Impact Innovations Systems

ImageOptimization

Version 1.0

User Manual

Impact Innovations

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1 Introduction

1.1 Overview

Image Optimization is a compression/conversion tool designed for Content Management Systems. Image Optimization compresses image files and converts them to PDF (searchable and non-searchable) documents. This will save storage space and helps to search based on metadata.

1.2 Components

ImageOptimization has three components - Web application, backend job processor, and database. Web application provides the user interface to create and run jobs. Backend job processor is responsible for compressing the files based on jobs created by the user. Database contains the information about the jobs.

Image Optimization uses PDFCompressor (by CVision Technologies) module to compress and convert images into PDF.

2 Using ImageOptimization

ImageOptimization provides a web based user interface can be accessed using a web browser. All the user actions are performed via the web based user interface.

2.1 Understanding User Interface

Here is the screenshot of user interface. Each component is explained in detail below.

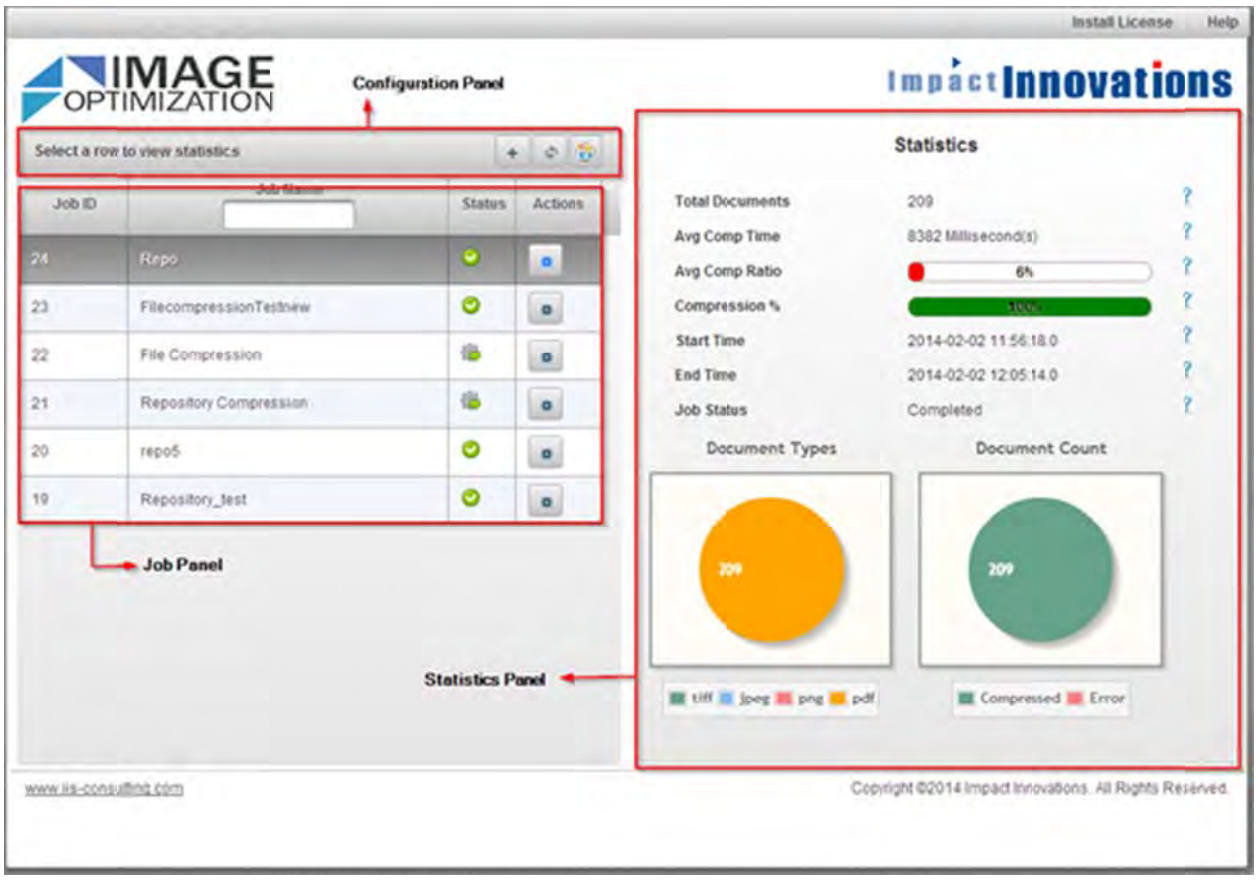

Figure 1 ImageOptimization Panels

2.1.1 Configuration Panel

The configuration panel is used to create new jobs and filter existing jobs present in the system. The options present in the configuration panel are outlined below.

- **Create New Job** – Click on '+' button to create a new job.
- **Refresh -** It refreshes both Job Panel and Statistics Panel.
- **Filters**-Filters the list of jobs by selecting 'Completed' or 'Failed' or 'Configured' or 'Running' or 'Stopped'.

The following table outlines different filters

Filters	Description
Completed	Filters Jobs which are Completed.
Configured	Filters Jobs which are Configured.
Failed	Filters Jobs which are Failed.
Stopped	Filters Jobs which are Stopped.
Running	Filters Jobs which are Running.
FileCompression	Filters File Compression Jobs.
RepositoryCompression	Filters Repository Compression Jobs.

Table 1 Job Filters

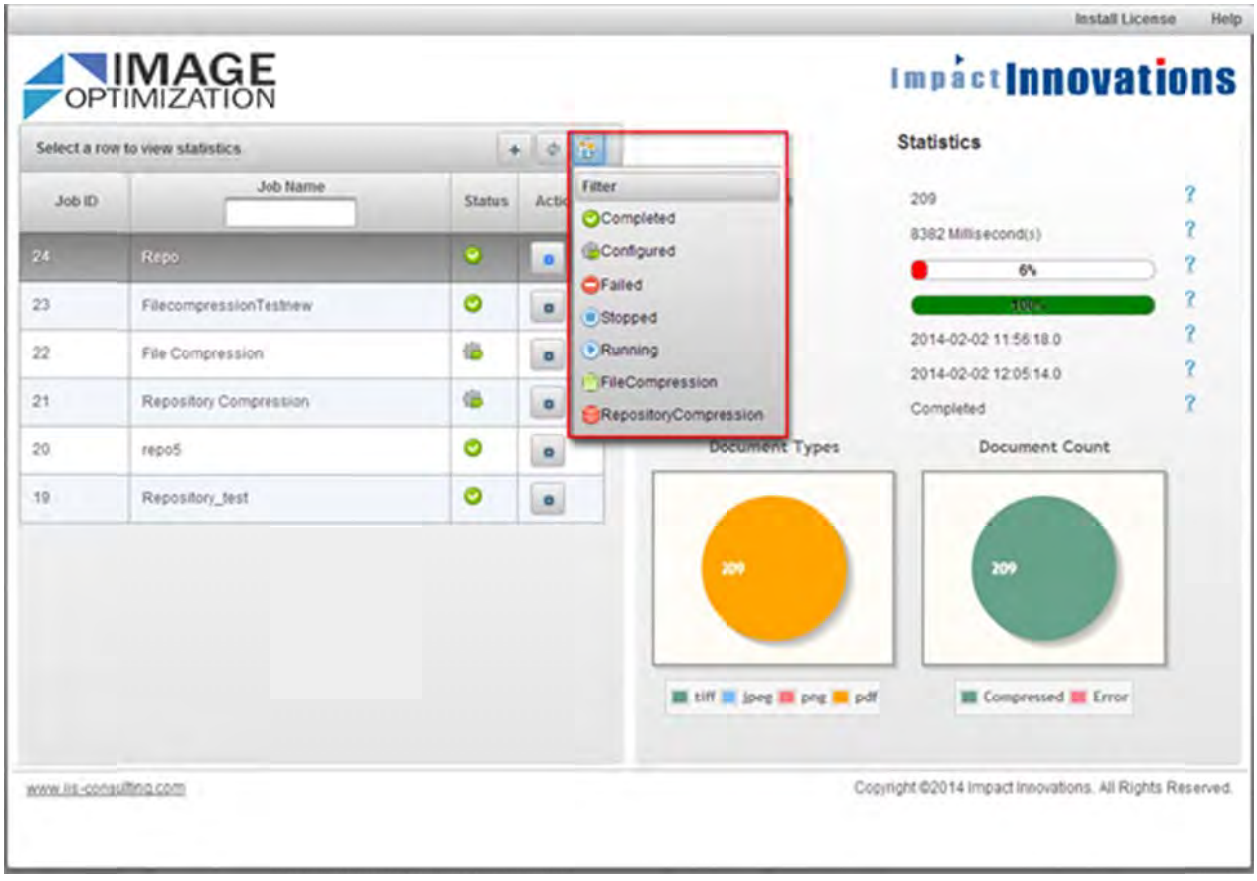

Figure 2 Job Filters

2.1.2 Job Panel

The job panel lists all the jobs present in the system. Here is a quick overview of each of the columns in job panel

Columns	Description
Job ID	The ID of the job.
Job Name	The name of the job.
Status	The status of the job is depicted using an image.
Actions	Clicking on actions button next to the job will open the available actions.

Table 2 Job Panel Columns

2.1.2.1 Job Actions

Click on action button next to the job to select an action. The following table outlined different actions that can be performed on a selected job.

Actions	Description
View	This will allow the user to view the job parameters.
Edit	This will allow the user to edit the job parameters.
Start	This will start the process of compressing files present in the given path.
Stop	This will stop the compression process.
Resume	This will resume the compression process from the last checkpoint.
Restart	This will restart the job. All the checkpoints will be deleted and the job will be treated as a new job.
Delete	This will delete the job and all the data associated with it.

Table 3 Job Actions

NOTE: The job panel will refresh for 30 seconds

2.1.3 Statistics Panel

All the job related statistics are displayed in statistics panel. Job statistics will be displayed when a job is selected from the job panel.

- **Total Documents**: The total number of documents that needs to be compressed in the selected job.
- **Average Compression Time**: The average time (in milliseconds) to compress one document.
- **Average Compression Ratio**: The average compression size ratio of the documents compressed so far.
- **Document Types**: A pie chart displaying the counts of different document types that have been compressed
- **Document Counts**: A pie chart displaying the number of documents that are compressed and that are not.
- **Job Status**: The status of the selected job. The following table outlines the possible job statuses

Status	Description
Completed	The job is completed.
Configured	The job is configured but the compression is not started yet.
Failed	The job has failed.
Stopped	The job is cancelled by the user.
Running	The job has been started (Document compression has been started).

Table 4 Job Statuses

- **Error Count**: Displays the total number of documents which are in error state.

2.1.4 Creating a Job

Click on '+' to create a new job. The following section outlines the different panels and job parameters that are available for creating a job.

2.1.4.1 Job Information Panel

This panel contains general job information parameters like name, description, compression type, and file types that need to be compressed.

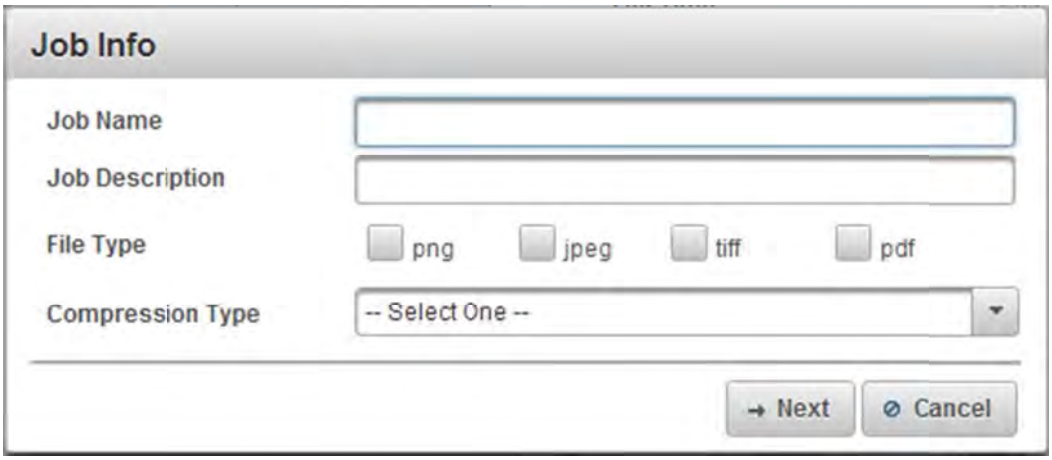

Figure 3 Job Information Panel

2.1.4.2 File Compression Panel

This panel contains parameters specific to file system compression job.

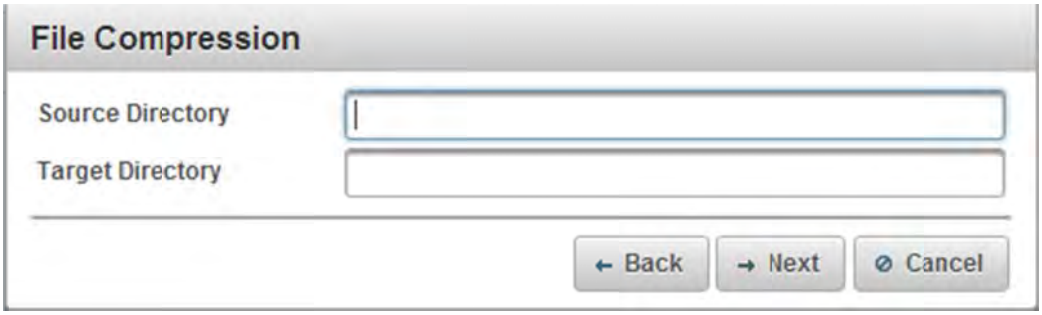

Figure 4 File Compression Panel

2.1.4.3 Repository Compression Panel

This panel contains parameters specific to repository compression job.

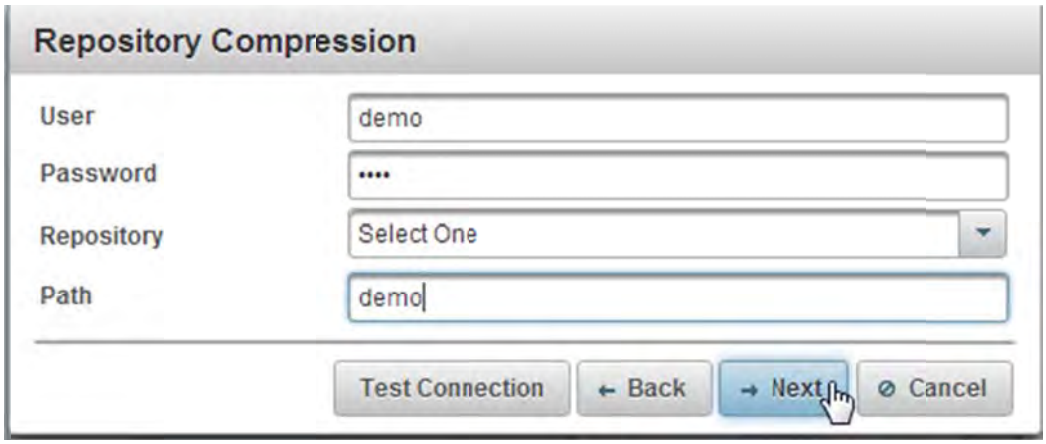

Figure 5 Repository Compression Panel

2.1.4.4 Compression Parameters Panel

This panel contains output parameters that will be used to generate a PDF. The parameters are explained in detail below.

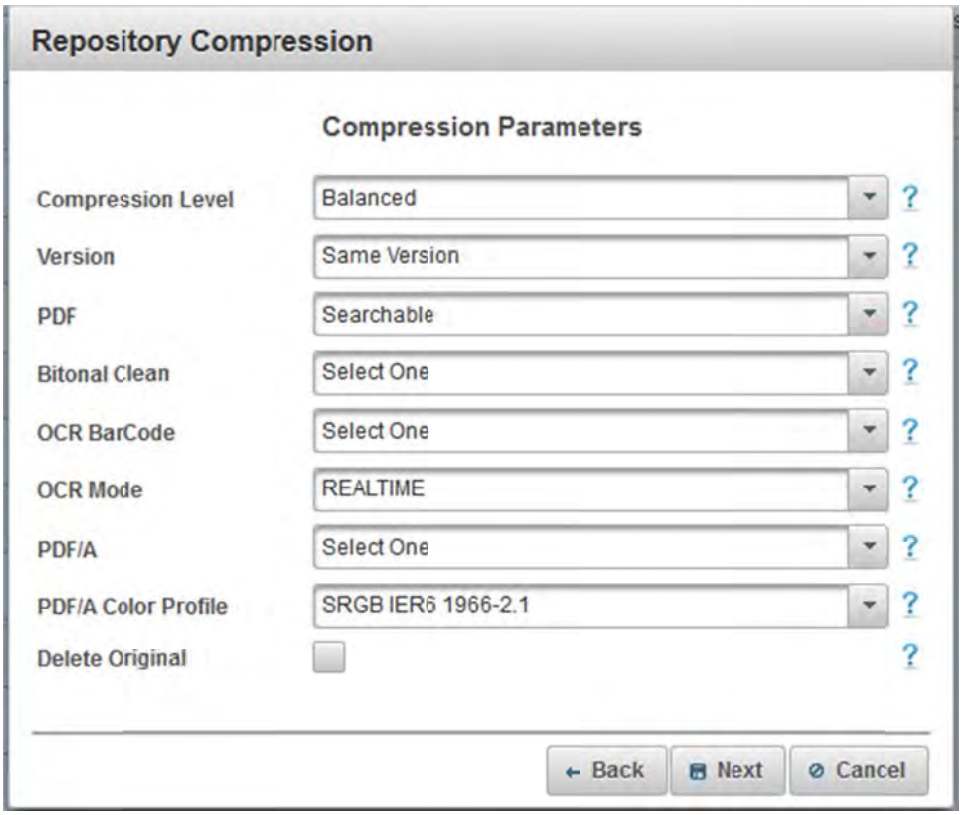

Figure 6 Compression Parameters Panel

- **Compression Level** - Image Optimization compression levels are Balanced, Best, Quick.
  - **Balanced**: It is the recommended and default option, it provides a balance of speed and compression.
  - **Best**: provides the best compression but is the slowest.
  - **Quick**: is much faster but generates larger output.
- **Versioning –** Versioning is applicable only to repository compression job. ImageOptimization supports two types of versioning.
  - **Same Version**: Compressed file will have the same version as of corresponding non-compressed file.
  - **New Version**: Compressed file will be generated in two versions (Current version and new version).
- **PDF Searchable/non-searchable-**Image Optimization can generate both searchable and non-searchable PDF's.
- **Bitonal Clean**-Turns bitonal cleaning **ON** or **OFF**. Cleaning removes very small stray dot's that were clearly artifacts of the scanning process. By default, cleaning is **ON** for perceptually lossless mode and **OFF** for lossless mode. If a file is compressed in lossless mode, the image first undergoes the cleaning process, and then the cleaned image is compressed in a lossless manner.
- **OCR Barcode**-Turns on barcode recognition.
- **OCR Mode**-This setting determines the balance between speed and accuracy used by the OCR engine. Mode can be real time, fast, accurate, or super accurate. The default setting is fast. As a rule the slower the OCR, the more accurate it will be. In order of speed real time is the fastest, followed by fast, accurate, and super accurate.
- **PDF/A** – ImageOptimization can generate the following types of PDF/A documents.
  - **PDF/A-1a** – Conformance level 1a shall adhere to all of the requirements of the PDF Reference as modified by the ISO 19005 specification and requires structural and semantic properties to be preserved. Level 1a uses "Tagged PDF" and Unicode character maps to preserve the document's logical structure and content text stream in natural reading order. For some applications, users may need to use a PDF/A-1 conformant viewer to take maximum advantage of embedded metadata.
  - **PDF/A-1b** – Conformance level 1b requirements are intended to be those minimally necessary to ensure the visual appearance of electronic documents. Level 1a preserves document structure from the original document that allows the consumer to the archived document to view and manipulate the document as they could the original.
- **PDF/A Color Profile** - If PDF/A mode are specified, this flag will determine the RGB profile to use. The parameter can be one of the following:

Value	Meaning
0	sRGB IEC61966-2.1
1	Adobe RGB (1998)
2	Apple RGB
3	ColorMatch RGB

Table 5 PDF/A Color Profile Description

- **Delete Original** - Deletes the original image file if this field is selected.

2.1.4.5 Annotation Panel

ImageOptimization supports annotations – watermark and bate stamping. This panel contains the parameters related to annotations. Each option is explained in detail below.

2.1.4.5.1 Bate Stamping Parameters

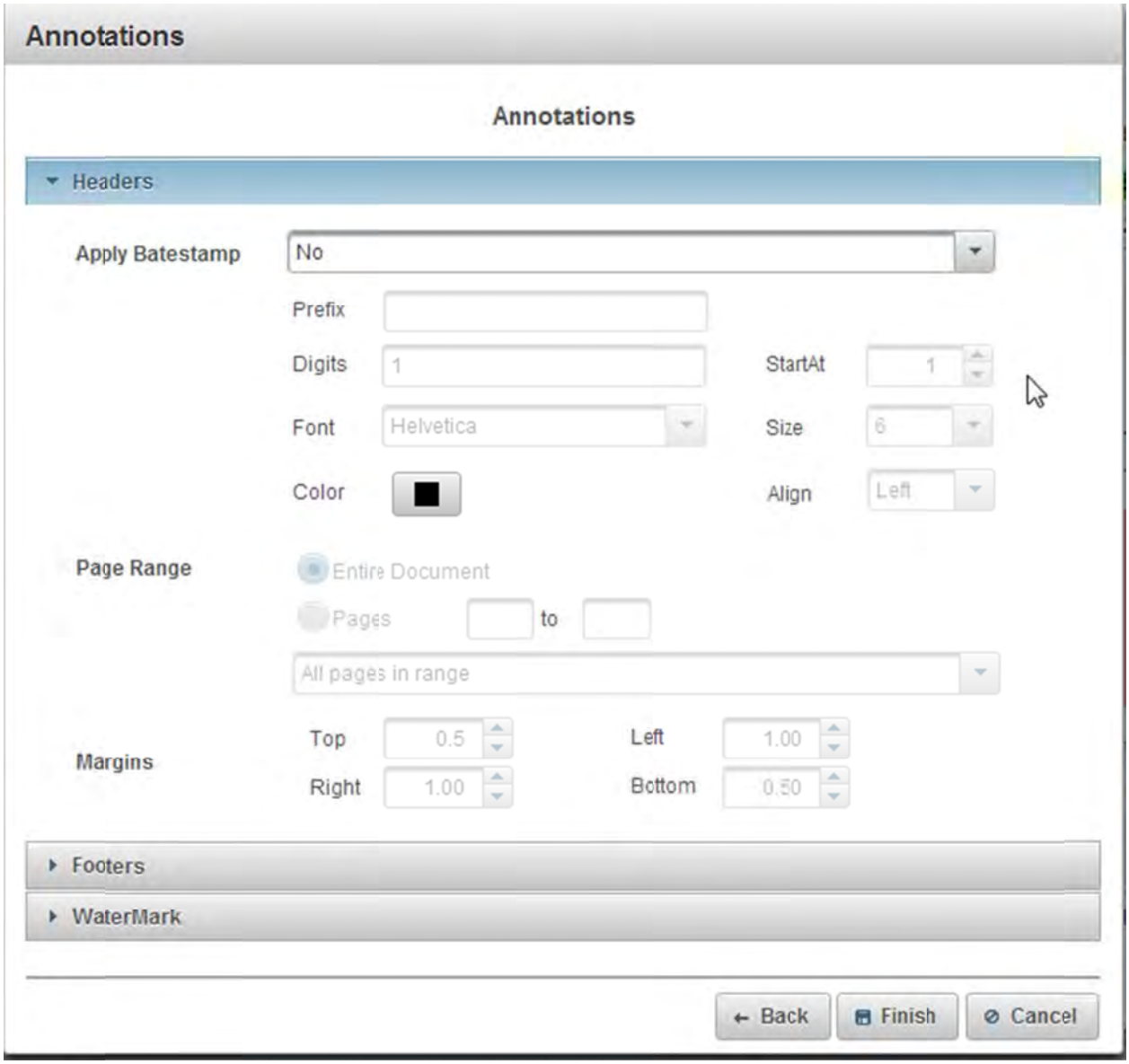

Figure 7 Bate Stamping Parameters

- **Header/Footer**- Option to add custom text in header/footer of the document.
  - **Prefix**: Defines the custom text annotation to insert.
  - **Start At**: Defines the starting position of the page number.
  - **Font**: Font for the header/footer text.

- **Size**: Size of the text for the header/footer.
- **Color**: Color of the text for the header/footer.
- **Align**: Alignment (Left, Centre, Right) of the text for the header/footer.
- **Page Range**: Specifies a range of pages in the document over which the text annotation is to be applied. If this field is omitted the page range is assumed to be the entire document. In addition, you can choose whether to include only the even-numbered or odd-numbered pages within the selected range.
- **Margins**: How far away from each edge of the page the header/footer appears.

2.1.4.5.2 Watermark Parameters

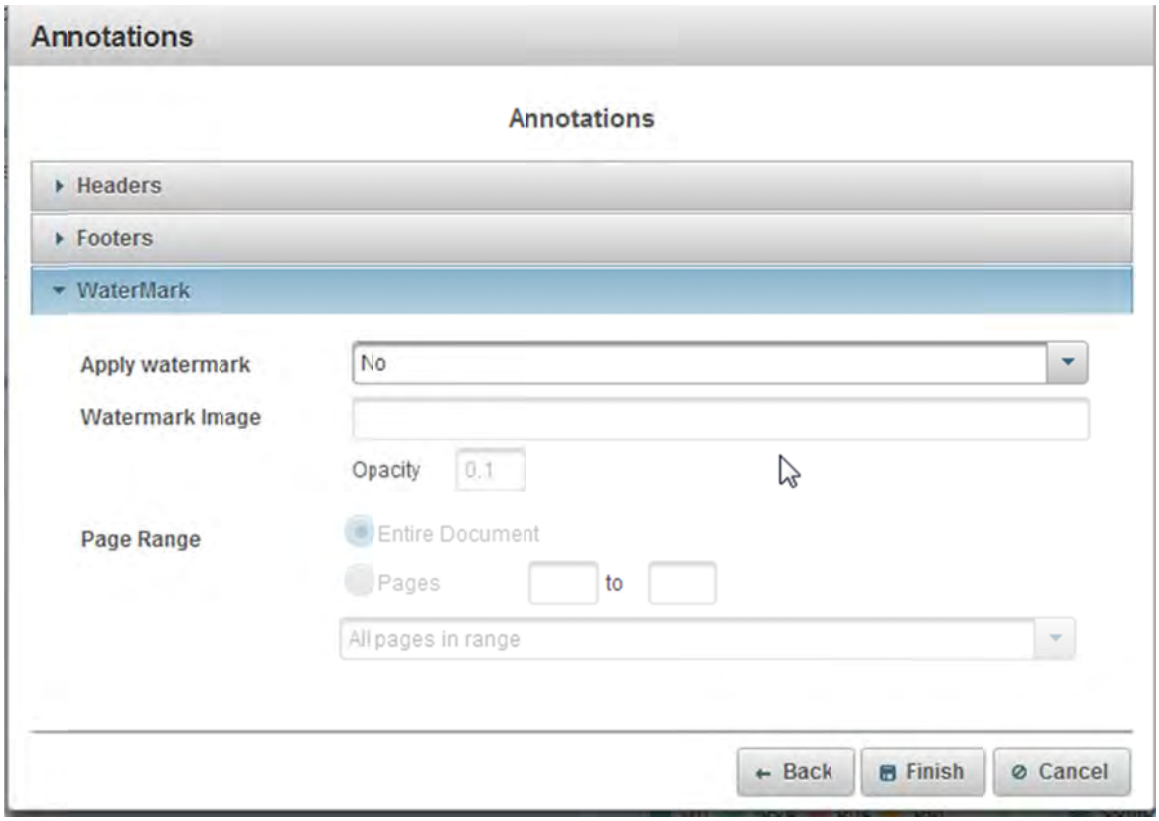

Figure 8 Watermark Parameters

Here are the watermark parameters

- **Watermark Image**: Places an image layer on each page that acts as a watermark (background image) which is blended with other elements on the page.
  Note: The watermark image should be a JPEG, Bitonal TIFF or Bitonal BMP file.
- **Opacity**: Floating point value between 0.0 and 1.0 representing how opaque the watermark should appear. A lower value yields a greater amount of transparency.
- **Page Range**: Specifies a range of pages in the document over which the watermark image is to be applied. If this field is omitted the page range is assumed to be the entire document. In

addition, you can choose whether to include only the even-numbered or odd-numbered pages within the selected range.

2.1.5 Editing a Job

Job can be edited by selecting edit option from job actions. Editing a job involves same steps as creating a job.

2.1.6 Stopping a Job

Job can be stopped by selecting stop option from job actions. A job can be stopped only when it is in running state. The progress will be saved when a job is stopped. Stopped jobs can be resumed or restarted.

2.1.7 Resuming a Job

Job can be resumed by selecting stop option from job actions. Only stopped jobs can be resumed. Resuming a job will resume the job. All the files which were compressed before will be skipped when a job is resumed.

2.1.8 Restarting a Job

Job can be restarted by selecting stop option from job actions. Only jobs which are completed or failed or stopped can be restarted. Restarting a job will clear all the job information that is in the database and starts the job from scratch.

2.2 Licensing

ImageOptimization requires a license to run. The jobs cannot be started and statistics cannot be viewed when the license expires. Please refer to installation manual on how to license ImageOptimization.