Metalink 3.0 Specification

A Publisher's Guide to Metalink

http://www.metalinker.org/

Anthony Bryan (albryan@comcast.net) [Author/Architect]

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Abstract

This guide specifies a way to publish Metalinks which describe location(s) and content for a faster and simpler downloading experience by automating typically advanced features.

Quick Starter's Guide

1. Create a Metalink

   Use either automated tools and scripts or the Metalink Generator.

2. Publish your Metalink

   FTP the .metalink file to your website and edit the HTML to provide a link to the .metalink and possibly a brief explanation of how to use it. Sites that serve Metalinks need to add a MIME type for .metalink files of "application/metalink+xml" on their web servers.

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1.0 Introduction

1.1 What is a Metalink?

Metalinks bundle the various ways (FTP/HTTP/P2P) to acquire files into one format for easy content distribution/Electronic Software Distribution (ESD). This can increase download performance, reliability, usability, & efficiency.

1.2 Benefits over traditional download methods

- Backward compatible with regular links.
- Combines FTP and HTTP with Peer-to-peer (P2P, shared bandwidth).
- Standard unified format that collects links for automatic accelerated (segmented) downloads from multiple sources.
- Automatic load balancing distributes traffic so individual servers are under less strain.
- No Single Point of Failure (SPOF) like FTP or HTTP URLs. More fault tolerant.
- Useful for automatic updating programs when new versions are released.
- No long confusing list of possibly outdated Mirrors and P2P links.
- Makes the download process simpler for users (automatic selection of language, Operating System, location, etc).
- Stores more descriptive and useful information for ESD.
- No separate MD5/SHA-1 file or manual process for verification.
- Uniquely identifies files, so even if all references to it in the Metalink stop working, the same exact file can be found via a P2P or Web search.
- Can finish P2P downloads even if no full seeds are shared.
- For FTP/HTTP, an updated client is needed, but not a separate client like some P2P (For example, BitTorrent (Official client) is a 6.5 megabyte download).

1.3 Goals

- Remain backward compatible with traditional hyperlinks.
- Make downloads faster and cheaper by making mirror/P2P use automatic and integrated.
- Make downloads more reliable and more likely to finish. Higher availability.
- Simplify the download process: Less options and user interaction by default.
- Improve the way that large multi-located files are distributed.
- Make the use of a unique identifier common across many file sharing networks and search engines so it is easy to find the exact same file.
- Keep the Metalink file format as simple as possible, while also storing information that may be useful for content distribution.

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1.4 Possible Uses

Metalink was designed for describing the locations of large files that are multi-located (shared via many mirrors and with P2P) so all locations can be used. It is useful for communities or companies who distribute content over the Internet with multiple servers and methods. Possible uses include software distribution (Operating Systems, games, software updates, etc) and large video or audio file distribution (iTunes, DVDs, lossless audio, compressed audio). It is also useful for making the download process simpler, so the user does not need to select or decide which Operating System, language, or download location they require and also for downloading many related files with one click. Metalink clients also automate the checksum verification process and more links allows greater availability and redundancy.

2.0 Metalink Generation

Individual Metalinks can be created with the Metalink Generator at http://www.metalinker.org/generator/ .

Command line tools are available in the form of metalink tools. These tools generate the checksums on local files (or use previously created MD5SUM files) and import mirror lists. This is the easiest choice for generating a few metalinks occasionally.

For generating many Metalinks a few times a day, see RoPkg::Metalink and Simba. Metalinks can also be automatically generated with Simba, the mirroring tool, and software available from http://metalink.packages.ro/ . Simba can be used to generate up to date Metalinks of files on mirrors or just newly updated files.

Other standalone applications for generating Metalinks are needed for regular people. A JavaScript page that could be used locally to create metalinks would be good too.

2.1 Metalink Comment Text

This text can be inserted into a .metalink file, usually after <metalink> and before <files>. Some Metalink Generators automatically insert this into .metalinks.

```
<!--
      Metalink, an Open Standard, makes downloading easier by
      bundling the various ways (FTP/HTTP/P2P) to get files into
      one format for easier downloads, as well as bundling
      checksums to automatically verify completed downloads.

      Currently the following applications support this file:

      - aria2 (Unix)          [ http://aria2.sourceforge.net/ ]
      - GetRight 6 (Windows)  [ http://www.getright.com/ ]
      - Speed Download (Mac)  [ http://www.yazsoft.com/ ]
      - wxDownload Fast (All)[ http://dfast.sourceforge.net/ ]
```

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```
      For further information please visit http://www.metalinker.org/
-->
```

3.0 Metalink Publishing

Currently, OpenOffice.org uses Metalinks to distribute its free office suite. They are located on the P2P Downloads page. These are automatically generated by Simba.

The following Linux and BSD distributions use Metalinks for their ISO downloads: Arch Linux, Berry Linux, BLAG Linux, DesktopBSD, PuppyLinux, redWall Firewall, StartCom Linux, and Ubuntu Christian Edition.

File Distribution sites like http://www.download.com/, http://fileforum.betanews.com/, http://freshmeat.net/, & other aggregating sites like http://filemirrors.com/ could subscribe to an official syndicated feed (Atom or RSS) from software producers that alerts them to new releases of programs or files & the Metalink file that describes their locations.

3.1 Metalink MIME types

Sites that serve Metalinks need to add a MIME type for `.metalink` files of "`application/metalink+xml`" on their web servers.

If you use an older version of Apache, filenames like `filename.tar.gz.metalink` may give an error in browsers. You need to comment out these lines in /etc/apache/http.conf:

```
# AddEncoding x-compress Z
# AddEncoding x-gzip gz tgz
```

3.2 Backward compatibility

If clients support it, Metalink 3.0 is backward compatible with regular hyperlinks. This is done by adding #!metalink3!http://www.example.com/file.ext.metalink onto the end of a URL like so:

http://www.example.com/file.ext#!metalink3!http://www.example.com/file.ext.metalink

Clients that do not recognize Metalink 3.0 will drop what is after the first #. This backward compatibility is inspired by Gervase Markham's Link Fingerprints.

3.3 Download Layout Recommendations

Feel free to use the Metalink logo on your download page. We recommend using backward compatible links with maybe a direct link to the .metalink as well, so more people can learn about it.

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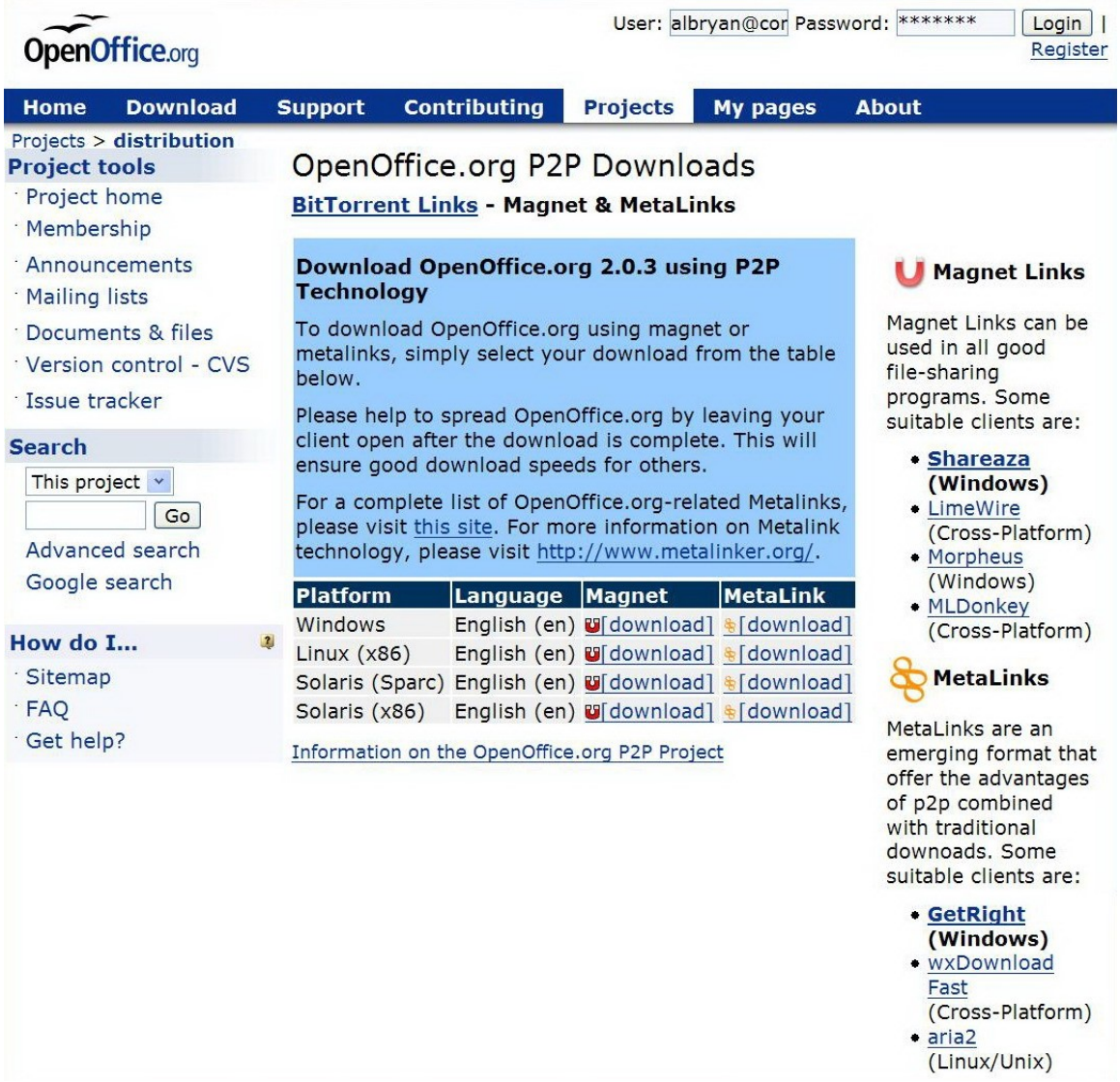
metalink

3.3.1 OpenOffice.org Example



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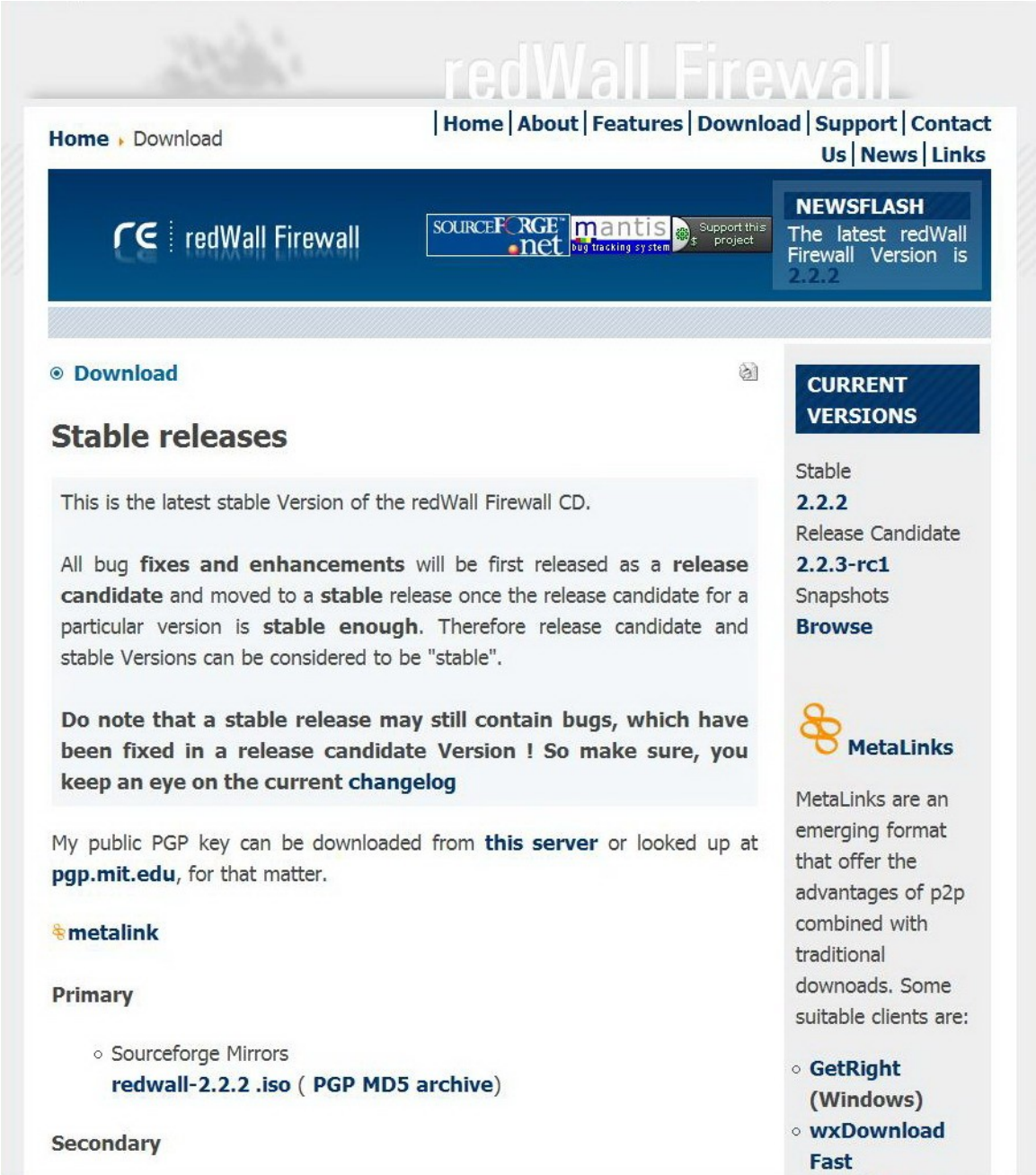
3.3.2 redWall Firewall Example



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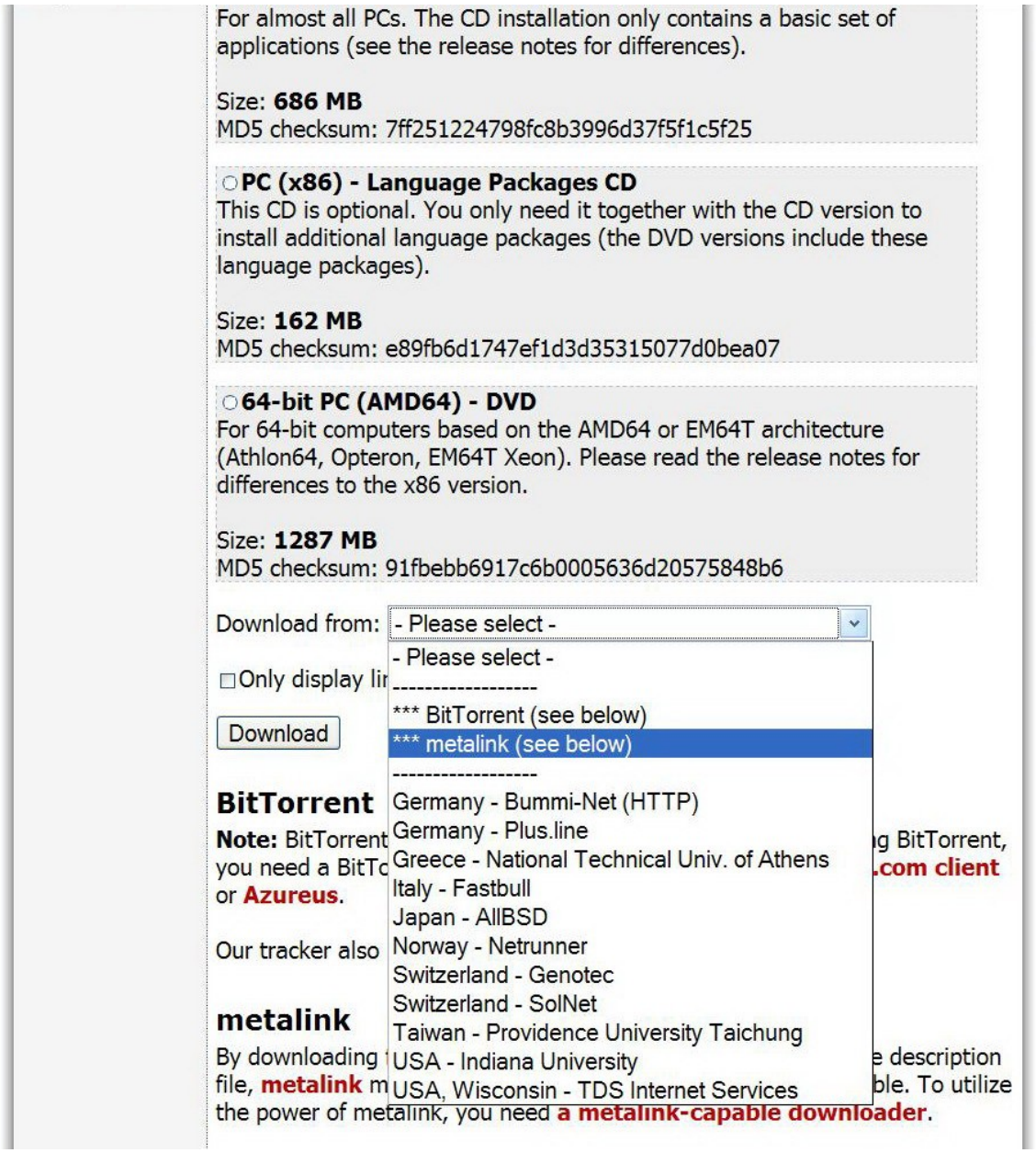
3.3.3 DesktopBSD Example



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