

How to Create an Internet-Draft Using Markdown

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Why Markdown?

Because this...

```
--- middle
# Introduction
Here is some intro text.
```

is easier for *most* people to understand than this...

```
<middle>
  <section title="Introduction">
    <t>Here is some intro text.</t>
  </section>
</middle>
```

What is Markdown?

- Lightweight text formatting language
- Developed by John Gruber in 2004 with help from Aaron Swartz
- <https://daringfireball.net/projects/markdown/>
- Inspired by customs and conventions emerging out of text-based email

"The overriding design goal for Markdown's formatting syntax is to make it as readable as possible. The idea is that a Markdown-formatted document should be publishable as-is, as plain text, without looking like it's been marked up with tags or formatting instructions."

*"The idea for Markdown is to make it easy to read, write, and edit prose. HTML is a **publishing** format; Markdown is a **writing** format."*

Markdown example

```
# First level heading
```

Some text

```
## Second level heading
```

- first bullet with *italic text*
- second bullet with **bold text**
- third bullet

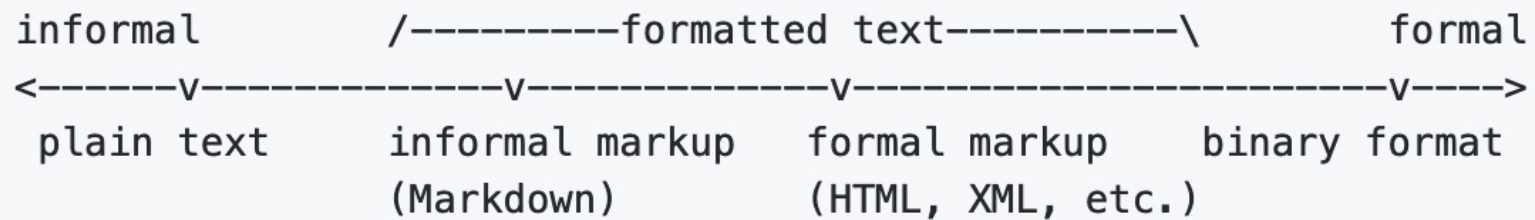
```
### Third level heading
```

Visit [the IETF's website](<https://www.ietf.org>)

```
## Second level heading  
(you get the idea...)
```

Comparison of Markdown to other formats

[RFC 7764](#) has this useful chart:



The many flavors of Markdown

- "Original" from John Gruber
- MultiMarkdown
- GitHub Flavored Markdown (GFM)
- pandoc
- kramdown
- Fountain
- CommonMark
 - An attempt at standardizing Markdown by a group of advocates
 - www.commonmark.org
- **MANY** other variants...

The text/markdown media type and an IANA Registry

Informational [RFC7763](#) (March 2016):

- registers the text/markdown media type
- defines a "Markdown Variants" registry established by IANA
- registers "Original" in that new registry

IANA Registry at:

- <https://www.iana.org/assignments/markdown-variants/markdown-variants.xhtml>

RFC 7764

- Informational RFC in March 2016
 - <https://tools.ietf.org/html/rfc7764>
- Title: "**Guidance on Markdown: Design Philosophies, Stability Strategies, and Select Registrations**"
- A good read to understand more about Markdown
- Registers with IANA:
 - a number of common Markdown variants, including:
 - kramdown-rfc2629
 - RFC7328 - Pandoc2rfc

Building an Internet Draft using Markdown

At a basic level, the various tools do this:

1. Take a markdown file and generate "xml2rfc" XML

- Originally often called "RFC 2629 XML", but then later defined in RFC 7749 "xml2rfc v2" and now [RFC 7991](#) "xml2rfc v3"

2. Run "xml2rfc" on the resulting XML to generate TXT

First step: choosing your markdown toolchain

- Kramdown-rfc
 - <https://github.com/cabo/kramdown-rfc2629>
 - Developed in Ruby by Carsten Bormann
 - Can be used online at: <https://xml2rfc.tools.ietf.org/experimental.html>
- mmark
 - <https://github.com/miekg/mmark>
 - Developed in Go by Miek Gieben
 - Supported by Docker image from Paul Jones:
<https://github.com/paulej/rfctools>
- This tutorial today will only cover kramdown-rfc

Getting Started with kramdown-rfc (locally)

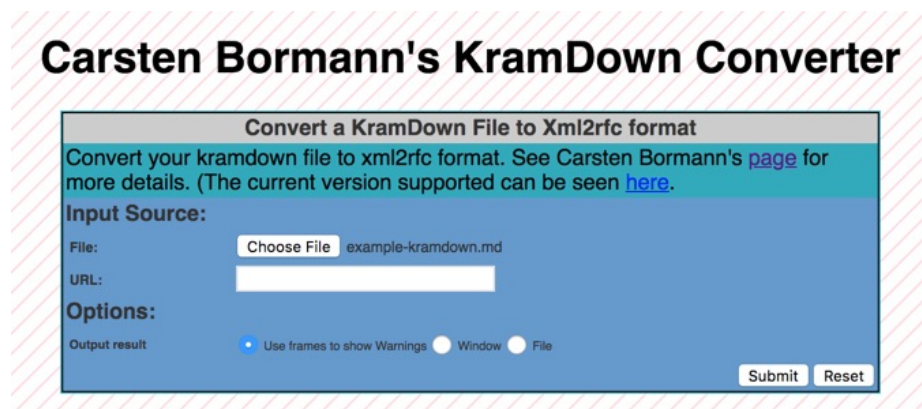
1. Assuming your computer has Ruby, install the kramdown-rfc2629 package:
`gem install kramdown-rfc2629`
2. Create your file using your favorite text editor
 - Many "markdown editors" also available
 - Convention is to end file with .md or .mkd
3. Just execute the `kdrfc` command:
 - `$ kdrfc draft-whomever-some-witty-name.md`
4. Output is two files: .xml and .txt

More info: <https://github.com/cabo/kramdown-rfc2629>

Note: Your system should be configured to work with UTF-8. (It should be in 2019, but older systems may not be. If it is not, and you use UTF-8 characters (ex. Smart quotes copied from Word), unpredictable things may happen.)

Getting started with kramdown remotely

1. Create your file using your favorite text editor
2. Visit <https://xml2rfc.tools.ietf.org/experimental.html>
3. Find the kramdown converter box:



4. Choose file and submit for processing.
5. The XML file will be downloaded to your computer.
 - *NOTE:* The XML file name is currently same name as input file, including .md extension.

Kramdown-rfc notes

- Based on kramdown parser by Thomas Leitner. Syntax:
 - <https://kramdown.gettalong.org/syntax.html>
- File starts with ---
- Header uses YAML. Example:

```
title: Your amazing title
abbrev: Your Abbreviation
docname: draft-todo-your-name-here
ipr: trust200902
area: General
author:
  ins: C. Bormann
  name: Carsten Bormann
  email: cabo@tzi.org
```

- References:
 - Normative: `{{!RFC2119}}`
 - Informative: `{{?RFC1925}}` or `{{?I-D.nottingham-for-the-users}}`

Finding markdown examples to get started

- Easiest way to begin is to find other people's Markdown I-Ds
- Examples provided in Dan York's tutorial Github repos of both kramdown-rfc and mmark

For people wanting a deeper dive:

- Martin Thomson provides a thorough git repo:
 - <https://github.com/martinthomson/i-d-template>
 - See features: <https://github.com/martinthomson/i-d-template/blob/master/doc/FEATURES.md>
 - Supports files in both kramdown-rfc and mmark formats

Final thoughts

- Markdown provides an easy way to rapidly create Internet Drafts without needing to know XML
- Markdown tools can be used to generate XML if you want to then work more in XML
 - Tools can only do Markdown -> XML
 - Some people who work in XML use Markdown as a way to bootstrap the creation of their XML files
- Markdown can be extended by embedding XML snippets (for example, if you want to use some feature in XML that is not yet in Markdown)
- The ecosystem of tools, apps, services, and sites that support Markdown continues to expand

Resources

- RFC 7763 - <https://tools.ietf.org/html/rfc7763>
- RFC 7764 - <https://tools.ietf.org/html/rfc7764>

- Carsten Bormann's repository:
 - <https://github.com/cabo/kramdown-rfc2629>

- Dan York's tutorial information:
 - <https://github.com/danyork/writing-internet-drafts-in-markdown>

Questions or suggestions?

Rfc-markdown mailing list:

<https://www.ietf.org/mailman/listinfo/Rfc-markdown>

RFC Editor:

rfc-editor@rfc-editor.org or stop by the desk this week

Please complete a short survey about this tutorial:

[\[\[https://www.surveymonkey.com/r/104tools\]\]](https://www.surveymonkey.com/r/104tools)