

DAPS Quick Start

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daps.sourceforge.net

The DocBook Authoring and Publishing Suite (DAPS) is developed as open source software for Linux operating systems, licensed under the GPL. A number of integrated tools, stylesheets, scripts, and makefiles help technical writers in the editing, translation and publishing process. DAPS supports single source publishing into a number of different output formats, and is suited both for small documentation projects as well as for comprehensive projects, created by multiple authors in a collaborative effort.

Target Audience

This document is intended for users who want to make efficient use of DocBook-XML for editing and publishing their documentation—be it documentation sets, individual books, or articles. Key knowledge of XML and DocBook is required, as well as key knowledge of using the Bash Shell (or command line interfaces in general).

Supported DocBook Versions

Currently, DAPS supports only DocBook 4.x. Support for DocBook 5.x is planned for version 2.0.

Requirements and Additional Software

System Requirements

RAM, Hard Disk Space, CPU

DAPS is a lean solution that does not require a lot of system resources. The disk space consumed mostly depends on the amount of your documentation sources and the number of output formats you want to generate. If you have multiple or very large documentation projects, a machine with multiple-cores is recommended, but is not required.

Software

In addition to DAPS, you need the following software:

- An XML (or text) editor of your choice.
- For generating PDF output: an FO formatter, like FOP (open source, Apache) or XEP (commercial, RenderX). Antenna House Formatter (commercial) is currently not supported.

When installing DAPS as an RPM package (on any SUSE-based system), dependencies on other software packages are automatically resolved during installation. For installing DAPS on other Linux distributions with `configure`, `make`, and `make install`, make sure the following packages or tools are installed on your system:

- `automake`
- `convert` (included in the `ImageMagick` package)
- DocBook 4
- DocBook 4 Stylesheets (usually a separate package)
- `make`
- `xmlcatalog` (usually part of the package `libxml2`, `libxml-utils`, or `libxml-tools`)
- `xmllint` (usually part of the package `libxml2`, `libxml-utils`, or `libxml-tools`)
- `xsltproc` (if not available as a separate package, it may be included in `libxslt`)

Directory Structure

For DAPS to work out of the box, it requires a certain organization of your XML files and images within your documentation directory. You can generate the necessary structure with the DAPS initialization script, `daps-init`.

Additional Software

To add further components like version management or a workflow mechanism for your projects, use DAPS in combination with the following software:

- Any version management system, like CVS, Subversion, Mercurial or Git.
- Docmanager, a command-line tool for adding and retrieving meta-information for all files belonging to a documentation project. Docmanager is especially useful for larger, collaborative projects where it helps you to keep track of owners (authors) and editing status of all files. However, Docmanager requires to host your documentation files on a Subversion server.

Together with the software components mentioned above, DAPS can be used as a fully-fledged authoring and content management system for documentation projects based on DocBook.

Installation

The DocBook Authoring and Publishing Suite can be installed and used on any Linux distribution. Currently, DAPS is available as RPM package for the openSUSE distribution. Eventually, RPM packages for further distributions may become available. In the meantime, you can download a tarball with the DAPS sources and install them on any distribution as described in Procedure 1, “Installing the DAPS Sources” (page 2).

Installing DAPS on openSUSE

For openSUSE, the `daps` package is available from the `Documentation:Tools` repository at <http://download.opensuse.org/repositories/Documentation:Tools/>. For the complete path to the repository, add the version number of your openSUSE installation. For example, the complete repository URL for openSUSE 12.1 is: http://download.opensuse.org/repositories/Documentation:Tools/openSUSE_12.1/

For basic details on how to add software repositories and how to install software on openSUSE, refer to the *openSUSE Reference Guide*. The guide is available from <http://www.suse.com/documentation>.

Choose one of the following installation methods. Any dependencies to other packages that are required by DAPS are automatically resolved.

1-Click Installation from the Internet

Follow the instructions in the *openSUSE Reference Guide*, chapter *Installing Packages from the Internet*. Search for the `daps` package that matches your openSUSE version. From the listed results, install the package that is provided by the repository `Documentation:Tools`.

Installation with YaST (GUI)

Follow the instructions in the *openSUSE Reference Guide*, chapter *Installing Or Removing Software*. Add the `Documentation:Tools` repository that matches your openSUSE version—see the introduction to this section. From this repository, install the `daps` package.

Installation with `zypper` (command line)

Follow the instructions in the *openSUSE Reference Guide*, chapter *Managing Software with Command Line Tools*. Add the `Documentation:Tools` repository that matches your openSUSE version—see the introduction to this section. From this repository, install the `daps` package.

Installing DAPS on Other Linux Distributions

For installation on other Linux distributions, the DAPS sources are available as tarball. They can be installed with `configure`, `make`, and `make install`.

Procedure 1. Installing the DAPS Sources

Before starting the installation, check the DAPS System Requirements (page 1) and make sure to have all required packages and tools installed.

1. Download the DAPS source tarball from <http://daps.sourceforge.net>.
2. Create a new directory in your file system and unpack the tarball there.
3. Change to the newly created directory and start the `configure` script:

```
$ ./configure
```

The script checks your system for any software relevant to DAPS or the DAPS installation process. It also creates a makefile that will be used during installation. Based on the analysis, the script shows a summary that includes the following information:

- the DAPS installation paths,
- an overview of DAPS features that will be available on your system if you install DAPS now, and
- which software is still missing to enable the remaining DAPS features as well.

4. Check the summary carefully.
5. Install missing packages, if necessary. After installing new packages, repeat Step 3 (page 2) and check the summary again.
6. If you want to adjust the DAPS installation paths, view the available options:

```
$ ./configure --help
```

To create a makefile with custom installation paths, run the configure script with the desired option.

7. If everything is prepared according to your wishes, enter:

```
$ make
```

8. To start the installation process:

```
$ make install
```

Installing and Configuring the FO Formatter

For installation and configuration of an FO formatter (for generating PDF output), refer to the installation instructions of the product or your system administrator. For FOP, you usually only need to install the respective FOP package. However, not all FOP packages contain hyphenation pattern files.

Defining Documentation Projects

The easiest way to set up a new documentation project from scratch is to use the DAPS initialization script. For instructions how to do so, refer to Procedure 2, “Using `daps-init`” (page 4). The script automatically creates the Key Files (page 3) and Directory Structure (page 3) you need to get started with DAPS.

Key Files

The following key files define a documentation project so that it can be processed by DAPS:

Main File

An XML file containing the “starting point” (the highest-level object) of your documentation project (for example, `book` or `article`). For larger documentation projects, it is good practice to name the file `MAIN-PROJECTNAME.xml`, but you can use any other filename as well.

Doc Config (DC) File

A configuration file defining a number of parameters for your documentation project (for example, the main file, layout variants, or which profiling information to use). Of the multiple parameters that can be set in the DC file, the only one required is `MAIN`, pointing to the XML file that you want to process.

Directory Structure

For DAPS to work out of the box, your XML files and images must be organized in a specific structure within your documentation directory. Example 1, “Directory Structure” (page 4) shows the required structure including the key files for a DAPS documentation project. The directories are printed in bold. You can also create multiple documentation directories for individual documentation projects, but they all need the substructure outlined below.

Example 1. Directory Structure

```
YOUR_DOC_DIR ❶
|--DC* ❷
|--images ❸
|   |--src ❹
|       |--dia
|       |--eps
|       |--fig
|       |--pdf
|       |--png
|       |--svg
|--xml ❺
|   |--MAIN*.xml ❻
```

- ❶ “Working directory” for the respective documentation project.
- ❷ DC file defining the documentation project.
- ❸ Top-level directory for any original images that you want to use in the documentation project. Contains sub-directories for images in various formats. Any images to be referenced in the XML sources must be put in the respective subdirectories.
- ❺ Directory holding the XML files for the documentation project. If you declare entities in an external file (for example, in `entity-decl.ent`), put the entity declaration file here, too.
- ❻ The main file of the documentation project. It contains “references” to other books, chapters, appendices, etc.

A Documentation Project From Scratch

Use `daps-init` to set up a new documentation project from scratch. The initialization script automatically creates the key files and directory structure you need to get started with DAPS. View the available options with the command `daps-init --help`. By default, the script creates a `book` as example document.

Procedure 2. Using `daps-init`

1. Create a directory that you want to use as your documentation directory:

```
$ mkdir DOC_DIR
```

2. Create the default directory structure for DAPS (containing an example `book`):

```
$ daps-init -d PATH_TO_DOC_DIR
```

With the `-r` option, you can also set another root element, such as `article`, for example. To create the default directory structure with an `article` example:

```
$ daps-init -d PATH_TO_DOC_DIR -r article
```

3. In case the specified directory does not exist, DAPS asks if to create it. Proceed by pressing `y` or `n`.
4. To see what the output of the XML example file looks like, follow the instructions on the screen. For example, the following command specifies the `DC*` file to use and the output format to create:

```
$ daps -d PATH_TO_DOC_DIR/DC-daps-example color-pdf
```

For creation of the PDF, DAPS uses FOP by default (if no other formatter is specified) and applies the default DocBook stylesheets (if no custom layout options are defined). At the end of the transformation process, DAPS shows a message where to find the generated PDF. By default, all contents generated by DAPS is located in the `build` subdirectory. It is automatically created within your documentation directory.

5. Check your documentation directory for the new files: The text file `DC-daps-example` is annotated and gives you a rough idea which options can be defined in a DC file. For having a look at the XML source code of the `book` or `article`, change to the `xml` subdirectory and open the file `MAIN-DC-daps-example.xml` in a text or XML editor.

Output Formats

DAPS supports a number of different output formats, including “exotic” formats like man pages or ASCII text.

By default, the DocBook stylesheets are used for generating output formats. But DAPS also allows you to customize your output formats in a very flexible way.

Validation

Generating any output requires that your XML files are well-formed and can be validated. As soon as any output command is executed, DAPS automatically runs a validation check first—if it fails, DAPS returns the parser errors. They include information about the type of error, the respective file name and the line number where the error occurred. In addition, DAPS shows the path to the profiled XML sources and the total number of errors.

Example 2. Parser Output For Validation Errors

```
daps_user_concept.xml:60: element xref: validity error :  
  IDREF attribute linkend references an unknown ID "itl.daps.user.inst.other.req"  
Document /local/svn/daps-svn/daps/doc/build/.profiled/x86-amd64-em64t_osuse_  
MAIN.DAPS.xml does not validate  
make: *** [validate] Error 3
```

Basic DAPS Syntax

Independent of the individual output format you want to create, you need to specify the Doc Config file to use:

```
$ daps -d DC_FILE OUTPUT_FORMAT
```

For example:

```
$ daps -d DC-daps-quick color-pdf
```

If your current directory is not the documentation directory where the DC file is located, also specify the (absolute or relative) path to the DC file. For example:

```
$ daps -d /svn/daps/doc/DC-daps-quick color-pdf
```

At the end of the transformation process, DAPS shows a message where to find the generated output.

Generating Different Output Formats

The following table gives an overview of the DAPS subcommands for generating output formats.

Table 1. DAPS Output Commands and Formats

Subcommand	Output	Note
color-pdf	Creates a color PDF (without any cropmarks). Requires an FO formatter. Open the result in a PDF viewer.	
dist	Creates a black and white PDF with cropmarks for each chapter. Open the result in a PDF viewer.	See color-pdf
epub	Creates an ePUB book. Open the result in an portable e-book reader (or with a software like Calibre).	
html	Creates a subdirectory containing individual HTML files for all chapters of a book (including also preface, glossary or appendix files). They are named according to the ID of the respective root element. Open the generated <code>index.html</code> file in a Web browser to view the generated HTML from the starting point (ROOTID of the top-level element).	Images and CSS files are only referenced in the HTML. To copy these files to the same location like the HTML files, use the <code>--static</code> option. This is useful for creating distributable HTML builds.

Subcommand	Output	Note
html-single	Creates a single HTML file, named after the DC file used to create the output. Open the generated *.html file in a Web browser.	Single HTML files are more convenient for full text searches. Images and CSS files are only referenced in the HTML. To copy these files to the same location like the HTML files, use the <code>--static</code> option. This is useful for creating distributable HTML builds.
htmlsingle		
Row 2, Cell 1	Row 2, Cell 2	Row 2, Cell 3

Advanced Output Options

Instead of always building your complete documentation project (`set`, `book`, or `article`), DAPS also allows you to build an individual `chapter` or `part`. If you want the output format to include `remark` elements or to be marked as a `draft` version, you can tell DAPS to do so.

Partial Builds

The “starting point” of your documentation project is specified by the `ROOTID` parameter. It usually points to the ID of a `set`, `book`, or `article` and is referenced in the DC file. Alternatively, specify a `ROOTID` on the command line by using the `--rootid` option. This also allows you to build only a part of your documentation project (like an individual chapter or part). To do so, specify the ID of the respective `chapter` or `part` to build.

If you have set up your working environment with `daps-init` and an example `book`, the following command will build only the chapter about the most commonly used DocBook constructs, without any book title page:

```
$ daps -d DC-daps-example color-pdf --rootid=cha.template.examples
```

Output with Remarks or Draft Watermark

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If you have Invariant Sections without Cover Texts, or some other combination of the three, merge those two alternatives to suit the situation.

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