Installation - Linux Sour
ce 2-0-Alpha-from-svn

Installation - Linux Source 2-0-Alpha-from-git

Version 18, last updated by jornane at 12 months

Installation FileSender 2.0 Alpha

This documentation is under development. It was created by installing FileSender on a CentOS 7 and Debian 8 machine.

Please help us with the FileSender one hour installation time guarantee

We've all used more time than we wanted on a first time install of a piece of open source software, just to see whether it does something interesting. We do not want FileSender to be like that.

This documentation is a work in progress and will be cleaned up as the software progresses from alpha to beta quality. The documentation itself might also contain mistakes.

If you notice mistakes in this documentation, or if it took you more than an hour to install FileSender, please let us know on filesender-dev@filesender.org and help us improve the documentation for those that come after you!

About this documentation

This is the installation documentation for installing the **FileSender 2.0-alpha Git snapshot** on Linux. This guide is written for installation from source on the RedHat/CentOS or Debian platform but any Linux variant should work with some modifications (most notably about installing the required additional software packages).

This documentation was tested with:

- RedHat/CentOS (7)
- Debian (8, Jessie)

FileSender depends on:

- SimpleSamlPhp 1.13 or newer.
- Apache and PHP from your distribution.
- A PostgreSQL or MySQL database.
- A big filesystem.

See https://www.assembla.com/wiki/show/file_sender/Requirements for all requirements.

Step 1 - Install Apache and PHP

On RedHat/CentOS, run:

```
# RedHat/CentOS
yum install -y httpd mod_ssl php php-mbstring php-xml
```

On Debian, run:

```
# Debian
apt-get install -y apache2 php5 libapache2-mod-php5
```

Step 2 - Install the FileSender package

Install the Git package on RedHat/CentOS:

```
yum install -y git
```

Or install the Git package on Debian:

```
apt-get install -y git
```

Install the FileSender 2.0-alpha branch from the GIT repository:

```
cd /opt/filesender/
git clone https://github.com/filesender/filesender.git filesender-2.0
ln -s filesender-2.0/ filesender
```

Initialise config file and set permissions right. Make the files, tmp and log directories writable by the web daemon user (`apache` on RedHat/CentOS, `www-data` on Debian), copy the config file in place from the template and allow the web daemon user to read the config.php configuration file:

On RedHat/CentOS/Debian, run:

```
cd /opt/filesender/filesender
cp config/config_sample.php config/config.php
chmod o-rwx tmp files log config/config.php
```

On RedHat/CentOS, run:

```
chown apache:apache tmp files log
chgrp apache config/config.php
semanage fcontext -a -t httpd_sys_content_t '/opt/filesender(/.*)?'
semanage fcontext -a -t httpd_sys_rw_content_t '/opt/filesender/(log|tmp|files
)(/.*)?'
setsebool httpd_can_sendmail on
restorecon -R /opt/filesender
```

On Debian, run:

```
chown www-data:www-data tmp files log
chgrp www-data config/config.php
```

NOTE: We ship the FileSender tarball with `config_sample.php` rather than `config.php` to make life easier when building RPMs and DEBs.

NOTE: If you use NFS storage for user files on RedHat/CentOS, mount it with the following option: `context=system_u:object_r:httpd_sys_rw_content_t:s0`. **DO NOT** enable `httpd_use_nfs`. If you did so before, roll back using `setsebool httpd_use_nfs off`.

Step 3 - Install and configure SimpleSAMLphp

SimpleSAMLphp helps you use nearly any authentication mechanism you can imagine. Following these instructions will set you up with a SimpleSAMLphp installation that uses Feide RnD's OpenIdP to authenticate users. When you move to a production service you probably want to change that to only support authentication sources of your choice.

Download SimpleSamlPhp 1.14.2. Other (later or older) versions will probably work but we tested with version 1.14.2.

```
cd /root
mkdir filesender
cd filesender
wget https://simplesamlphp.org/res/downloads/simplesamlphp-1.14.2.tar.gz
```

NOTE: you will of course remember to check the sha1 hash of the tar file, right?

Extract it in a suitable directory and create symlink:

```
mkdir /opt/filesender/
cd /opt/filesender
tar xvzf /root/filesender/simplesamlphp-1.14.2.tar.gz
ln -s simplesamlphp-1.14.2/ simplesaml
```

SECURITY NOTE: we only want *the user interface files* to be directly accessible for the world through the web server, not any of the other files. We will not extract the SimpleSAMLphp package in the `/var/www` directory (the standard Apache document root) but rather in a specific `/opt` tree. We'll point to the SimpleSAML web root with a web server alias.

Copy standard configuration files to the right places:

```
cd /opt/filesender/simplesaml
cp -r config-templates/*.php config/
cp -r metadata-templates/*.php metadata/
```

To tailor your SimpleSAMLphp installation to match your local site's needs please check its installation and configuration documentation. When connecting to an Identity provider make sure all the required attributes are sent by the identity provider. See the section on IdP attributes in the Reference Manual for details.

NOTE: It's outside the scope of this document to explain how to configure an authentication backend. The software has built-in support for SAML, LDAP, Radius and many more.

Step 4 - Configure Apache

Create a configuration file for FileSender. This file is located in one of these locations:

- /etc/httpd/conf.d/filesender.conf (RedHat/CentOS)
- /etc/apache2/sites-available/filesender.conf (Debian)

The contents of the file must be as follows:

```
Alias /simplesaml /opt/filesender/simplesaml/www
<Directory "/opt/filesender/simplesaml/www">
    Options None
    AllowOverride None
    Require all granted
</Directory>

Alias /filesender /opt/filesender/filesender/www
<Directory "/opt/filesender/filesender/">
    Options SymLinksIfOwnerMatch
    AllowOverride None
    Require all granted
</Directory>
```

On Debian you must enable your configuration, run:

```
a2enmod alias headers ssl
a2ensite default-ssl filesender
```

Step 5 - Install and configure database

Option a - PostgreSQL

On RedHat/CentOS, run:

```
yum install -y php-pgsql
```

On Debian, run:

```
apt-get install -y postgresql php5-pgsql
```

FileSender uses password based database logins and by default assumes that PostgreSQL is configured to accept password based sessions on 'localhost'. You should check and when needed change the relevant settings in the PostgreSQL pg_hba.conf configuration file. This file should have the following entries with **md5** listed as METHOD for local IPv4 and IPv6 connections:

```
# Database administrative login by UNIX sockets
local   all         postgres                            peer
# TYPE  DATABASE    USER        CIDR-ADDRESS          METHOD
# "local" is for Unix domain socket connections only
local   all         all                               peer
# IPv4 local connections:
host    all         all         127.0.0.1/32          md5
# IPv6 local connections:
host    all         all         ::1/128               md5
```

On Debian based systems this file will be in `/etc/postgresql/<version>/main/pg_hba.conf`. On Red Hat/Fedora based systems this file will be in `/var/lib/pgsql/data/pg_hba.conf`. When changing the pg_hba.conf file you'll have to restart the database server with (version number may be different or not needed depending on your system):

```
service postgresql reload
```

Now create the database user `filesender` without special privileges and with a password. The command will prompt you to specify and confirm a password for the new database user. *This is the password you need to configure in the FileSender configuration file later on*.

```
$ postgres createuser -S -D -R -P filesender
Enter password for new role: <secret>
Enter it again: <secret>
```

This will create a database user **filesender** without special privileges, and with a password. This password you will have to configure in the filesender config.php later on.

Create the filesender database with UTF8 encoding owned by the newly created filesender user:

```
postgres createdb -E UTF8 -O filesender filesender
```

Option b - MySQL

On RedHat/CentOS, run:

```
yum install -y mariadb php-mysql
mysql_secure_installation
```

On Debian, run:

```
apt-get install -y mysql-server php5-mysql
dpkg-reconfigure mysql-server
```

Create the filesender database:

```
mysql -u root -p
CREATE DATABASE `filesender` DEFAULT CHARACTER SET utf8;
GRANT USAGE ON *.* TO 'filesender'@'localhost' IDENTIFIED BY '<your password>'
;
GRANT CREATE, ALTER, SELECT, INSERT, UPDATE, DELETE ON `filesender`.* TO 'file
sender'@'localhost';
FLUSH PRIVILEGES;
exit
```

Change from FileSender 1.x: you now configure FileSender first and then use a FileSender script to initialise the database. See step 8 for initialising the database. Make sure you configure the correct database in the config file. =)

Step 6 - Configure PHP5

Automatic

A sample settings file is provided with FileSender in **config-templates/filesender-php.ini**. If you don't feel like manually editing your php.ini file, copy the filesender-php.ini file to your **/etc/php.d/** (**RedHat/CentOS**) or **/etc/php5/apache2/conf.d/** (**Debian**) directory to activate those settings.

On **RedHat/CentOS**, run:

```
service httpd reload
```

On **Debian**, run:

```
service apache2 reload
```

Manual

To allow for max. 2 GB Flash uploads change these settings to the values indicated:

```
max_input_time = 3600 ; in seconds
upload_max_filesize = 2047M ; in M, the default value is 2MB
post_max_size = 2146446312 ; in M, 2047M + 10K
```

NOTE: when you edit your FileSender config.php remember to change `$config['max_flash_upload_size']` to match your `upload_max_filesize`. If they are not the same FileSender will use the lowest value as the actual maximum upload size for Flash uploads.

Ensure the php temporary upload directory points to a location with enough space:

```
upload_tmp_dir = /tmp
```

NOTE: You probably want to point this to the same directory you will use as your HTML5 upload temp directory (`$config['site_temp_filestore']`). **NOTE**: that this setting is for all PHP-apps, not only for filesender.

Turn on logging:

```
log_errors = on
error_log = syslog
```

Enable secure cookie handling to protect sessions:

```
session.cookie_secure = On
session.cookie_httponly = On
```

Reload your Apache server to activate the changes to your php.ini.

On **RedHat/CentOS**, run:

```
service httpd reload
```

On **Debian**, run:

```
service apache2 reload
```

Step 7 - Configure your FileSender installation

Copy the configuration template and edit it to match your site settings.

```
cd /opt/filesender/filesender/config
cp config{_sample,}.php
$EDITOR config.php
```

Be sure to at least set `$config['site_url']`, contact details, database settings and authentication configuration. The configuration file is self-explanatory.

Step 8 - Initialise the FileSender database

Run:

```
php /opt/filesender/filesender/scripts/upgrade/database.php
```

Step 9 - Configure the FileSender clean-up cron job

```
tee /etc/cron.daily/filesender <<EOF
#!/bin/sh
php -q /opt/filesender/filesender/scripts/task/cron.php
EOF
chmod +x /etc/cron.daily/filesender
```

Step 10 - Start using FileSender

Visit the URL to your FileSender instance.

```
https://<your site>/filesender/
```

NOTE: If you want your site to be available on https:///, without the /filesender, set `DocumentRoot /opt/filesender/filesender/www` in Apache and remember to update your `$config['site_url']` accordingly.

Perfection

SElinux

If you use RedHat/CentOS, you have SElinux installed. SElinux protects your system from unauthorised changes by attackers. FileSender supports SElinux, and if you followed this guide you have set up SElinux correctly with file storage in the same directory as FileSender.

If you want to store files on another location, set the context of this location to `httpd_sys_rw_content_t`, otherwise FileSender will fail trying to write there. If the other location is on an NFS share, be sure to set the following mount flag:

```
context=system_u:object_r:httpd_sys_rw_content_t:s0
```

Example `/etc/fstab` line:

```
nfs.filesender.org:/var/lib/filesender  /var/lib/filesender nfs noexec,nolock,
nfsvers=3,context=system_u:object_r:httpd_sys_rw_content_t:s0 0 0
```

SEbooleans

httpd_can_sendmail

MUST be on for Apache to be able to send mail.

```
setsebool httpd_can_sendmail on
```

httpd_use_nfs

MUST be off, use `context=system_u:object_r:httpd_sys_rw_content_t:s0` as a mount option instead if you use NFS.

```
setsebool httpd_use_nfs off
```

httpd_can_network_connect_db

MAY be on, if you do not run the database on the local host.

```
setsebool httpd_can_network_connect_db on
setsebool httpd_can_network_connect_db off
```

HTTPS Only

Its good practice to disallow plain HTTP traffic and allow HTTPS only. Make a file in one of the following locations:

- /etc/httpd/conf.d/000-forcehttps.conf (**RedHat/CentOS**)

- /etc/apache2/sites-available/000-forcehttps.conf (**Debian**)

Add the following:

```
<VirtualHost *:80>
    Redirect / https://filesender.example.org/
</VirtualHost>
```

On **RedHat/CentOS**, run:

```
service httpd reload
```

On **Debian**, run:

```
a2ensite 000-forcehttps
a2dissite 000-default
service apache2 reload
```

FileSender as main page

If you don't want your users to have to type `/filesender` after the hostname, you can add the following line to your filesender Apache configuration:

```
RedirectMatch ^/(?!filesender/|simplesaml/)(.*) https://filesender.example.org
/filesender/$1
```

Support and Feedback

See Support and Mailing lists and Feature requests.

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