

# RFC-019: Documentation Pipeline

**Status:** Implemented **Date:** January 2026 **Author:** Derrell Piper ddp@eludom.net **Implementation:** generate-rfcs.sh

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## Abstract

This RFC specifies the documentation pipeline for the Library of Cyberspace: automated generation of canonical document formats, index catalogs, and future syndication feeds.

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## Motivation

Documentation must be:

1. **Preserved** – Multiple formats for long-term archival
2. **Accessible** – Viewable in any environment
3. **Discoverable** – Indexed for navigation
4. **Syndicated** – Subscribable for updates (future)

The pipeline automates generation of all canonical formats from Markdown source.

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## Canonical Formats

Format	Extension	Purpose	Tool
Markdown	.md	Source, editing, version control	-
HTML	.html	Web viewing, rich rendering	pandoc – standalone
PDF	.pdf	Archival, printing, distribution	pandoc + xelatex

Format	Extension	Purpose	Tool
Plain Text	.txt	Universal compatibility, IETF tradition	pandoc --to=plain

All formats are first-class citizens. None is derived or secondary.

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## Pipeline Specification

### Input

Markdown source files following the naming convention:

rfc-NNN-short-name.md

Where:

- NNN - Zero-padded RFC number (000–999)
- short-name
- Lowercase, hyphenated descriptive name

### Output

For each input file, generate:

```
rfc-NNN-short-name.html      # Standalone HTML
rfc-NNN-short-name.pdf       # PDF via XeLaTeX
rfc-NNN-short-name.txt       # Plain text, 78 columns
```

Plus a navigational index:

```
index.html                  # Hypertext catalog
```

### Generation Commands

```
# HTML (standalone, no external dependencies)
pandoc ${rfc}.md -o ${rfc}.html --standalone --metadata title=""

# PDF (XeLaTeX with monospace font for code)
pandoc ${rfc}.md -o ${rfc}.pdf --pdf-engine=xelatex -V mainfont="Menlo"

# Plain text (IETF-style, 78 columns)
pandoc ${rfc}.md -o ${rfc}.txt --to=plain --wrap=auto --columns=78
```

## **Index Generation**

The index.html catalog provides:

- RFC number and title
- Links to all four formats
- Clean, accessible HTML

Structure:

```
<table>
  <tr>
    <td>RFC Number</td>
    <td>Title</td>
    <td>html | pdf | txt | md</td>
  </tr>
</table>
```

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## **Publication**

### **Local Workflow**

```
# Generate all formats
./generate-rfcs.sh

# Commit to vault
seal-commit "Regenerate RFC documentation"
```

### **Remote Publication**

```
# Publish to web server
rsync -avz --chmod=D755,F644 -e ssh \
  *.md *.html *.pdf *.txt index.html \
  user@server:~/path/to/docs/
Permission model: - Directories: 755 (world-readable,
owner-writable) - Files: 644 (world-readable, owner-
writable)
```

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## **Future: Syndication**

### **RSS/Atom Feeds**

Future versions will generate:

```
rfc-feed.xml      # Atom feed of RFC updates  
Feed entries will include: - RFC number and title - Publication/update date - Abstract - Links to all formats
```

## Subscription Model

```
;; Subscribe to RFC feed  
(seal-subscribe "https://example.com/cyberspace/rfc-feed.xml"  
    verify-key: publisher-public)
```

Integration with Vault subscription system (RFC-006).

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## Implementation

### generate-rfcs.sh

```
#!/bin/bash  
# RFC Documentation Pipeline  
  
RFCS=(rfc-000-declaration rfc-001-replication-layer ...)  
  
for rfc in "${RFCS[@]}"; do  
    pandoc "${rfc}.md" -o "${rfc}.html" --standalone  
    pandoc "${rfc}.md" -o "${rfc}.pdf" --pdf-engine=xelatex -V mainfont="Menlo"  
    pandoc "${rfc}.md" -o "${rfc}.txt" --to=plain --columns=78  
done  
  
# Generate index.html  
generate_index
```

## Dependencies

Tool	Version	Purpose
pandoc	2.x+	Document conversion
xelatex	TeX Live	PDF generation
rsync	3.x+	Publication

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## **Security Considerations**

### **Integrity**

Generated documents inherit integrity from:

- Git version control (source)
- Vault signatures (releases)

### **Publication**

Remote publication uses:

- SSH key authentication
- No sensitive data in documents
- World-readable permissions only

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## **References**

1. Pandoc User's Guide
  2. RFC-006 – Vault System Architecture
  3. Atom Syndication Format – RFC 4287
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## **Changelog**

- **2026-01-06** – Initial specification
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**Implementation Status:** Complete **Script:** generate-rfcs.sh  
**Formats:** Markdown, HTML, PDF, Plain Text