



Mena'an

by Inferima.x2 team

User manual

2012 year

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"Now, here, you see, it takes all the
running you can do, to keep in the
same place. If you want to get
somewhere else, you must run at least
twice as fast as that!"

Lewis Carroll. Through the Looking Glass.

"Please feel our pain..."

Interima.x2.



Contents

About Menaan	2
What is Menaan?	2
Developers	2
License	3
Tools	4
Overview	3
Cryptographic algorithms	3
Creating a job	3
Job's list	3
Overview	3
Job's control	3
Config	3
Overview	3
Options	3
Help	3
Exit	3
From developers	3



About Mena'an

What is Mena'an?

Mena'an is cryptographic tool that make easy using crypto algorithm for safety of your data. Mena'an used Qt 4.8 library. Mena'an was created specially for Linux, but you may use it for all operation systems which are supported by Qt.

Developers

Mena'an was created by Interima.x2 team:

- Interima.ix2
- Interima.Cry
- Interima.Inmay
- Interima.Cemetery
- Interima.Tombstone
- Interima.BlueIceScream
- Interima.The Heavy Rain



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Tools

Overview

When you run application, first pane is Tools (Figure 1). This is a main pane of Mena'an. It provides the list of available cryptographic algorithms. For browsing all list you may use mouse scroll or simply moving cursor with keeping left mouse button. At the right is scroll bar located. Do not use it for scroll. It also shows scroll progress.

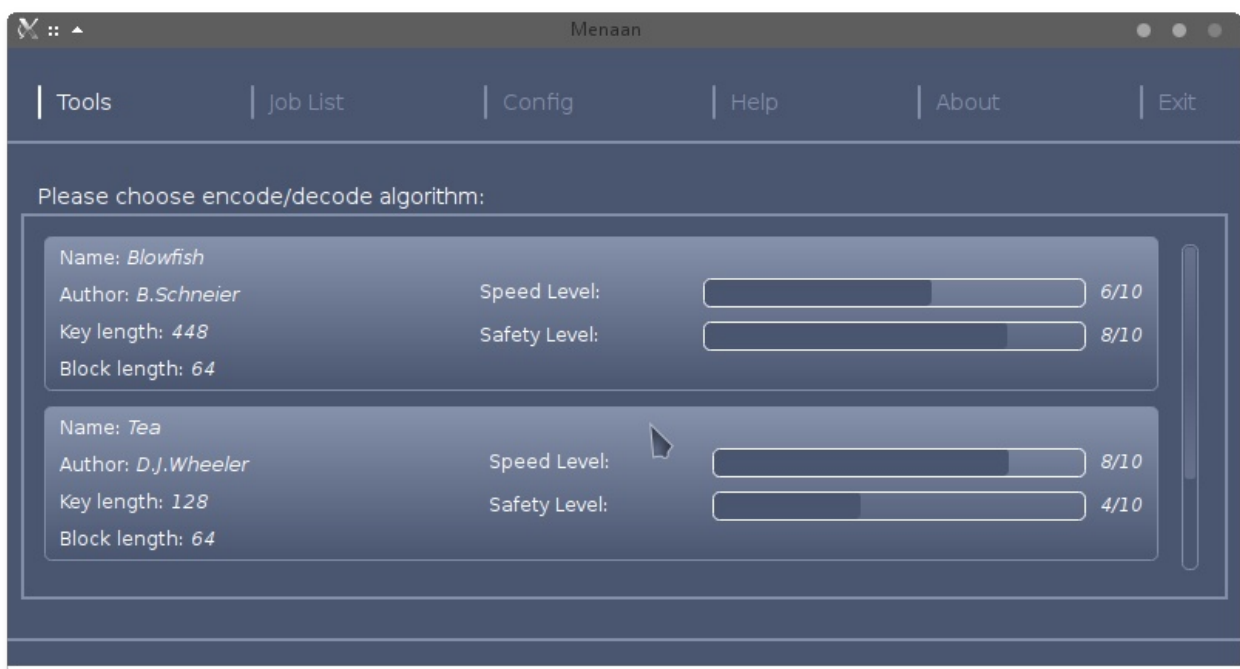


Figure 1. Tools pane



Cryptographic algorithms

All cryptographic algorithms were designed as plugins for the main application. Thus you can write or get plugin and use it with Mena'an. For this you need copy plugin to 'plugin' directory in Mena'an installation path. For different operation system plugins extension may be different. You can get new plugins from the developer's site.

Each plugin has some information for users. This information needs for choosing appropriate user algorithm. Let's look at Figure 2.

'Name field' contains the name of cryptographic algorithm.

'Author field' contains cryptographic algorithm author's name. This is not a name of plugin developer. This is algorithm developer's name. If developers are more than one, only one of them is shown.

'Key length' field contains the length of algorithm key in bits. Large key has large reserve of reliability.

'Block length' field contains length of data blocks which processed by the algorithm in bits. Large block length, is also a characteristic of large reliability.

Name: <i>Blowfish</i>	Speed Level:	<input type="range" value="6"/>	6/10
Author: <i>B.Schneier</i>	Safety Level:	<input type="range" value="8"/>	8/10
Key length: 448			
Block length: 64			

Figure 2. Cryptographic algorithm information

'Speed level' field contains algorithm speed capabilities. This is an important capability. Some algorithms may process data for a very long time, others do it very fast. It is not a recognized measure, but you must keep it in mind when choosing the algorithm.

'Safety level' field contains algorithm cryptographic strength. This is the other important algorithm capability. If you need extreme protection for your data - choose algorithm with max safety level. But keep in mind that algorithm with high safety is very slow.

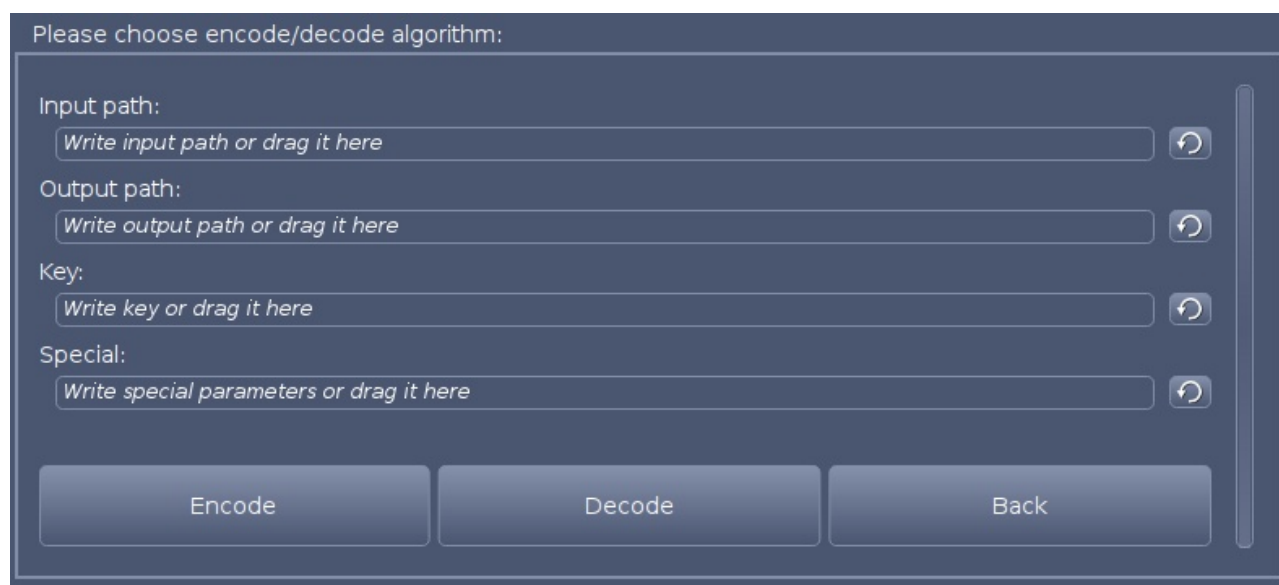
'Speed' and 'Safety' of algorithm enumerated from 1(min) to 10(max).

When you decide which algorithm you, then click on it.



Creating a job

After you choose algorithm Mena'an prompts you some parameters needed for creating the job. What is a job? Job is a task to Mena'an that consists of algorithm, input and output data. So cryptographic algorithm converts input data to output data. A job creating form is shown at Figure 3.



The form is titled "Please choose encode/decode algorithm:". It contains four input fields, each with a placeholder text and a clear button (a circular arrow icon):

- Input path:** Placeholder "Write input path or drag it here".
- Output path:** Placeholder "Write output path or drag it here".
- Key:** Placeholder "Write key or drag it here".
- Special:** Placeholder "Write special parameters or drag it here".

At the bottom, there are three buttons: "Encode", "Decode", and "Back".

Figure 3. A job creator form

The form has several labels for user tooltip and input fields. Also it contains clear buttons for clearing input fields contents. The control buttons are located at the bottom. Let's describe each of the elements.

'Input path' field must contain path to your input source. It may be path to file or folder. You may input path from keyboard or simply drag it by mouse. You may drag in this field file, directory or text.



'Output path' field must contain path to your output destination. It may be a path to file or directory. You also may drag file, directory or text to this field. Note that Input path and Output path can't be the same, except if you are installing 'Use special extension' in your config to 'Enabled'. If input data is directory, then output path also must be the path to the directory.

'Key' field must contain key which you use for encode/decode operation. What is a key? Key is some sequence of symbols. You can use any symbol, because Mena'an supports Unicode. Each algorithm has key length parameter. The parameter indicates how many bits are using for key. If your key size in bits is smaller than key size needed by the algorithm, so Mena'an use your key as circular sequence to complete key. If your key size is larger than algorithm needed, then Mena'an truncate your key. You couldn't worry about it, Mena'an does it automatically. You shouldn't tell your key to nobody.

The last field is 'Special parameters'. These parameters are used by the algorithm to change internal data process mechanism. These parameters can be used for changing mode, rounds count, constants of algorithms and etc. They are specific for each algorithm. You can find some information about it in 'description' directory. These files has plugin name with '.txt' extension. If you don't need special parameters, don't change contents of this field or keep it clear.

Don't worry if you input invalid data. Mena'an verify it, and says what is wrong.



After you entered all needed data for the algorithm, you may use buttons at the bottom of form.

'Encode' button create the job. This job type is cipher. Mena'an puts some magical number at the beginning of output data, needed for data identification as Mena'an's data.

'Decode' button creates the job with type decipher. Mena'an reads magical number from input data beginning and if data is not Mena'an's, so data job is failed. Mena'an tells about this error to you.

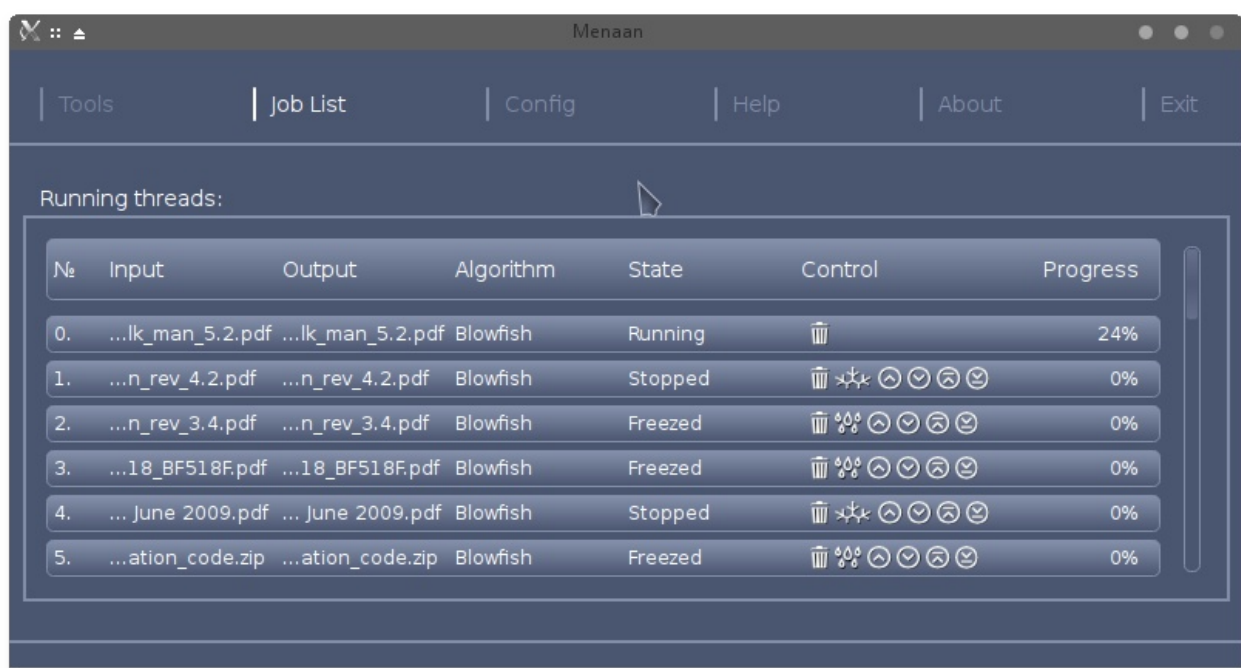
After creating a job you may create a new one with the same algorithm or return to previous algorithms list using 'Back' button.



Job's list

Overview

The pane 'Job's list' contains all jobs that you have been created. This pane is shown on Figure 4. All jobs arranged by time of its creation. The header of list is divided into several columns. Each of columns provides information of jobs properties. Header is shown at Figure 5.



№	Input	Output	Algorithm	State	Control	Progress
0.	...lk_man_5.2.pdf	...lk_man_5.2.pdf	Blowfish	Running	🗑️	24%
1.	...n_rev_4.2.pdf	...n_rev_4.2.pdf	Blowfish	Stopped	🗑️ ⚙️ ⏏️ ⏸️ ⏹️ ⏺️	0%
2.	...n_rev_3.4.pdf	...n_rev_3.4.pdf	Blowfish	Freezed	🗑️ ⚙️ ⏏️ ⏸️ ⏹️ ⏺️	0%
3.	...18_BF518F.pdf	...18_BF518F.pdf	Blowfish	Freezed	🗑️ ⚙️ ⏏️ ⏸️ ⏹️ ⏺️	0%
4.	... June 2009.pdf	... June 2009.pdf	Blowfish	Stopped	🗑️ ⚙️ ⏏️ ⏸️ ⏹️ ⏺️	0%
5.	...ation_code.zip	...ation_code.zip	Blowfish	Freezed	🗑️ ⚙️ ⏏️ ⏸️ ⏹️ ⏺️	0%

Figure 4. 'Job's list' pane



'№' - the column contains ticket of job. Each job has the unique ticket. This is not a number of job in the list. This value related to job's creating time. The less is value, the older is job. The jobs ticket values grown from top to bottom of list, but you can change this order using job control buttons.

'Input' - the column contains path to input data, which you entered when creating a job. If input name is large, then it truncates and you may see only last part of name.

'Output' - the column contains path to output data, which is entered when creating a job. It is also will be truncated as 'Input' if need.

№	Input	Output	Algorithm	State	Control	Progress
---	-------	--------	-----------	-------	---------	----------

Figure 5. 'Job's list' header

'Algorithm' - the column contains algorithm name, wich you choose for your job.

'State' - the column contains the current state of a job.

The job can have several states:

'Running' - the state means that job is currently processed.

'Stopped' - the state means that job is wait for being run. Job starts, when a free processor core appears. Some jobs can conflict with other, and they need wait before other jobs have been finished.

For example, if one job's output is another job's input.

'Finished' - the state indicates that job is successfully ended. You may delete this job from list. All data was stored on storage.

'Freezed' - the state indicates that you freeze this job. The job that will be frozen, can't start before you unfreeze it with job control buttons. This is useful if you do not want that job to be run.

'Error' - the state indicates that error has been corrupted when processing the job. There are many reasons for error: plugin init crash, file write/read error, invalid special parameters and etc. Mena'an clears all temporary data and tells you the error reasons. You need to delete job from job list, fix all problems and create the job again.

'Control' - the column provides job manipulation functions. We will cover it later.

'Progress' - the column indicates job's progress in percents. For large input data, this value may change very slowly. For optimization purpose progress value does not change by 1%, but by some piece. When progress' value reaches 100%, the job's state becomes 'Finished'.



Job's control

Each job has column with job's control button. Job element in list is shown on Figure 6.



Figure 6. Job element

Let's see each of control buttons.



Deletes a job. Any job can be deleted. All temporary files also will be deleted.



Freeze a job. Only not running job can be frozen.



Unfreeze a job. Only frozen job can be unfrozen.



Set job's priority to the lowest. Job will be moved to the bottom of the list.



Set job's priority to the highest. Job will be moved to the top of the list.



Decrease job's priority. Job will be moved to one position down in job's list.



Increase job's priority. Job will be moved to one position up in job's list.

Config

Overview

'Config' pane contains Mena'an's options. The pane is shown at Figure 7. As you see, there are several options at the option list. Each option controls special functions of Mena'an. The options have fixed value's set. You can choose from this set of values by clicking on the arrow button.

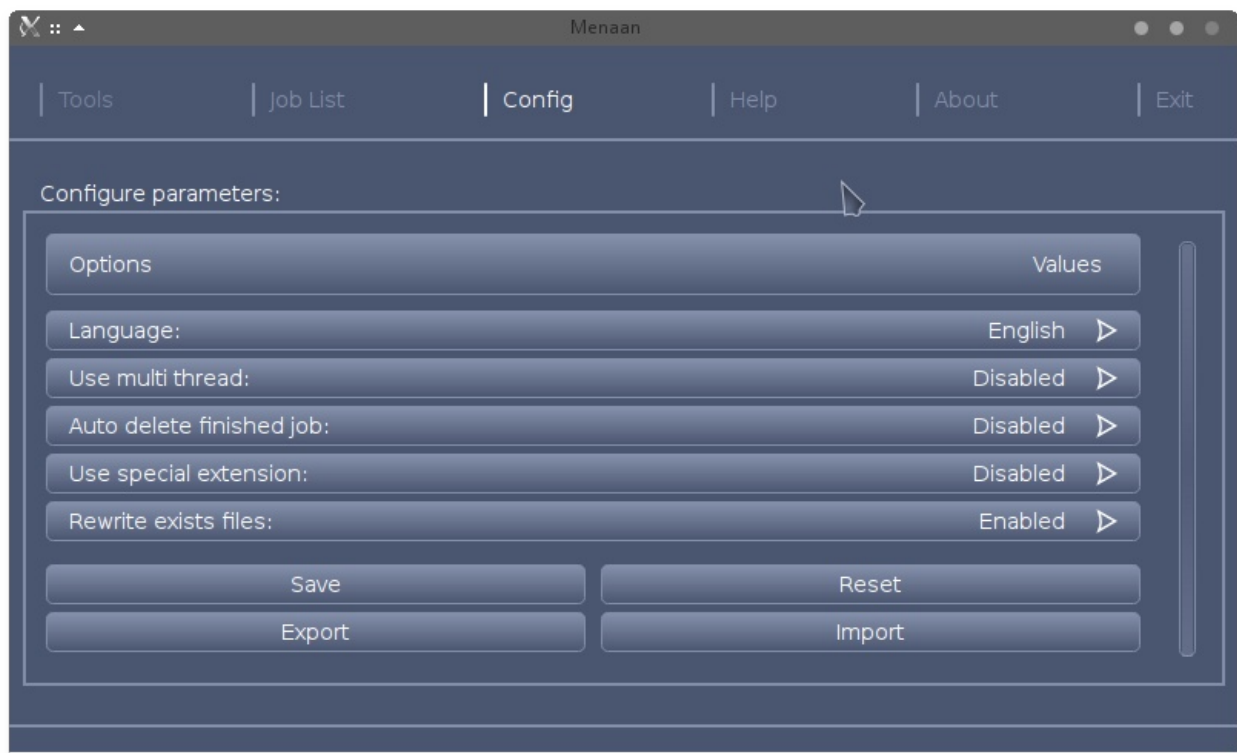


Figure 7. 'Config' pane



Options

Let's describe each option.

'Language' - the option controls Mena'an language. Mena'an supports many languages. If you want to add your language, please contact the developers. By default this option's value is set to 'English'.

'Use multi thread' - the option enables/disables using several thread. Each thread performs one job. More threads, fast job processing. Threads count depends on number of processor's cores, both real and logical. If your processor has only one core, then only one job will be running each time. By default this option's value is set to 'Enabled'. This value is recommended.

'Auto delete finish job' - the option enables/disables Mena'an's auto delete function. If option's value is set to 'Enabled', then each finished jobs will be deleted from the job's list, else you need to delete it manually. By default this option's value is set to 'Disabled'.

'Use special extension' - the option enables/disables Mena'an's special extension for output data. If option's value set to 'Enabled', then Mena'an adds to output data name 'ecb_enc'/'ecb_dec' and etc. By default this option's value is set to 'Disabled'.



'Rewrite exists files' - this options enables/disables rewriting of the existing files. If this option's value is set to 'Enabled', then when Mena'an creates output data, it rewrites already existing files, else if option's value is set to 'Disabled', then Mena'an adds to output data name unique symbols, so your files will be not lost. By default this option's value is set to 'Disabled'.

Be attentive when you change option's value. If you don't know what you do - do not do nothing.

After you change options, you need save it. This options can be applied to application after restart. Therefore, close Mena'an and run it again.

'Save' button saves all your changes. If config will be successfully saved, Mena'an shows you special message.

'Reset' button provides a way to reset all option's value to default.

Buttons 'Import' and 'Export' provide the way to import or export Mena'an's config file.



Help

'Help' pane contains some help pages. This pane is shown on Figure 8.

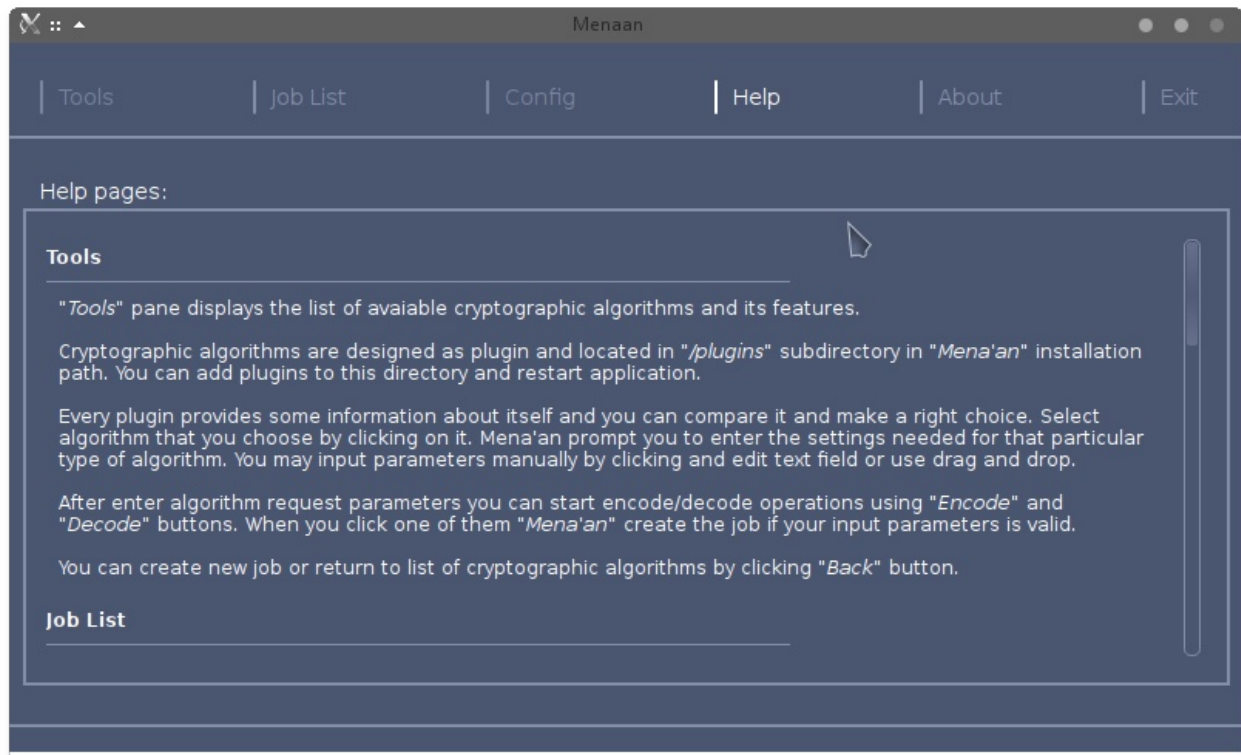


Figure 8. 'Help' pane

Exit

'Exit' pane performs safety exit from Mena'an. When you decide to exit from the application, some jobs can be run. If you confirm exiting all running jobs will be stopped and deleted. All temporary data also will be cleaned. Be careful or you will loose your data. The 'Exit' pane is shown at Figure 9.

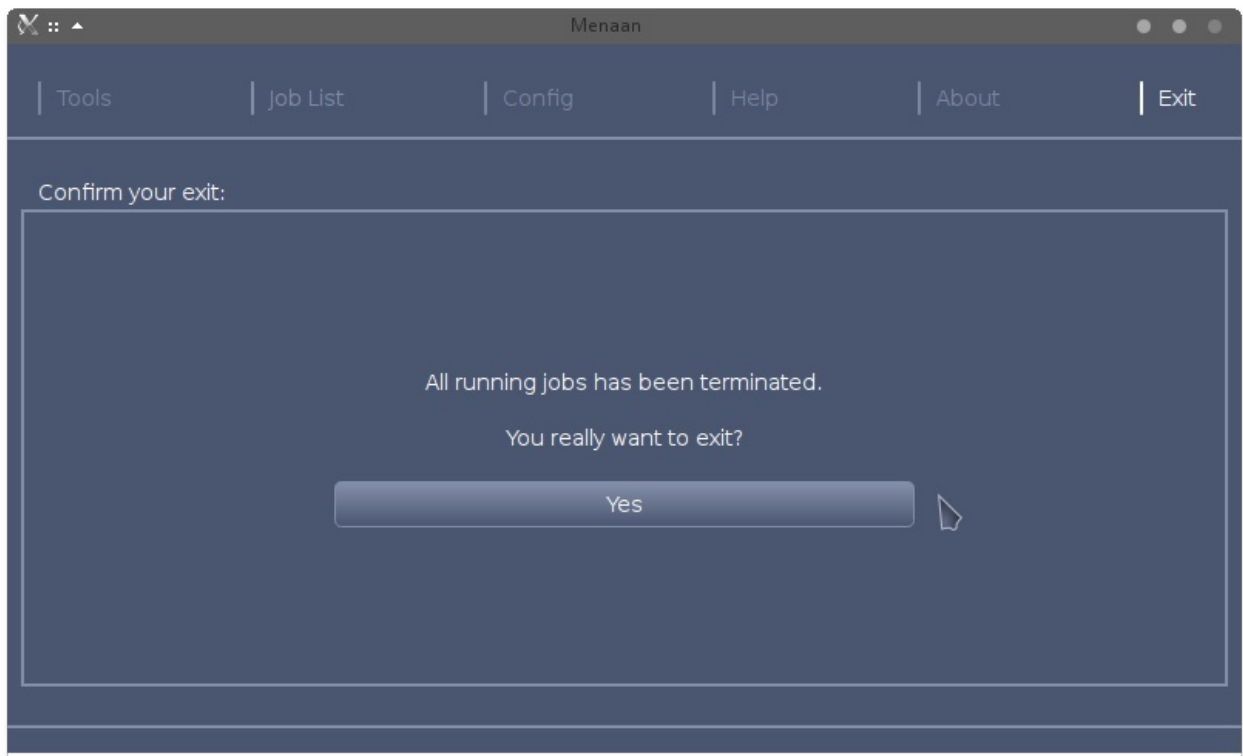


Figure 9. 'Exit' pane



From developers

Mena'an is developing application, therefore it has a lot of errors, non optimized code and some bad solution. If you find a bug or you have more optimized code please contact with developers. Mena'an needs more plugins and language's translations. If you can contribute to plugins or translations contact with developers.

If you have some work (may be in your company) please write to developers to get CV.

If you decide on creating the plugin, you must read 'PluginHowTo.pdf' at first. This file is located in 'develop' directory. All your questions you may write to developers.

Interima.x2 team - consist of one real person. Therefore not always possible to respond immediately to your questions. Keep it in mind and be patient.

E-mail: Interima.x2@gmail.com

Developer's blog: <http://exsector.blogspot.com/p/menaan-project.html>

Source code: [git.interima.x2/menaan/](https://github.com/interima.x2/menaan/)

