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# Notetaking with ReStructuredText

*Release 1.0.0*

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**Important:** This project is discontinued. Please use [tp-note](#) instead. The code of *tp-note* is generic and works with all markup languages.

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Markup languages like `reStructuredText` are perfectly suited for quick note taking. Type your notes with your favourite editor, view and browse them with Chromium, Chrome or Firefox.

All you need is the so called `rst-note` ash-script, the python packages [restview](#), [docutils](#), [pygments](#) and any browser of your choice: Chromium, Chrome or Firefox.

This is the documentation of the `bin/rst-note` program. `rst-note` runs under Linux and Windows.<sup>1</sup> The script operates in four modes depending on it's options (see ):

**New note** Creates a new context depending *rst* note file.

**Edit notes** Launches an editor.

**View notes** Launches a live-previewer (Firefox, Chrome or Chromium).

**Sync filename** Renames the filename to be in sync with the document's title.

The project is hosted on Github: [restructuredtext-notetaking](#).

### Quickstart:

1. Read the installation guide for *Linux* or *Windows*.
2. Read about the 2 most common use cases in *How students take notes*.

## 1 How students take notes

A fellow student still uses paper and pen. I ask her why and she replied "I can better concentrate. My computer distracts me. I would do all kind of other things, but not listening."

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<sup>1</sup> MacOSX ships with the BSD `sed` tool which is not compatible with GNU `sed`. Workaround: run in `rst-note` in *busybox*.

This is certainly true. As I am concerned, I am not good at logistics. For me having all documents and notes in one little machine is a real blessing.

To illustrate how to work with `rst-note` here are my most common workflows.

## 1.1 The lesson starts

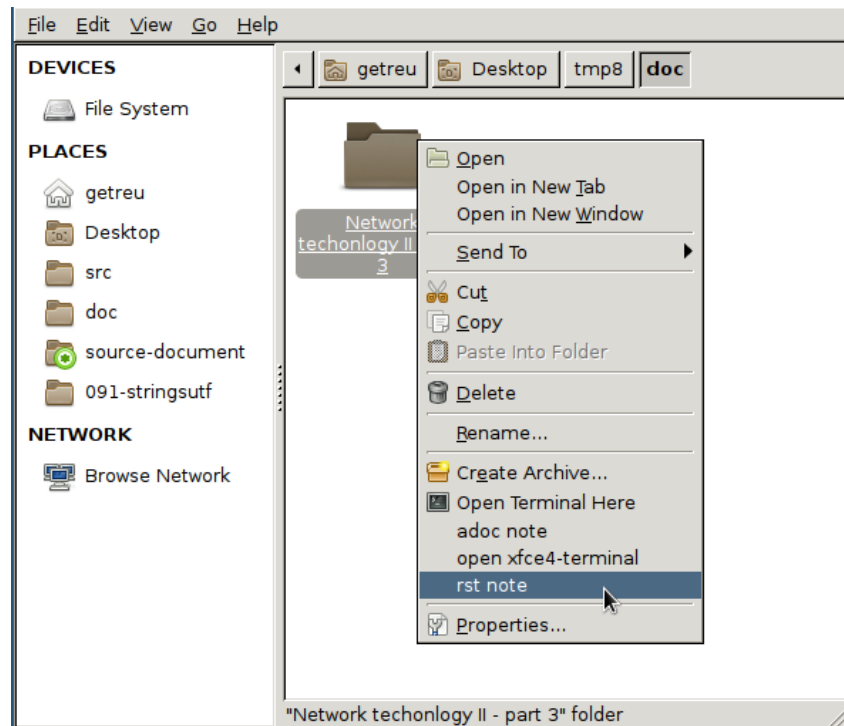


Fig. 1: Create a new note in the selected directory

Alternatively you can open the folder you want to create a new note in and right-click on some empty white space. Both actions create a new document as shown in the figure below.

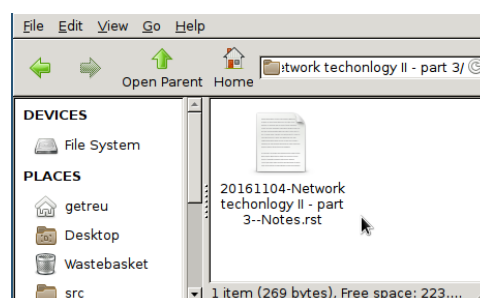


Fig. 2: Resulting new file

After creation of the new file `rst-note` opens an editor and the `viewrest` viewer.

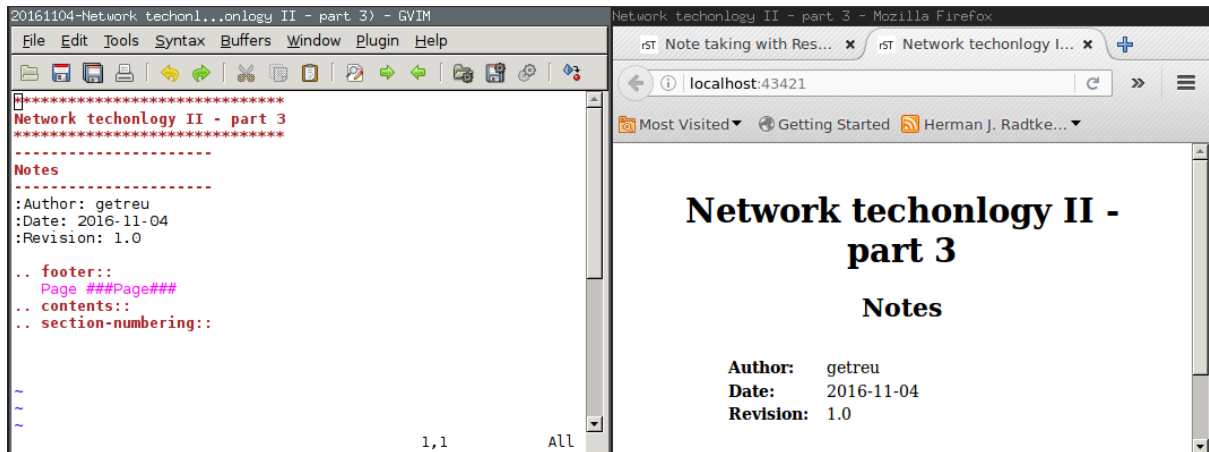


Fig. 3: Editor and viewrest viewer window opens automatically

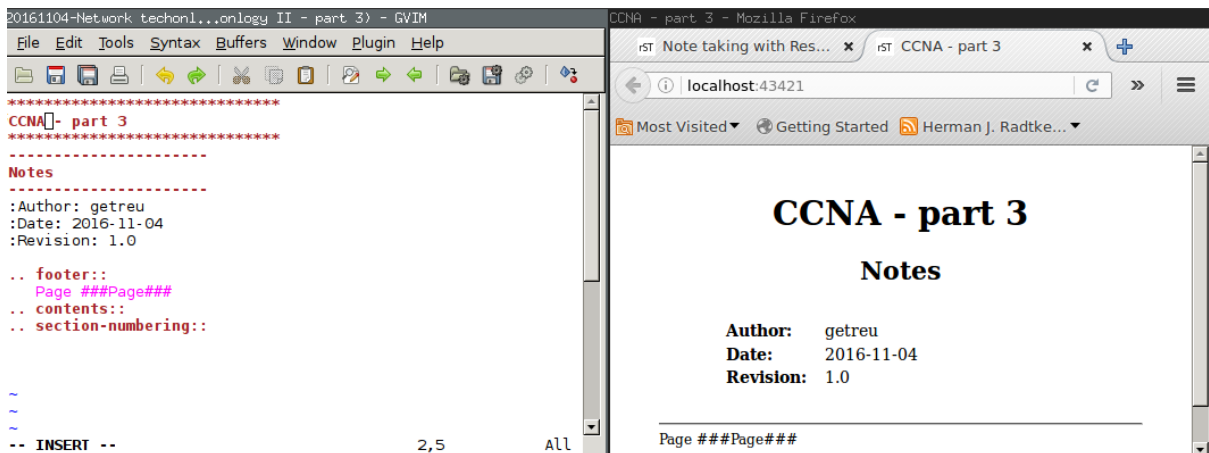


Fig. 4: Change document title

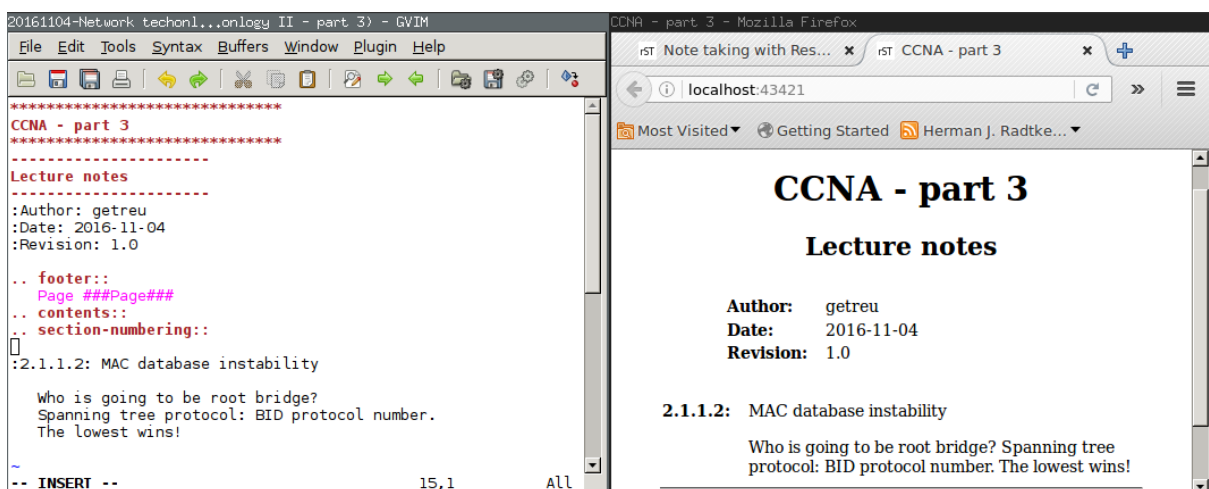


Fig. 5: Adding content

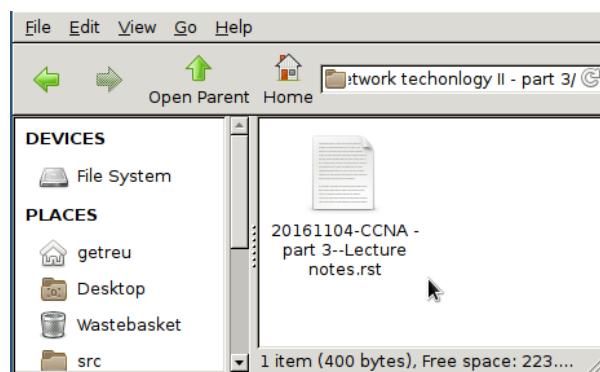


Fig. 6: `rst-note` synchronizes document title and filename when the editor closes

**Note**

Before and after launching the editor `rst-note` renames the file to be in sync with the `reStructuredText` title. For more details see *Title filename sync*.

## 1.2 Taking notes on an existing file

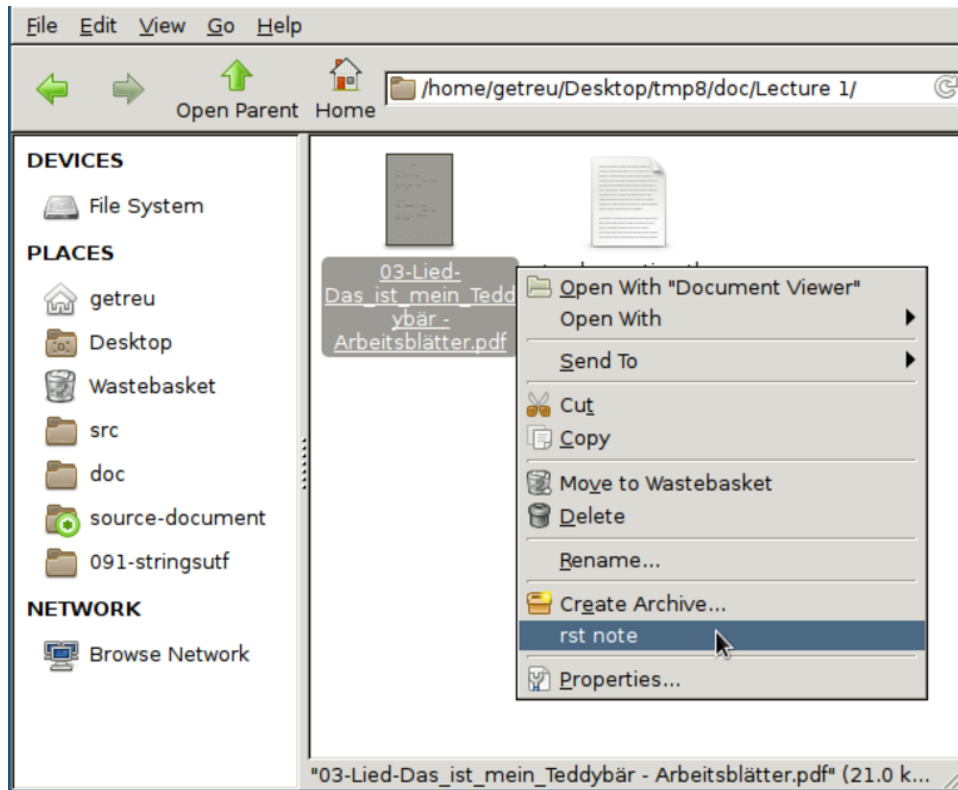


Fig. 7: Launching `rst-note` with the selected filename as parameter

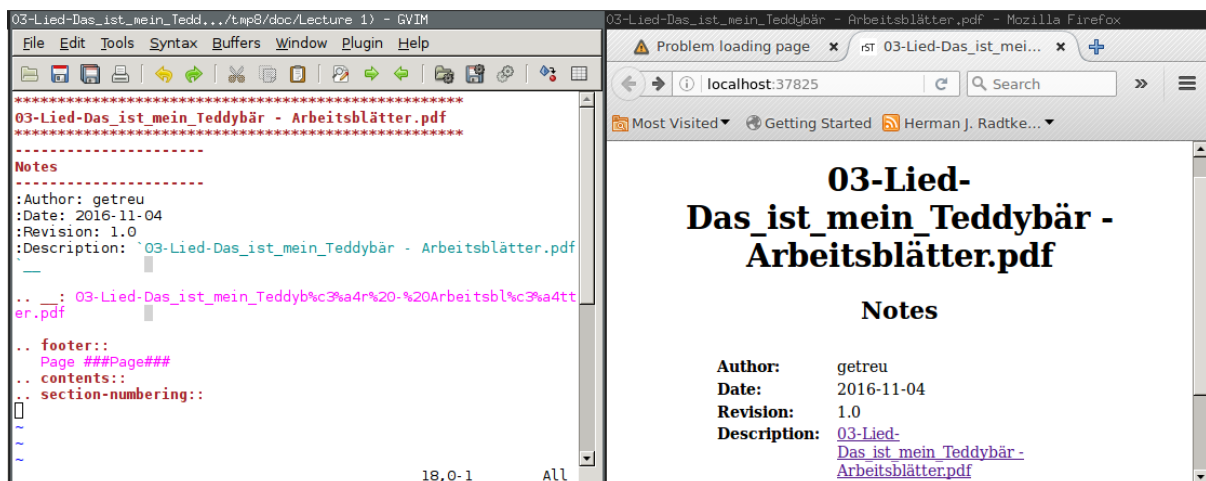


Fig. 8: `rst-note` creates a new document and opens the editor and viewer

The above figure shows the metadata `rst-note` has inserted automatically.

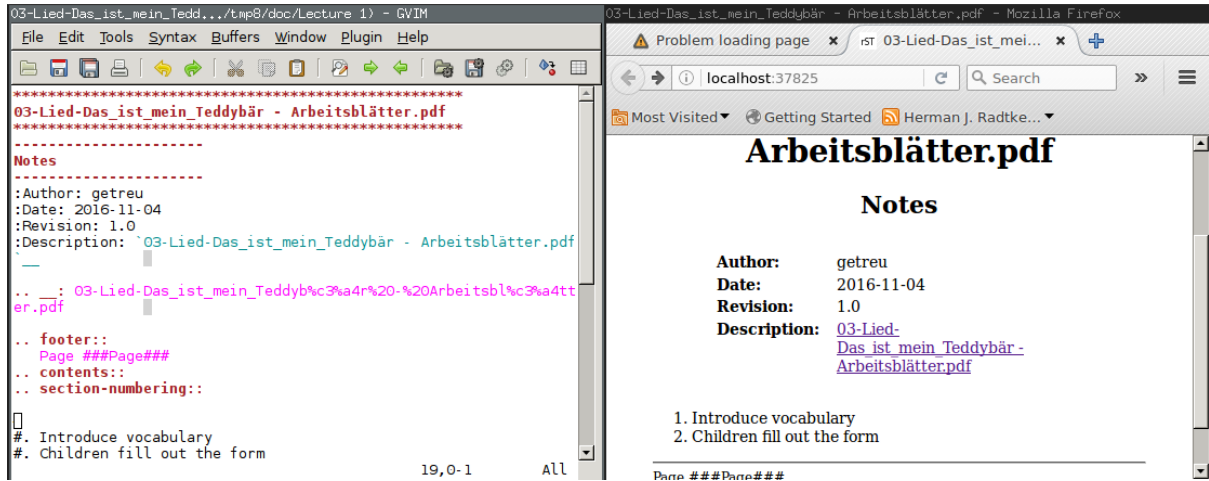


Fig. 9: Adding some content

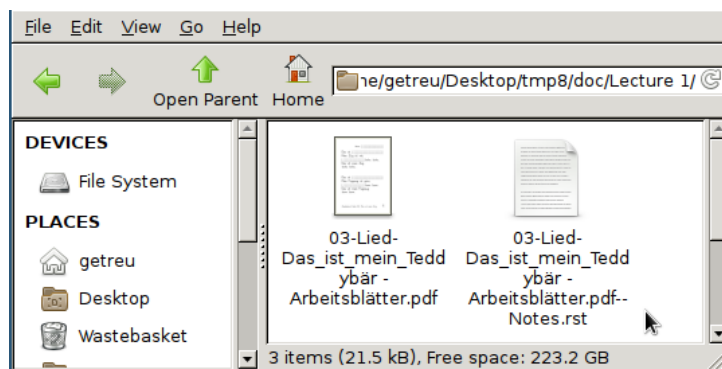


Fig. 10: The new file with annotations

## 2 Create a new note

There are several ways to launch `rst-note`.

### Linux

- Launch the commands in shell as described the sections *Syntax* below.
- Right click on a file or directory in your file-manger and choose *rst-note* in the context menu. See *Linux file manager configuration*.

### Windows

- Drag and drop a file or directory on the shortcut `rst-note.bat` on your desktop.  
This method also works in very restricted environments. The only rights you need is to be allowed to execute portable binaries and batch scripts.
- Double-click the shortcut `rst-note.bat` on your desktop. This will place a new note on your desktop.
- Right click on a file or directory in file explorer and choose *rst-note* in the context menu. See *Windows file explorer configuration*.

### 2.1 Invoking the script

```
rst-note -h
```

shows a short help text with available command line options:

```
/usr/local/bin/rst-note creates, edits or views an reStructuredText note.

usage:

    /usr/local/bin/rst-note [-h] [-ro|-so|-eo] | [<File.rst>|<Dir>|<File>]

<Dir>|<File>: directory where the new note file will be created
(current directory if none).
If <File> is given a new rst note will be created next to that file.
If <File.rst> is given the file is edited.
Filename of <File> is changed when not in sync with title.

Options:
-ro      Do not open editor, open viewer only.
-eo      Do not open viewer, only new note or, sync filename and edit.
-so      Do not open editor or viewer, only new note or sync filename.
```

Table 1: Mapping `rst-note` options to functions

Option	Create a new note	Launch editor	Launch viewer	Sync title-filename
<i>without</i>	Y *	Y	Y	Y
-ro	Y *	N	Y	N
-eo	Y *	Y	N	Y
-so	Y *	N	N	Y

Table 2: Legend

Symbol	Meaning
Y	is included
N	not included
Y *	If a note with the same filename exists on disk already, no new note is created.

## 2.2 Directory as parameter

### Syntax 1

```
rst-note <path>/<dir>
```

creates the following document<sup>1</sup>:

```
<path>/<dir>/YYYYMMDD-<dir>--Notes.rst
```

```
*****
<dir>
*****
-----
Notes
-----
:Author: $USER
:Date: YYYY-MM-DD
:Revision: 1.0
```

### Example 1

```
rst-note 'doc/Lecture 1'
```

creates the following document:

```
doc/Lecture 1/20161102-Lecture 1--Notes.rst
```

```
*****
Lecture 1
*****
-----
Notes
-----
:Author: getreu
:Date: 2016-11-02
:Revision: 1.0
```

## 2.3 No parameter

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<sup>1</sup> The template is slightly simplified.



## Syntax 2

It is also possible to invoke the script without options:

```
rst-note
```

The result is the same as above but the current working directory defines <path>/<dir>.

## Example 2

```
cd 'doc/Lecture 1'  
rst-new-note
```

creates the following document:

```
doc/Lecture 1/20161102-Lecture 1--Notes.rst
```

```
*****  
Lecture 1  
*****  
-----  
Notes  
-----  
:Author: getreu  
:Date: 2016-11-02  
:Revision: 1.0
```

## 2.4 Filename as parameter

The filename should be some existing local file you want to annotate. For example I use this feature to note from where I have downloaded a .pdf.

## Syntax 3

When invoke with a filename, no date stamp is prepended.

```
rst-note <path>/<dir>/<filename>
```

The new file will look like this:

```
<path>/<dir>/<filename>--Notes.rst
```

```
*****  
<filename>  
*****  
-----  
Notes  
-----  
:Author: <$USER>  
:Date: 2016-11-03  
:Revision: 1.0
```

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```
:Description: `<filename>`__  
.. __: <url-encoding(filename)>
```

### Example 3

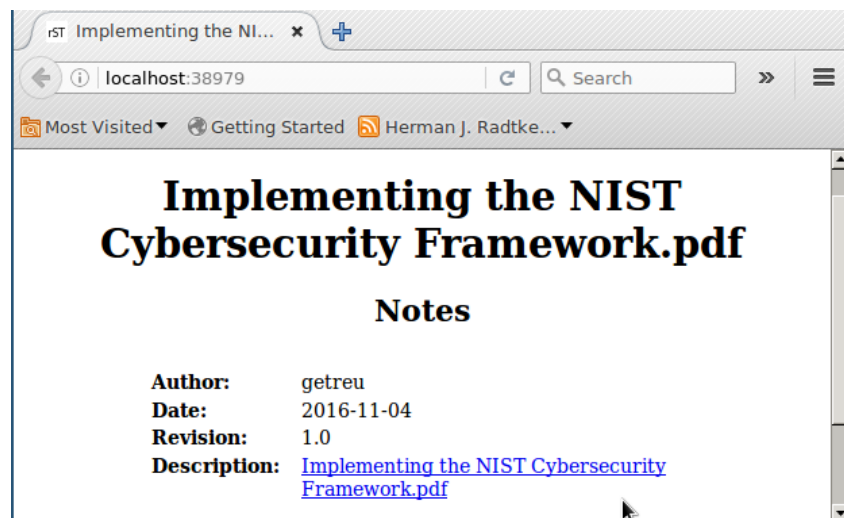
```
rst-new-note 'doc/Implementing the NIST Cybersecurity Framework.pdf'
```

creates the following document:

```
doc/Implementing the NIST Cybersecurity Framework.pdf--Notes.rst
```

```
*****  
Implementing the NIST Cybersecurity Framework.pdf  
*****  
-----  
Notes  
-----  
:Author: getreu  
:Date: 2016-11-03  
:Revision: 1.0  
:Description: `Implementing the NIST Cybersecurity Framework.pdf`__  
.. __: Implementing%20the%20NIST%20Cybersecurity%20Framework.pdf
```

Before quitting the `rst-note` script executes it's *editing-mode*. This opens in your editor the completed template (see example above) and a live-previewer showing the rendered *rst* file:



## 3 Editing notes

### 3.1 Syntax 4

```
rst-note <path>/<filename>.rst
```

launches the `gvim` editor by default. Replace `gvim` by any editor of your choice. At the same time a `chrome` or `chromium` window will pop up showing the live rendition of your `rst` file. You need to have the `restview` installed on your system. You may want to use some autosave editor feature in order to observe changes immediately in the rendered preview live.

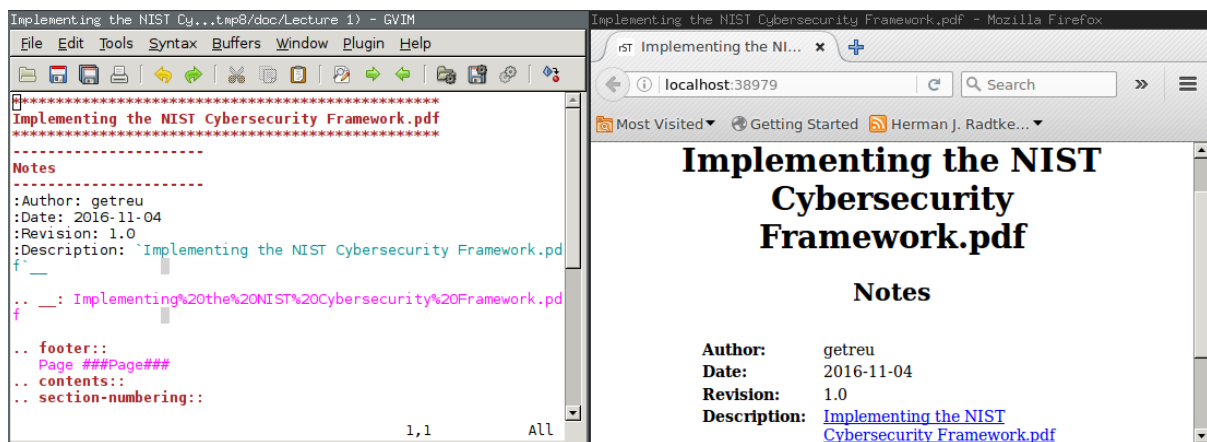
At the beginning and the end of the `rst-note` script another helper function `ChangeFilename` is called. It guarantees that any change in the `rst` document title will replicate in the filename of that `rst` file. This guarantees that the filenames of `rst` notes always correspond to their `rst` document title allowing you to find your notes quickly in your directory structure. See *Title filename sync* for more details.

#### Note

You can disable the title-filename-sync feature by adding a blank line at the beginning of the `rst` document.

### 3.2 Example 4

```
rst-note 'Implementing the NIST Cybersecurity Framework.pdf--Notes.rst'
```



The same result is obtained by repeating the same command you used to create this note<sup>2</sup>:

```
rst-note 'Implementing the NIST Cybersecurity Framework.pdf'
```

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<sup>2</sup> This only works if you have not changed the original title in the meantime!

## 4 Viewing notes

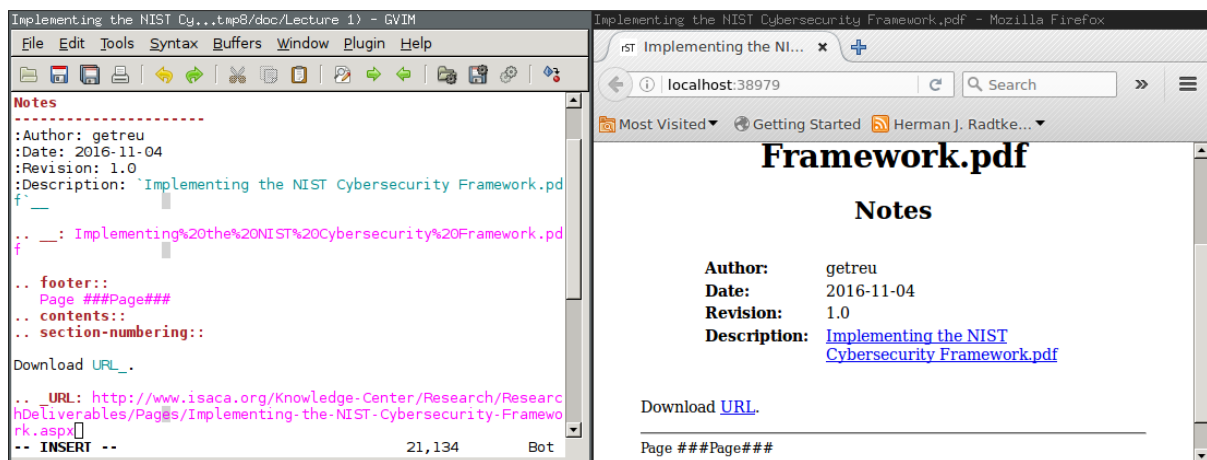
### 4.1 Syntax 5

```
rst-note -ro <path>/<filename>.rst
```

launches `restview` which opens a live-rendition of the current document in your default browser.

### 4.2 Example 5

```
rst-note -ro 'Implementing the NIST Cybersecurity Framework.pdf--Notes.rst'
```



All text in the above example was automatically generated by the `rst-new-note` script only the last link *Download URL* was added “by hand”. This is particularly useful for a short note about the source of a downloaded document.

## 5 Title filename sync

Consider the following note file:

```
20151208-Make this world a better place--Suggestions.rst
```

The filename has 3 parts:

```
<sort tag>--<simplified-title>--<simplified-subtitle>.rst
```

A `<sort tag>` can be a

- *chronological sort tag* or

```
20140211-  
20151208-
```

- *a sequence number sort tag.*

```
02-  
08-  
09_02-
```

`<sort tag>` can be any combination of 0123456789-\_\_.

When `rst-note` creates a new note based on a directory, it prepends a *chronological sort tag* of today. The `<simplified-title>` part is derived from the parent directory name omitting its own *sort tag*.

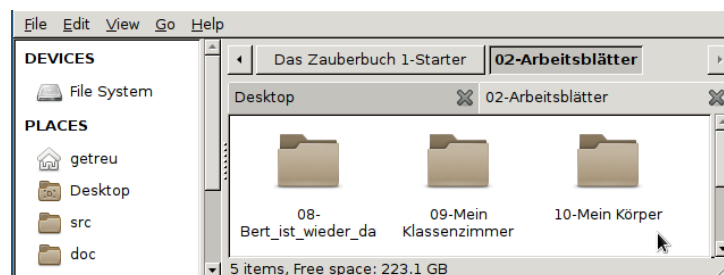


Fig. 11: Sequence number sort tag

The shell command

```
rst-note '10-Mein Körper'
```

will result in a new file:

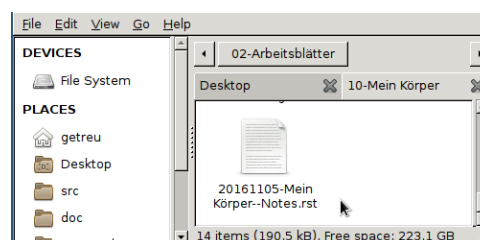


Fig. 12: File: 10-Mein Körper/20161105-Mein Körper--Notes.rst

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**Note:** The parent directory's sort tag is never used to compose a filename for a new note.

---

When `rst-note` creates a new note based on a filename no *sort tag* is prepended.

Before and after editing the `rst-note` analyses the title and subtitle of the *rst* file and simplifies them in a file-system friendly form. If the result does not equal to `<simplified-title>--<simplified-subtitle>` the filename is changed on disk. Potential *sort tags* remain untouched.

---

**Tip:** You can disable the title-filename synchronisation feature by prepending the title string or the subtitle string with one more more whitespace.

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**Attention:** Title and subtitle strings are only taken into account for filename synchronisation when they are defined within the first 6 lines of the *rst* document.

---

**Note:** `rst-note` might change the note's filename but never changes an *sort tag*!

---

For details about the `<simplified-title>--<simplified-subtitle>` string refer to the `SanitizeFilename()` function in `bin/rst-note`.

## 6 Installation and configuration

`rst-note` runs on Linux and Windows. For Windows installation and configuration see section *Windows* below.

### 6.1 Linux

1. Install the rst-live-previewer `restview`.
2. Download the note-taking-script `bin/rst-note` from Github [getreu/restructuredtext-notetaking](#)
3. Copy it in a location of your `$PATH` and make it executable for everyone.

```
sudo cp rst-note /usr/local/bin
sudo chmod a+rx /usr/local/bin/rst-note
```

4. Install some helper packages (most should be already on your system).

```
sudo apt-get install sed vim-gtk
```

Replace `vim-gtk` with an editor of your choice. Configure `rst-note` accordingly.

5. Configuration: At the beginning of `rst-note` you will find a section enclosed in the comments `CONFIGURATION SECTION START` and `CONFIGURATION SECTION END`.

---

**Note:** The only file you edit to change the default choices for *editor* and *viewer* under Linux is `rst-note`. **Not** `rst-note.bak`!

---

Here you can specify what editor you want to use. Make sure that your editor does not fork when launched. If it does fork, the script will still work but when you quit, no `rst-title-filename` sync will occur. Outside the `CONFIGURATION SECTION` no changes should be necessary.

**Warning:** The environment variables `ADOC_EDITOR` or `ADOC_VIEWER` -when defined- have precedence over settings in the `CONFIGURATION SECTION` and will override them.

6. Test the installation: open a console window and type `rst-note`. An *editor* and *viewer* window containing a note template should open.
7. Optional: integrate the scripts with your file-manager (see *Integration with file manager*).

## 6.2 Windows

1. Install the rst-live-previewer [restview](#).
2. Download the files `bin/rst-note`, `bin/rst-note.bat` and `bin/busybox.exe` from Github [getreu/restructuredtext-notetaking](#)
3. The version of `busybox` in the above repository is probably outdated. Please get a newer version from here: <http://frippery.org/busybox/>
4. Copy the 3 files in a directory of your choice (hereafter referred to as `BIN_DIR`).
5. Configuration:

At the beginning of `rst-note.bak` you will find a section enclosed in the comments `CONFIGURATION SECTION START` and `CONFIGURATION SECTION END`.

---

**Note:** The only file you edit to change the default choices for *editor* and *viewer* under Windows is `rst-note.bat`. **Not** `rst-note`!

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**Important:** New notes are created with an Unicode BOM indicating Unicode encoding. Do not use the `notepad` editor coming with Windows older then Vista. These old verisons of `notepad` do not handle Unicode correctly. Use *Wordpad* or and other modern Unicode editor instead.

---

Here you can specify the path to the [restview](#)-program. Next configure the path to your editor of your choice. Make sure that your editor does not fork when launched. If it does fork, the script will still work but when you quit, no *rst-title-filename* sync will occur. Outside the `CONFIGURATION SECTION` no changes should be necessary.

6. Create a shortcut to `rst-note.bat` on your desktop, click on properties and change the shortcut to *run minimized*. Let the *start in* path empty.
7. Test the installation: drag a file or directory on the `rst-note` Shortcut on your desktop. An *editor* and *viewer* window should open.
8. Optional: integrate the scripts with your file-manager (see *Integration with file manager*).



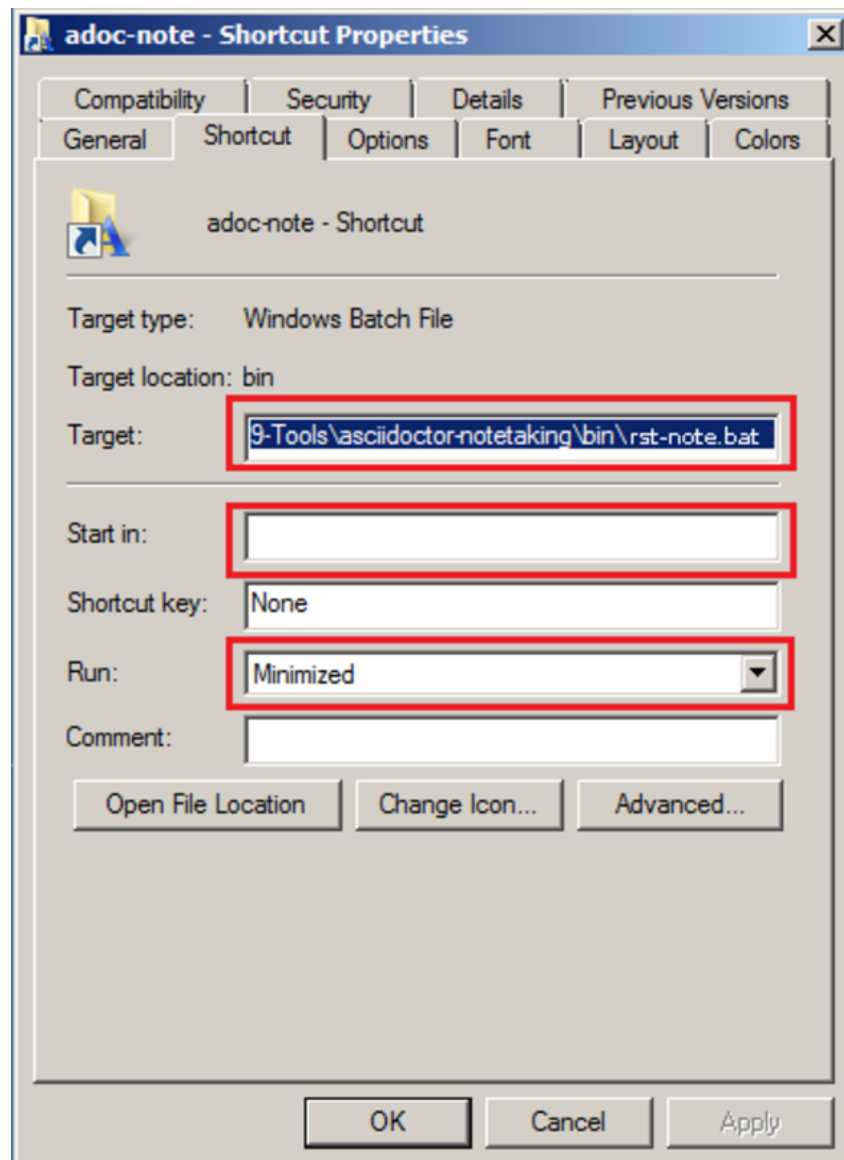


Fig. 13: Shortcut properties

## 6.3 Integration with file manager

`rst-note` integrates nicely with your favorite *Linux file manager* or *Windows Explorer*.

### Linux file manager configuration

The example below shows the *Thunar* filebrowser's custom actions.

Most file-manager allow extending the context menu. As an example the following images show the configuration of the Thunar-file-manger.

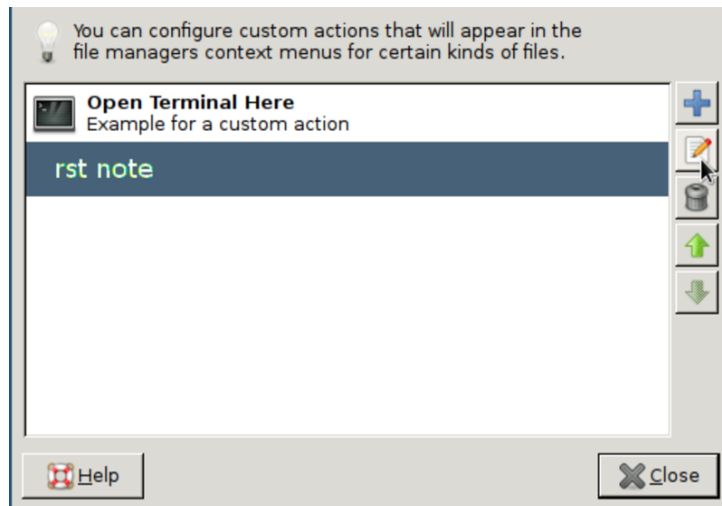


Fig. 14: *Thunar* filebrowser's custom actions

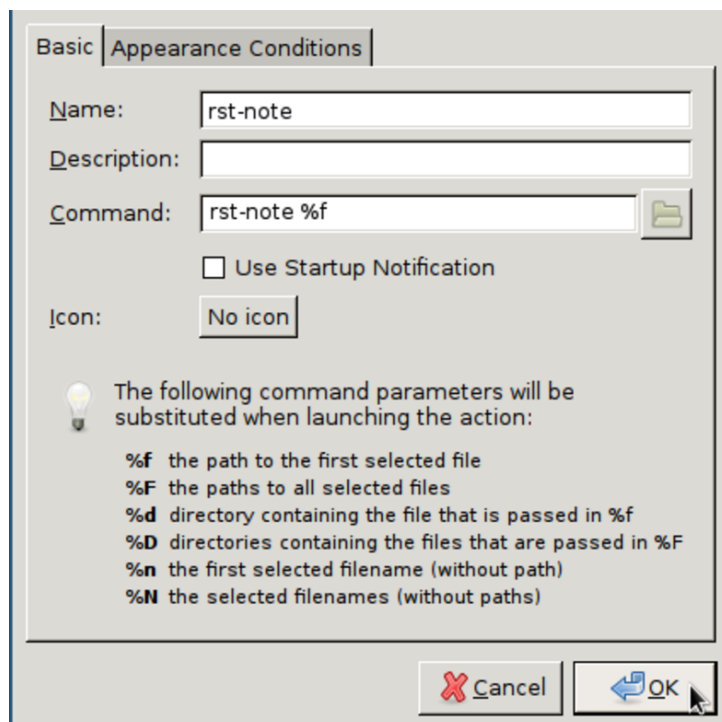


Fig. 15: Edit custom action

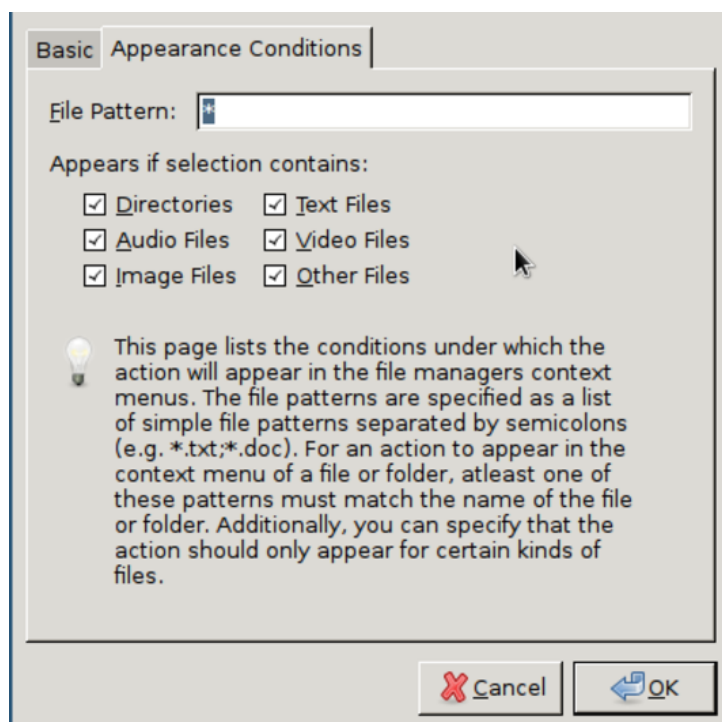


Fig. 16: Appearance condition

## Windows file explorer configuration

1. Open a folder containing an `.rst` file.
2. Right-click the `.rst` file and point to *Open with* and then click *Choose default program*.

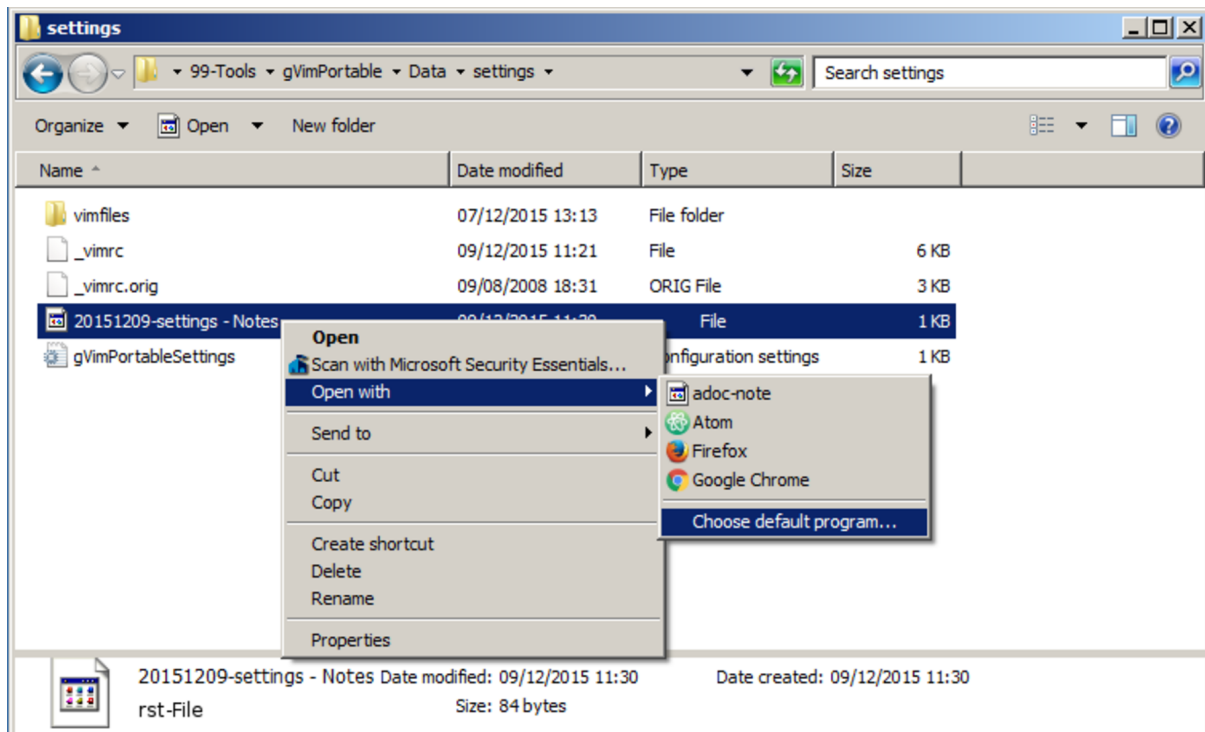


Fig. 17: Choose default program

3. Select the *Always use the selected program* and then click *Browse...*
4. Click *Browse...* then browse to your `BIN_DIR` directory, select `rst-note.bak` and click *Open* and later *Ok*.

### Further reading

- [Change the program that opens a type of file](#)
- [How to Add Any Application Shortcut to Windows Explorer's Context Menu.](#)

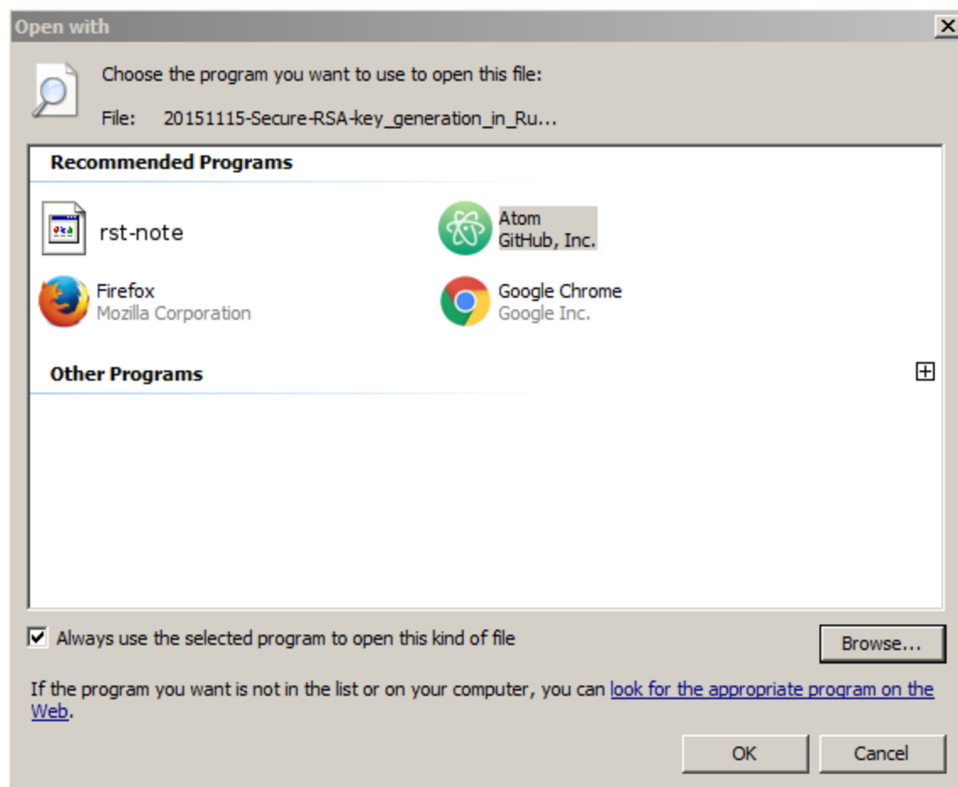


Fig. 18: Click on *Browse...*

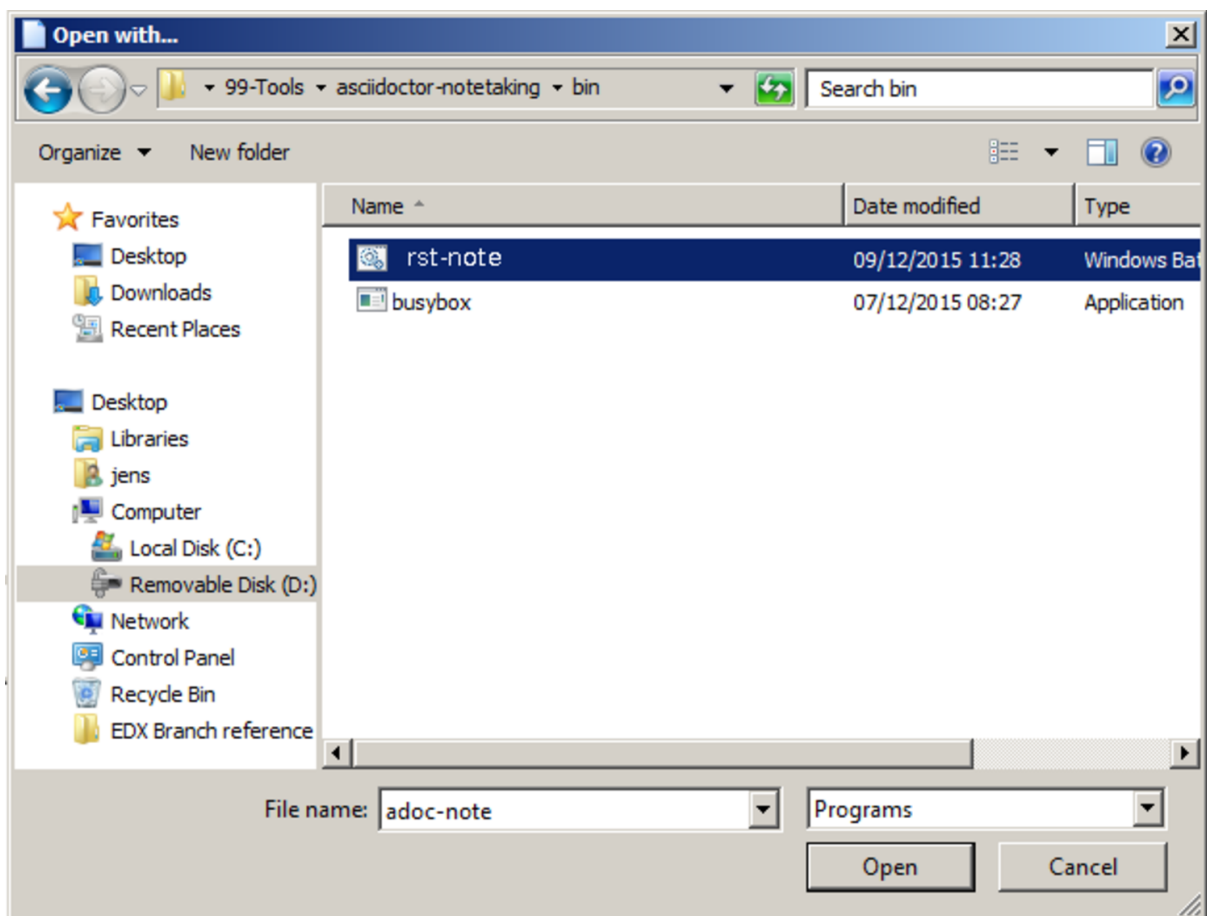


Fig. 19: Select *rst-note*.