



# ***LRIOBF***

## **Get LRIOBF:**

LRIOBF can be downloaded on La Rochelle Innovation website **[www.lr-i.com](http://www.lr-i.com)**.

Once you have downloaded and uncompressed LRIOBF.zip archive, you will find three command line binaries : one for Windows, one for Mac OS X and one for Linux.

It's recommended to move the binary for your working platform in a directory listed in your ::env(PATH) such as C:\Windows\system\ or /usr/bin/ (depending on the platform).

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## **Download Tclkit runtimes:**

If you want to try your starkits or if you want to build starpacks, you will also need to download Tclkit runtimes from the web.

For this presentation I have downloaded from [www.equi4.com](http://www.equi4.com) a runtime for Windows renamed **tclkit-win32.exe**, another runtime for Mac OS X renamed **tclkit-darwin** and a runtime for Linux renamed **tclkit-linux**.

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## **Create a very simple VFS:**

My first example use a very simple VFS with only one Tcl script: main.tcl stored in the directory simple.vfs. Here is the content of main.tcl:

```
package require starkit
starkit::startup
package require Tk
pack [::ttk::frame .f] -expand 1 -fill both
pack [::ttk::button .f.b -text Simple! -command exit]
```

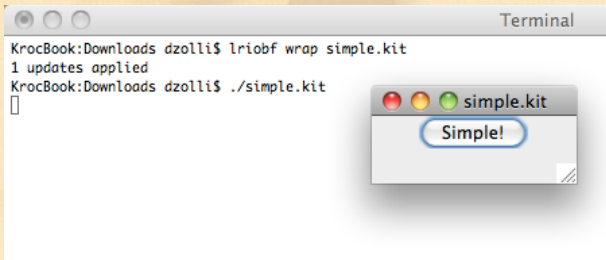
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## **Build a starkit:**

Then I can build and try my first starkit:



```
KrocBook:Downloads dzolli$ lriobf wrap simple.kit
1 updates applied
KrocBook:Downloads dzolli$ ./simple.kit
█
```

simple.kit

Simple!

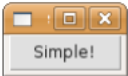


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## **Build an encrypted starkit:**

Just replace wrap by protect and the job is done.

```
kroc@KrocBuntu: /media/mac/dzolli/  
Fichier Édition Affichage Terminal Onglets Aide  
kroc@KrocBuntu:/media/mac/dzolli/Downloads$ lriobf protect simple.kit  
This copy of LRIObf is registered to:  
  D. Zolli - LR-I <zolli.david@lr-i.com>  
11 updates applied  
kroc@KrocBuntu:/media/mac/dzolli/Downloads$ ./simple.kit  
[ ]
```





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## Build an encrypted starnpack:

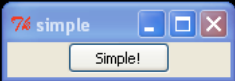
We still use the protect command but with the -runtime argument:

```
c:\ Invite de commandes

Z:\dzolli sur mon Mac\Downloads>lriobf protect simple.exe -runtime tclkit-win32.exe
This copy of LRIObf is registered to:
  D. Zolli - LR-I <zolli.david@lr-i.com>
10 updates applied

Z:\dzolli sur mon Mac\Downloads>simple.exe

Z:\dzolli sur mon Mac\Downloads>
```





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## **Performance comparison:**

Testing 3display.kit (10 runs):

|         |   |
|---------|---|
| Tcl:    | 1020611 microseconds per iteration              |
| LRIObf: | 1029664 microseconds per iteration (+0.01 sec.) |

Testing coccinella.kit (10 runs):

|         |   |
|---------|---|
| Tcl:    | 2536311 microseconds per iteration              |
| LRIObf: | 3091060 microseconds per iteration (+0.55 sec.) |

Testing lrilabel.kit (10 runs):

|         |   |
|---------|---|
| Tcl:    | 3447467 microseconds per iteration              |
| LRIObf: | 3578531 microseconds per iteration (+0.13 sec.) |

Testing tkabber.kit (10 runs):

|         |   |
|---------|---|
| Tcl:    | 6881367 microseconds per iteration              |
| LRIObf: | 7424918 microseconds per iteration (+0.54 sec.) |





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## **What's the result:**

Before:

```
package require starkit
starkit::startup
package require Tk
pack [::ttk::frame .f] -expand 1 -fill both
pack [::ttk::button .f.b -text Simple! -command exit]
```

After:

```
::Lriobf::eval      {S4ymANqx8/sGmbekdWdANVrV/AeGCJzwbFPpxTNLZburhemCrWQHe0+sGJPW/ezq/
J0TfXBehLzRzuV8aolaCaYtczQUppq1eu7H0T6BcQP2PXFkXCJSV+ekasP09aKrWCKxGNS+6teoyQcf6/
ORP7AuVhQZQ5DLdtZ9zHFWVT0Bi5jyc5acZeH8//izwUHvEyfBdE7mnLCP8idT1ydI=}
```





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## **Limitations:**

- Only 3 supported platforms: Windows, Mac OS X and linux
- A bit slower than pure Tcl scripts

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## **Benefits:**

- Simple to use
- Very affordable: 40€
- Works with any Tcl version (8.4 or 8.5 or 8.6)
- Protect application **and** wrapped Tcl packages

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