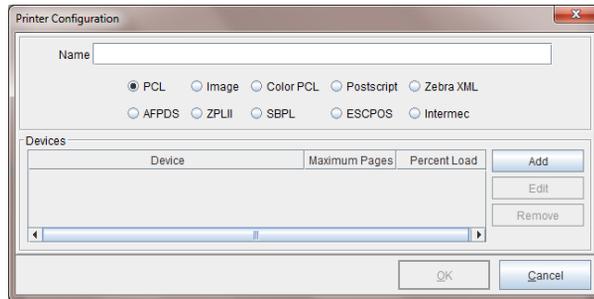
Note: The Customer's eFORMz Printer License Purchase Agreement determines the number of printer devices that can be specified. The default is a 2-printer license. Should you need to increase the number of printers an updated license is necessary. Please contact Minisoft Sales at sales@minisoft.com or 800-682-0200..

Print queues will need to be defined for use on the Configure tab. When the Director Toolkit is started, switch to the Printers tab as shown below:



To configure a new print queue:

1. From the Printers configuration tab select *Add*.
2. The Printer Configuration dialog box appears. From Devices select *Add*:



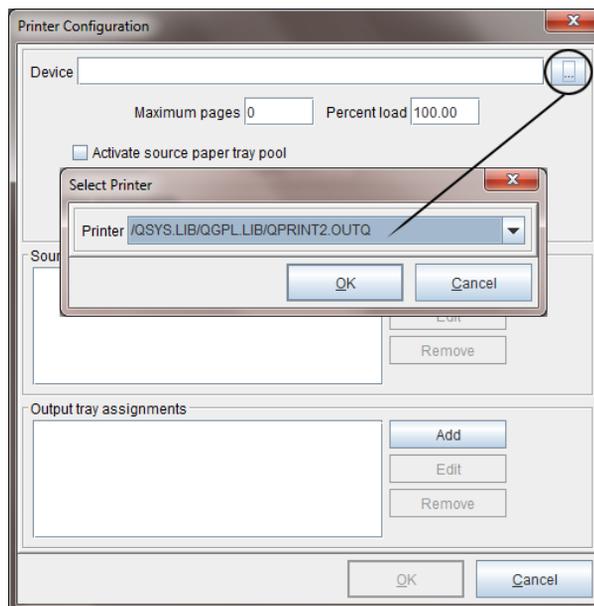
Options include:

Name is a descriptive title assigned to a print queue to better identify it.

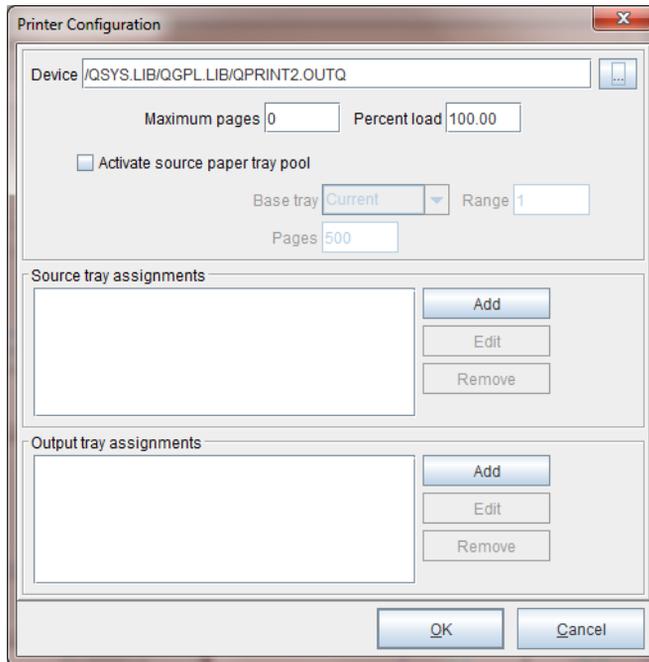
Printer language PCL, Image, Color PCL, Postscript, Zebra XML, AFPDS, ZPLII, SBPL, ESCPOS, Intermecc.

Devices allows you to add multiple print queue to one name descriptor, for example, used with print pooling.

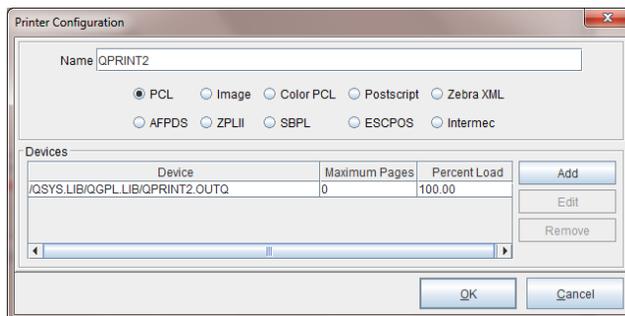
3. Select the optical button to select (...) a print queue:



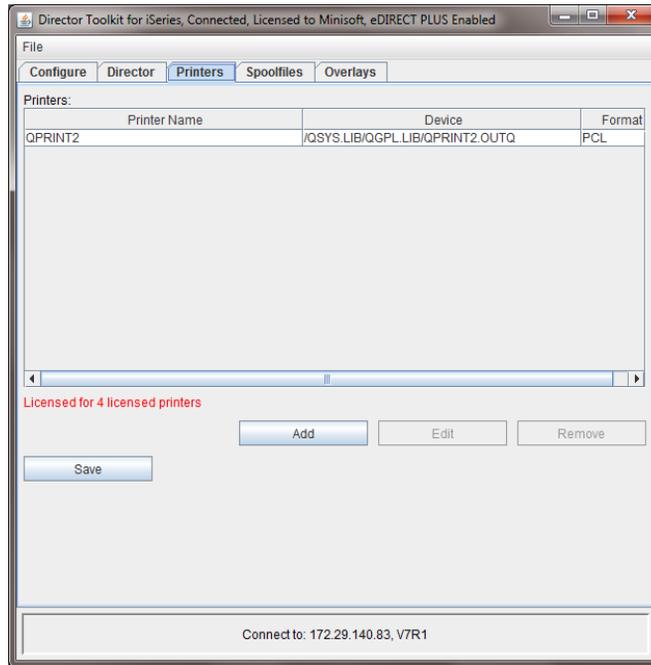
- Your selected print queue will then appear, select *OK*.



- The selected print queue will appear under Devices from the Printer Configuration dialog box. Select *OK*.



6. Once you have completed adding all the necessary print queues, select **Save** to save your printer configuration:

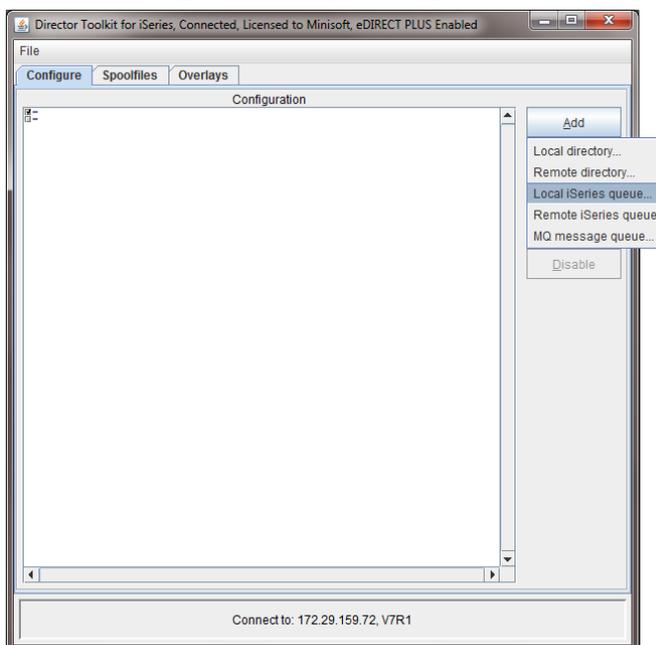


Director Configuration Setup

Input Directory

As you connect for the first time to create your Director Toolkit configuration, a blank configuration file will appear:

1. Start your configuration file by selecting *Add*:



2. Select the type of directory you will be monitoring for source print files, this is the directory where your source print file or data files will reside and be pulled to be merged with an eFORMz project. Available options include:
 - Local directory
 - Remote directory
 - Local iSeries queue (*AS400 only*)
 - Remote iSeries queue
 - MQ message queue

For a full description of each input directory type see the *Source Directory* later in this Mini-Manual. For the purpose of this documentation we will focus on using the *Local iSeries queue* option.

3. The *Input Queue* dialog box will display. To specify the Input Queue click the drop down button to specify. Once complete, click *OK*:

The screenshot shows the 'Input Queue' dialog box with the following fields and controls:

- Name:** An empty text input field.
- Input Queue:** A dropdown menu currently displaying `/QSYS.LIB/QGPL.LIB/QDKT.OUTQ`.
- Check Interval (in seconds):** A text input field containing the value `60`.
- Priority:** A dropdown menu currently displaying `Default`.
- Active Intervals:** An empty list box.
- Buttons:** 'New', 'Edit', and 'Remove' buttons are positioned to the right of the 'Active Intervals' list. 'OK' and 'Cancel' buttons are at the bottom of the dialog.

Name a descriptive title assigned to an input queue for the Director configuration to better identify the selection location of print files to be processed by eFORMz.

Check Interval indicates the number of seconds the Director will wait before checking the input queue for new print files.

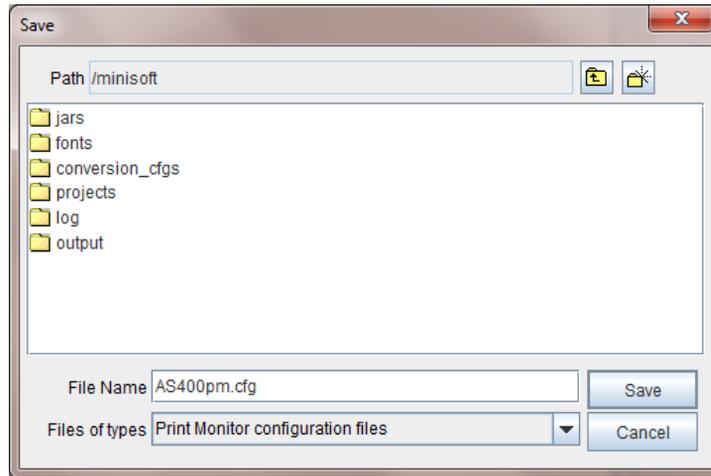
Priority sets the priority setting for the individual input queues. Each input queue executes a queue monitor in a separate thread. Control the execution priority of each thread individually based on the priority. The higher the priority (1-10) the more execution time is given to a thread in relation to other threads and processes.

Active Intervals sets timed interval checks on the Input queue. Timed intervals can be set based on the day and time of week.

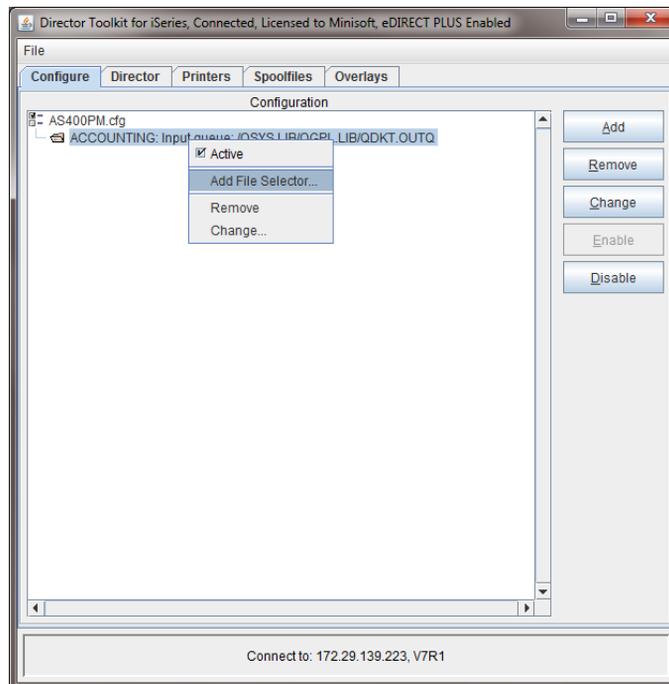
The screenshot shows the 'Input Queue' dialog box with the following fields and controls:

- Name:** A text input field containing the value `ACCOUNTING`.
- Input Queue:** A dropdown menu currently displaying `/QSYS.LIB/QGPL.LIB/QDKT.OUTQ`.
- Check Interval (in seconds):** A text input field containing the value `60`.
- Priority:** A dropdown menu currently displaying `Default`.
- Active Intervals:** A list box containing one entry: `From 16:00 to 18:00 daily`.
- Buttons:** 'New', 'Edit', and 'Remove' buttons are positioned to the right of the 'Active Intervals' list. 'OK' and 'Cancel' buttons are at the bottom of the dialog.

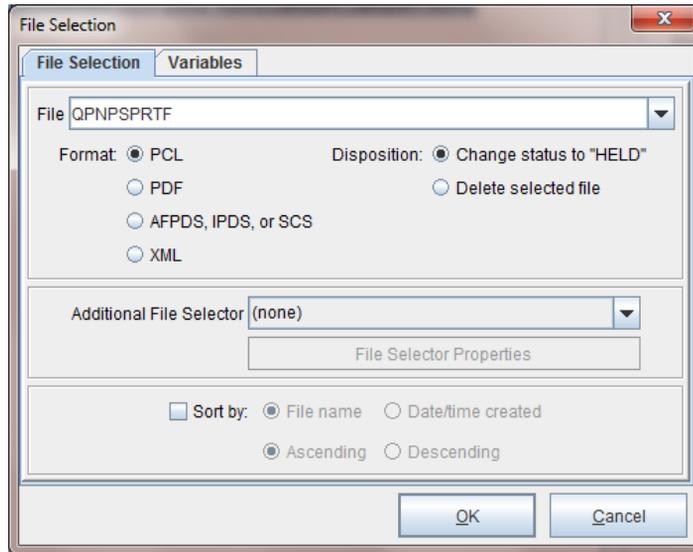
4. Save your configuration file by selecting *File > Save Configuration*. The Save dialog box will display. Name your configuration file and then select *Save*.



5. Right click the *Input Directory* field and select *Add File Selector*:



- From the *File Selection* dialog box use the *File* drop down button to select an output print file to be merged with an eFORMz project:



- Select the format type the source file is created. Options include:

Format: PCL, PDF, AFPDS, IPDS, or SCS, XML

File Disposition Options:

- *Change status to "HELD"*, changes the file disposition to HELD after a file has been processed.
- *Delete selected file* if you wish to delete the file from the queue/directory eFORMz is monitoring.

TIP: An asterisk (*) or question mark (?) can also be used as wild card entry in the source print file name. For example:

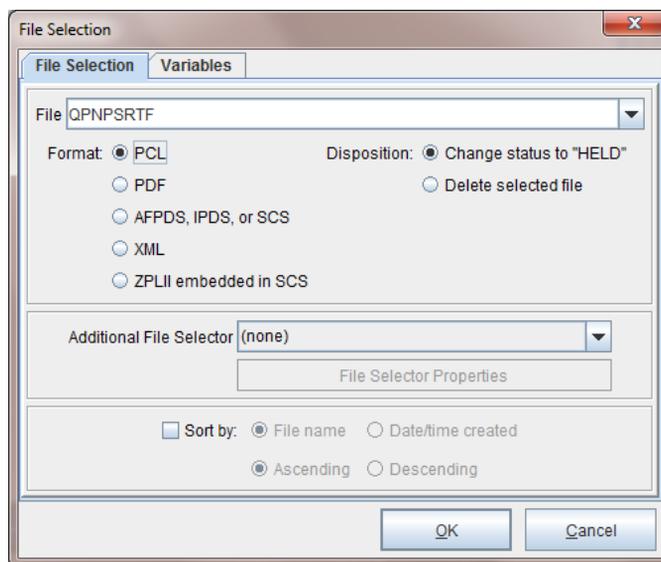
stmdata* stm??12* ???data

The 'File Selection' option also allows for multiple file selection criteria. The delimiter between each file selection can be a space, comma, plus, or minus. If the delimiter is a space, comma, or plus the next file selection goes in an 'include' list. If the delimiter is a minus, the next file selection goes in an 'exclude' list. A data file must match one of the selections in the include list and not match any of the selections in the exclude list to be processed. For example:

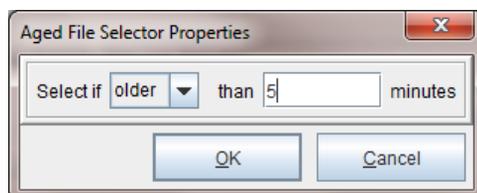
File select = PO* - PO1* - PO2*
 PO01* + PO?1* - PO2*

(Optional) Additional File Selector Options

Add additional file selectors. If using the *File Age Selector* the most likely uses would be to clean up files older than a specific interval or delay processing for a specific interval in order for something else to process first.



Once you have selected an Additional File Selector option you can then set the properties for the selector using the *File Selector Properties*.



(Optional) Director Variable

A Director variable can be added and be accessible from a project by using an xml node of:

```
QMVariables/<variablename>
```

Example:

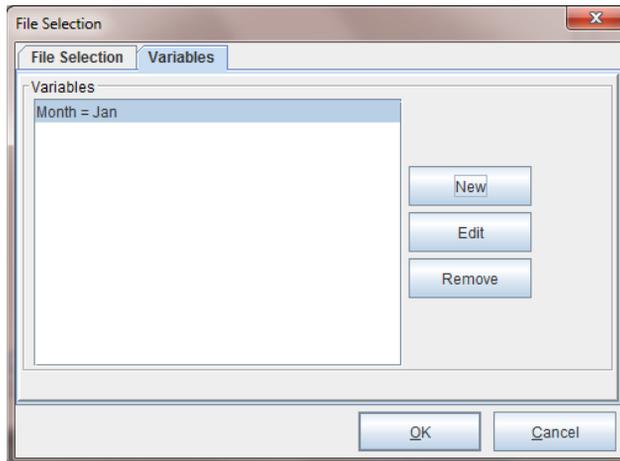
```
QMVariables/Month
```

If the data file is an xml file the value will come from an xml noted named:

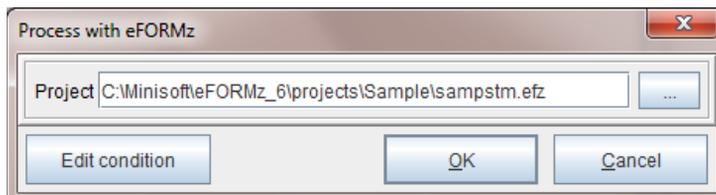
```
<datafileroot>/QMVariable/<variablename>
```

Example:

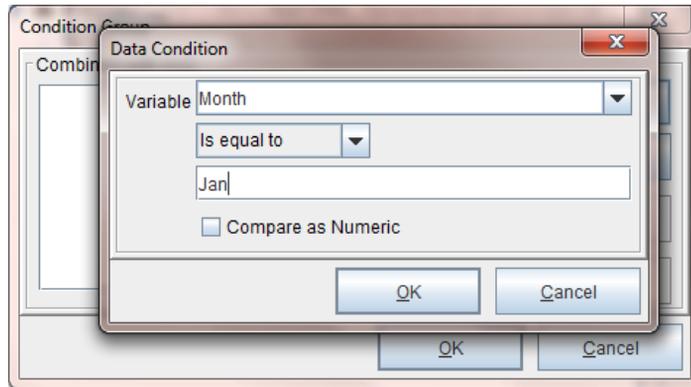
```
Statements/QMVariables/Month
```



Variables in the Director Toolkit can be used for convenience when setting up conditions on projects. For example, lets say you have one project that sets a global variable to be passed back to the queue monitor. Then you want to use that variable in a condition on another project to determine whether to execute that project or not. When setting up the condition within the *Process with eFORMz* dialog box:



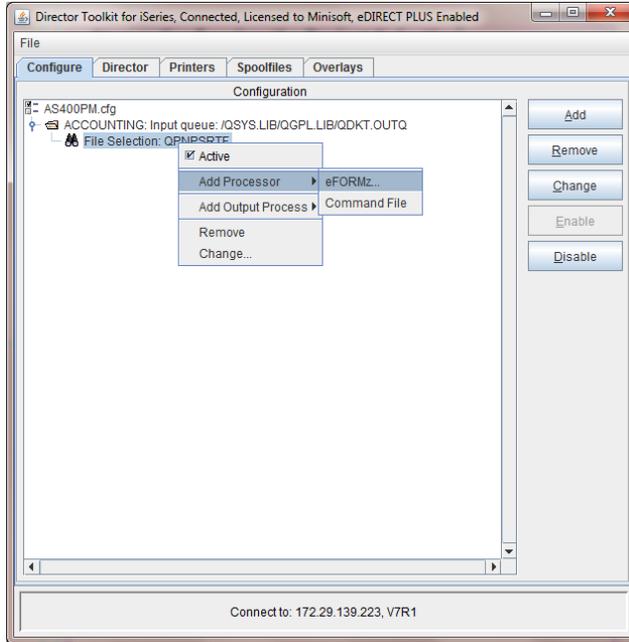
The combo boxes for variables in the dialogs will be filled with the list of variables defined in the file selection. By naming all the variables in the file selection, you can just select them when setting up the project conditions, rather than typing the variable name in:



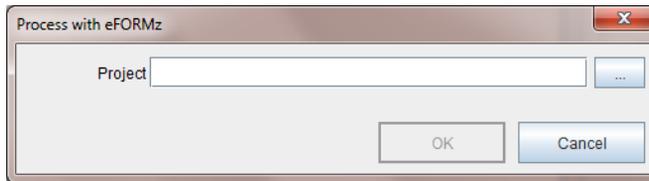
Configuring the Project Selection

Once a file selection has been completed using your mouse:

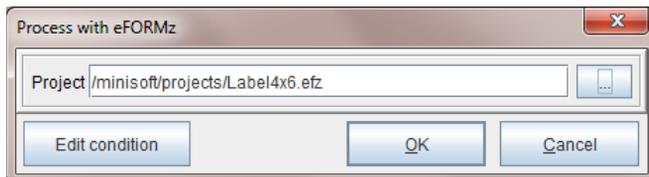
1. *Right click*, the file selection field and select *Add Processor > eFORMz* to specify a project to be merged with your file selection:



2. From the *Process with eFORMz* dialog box use the browse button to select the project file you would like your file selection to be merged with:



3. Once the project file has been located using the *Project* dialog box click *Open*.
4. The project and project path will appear in the *Project* field. Click *OK*.



Feature: eFORMz Project Reference File (.efr) allows one to perform ‘table-formatted’ lookups on project names based on the name of the print file. For example:

efr text file:

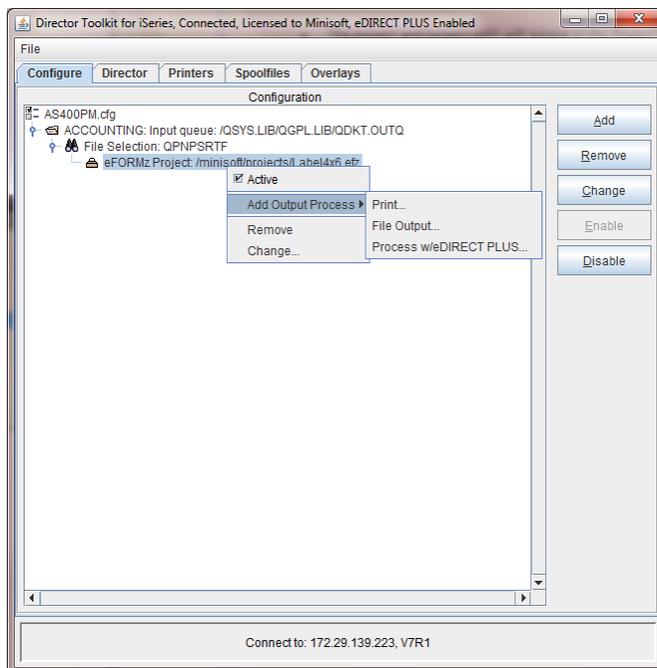
```
<ProjectReference>
<Ref Datafile="P2310201_*"
  Project="/minisoft/projects/sampstm.efz" />
<Ref Datafile="P5310201_*"
  Project="/minisoft/projects/sampstm_d2.efz" />
</ProjectReference>
```

Toolkit Project File reference:

```
/minisoft/projects/projectable.efr
```

- The project file selection will appear in the eFORMz Project field. Using your mouse, right click the eFORMz Project field and select *Add Output Process*, select:

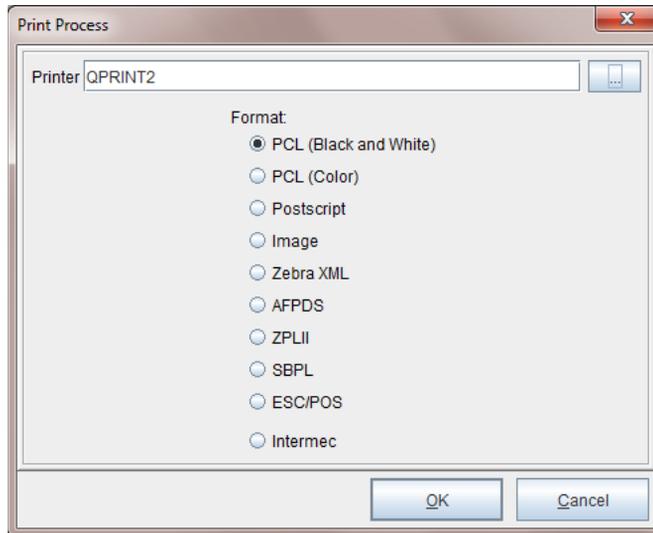
Print
File Output
Process w/eDIRECT or eDIRECT+



Selecting the Output Options

Print

Allows you to select the printer you would like to print your output to. Select the browse button to select a print queue from the printer list.

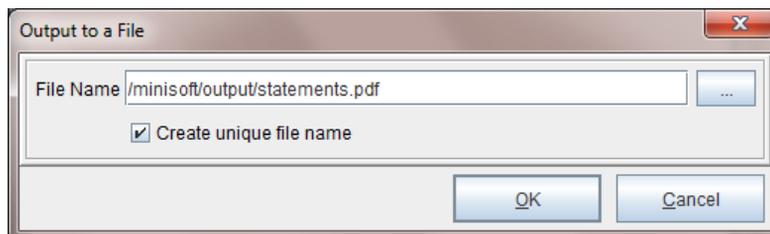


File Output

Implements the *Output to a File* dialog box. Use the browse icon to locate the directory you would like the file output to be placed. The output file name can either match a pre-defined variable or a static naming convention. Output file name variables include:

<directory>, <datafilename>, <datafileext>, <project>

Example: /outputdirectory/<datafilename>.pdf



Creates a unique file output name every time a process is ran. The unique file name must contain at least 3 characters. For example:

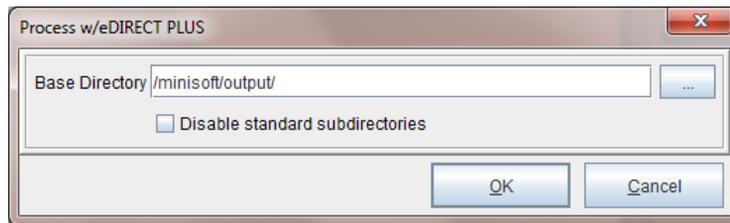
statements_{system date/time stamp}.pdf

Unchecked causes the output file name to consistently remain the same for every time a process is run. For example:

invoice.pdf

Process with eDIRECT(+)

Implements the eDIRECT Process if a project file has been configured for eDIRECT. The *Base Directory* represents the directory where you would like your output to reside. eDIRECT by default creates sub directories under the base directory for the standard output. If you do not wish the subdirectories to be built, select *Disable standard subdirectories*.



NOTE: Unless disable option is checked, new sub folders are automatically created under the base directory for each eDIRECT output process:

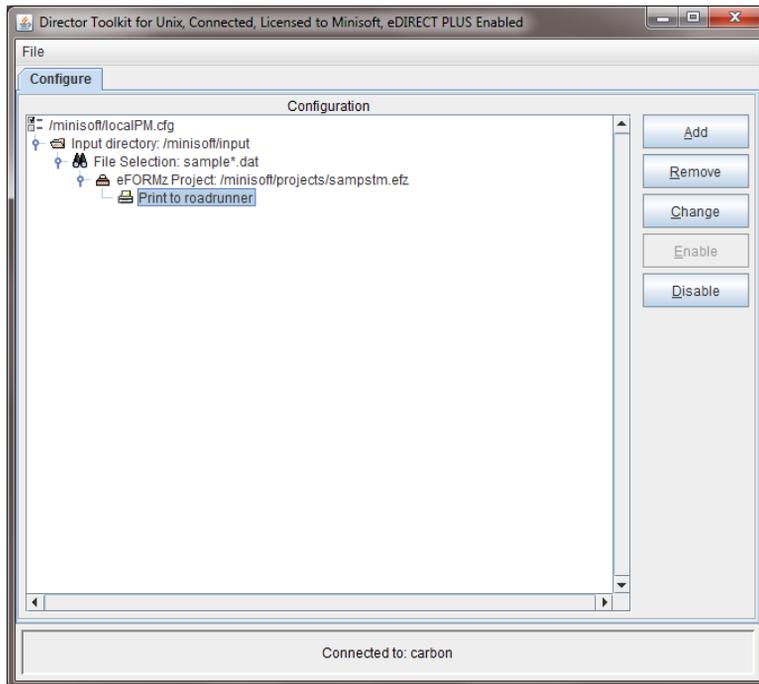
email	-	/email
print	-	/print
fax	-	/fax

(Optional) Post Processing

Each output process can also have multiple post processing commands (*optional*):

- Print Files*
- Copy Files*
- Delete Files*
- External Commands*

Once your output types have been defined they will appear in your configuration table:



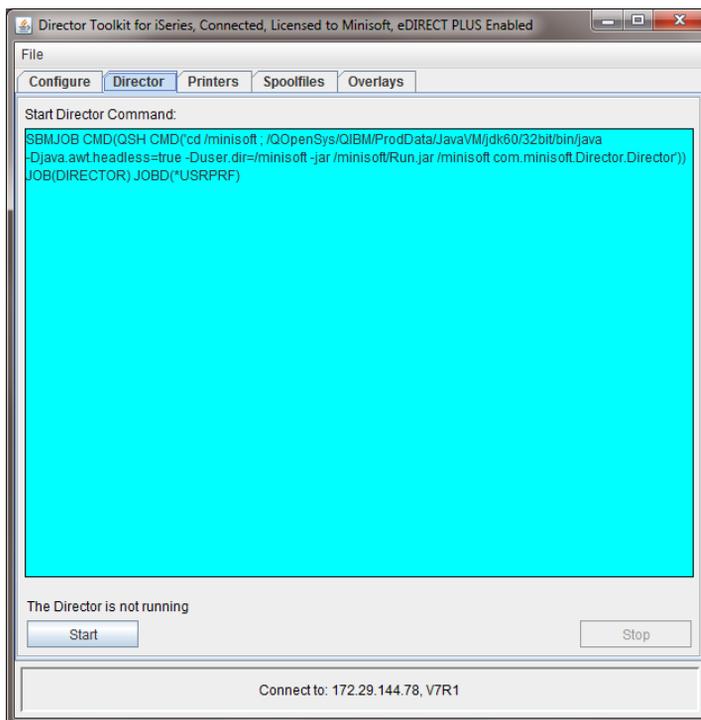
Save your Configuration

Once your configuration file is complete, save your changes by selecting *File > Save Configuration*.

AS400 Automated Job Process

The Director can be setup as an automated process on the AS400. The following instructions will step you through the setup process of running the Director as a job process on the AS400. To start the Director from the Director Toolkit:

1. Select the Director tab:



2. From the Director select *Start*.

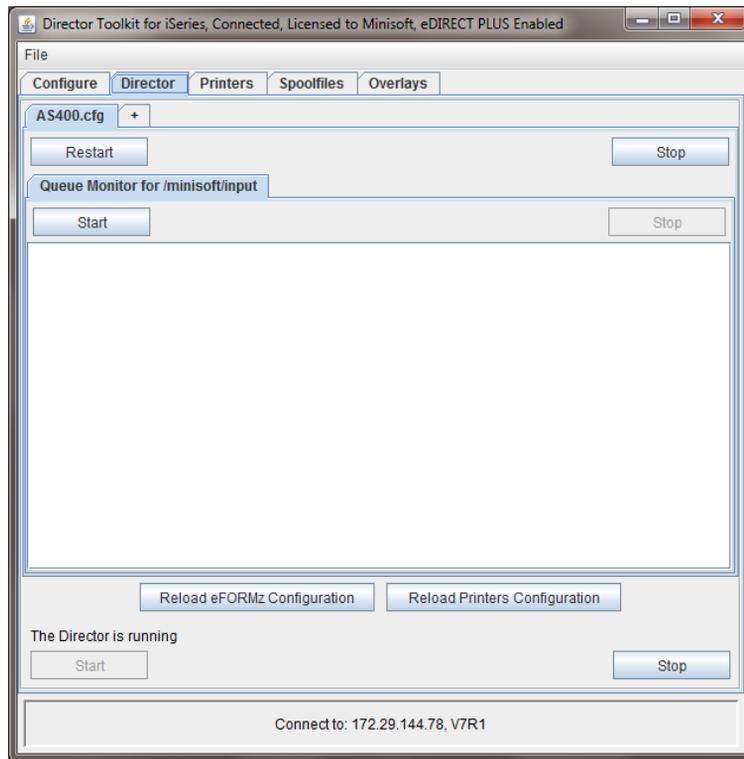
Start Job

Submits the job. The job command is displayed in the Submit Job Command box and can be edited if needed for custom job processing.

Stop Job

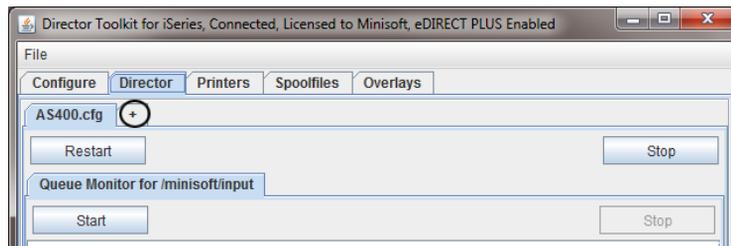
Stops the selected job from the table above.

3. The Director will startup displaying the active configuration file:

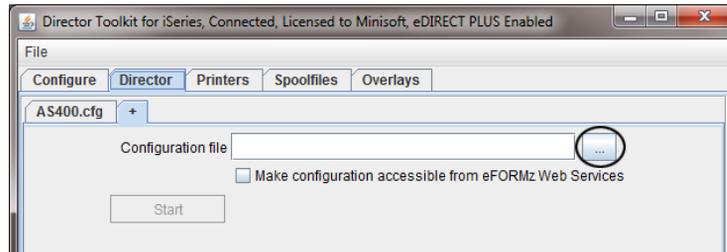


The Director can monitor multiple configuration files in a single job process. To add another configuration file to the job process:

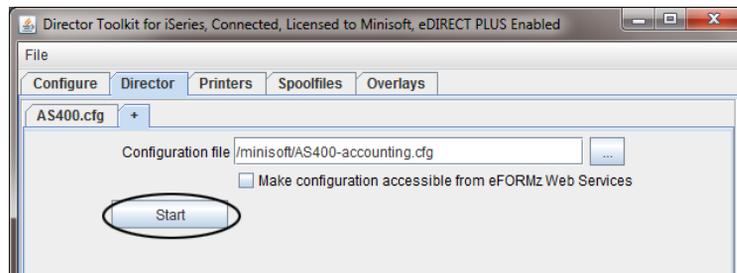
1. Select the (+) located beside the existing configuration tab:



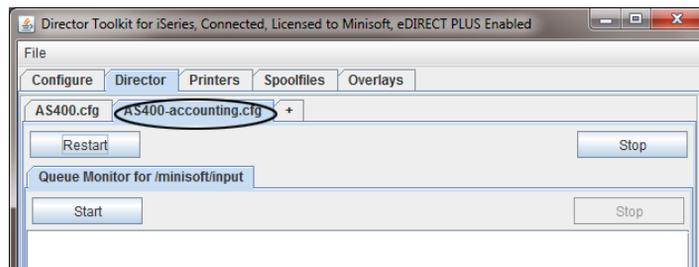
2. Use the browse button (...) on the Configuration file field to select another configuration file:



3. Once selected, *Start* the configuration:

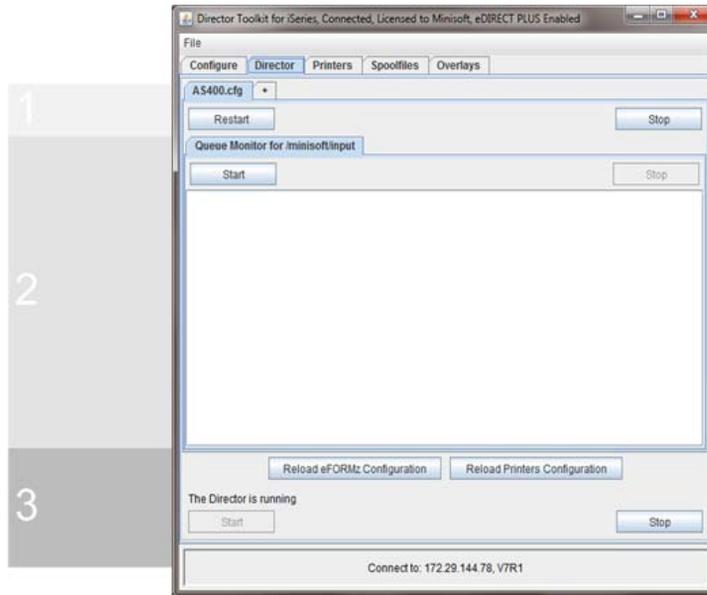


4. Your configuration will appear under the Director tab:



Managing the Automated Job Process

The Director tab contains multiple levels in which each level contains a function to controls the Director as it is monitoring on the AS400:



(Level 1) Controls the *Restart* or *Stop* of a Configuration file that has been setup to monitor specific queues. If the Director is setup to run multiple configuration files, each configuration file can be restarted or stopped individually. By default, a restart would occur if changes to your configuration have occurred and you would like to have those changes implemented. Selecting Stop will cause the Director to no longer monitor the specified configuration file.

(Level 2) Controls the Stopping or Starting of a Queue that is being monitored by the configuration file. Note, a Queue can be inactive within the Configure tab but can be started or stopped from the Directors tab if wanted.

(Level 3) Controls the Director as a whole. You can Stop/Start the Director using the stop and start buttons. Once you stop the Director you will need to resubmit the job.

Reload eFORMz Configuration allows you to reload the eFORMz_cfg_User.xml if any changes were made to this file externally without having to stop and restart the service.

Reload Printers Configuration allows you to reload the Printers.xml file if changes have been made without having to stop and restart the service.

Section 3

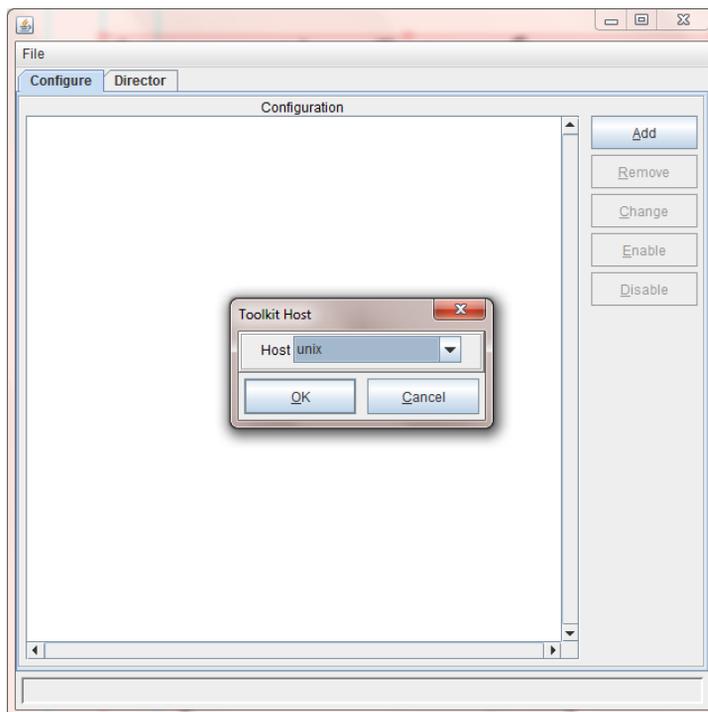
Director Toolkit for Unix



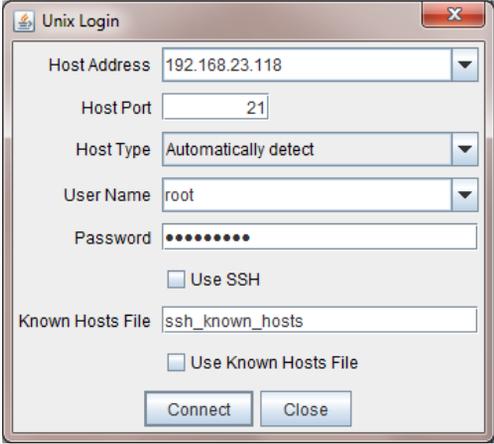
Director Setup for Unix

The Director Toolkit is utilized to setup the automated print process on Unix using toolkit configurations. One or multiple configuration can be setup and monitored by the Director. To setup the automation process you must configure a configuration file to determine which source files will be picked up by eFORMz and how that source file will be handled. To setup a configuration file, start the Director Toolkit utility installed with a Windows install:

1. From the Windows Start Menu select eFORMz 10 > Management > Director > Director Toolkit. From the list of Host options select *unix*:



- The Unix login dialog box will then appear. Enter your *Host IP Address* or name along with *User Name* and *Password*. Then select *Connect*:



The image shows a screenshot of a "Unix Login" dialog box. The dialog box has a title bar with a close button. It contains the following fields and options:

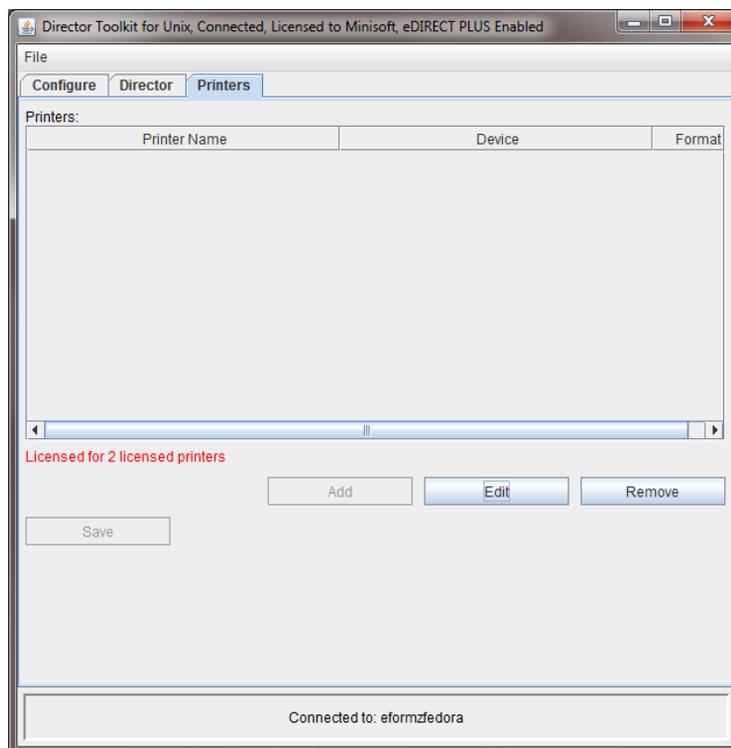
- Host Address:** A dropdown menu showing "192.168.23.118".
- Host Port:** A text input field containing "21".
- Host Type:** A dropdown menu showing "Automatically detect".
- User Name:** A dropdown menu showing "root".
- Password:** A text input field with ten dots representing a masked password.
- Use SSH:** An unchecked checkbox.
- Known Hosts File:** A text input field containing "ssh_known_hosts".
- Use Known Hosts File:** An unchecked checkbox.
- Buttons:** "Connect" and "Close" buttons at the bottom.

Note: Highly recommended selecting *Use SSH* for your initial login.

Printer Configuration Setup

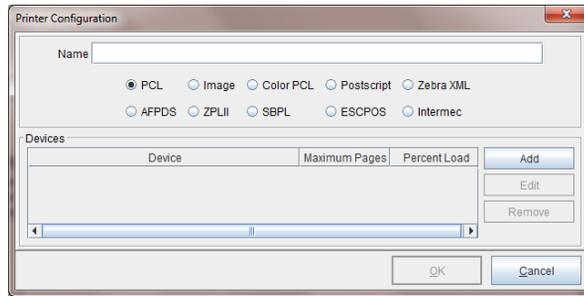
Note: The Customer's eFORMz Printer License Purchase Agreement determines the number of printer devices that can be specified. The default is a 2-printer license. Should you need to increase the number of printers an updated license is necessary. Please contact Minisoft Sales at sales@minisoft.com or 800-682-0200.

Configure your network printers for use in your automation setup. Printers will need to be defined for use on the Configure tab. When the Director Toolkit is started, switch to the Printers tab as shown below:



To configure a new print queue:

1. From the Printers configuration tab select *Add*.
2. The Printer Configuration dialog box appears. From Devices select *Add*:



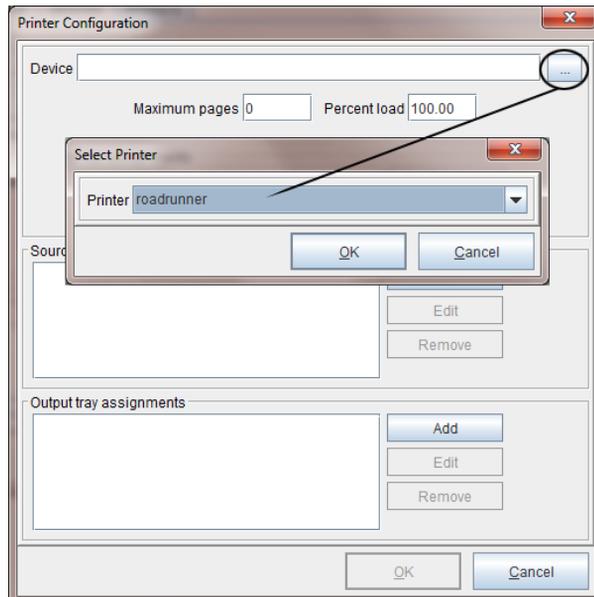
Options include:

Name is a descriptive title assigned to a printer to better identify it.

Printer language PCL, Image, Color PCL, Postscript, Zebra XML, AFPDS, ZPLII, SBPL, ESCPOS, Intermec.

Devices allows you to add multiple print queue to one name descriptor, for example, used with print pooling.

3. Select the optical button to select (...) a print queue:



4. Your selected printer will then appear, select *OK*.

The **Printer Configuration** dialog box is shown with the following settings:

- Device:** roadrunner
- Maximum pages:** 0
- Percent load:** 100.00
- Activate source paper tray pool**
- Base tray:** Current
- Range:** 1
- Pages:** 500

Below these settings are two sections for tray assignments:

- Source tray assignments:** Includes an empty list box and buttons for **Add**, **Edit**, and **Remove**.
- Output tray assignments:** Includes an empty list box and buttons for **Add**, **Edit**, and **Remove**.

At the bottom are **OK** and **Cancel** buttons.

5. The selected printer will appear under Devices from the Printer Configuration dialog box. Select *OK*.

The **Printer Configuration** dialog box is shown with the following settings:

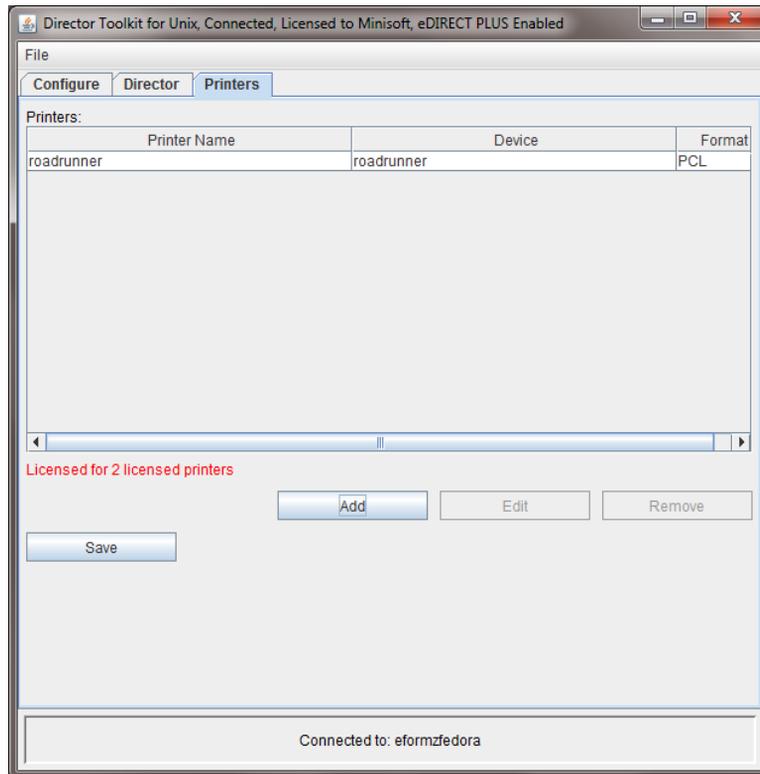
- Name:** roadrunner
- PCL** Image Color PCL Postscript Zebra XML
- AFPS ZPLII SBPL ESCPOS Intermec

Below these settings is a **Devices** section with a table:

Device	Maximum Pages	Percent Load	
roadrunner	0	100.00	Add
			Edit
			Remove

At the bottom are **OK** and **Cancel** buttons.

- Once you have completed adding all the necessary printers, select *Save* to save your printer configuration:

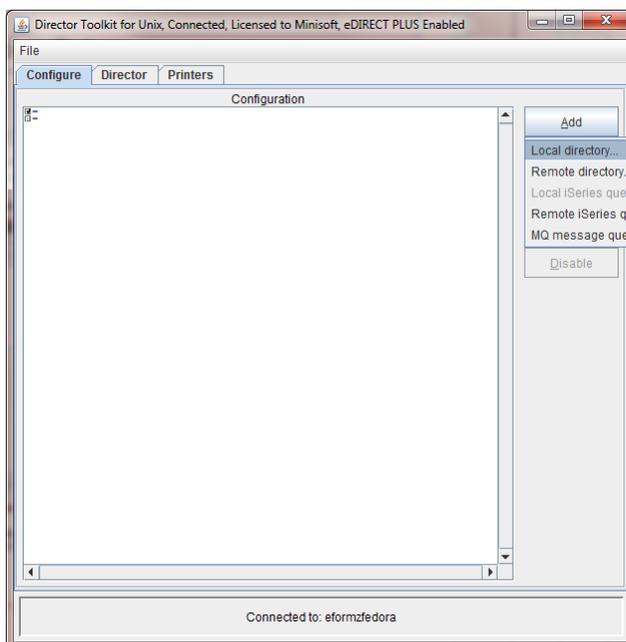


Director Configuration Setup

Input Directory

As you connect for the first time to create your Director Toolkit configuration, a blank configuration file will appear:

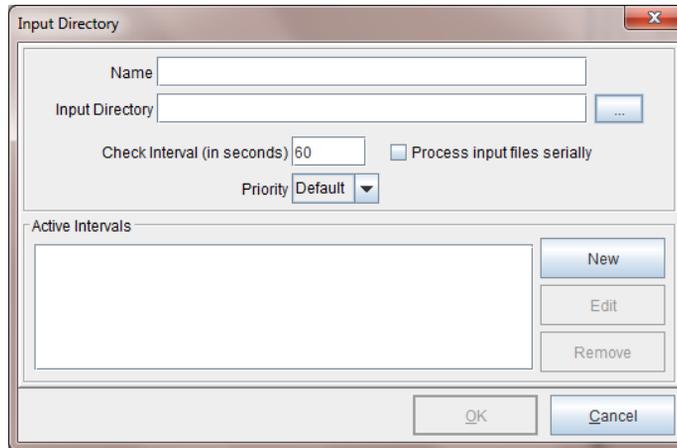
1. Start your configuration file by selecting *Add*:



2. Select the type of directory you will be monitoring for source files, this is the directory where your source print file or data files will reside and be pulled to be merged with an eFORMz project. Available options include:
 - Local directory
 - Remote directory
 - Local iSeries queue (*AS400 only*)
 - Remote iSeries queue
 - MQ message queue

For a full description of each input directory type see the *Source Directory* later in this Mini-Manual. For the purpose of this documentation we will focus on using the *Local Directory* option.

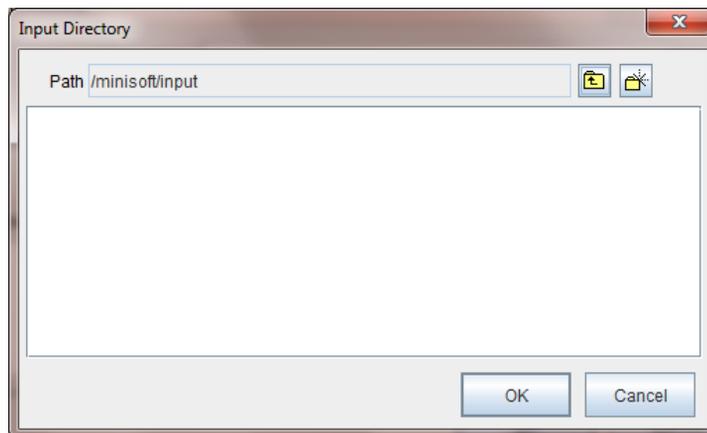
3. The *Input Directory* dialog box will display. To specify the Input Directory click the browse button to specify your input directory.



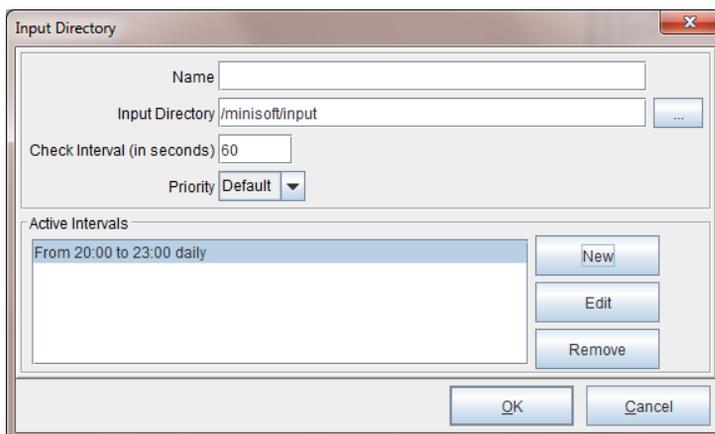
4. The *Input Directory* dialog box displays. Using the *Look in* field navigate to the input directory where your print files reside.

Minisoft has provided the following default directory if you wish to use it:

/minisoft/input



- When you have the input directory located click *OK* to return to the Input Directory dialog box.



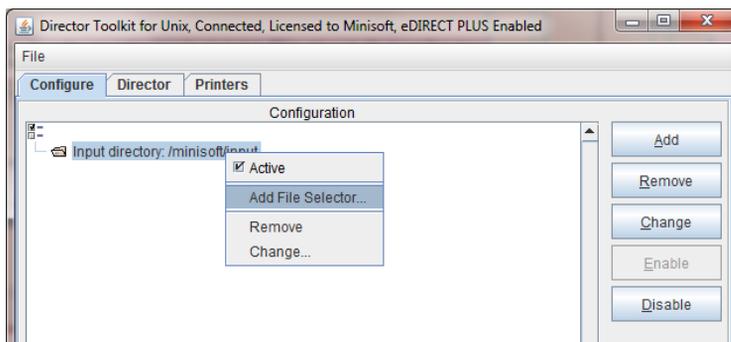
Name a descriptive title assigned to an input directory to better identify the selection location of print files to be processed by eFORMz.

Check Interval indicates the number of seconds the Director will wait before checking the input directory for new print files.

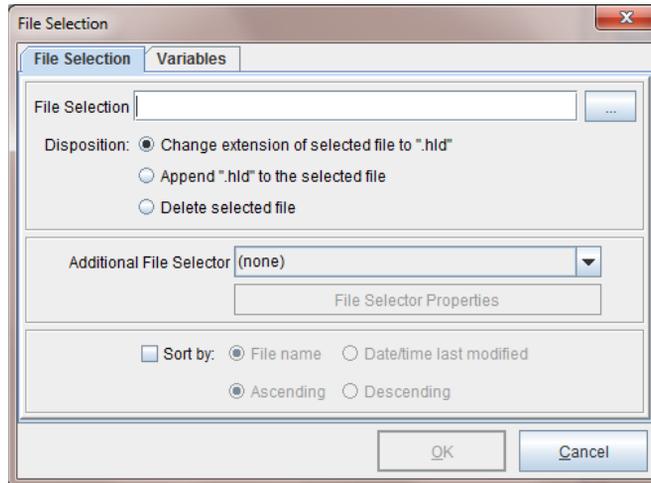
Priority sets the priority setting for the individual input directories. Each input queue executes a queue monitor in a separate thread. Control the execution priority of each thread individually based on the priority. The higher the priority (1-10) the more execution time is given to a thread in relation to other threads and processes.

Active Intervals sets timed interval checks on the Input Directory. Timed intervals can be set based on the day and time of week.

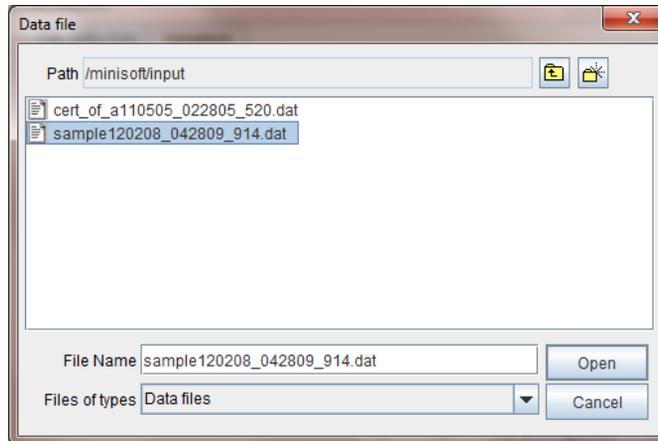
- Once complete, click *OK*. *Right click* the *Input Directory* field and select *Add File Selector*:



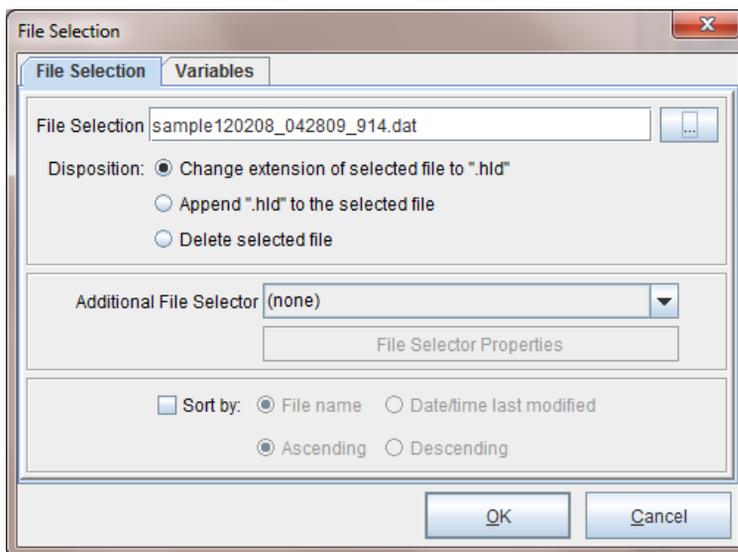
- From the *File Selection* dialog box use the browse button to select a print file to be merged with an eFORMz project from the input directory:



- From the input directory folder select the print file to be merged with an eFORMz project file and click *Open* from the *Data File* dialog box:



9. The *File Selection* field will now display with the specified print file to be merged with an eFORMz project. Select a disposition option and click *OK*.



File Disposition Options:

- If you would like the print file to remain in the input directory after a merge has taken place, select *Change extension of selection file to ".hld"*.
- If you would like the print file to maintain its original extension select *Append ".hld" to the selected file*. This will cause the *.hld* to append to the end of the original extension.
- If you would like to delete the print file from the input directory after a merge has taken place, select *Delete selected file*.

TIP: An asterisk (*) or question mark (?) can also be used as wild card entry in the source print file name. For example:

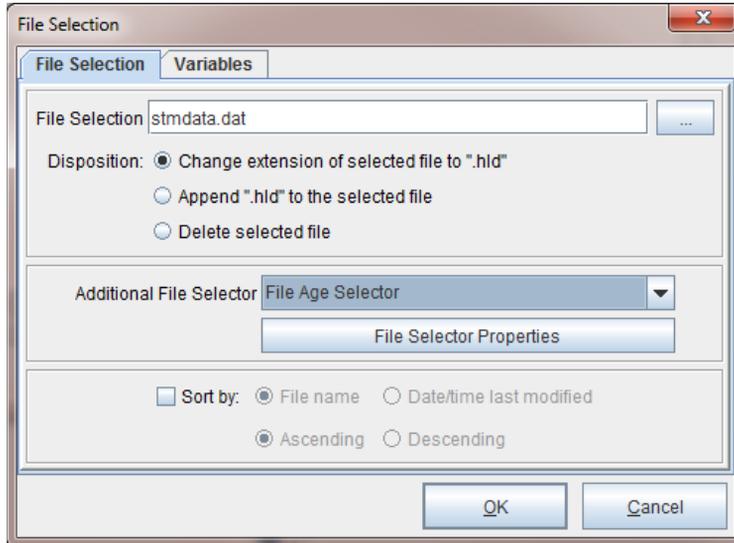
```
stmdata*.dat   stm??12*.dat   ???data.*
```

The 'File Selection' option also allows for multiple file selection criteria. The delimiter between each file selection can be a space, comma, plus, or minus. If the delimiter is a space, comma, or plus the next file selection goes in an 'include' list. If the delimiter is a minus, the next file selection goes in an 'exclude' list. A data file must match one of the selections in the include list and not match any of the selections in the exclude list to be processed. For example:

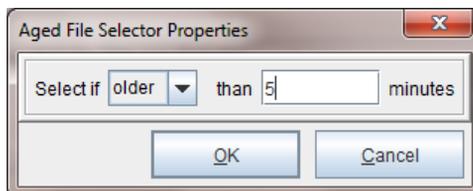
```
File select = PO*.DAT - PO1.DAT - PO2.DAT
              PO01*.DAT + PO?1*.DAT - PO2*.DAT
```

(Optional) Additional File Selector Options

Add additional file selectors. If using the *File Age Selector* the most likely uses would be to clean up files older than a specific interval or delay processing for a specific interval in order for something else to process first.



Once you have selected an Additional File Selector option you can then set the properties for the selector using the *File Selector Properties*.



Variables

Variables in the Toolkit configuration are accessible in a project. The Director variables are accessible from a project by using an xml node of:

```
QMVariables/<variablename>
```

Example:

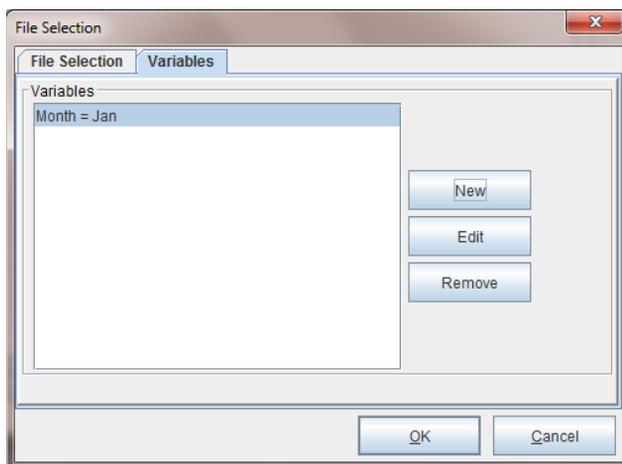
```
QMVariables/Month
```

If the data file is an xml file the value will come from an xml node named:

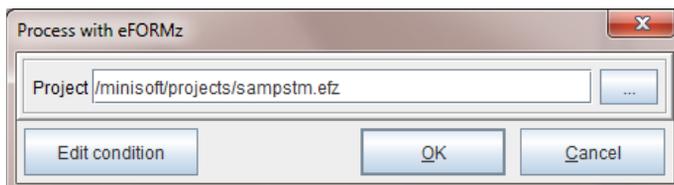
```
<datafileroot>/QMVariable/<variablename>
```

Example:

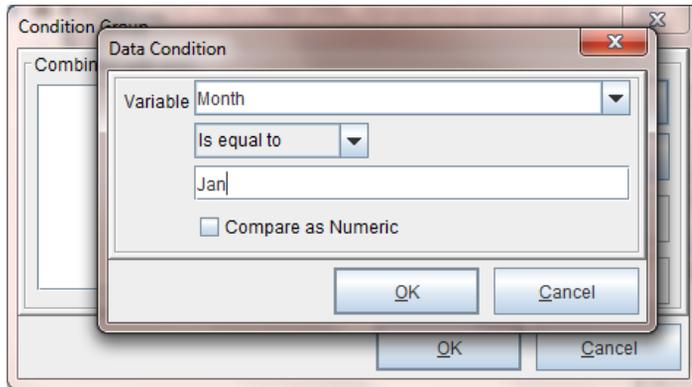
```
Statements/QMVariables/Month
```



Another option to use Variables in the Director Toolkit is for convenience when setting up conditions on projects. For example, let say you have one project that sets a global variable to be passed back to the queue monitor. Then you want to use that variable in a condition on another project to determine whether to execute that project or not. When setting up the condition within the *Process with eFORMz* dialog box:



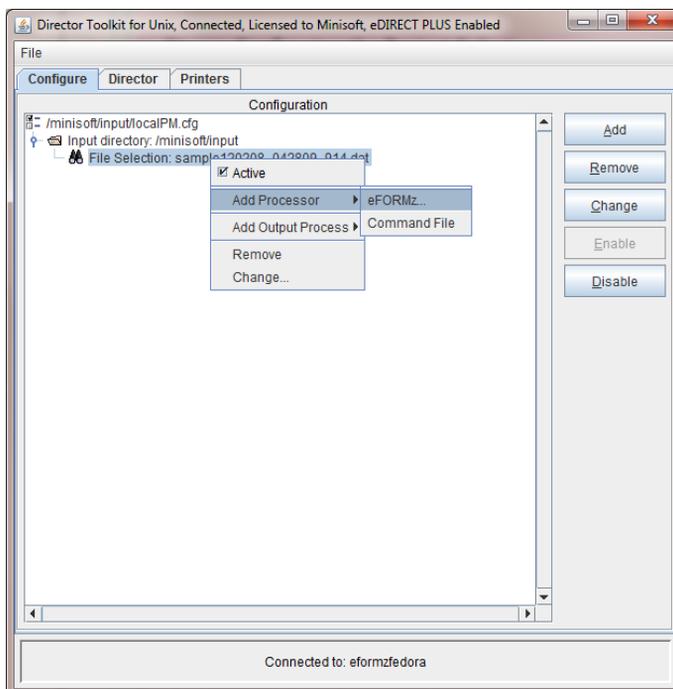
The combo boxes for variables in the dialogs will be filled with the list of variables defined in the file selection. By naming all the variables in the file selection, you can just select them when setting up the project conditions, rather than typing the variable name in:



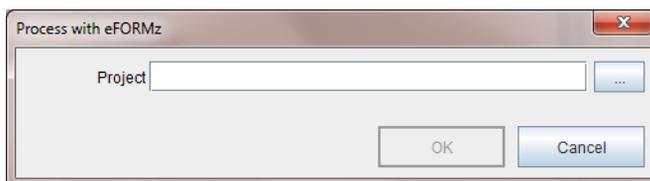
Configuring the Project Selection

Once a file selection has been completed using your mouse:

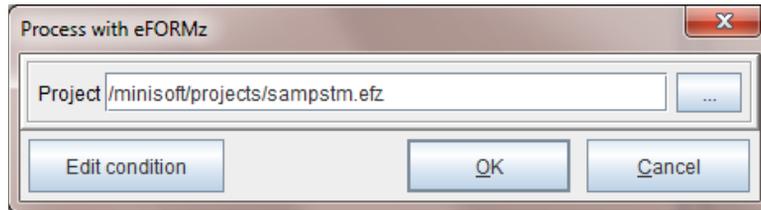
1. *Right click*, the file selection field and select *Add Processor > eFORMz* to specify a project to be merged with your file selection:



2. From the *Process with eFORMz* dialog box use the browse button to select the project file you would like your file selection to be merged with:



3. Once the project file has been located using the *Project* dialog box click *Open*.
4. The project and project path will appear in the *Project* field. Click *OK*.



Feature: eFORMz Project Reference File (.efr) allows one to perform 'table-formatted' lookups on project names based on the name of the print file. For example:

efr text file:

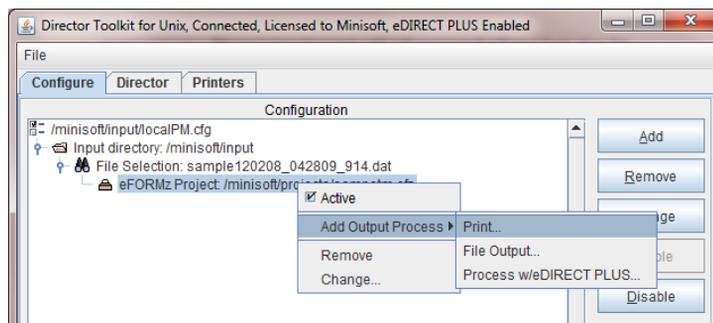
```
<ProjectReference>
<Ref Datafile="P2310201_*"
  Project="/minisoft/projects/sampstm.efz" />
<Ref Datafile="P5310201_*"
  Project="/minisoft/projects/sampstm_d2.efz" />
</ProjectReference>
```

Toolkit Project File reference:

/minisoft/projects/projectable.efr

5. The project file selection will appear in the *eFORMz Project* field. Using your mouse, *right click* the *eFORMz Project* field and select *Add Output Process*, select:

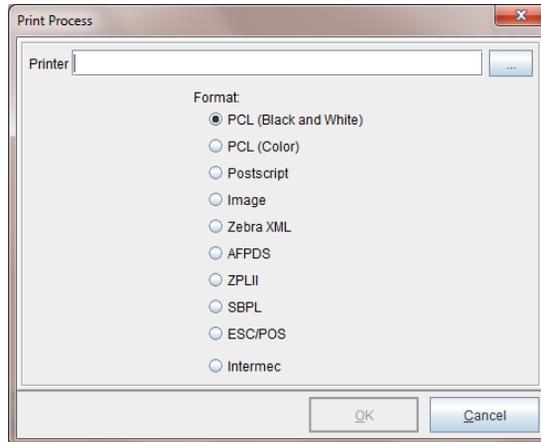
Print
File Output
Process w/eDIRECT or eDIRECT+



Output Options

Print

Allows you to select the printer you would like to print your output to. Select the browse button to select a printer from the printer list.

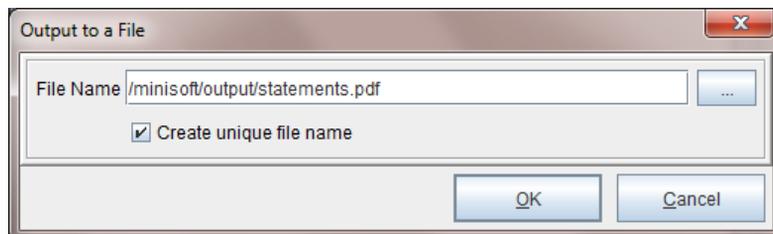


File Output

Implements the *Output to a File* dialog box. Use the browse icon to locate the directory you would like the file output to be placed. The output file name can either match a pre-defined variable or a static naming convention. Output file name variables include:

<directory>, <datafilename>, <datafileext>, <project>

Example: /outputdirectory/<datafilename>.pdf



Director

Creates a unique file output name every time a process is ran. The unique file name must contain at least 3 characters. For example:

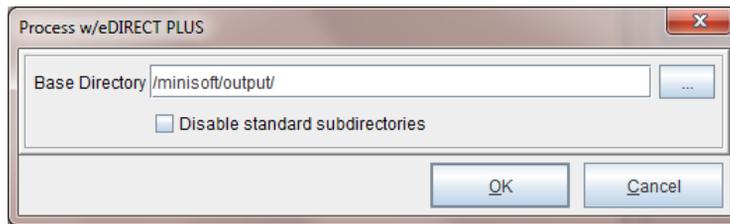
statements_{system date/time stamp}.pdf

Unchecked causes the output file name to consistently remain the same for every time a process is run. For example:

invoice.pdf

Process with eDIRECT(+)

Implements the eDIRECT Process if a project file has been configured for eDIRECT. The *Base Directory* represents the directory where you would like your output to reside. eDIRECT by default creates sub directories under the base directory for the standard output. If you do not wish the subdirectories to be built, select *Disable standard subdirectories*.



NOTE: Unless disable option is checked, new sub folders are automatically created under the base directory for each eDIRECT output process:

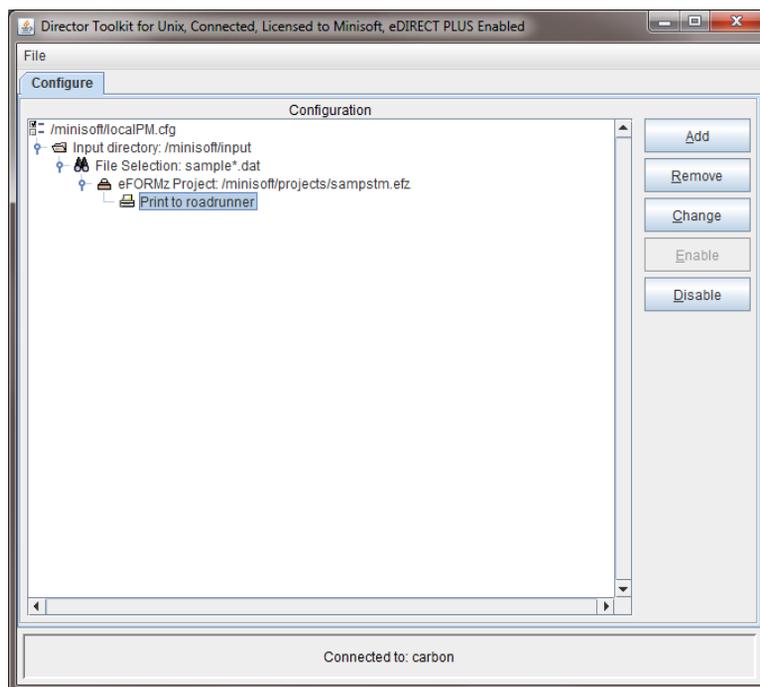
email	-	/email
print	-	/print
fax	-	/fax

(Optional) Post Processing

Each output process can also have multiple post processing commands (optional):

- Print Files*
- Copy Files*
- Delete Files*
- External Commands*

Once your output types have been defined they will appear in your configuration table:



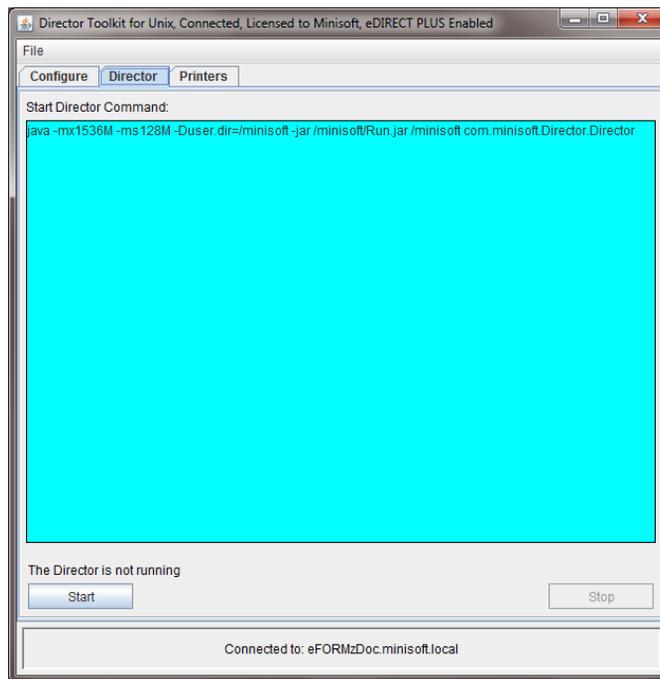
Save your Configuration

Once your configuration file is complete, save your changes by selecting *File > Save Configuration*.

Unix Automated Job Process

The Director can be setup as an automated process on a Unix environment. The following instructions will step you through the setup process of running the Director as a job process on Unix. To start the Director from the Director Toolkit:

1. Select the Director tab:



2. From the Director select *Start*.

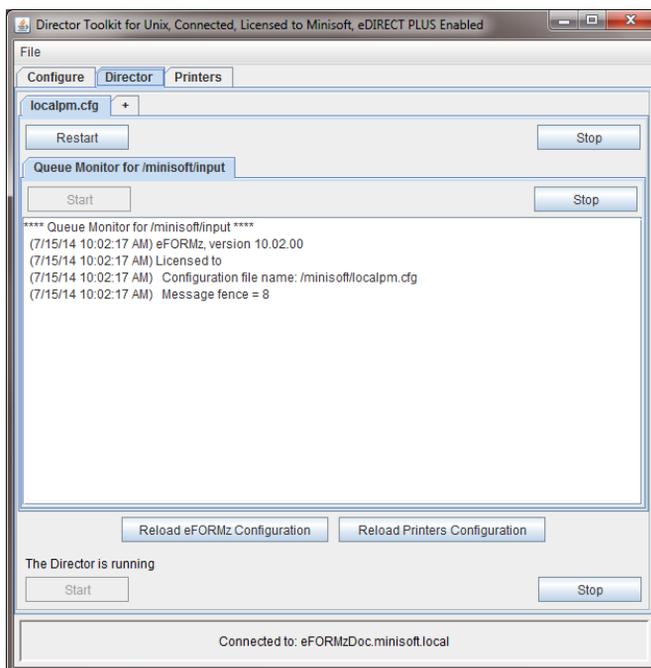
Start Job

Submits the job. The job command is displayed in the Submit Job Command box and can be edited if needed for custom job processing.

Stop Job

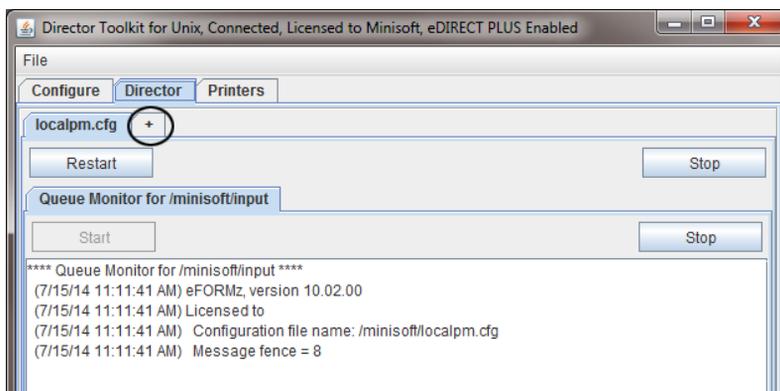
Stops the selected job from the table above.

- The Director will startup displaying the active configuration file:

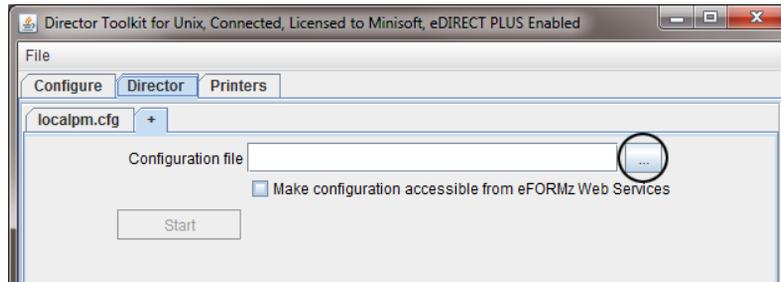


The Director can monitor multiple configuration files in a single job process. To add another configuration file to the job process:

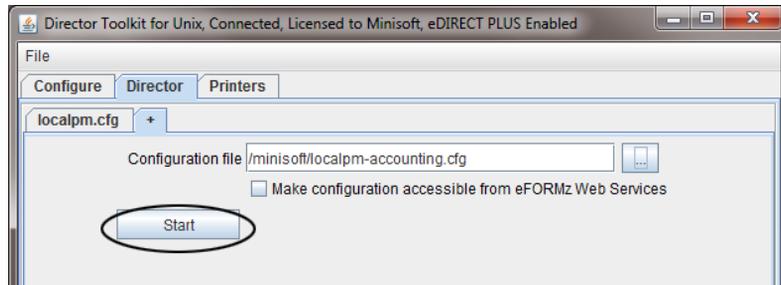
- Select the (+) located beside the existing configuration tab:



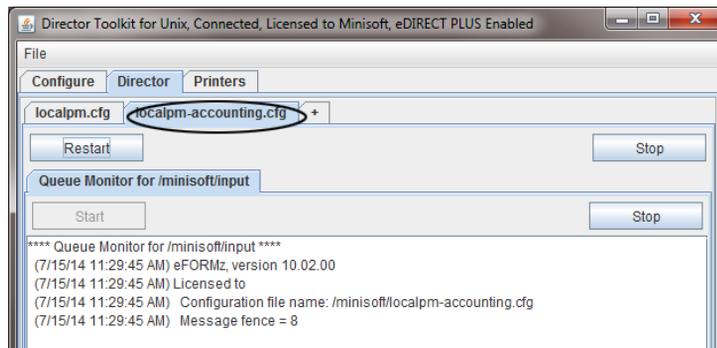
2. Use the browse button (...) on the Configuration file field to select another configuration file:



3. Once selected, *Start* the configuration:



4. Your configuration will appear under the Director tab:



The Director can be implemented in different ways based on the flavor of the Unix environment you are running.

Alternative Print Automation Process

1. If the command file does not already exist, upload the following file to the /minisoft directory:

```
C:\Minisoft\efORMz_6\runUnix.cmd
```

The runUnix.cmd contains the following commands:

```
java -mx1024M -ms128M -jar Run.jar - com.minisoft.HostTools.Unix.PrintMonitor /  
minisoft/UnixPM.cfg
```

2. From the minisoft directory change the attributes of the command file:

```
chmod 755 runUnix.cmd
```

3. Next, start the monitor process via the following command:

```
# /minisoft/runUnix.cmd
```

If you would like the job process to not be tied to the terminal enter the following:

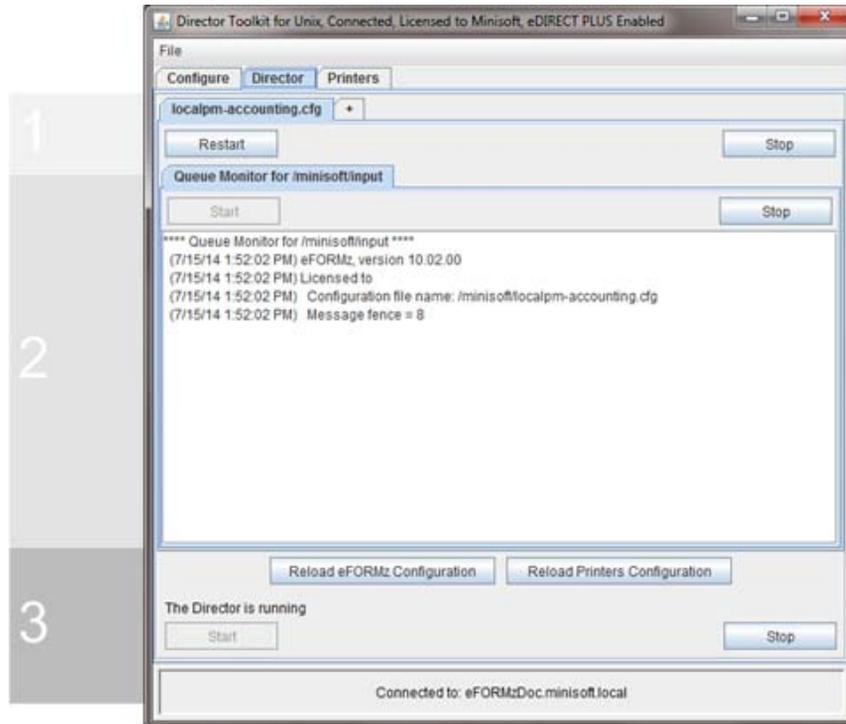
```
# nohup /minisoft/runUnix.cmd &
```

After the above command is executed something like the following will appear:

```
[1] 575  
# Sending output to nohup.out
```

Managing the Automated Job Process

The Director tab contains multiple levels in which each level contains a function to control the Director as it is monitoring:



(Level 1) Controls the *Restart* or *Stop* of a Configuration file that has been setup to monitor specific queues. If the Director is setup to run multiple configuration files, each configuration file can be restarted or stopped individually. By default, a restart would occur if changes to your configuration have occurred and you would like to have those changes implemented. Selecting *Stop* will cause the Director to no longer monitor the specified configuration file.

(Level 2) Controls the Stopping or Starting of a Queue that is being monitored by the configuration file. Note, a Queue can be inactive within the Configure tab but can be started or stopped from the Directors tab if wanted.

(Level 3) Controls the Director as a whole. You can Stop/Start the Director using the stop and start buttons in the top level of the Director Tab. Once you stop the Director you will need to resubmit the job.

Reload eFORMz Configuration allows you to reload the eFORMz_cfg_User.xml if any changes were made to this file externally without having to stop and restart the service.

Reload Printers Configuration allows you to reload the Printers.xml file if changes have been made without having to stop and restart the service.

Section 4

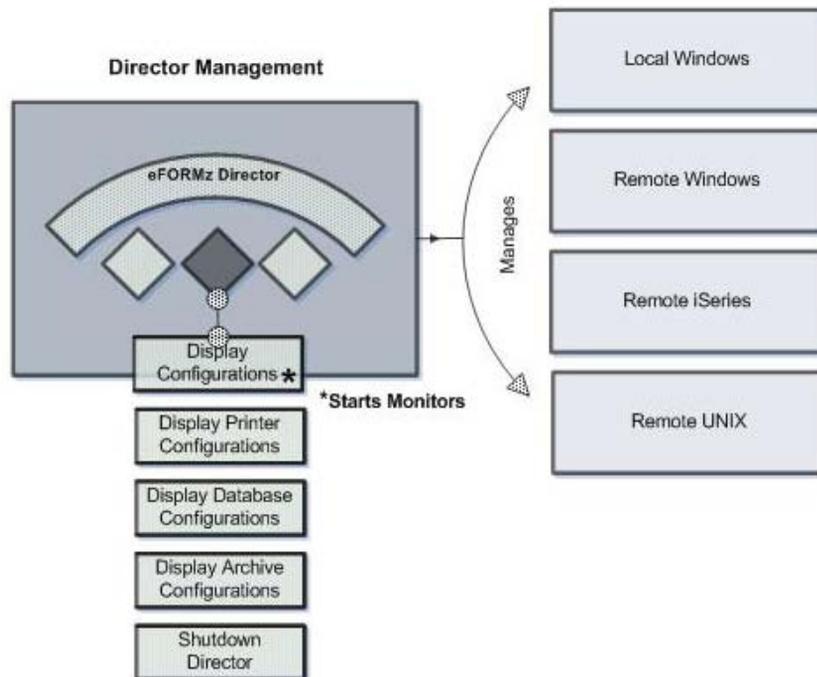
Director Management



Introduction to Director Management

The Director Management utility allows you to manage the Director service on Windows, Unix, or an iSeries from one location:

- Display Configurations (*start monitors)
- Display Printer Configurations
- Display Database Configurations
- Display Archive Configurations
- Shutdown the Director

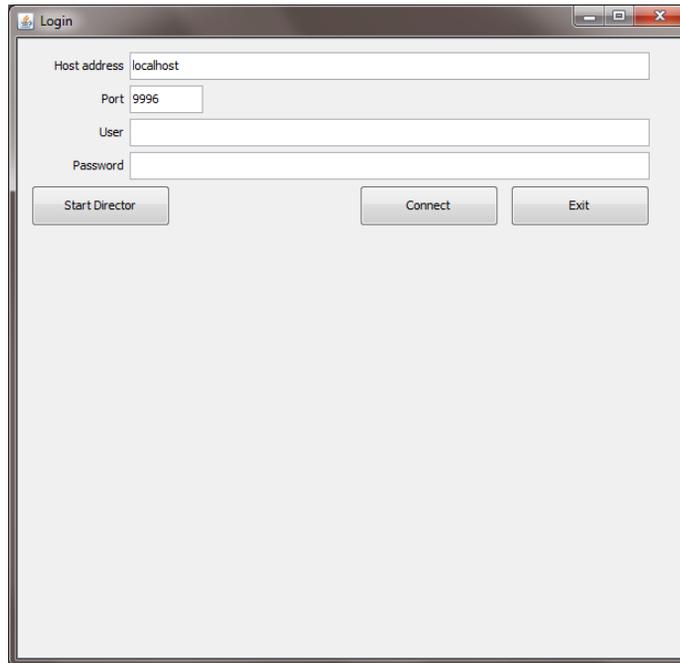


Director Management - Login

To manage the Director either locally or on another system like Windows, Unix, or AS400, start the Director Management utility provided through a Windows install:

C:\Minisoft\efORMz_6\Director_Management.exe

1. The Director Management login dialog displays:



2. Enter the Host address (host name or ip address) of the box you would like to log onto. Default host address is *localhost*, as the Director Management can manage the local box the Director is installed on.

Port represents the port the Director is running on, default 9996.

Enter the Director User name and Password, default:

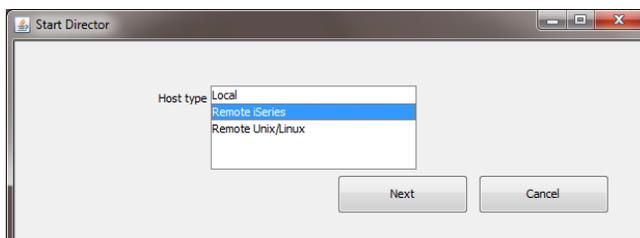
User: *minisoft*

Password: *password*

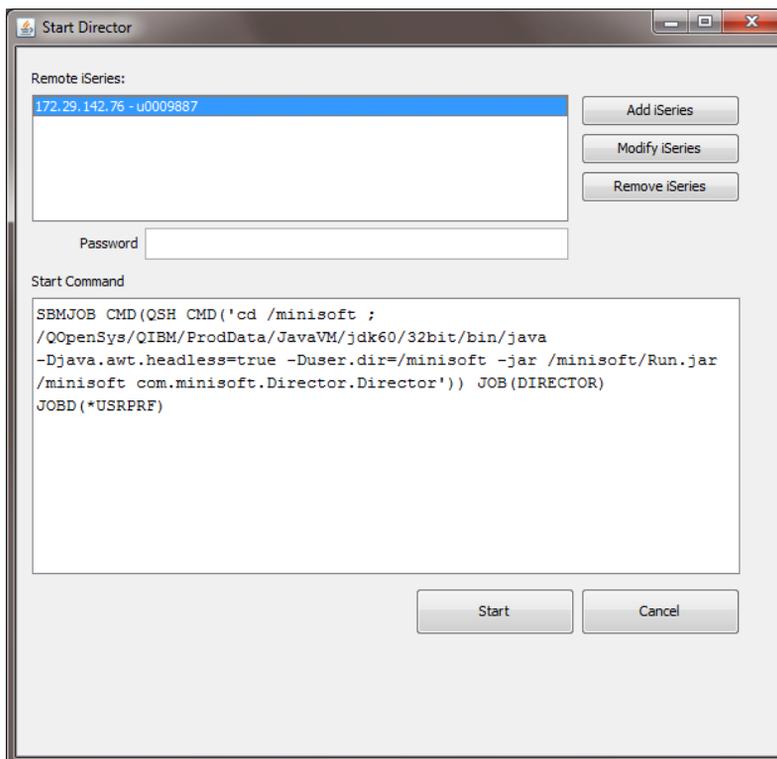
3. Select *Connect*.

Note, if you receive an error concerning the connection, "Error connecting to the Director" the Director must not be started on the box you are trying to connect. Select *Start Director*.

Select the Host type, Local, Remote iSeries, Remote Unix/Linux and then select *Next*:

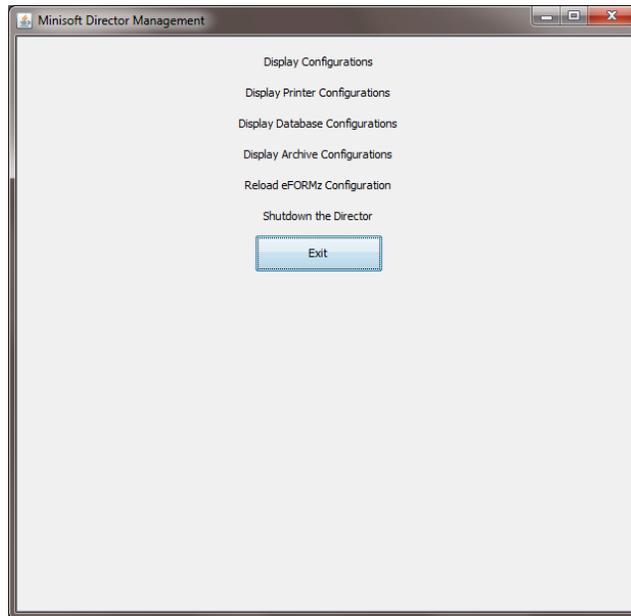


If connecting to a remote iSeries or Unix box, you will be asked to provide your remote user name and password, once complete, select *Start*.



You will be returned to the Connection dialog, select *Connect*.

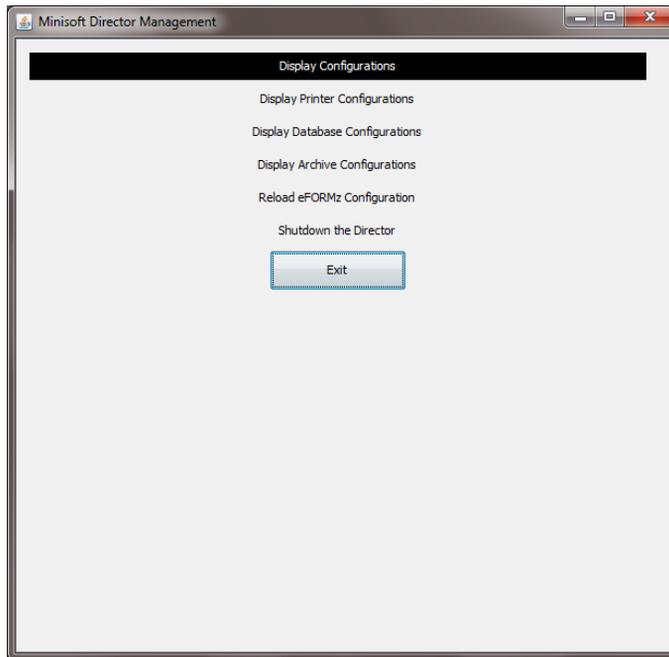
4. The Director options will then appear:



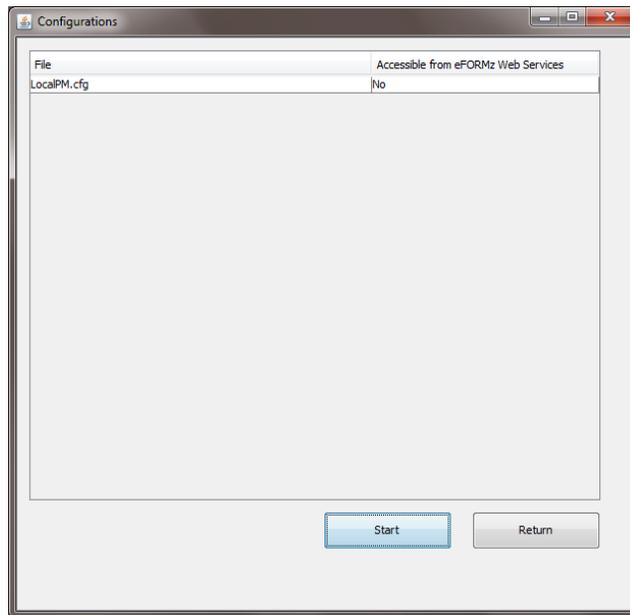
Managing Configurations

The Director allows you to manage multiple or individual configuration files. Individual configuration files can be stopped, restarted, and configured without affecting another configuration file. To manage your configuration files:

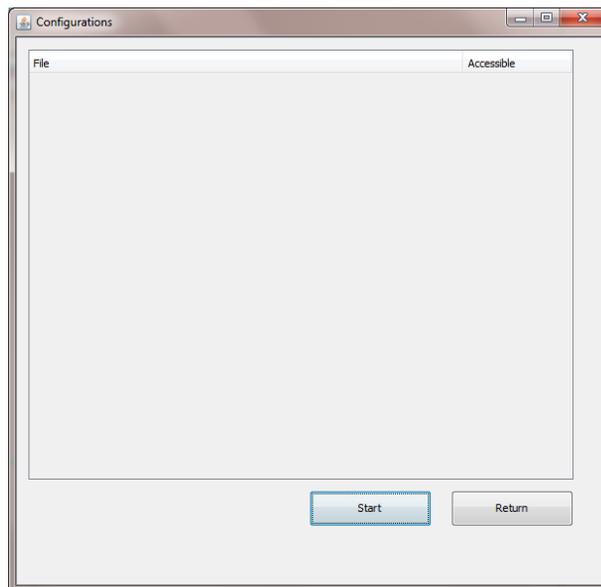
1. Select Display Configurations:



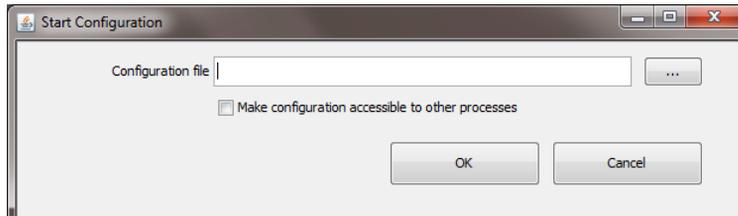
2. A list of started configuration files will display:



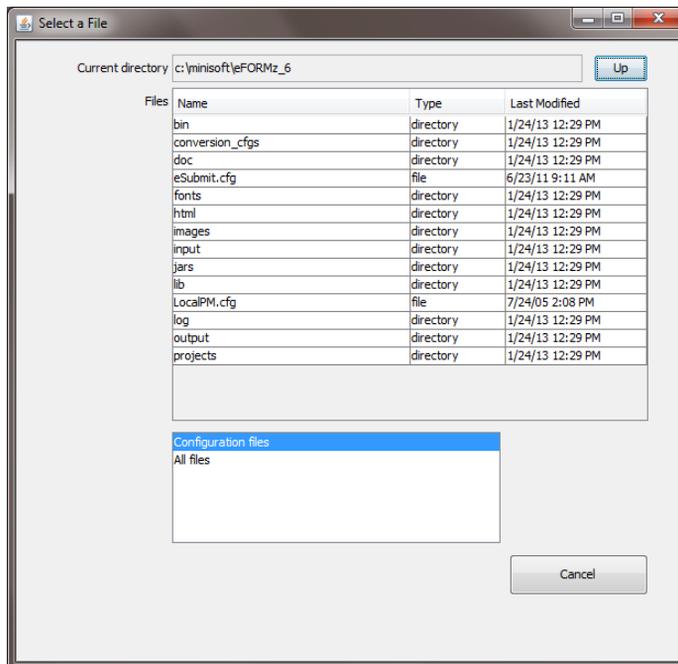
If no configuration files have been started, select Start.



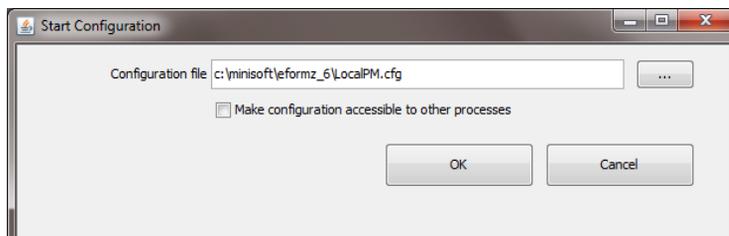
From the *Configuration file* field select the browse button to select the configuration file you would like to add to the Director:



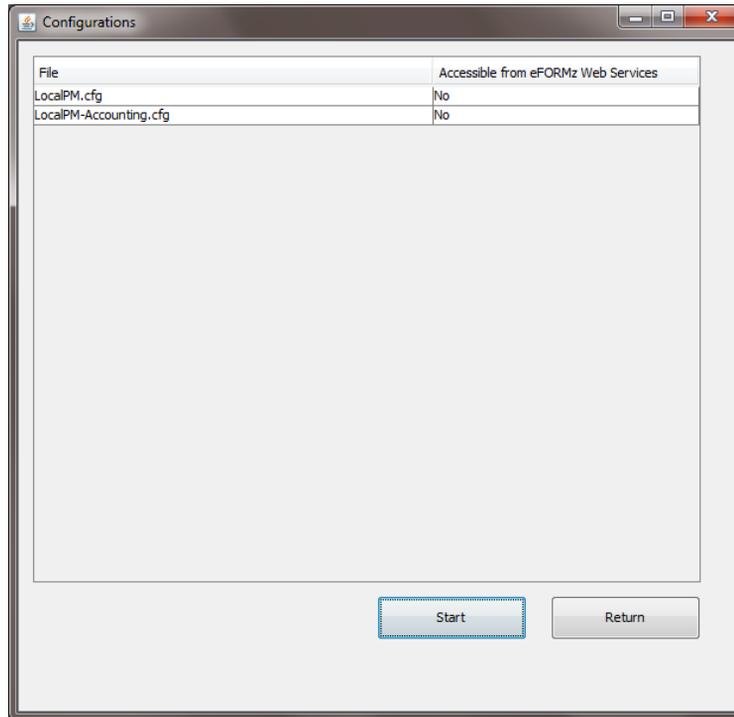
Navigate to the directory where your configuration file is located. Once your configuration file has been located, select the configuration file:



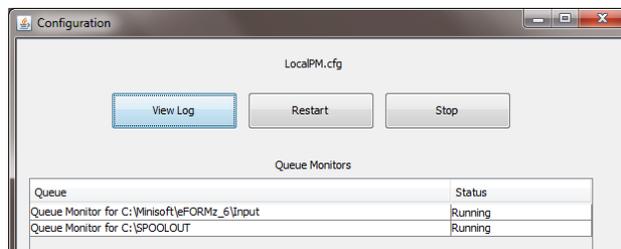
Your configuration file path will then appear in the field:



3. The number of configuration files added to the Director will be listed in the Configuration dialog box:



4. Select a configuration file to see further options:



Options:

View Log allows you to view logging for the selected configuration file.

Restart causes the job to restart the selected configuration. This would be necessary if changes have been made to the configuration file and need to be resubmitted.

Stop causes the job for the selected configuration to stop.

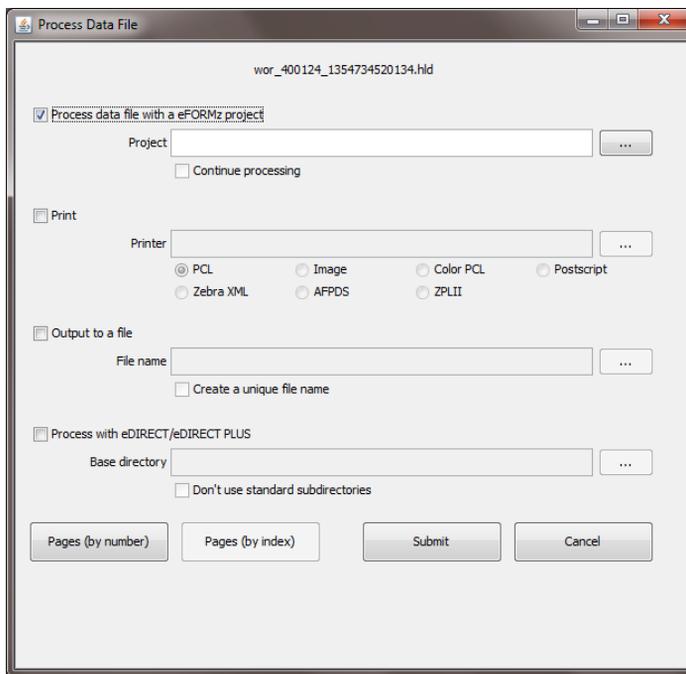
If the configuration file has been configured to monitor multiple queues, a listing of the queue's will display. Each queue can be stopped and restarted by selecting the individual queue from the list shown.



Selecting View Files allows you to see the files within a configured queue.

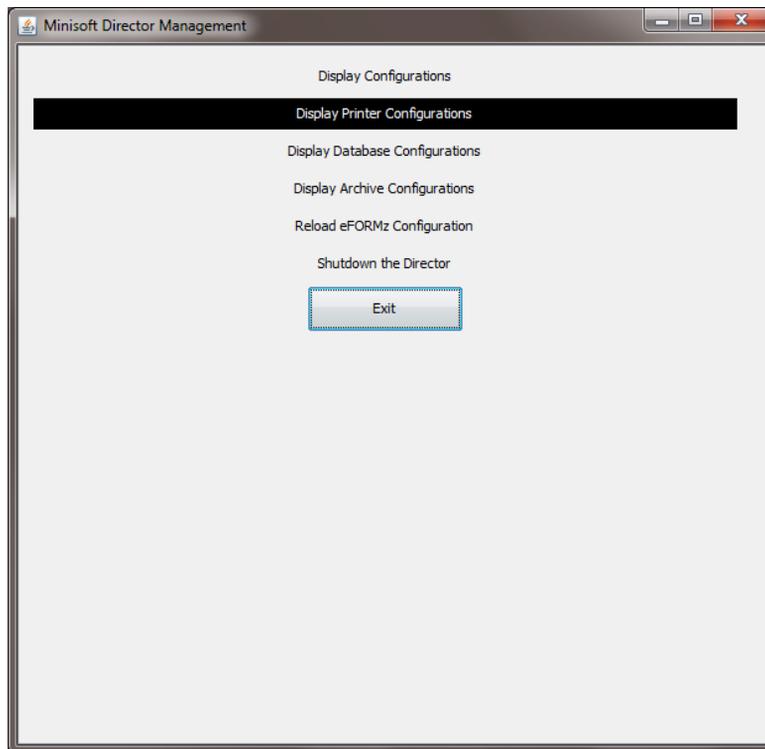


Select a selected file and you will receive further options:

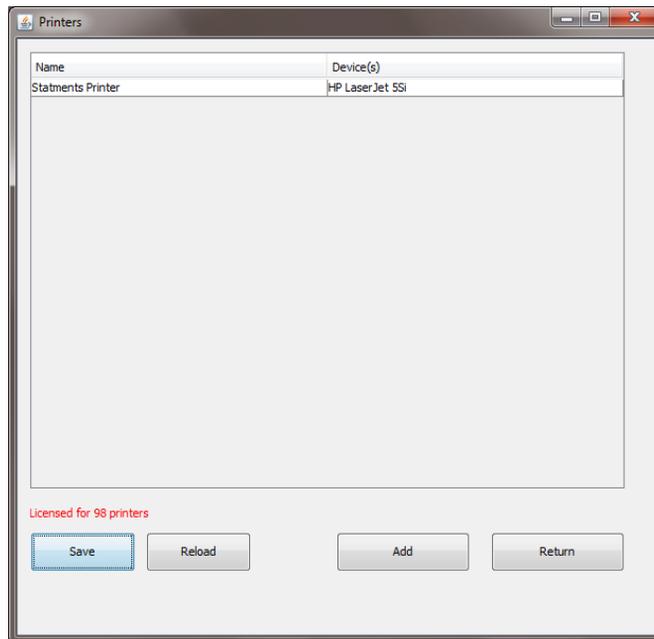


Printer Configuration

Using the 'Display Printer Configuration' option you can manage and configure your licensed printers, from the list of options select *Display Printer Configuration*:



The printer listing dialog box will display.

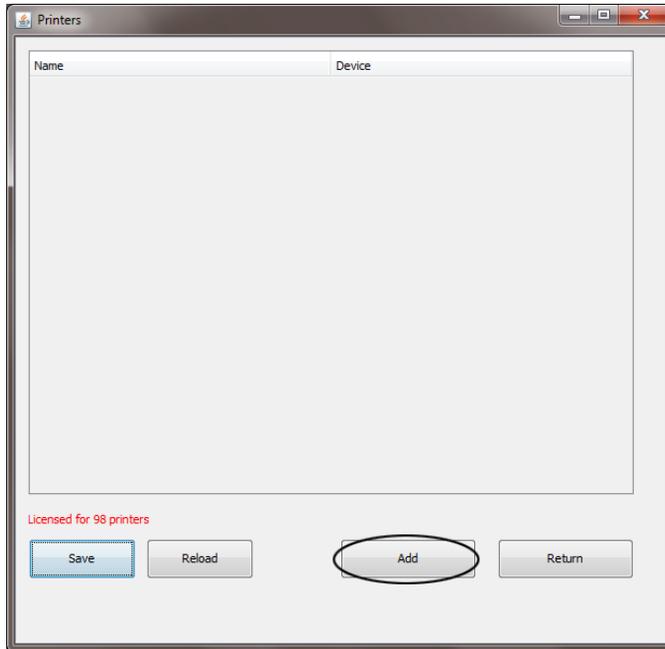


Note: The customer's eFORMz Printer License Purchase Agreement determines the number of printer devices that can be specified. The default is a 2-printer license. Should you need to increase the number of printers an updated license is necessary. Please contact Minisoft Sales at sales@minisoft.com or 800-682-0200..

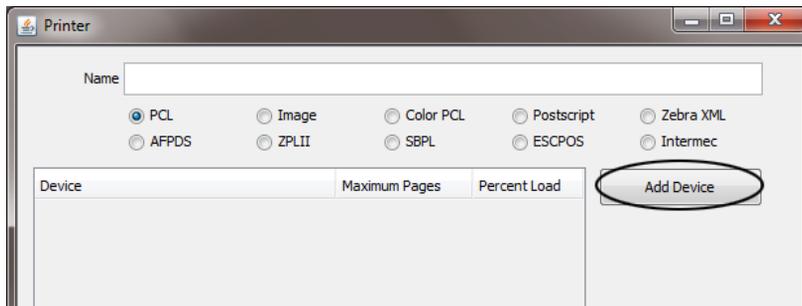
Adding a Printer

To add printers using the Director Management utility:

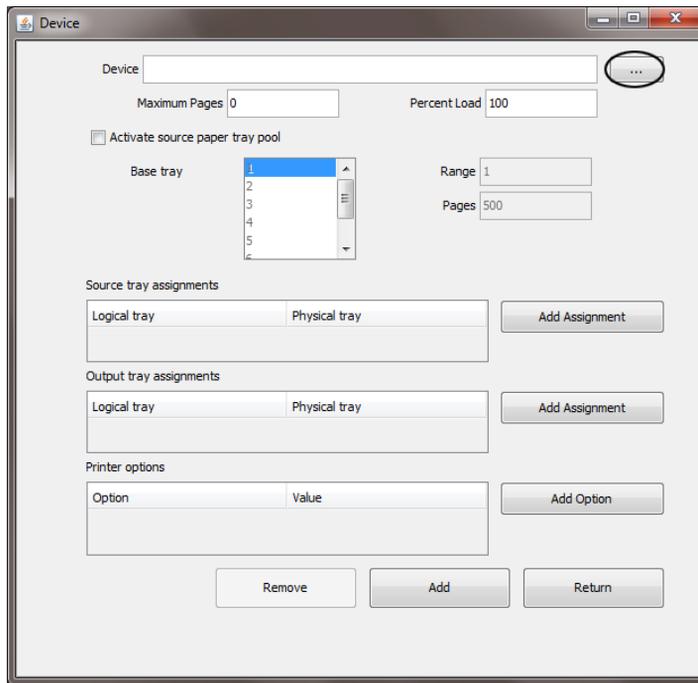
1. Select Add:



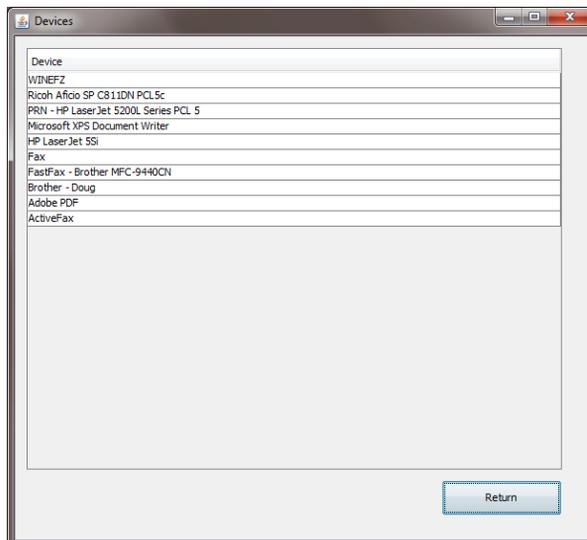
2. Select *Add Device* to select a printer from your network:



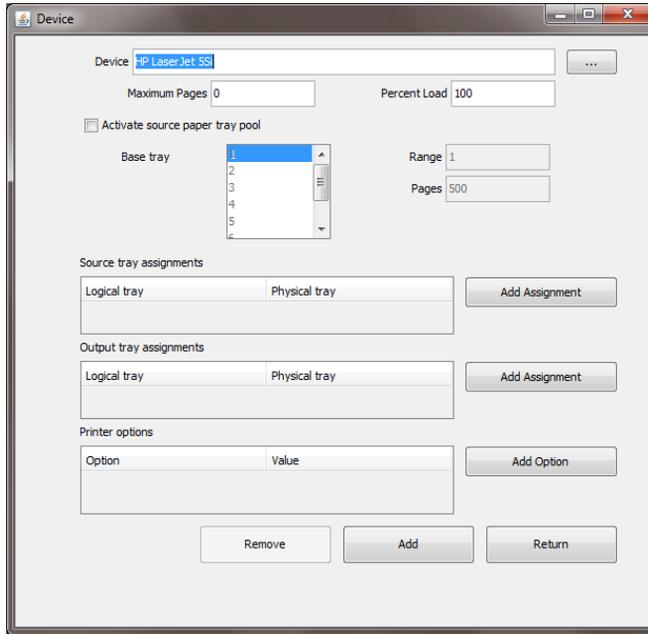
- From Device options select the browse button to select the device:



- A listing of devices will appear, select a printer from the list:

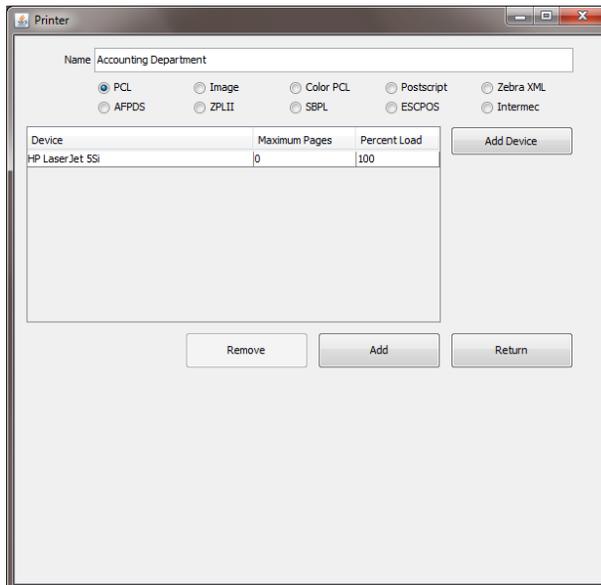


- Once a printer has been selected it will automatically appear in the device field.

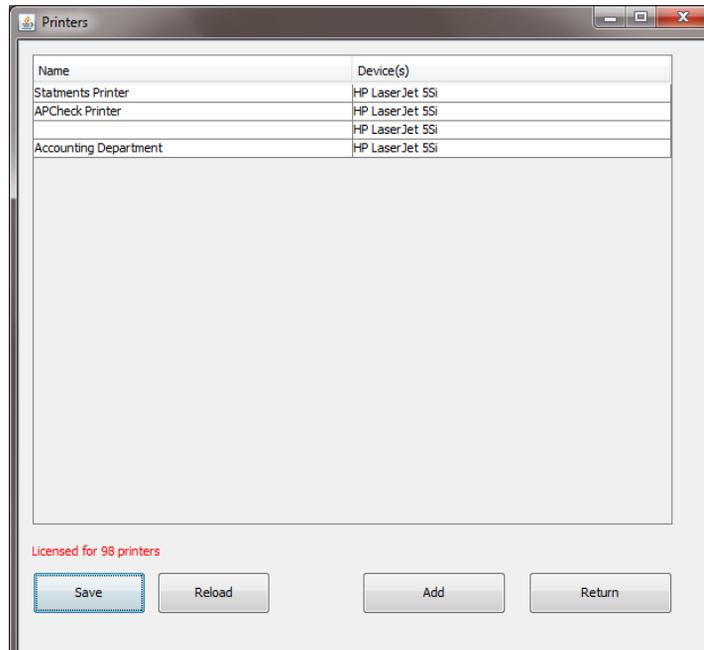


Select Add.

- Each device can also be given a unique descriptive name.



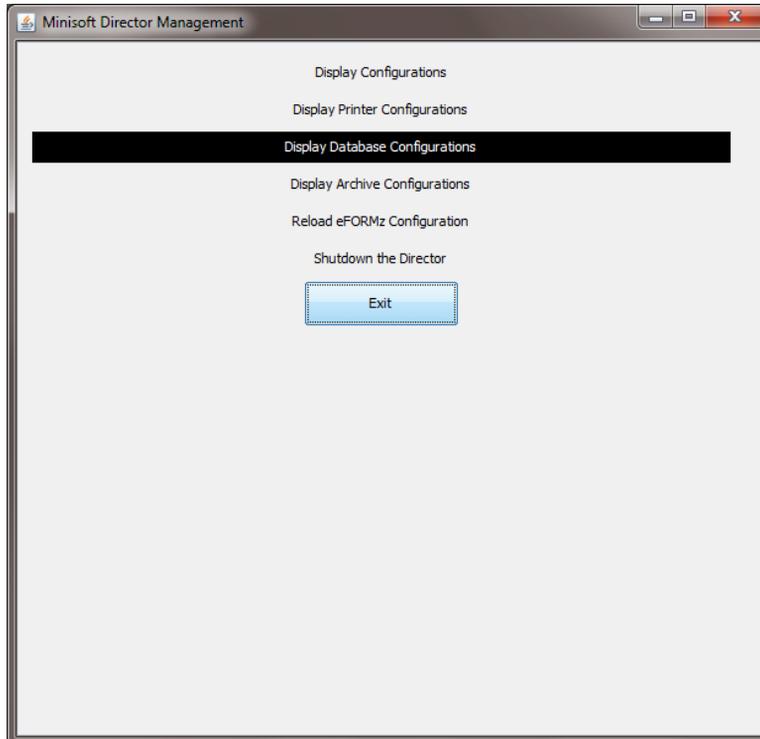
6. Your printers will start listing below:



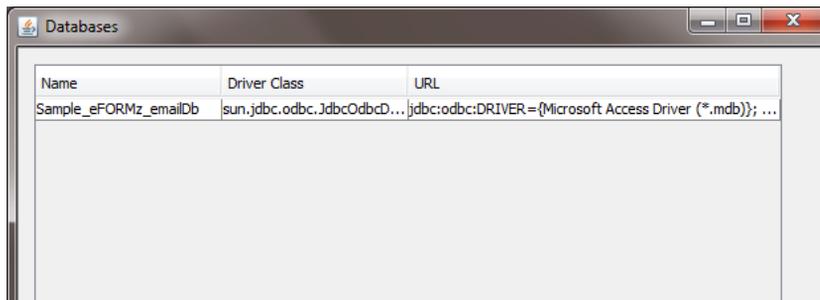
7. Once your printers have been added, select *Save*. Selecting *Save* causes eFORMz to generate or update the Printer.xml file.

Database Configuration

To configure a global database connection select "Display Database Configuration".



A listing of configured database will appear, if configured:



Note: Minisoft provides a sample database (Sample_eFORMz_emailDb).

To configure a new database connection:

1. Select *Add* and the connection dialog box will display:

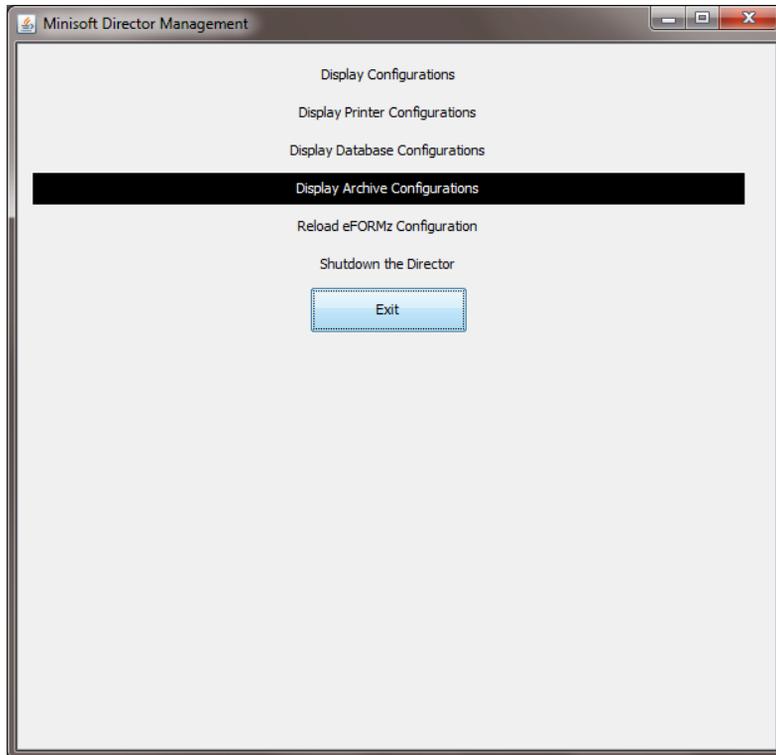
The screenshot shows a window titled "Database" with the following elements:

- Three text input fields labeled "Connection name", "Driver class", and "URL".
- A table with two columns: "Property" and "Value".
- An "Add Property" button to the right of the table.
- Four buttons at the bottom: "Test", "Remove", "Add", and "Return".

Note: For database connection driver class and url pertaining to the supported database type see the *eFORMz Reference Manual*.

Archive Configuration

To setup a global archive select "Display Archive Configuration":

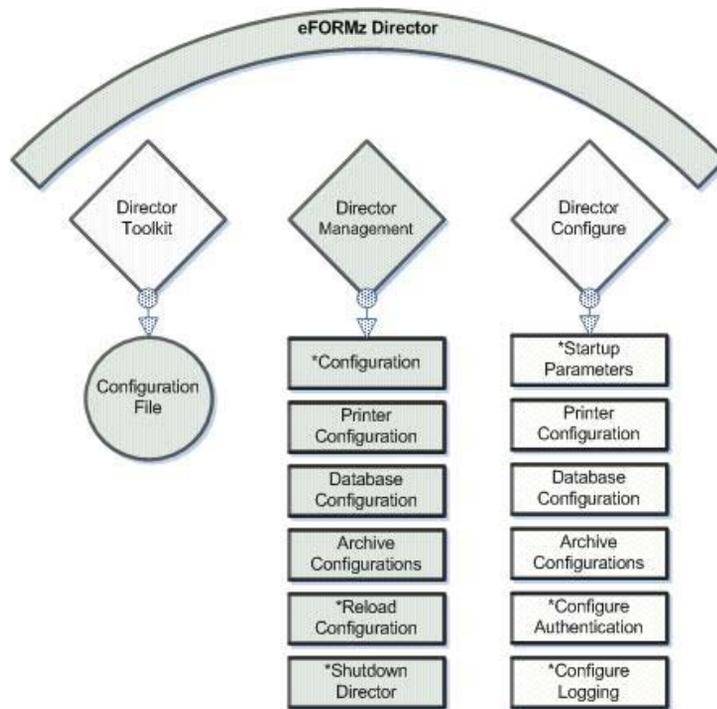


Section 5

Director Configure



Introduction to the Director Configure

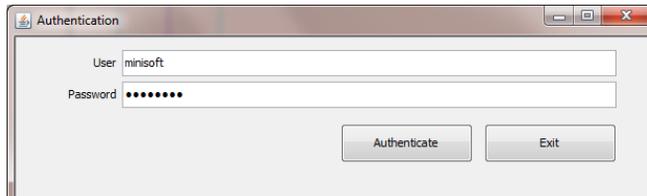


You can configure the Director user authentication and logging using the Director Configure (*Director_Configure.exe*).

To edit and change the setting login using the preset user name and password:

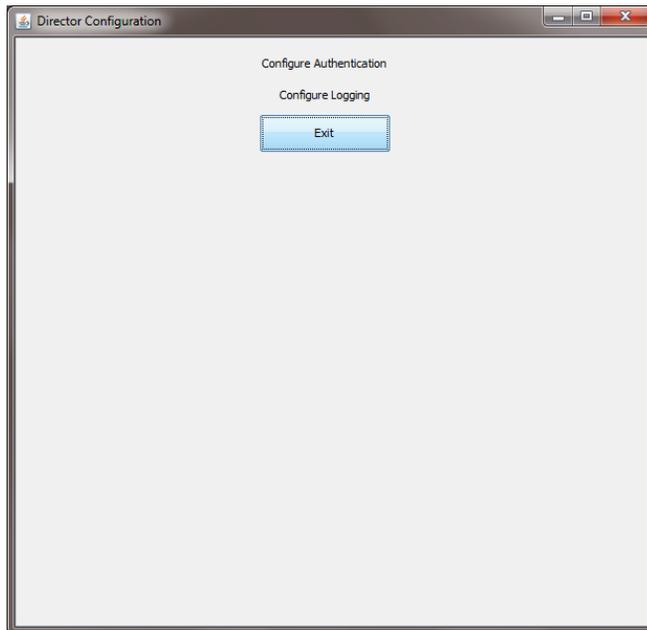
User: *minisoft*

Password: *password*



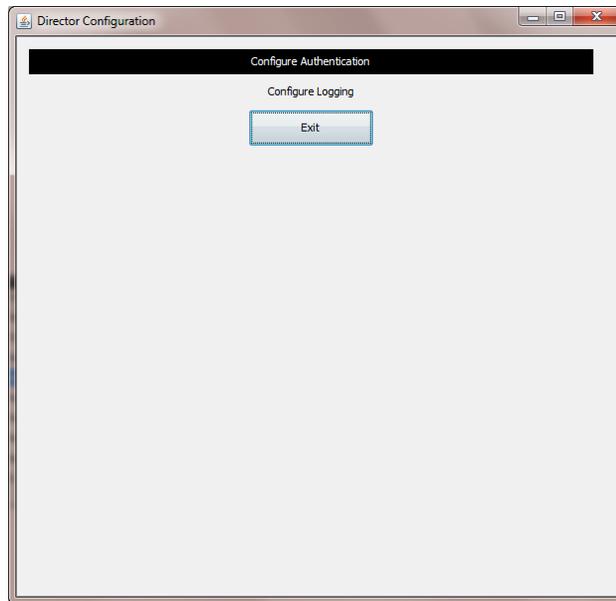
Once logged-in the following two options are available:

- Configure Authentication
- Configure Logging

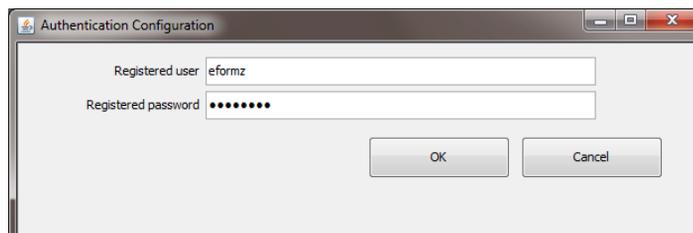


Director Authentication

To change the authentication of the Director for security reasons, from the Director Configuration dialog box select *Configure Authentication*:



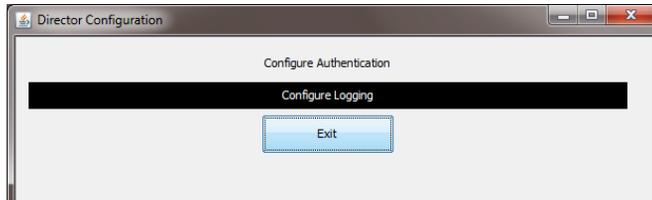
If you wish to change your registered user and password for security, edit the *user name* and *password* fields, once complete select *OK*:



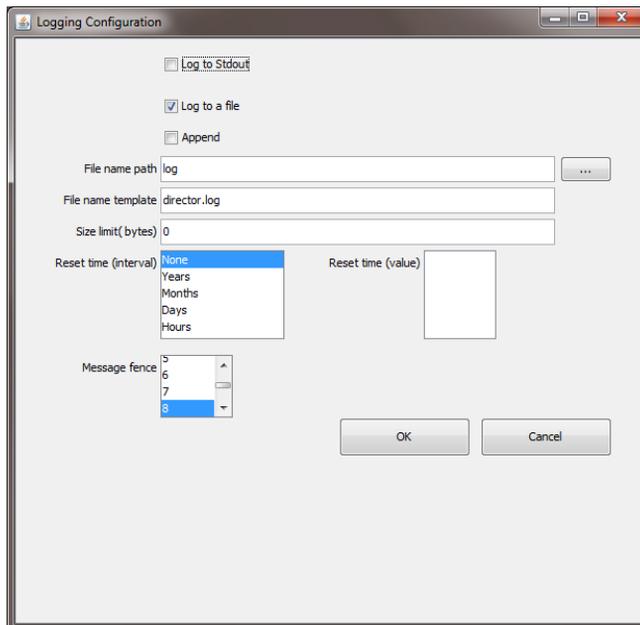
The *DirectorSetting.xml* (default location: C:\Minisoft\eFORMz_6\)) will be updated and encrypted with the new user name and password. If the Director is running, you will need to stop, shutdown, and restart the Director so the user name and passwords are updated across the eFORMz Director utilities.

Configure Logging

Configure logging for the eFORMz Director by selecting Configure Logging from the Director Configuration window:



The Logging options will then display:



For detailed information on logging, consult the *Logging Mini-Manual*.

Section 6

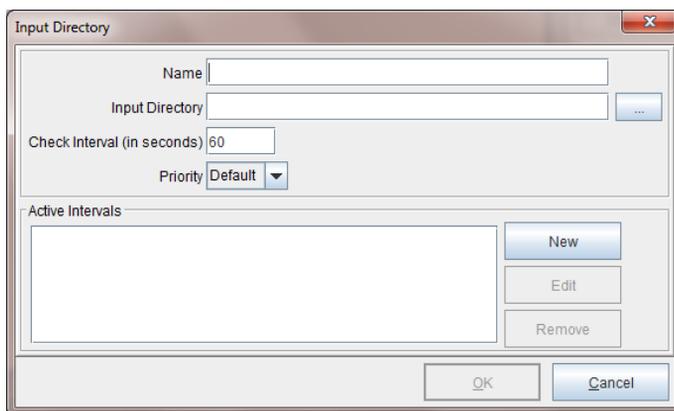
Source Directories



Local Directory

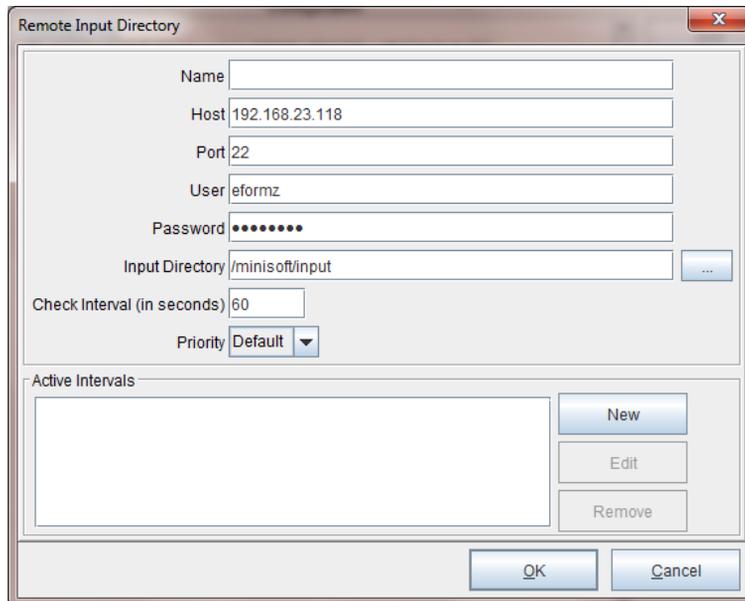
A Local Directory represents a directory or folder located locally on the system you are running. Your source print files will reside in this location to be pulled to be merged with an eFORMz process.

Using the Input Directory browse button select a directory or folder you would like to pull your output data files from.



Remote Directory

Remote Directory is a source directory for monitoring output files on a remote box.



The screenshot shows a dialog box titled "Remote Input Directory" with a close button (X) in the top right corner. The dialog contains several input fields and controls:

- Name:** An empty text input field.
- Host:** A text input field containing "192.168.23.118".
- Port:** A text input field containing "22".
- User:** A text input field containing "eformz".
- Password:** A text input field with masked characters (dots).
- Input Directory:** A text input field containing "/minisoft/input" and a browse button (...).
- Check Interval (in seconds):** A text input field containing "60".
- Priority:** A dropdown menu currently set to "Default".
- Active Intervals:** A section containing an empty list box and three buttons: "New", "Edit", and "Remove".
- Buttons:** "OK" and "Cancel" buttons at the bottom.

Name is an optional field for reference in the Director configuration.

Host name or IP Address of the system where your remote source directory resides.

Port number by default 22.

User/Password for access to your remote system directory.

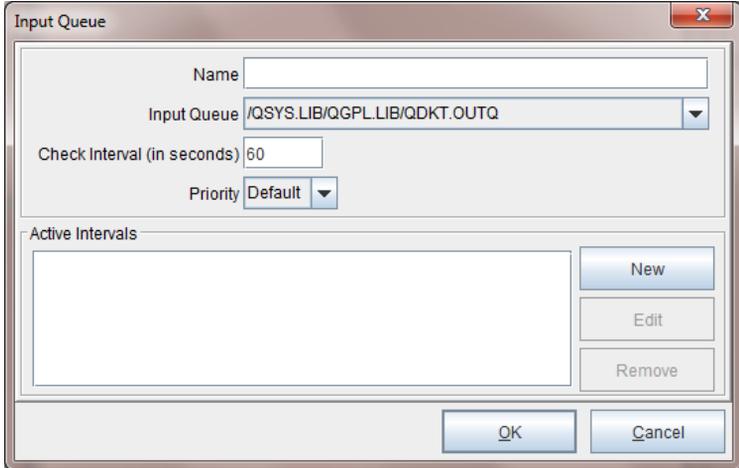
Input Directory is the path to the location where your output files reside on the remote system.

Check Interval is the number of seconds the Director will pause before checking the input directory for new files.

Priority sets the priority setting for the individual input directories. Each input queue executes a queue monitor in a separate thread. Control the execution priority of each thread individually based on the priority. The higher the priority (1-10) the more execution time is given to a thread in relation to other threads and processes.

Local iSeries Queue

Local iSeries Queue allows you to select a queue for monitoring once connected to your local iSeries server.



The screenshot shows a dialog box titled "Input Queue". It contains the following fields and controls:

- Name:** An empty text input field.
- Input Queue:** A dropdown menu currently displaying "/QSYS.LIB/QGPL.LIB/QDKT.OUTQ".
- Check Interval (in seconds):** A text input field containing the value "60".
- Priority:** A dropdown menu currently displaying "Default".
- Active Intervals:** A section containing an empty list box and three buttons: "New", "Edit", and "Remove".
- Buttons:** "OK" and "Cancel" buttons are located at the bottom right of the dialog.

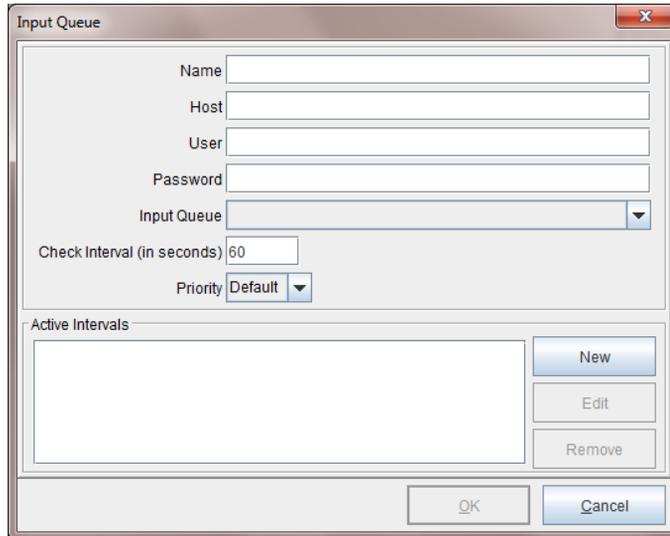
Name is an optional field for reference in the Director configuration.

Input Queue is the selected queue for monitoring for output files from your source application.

Check Interval is the number of seconds the Director will pause before checking the input directory for new files.

Priority sets the priority setting for the individual input directories. Each input queue executes a queue monitor in a separate thread. Control the execution priority of each thread individually based on the priority. The higher the priority (1-10) the more execution time is given to a thread in relation to other threads and processes.

Remote iSeries Queue



Name is an optional field for reference in the Director configuration.

Host name or IP Address of the MQ.

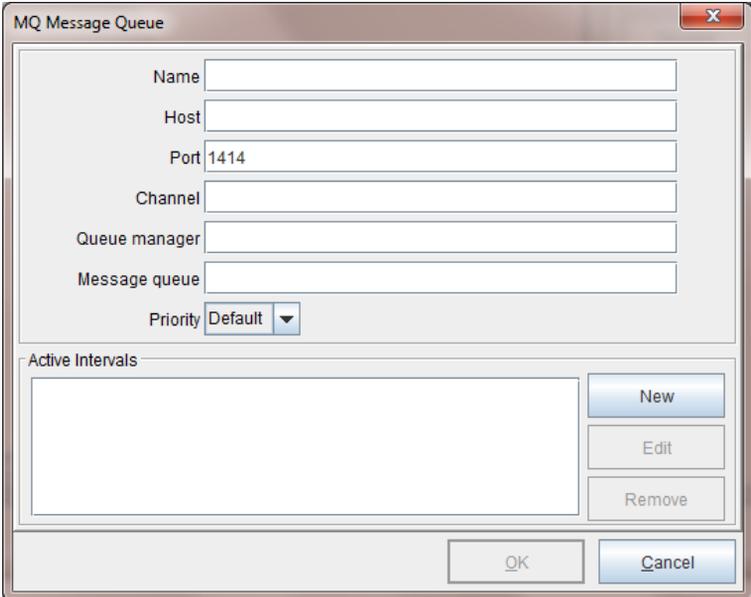
User/Password for access to your remote system directory.

Input Queue is the selected queue for monitoring for output files from your source application.

Check Interval is the number of seconds the Director will pause before checking the input directory for new files.

Priority sets the priority setting for the individual input directories. Each input queue executes a queue monitor in a separate thread. Control the execution priority of each thread individually based on the priority. The higher the priority (1-10) the more execution time is given to a thread in relation to other threads and processes.

MQ message queue



The image shows a dialog box titled "MQ Message Queue" with a close button (X) in the top right corner. The dialog contains several input fields and a dropdown menu:

- Name:
- Host:
- Port:
- Channel:
- Queue manager:
- Message queue:
- Priority: (dropdown arrow)

Below these fields is a section titled "Active Intervals" containing an empty list box. To the right of the list box are three buttons: "New", "Edit", and "Remove". At the bottom of the dialog are "OK" and "Cancel" buttons.

Name is an optional field for reference in the Director configuration.

Host name or IP Address of the MQ.

Port default number 1414.

Channel the case-sensitive name of the server connection channel.

Queue Manager library is given a unique name, no more than 10 characters long, largely based on the user defined queue manager name.

Message queue is used to store messages sent by programs. They are defined as objects belonging to the queue manager.

Priority sets the priority setting for the individual input directories. Each input queue executes a queue monitor in a separate thread. Control the execution priority of each thread individually based on the priority. The higher the priority (1-10) the more execution time is given to a thread in relation to other threads and processes.



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