
tailon Documentation

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Tailon is a self-hosted web application for looking at and searching through log files. It is little more than a fancy web wrapper around the following commands:

```
tail -f  
tail -f | grep  
tail -f | awk  
tail -f | sed
```


CHAPTER 1

Screenshots

```

/var/log/application.log  Tail  mode "tail" does not accept any input
[10/Sep/2015:00:46:56 ] "HEAD /js/app/view/AppView.js HTTP/1.1" 200 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_3) Ap
[10/Sep/2015:00:46:56 ] "HEAD /js/app/view/NavView.js HTTP/1.1" 200 0 "Mozilla/5.0 (Windows NT 6.1) AppleWebKit/537.31 (
[10/Sep/2015:00:46:56 ] "GET /js/app/view/HomeView.js HTTP/1.1" 200 0 "Mozilla/5.0 (Windows NT 6.2; WOW64) AppleWebKit/5
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[10/Sep/2015:00:46:57 ] "HEAD /js/app/model/User.js HTTP/1.1" 200 0 "Mozilla/5.0 (Windows NT 6.1) AppleWebKit/537.31 (KH
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[10/Sep/2015:00:46:57 ] "POST /js/app/model/ChatMessage.js HTTP/1.1" 304 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_
[10/Sep/2015:00:46:57 ] "HEAD /js/app/model/Chat.js HTTP/1.1" 300 0 "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:20.0) Gecko/
[10/Sep/2015:00:46:57 ] "HEAD /js/app/view/ListenersView.js HTTP/1.1" 200 0 "Mozilla/5.0 (Windows NT 6.2; WOW64) AppleWeb
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[10/Sep/2015:00:46:57 ] "POST /index.html HTTP/1.1" 304 0 "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:20.0) Gecko/20100101 F
[10/Sep/2015:00:46:58 ] "GET /js/app/model/ChatMessage.js HTTP/1.1" 400 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_3
[10/Sep/2015:00:46:58 ] "HEAD /js/app/view/HomeView.js HTTP/1.1" 304 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_3) A
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[10/Sep/2015:00:46:58 ] "POST /js/app/router.js HTTP/1.1" 200 0 "Mozilla/5.0 (Windows NT 6.1) AppleWebKit/537.31 (KHTML,
[10/Sep/2015:00:46:58 ] "POST /js/app/view/DiscoverView.js HTTP/1.1" 304 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_
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[10/Sep/2015:00:46:59 ] "GET /js/app/view/NavView.js HTTP/1.1" 300 0 "Opera/9.80 (Windows NT 6.1; WOW64) Presto/2.12.388
[10/Sep/2015:00:46:59 ] "POST /js/app/model/ChatMessage.js HTTP/1.1" 304 0 "Mozilla/5.0 (Windows NT 6.1) AppleWebKit/537
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[10/Sep/2015:00:47:00 ] "HEAD /js/app/view/ListenersView.js HTTP/1.1" 400 0 "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWeb
[10/Sep/2015:00:47:00 ] "POST /js/app/view/SignupView.js HTTP/1.1" 300 0 "Mozilla/5.0 (Windows NT 6.1) AppleWebKit/537.3
[10/Sep/2015:00:47:00 ] "POST /index.html HTTP/1.1" 200 0 "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:20.0) Gecko/20100101 F
[10/Sep/2015:00:47:00 ] "HEAD /js/app/view/LoginView.js HTTP/1.1" 304 0 "Opera/9.80 (Windows NT 6.1; WOW64) Presto/2.12.
[10/Sep/2015:00:47:00 ] "HEAD /js/app/view/TrackView.js HTTP/1.1" 300 0 "Mozilla/5.0 (Windows NT 6.1) AppleWebKit/537.31
[10/Sep/2015:00:47:00 ] "HEAD /js/app/model/User.js HTTP/1.1" 304 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_3) Appl
[10/Sep/2015:00:47:00 ] "POST /js/app/view/TrackView.js HTTP/1.1" 304 0 "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit
[10/Sep/2015:00:47:00 ] "HEAD /js/app/model/User.js HTTP/1.1" 200 0 "Mozilla/5.0 (Windows NT 6.2; WOW64) AppleWebKit/537
[10/Sep/2015:00:47:01 ] "POST /js/app/view/DiscoverView.js HTTP/1.1" 200 0 "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:20.0)
[10/Sep/2015:00:47:01 ] "HEAD /js/app/view/SignupView.js HTTP/1.1" 304 0 "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:20.0) G
[10/Sep/2015:00:47:01 ] "HEAD /js/app/router.js HTTP/1.1" 200 0 "Opera/9.80 (Windows NT 6.1; WOW64) Presto/2.12.388
[10/Sep/2015:00:47:01 ] "POST /js/app/view/ListenersView.js HTTP/1.1" 300 0 "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:20.0)
[10/Sep/2015:00:47:01 ] "POST /js/app/model/User.js HTTP/1.1" 200 0 "Mozilla/5.0 (Windows NT 6.1) AppleWebKit/537.31 (KH
```



```
/var/log/application.log  Grep  GET.*404
[10/Sep/2015:00:52:07 ] "GET /js/app/view/DiscoverView.js HTTP/1.1" 404 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_3
[10/Sep/2015:00:52:07 ] "GET /js/app/view/ChatView.js HTTP/1.1" 404 0 "Mozilla/5.0 (Windows NT 6.2; WOW64) AppleWebKit/5
[10/Sep/2015:00:52:08 ] "GET /js/app/model/Chat.js HTTP/1.1" 404 0 "Mozilla/5.0 (Windows NT 6.1) AppleWebKit/537.31 (KHT
[10/Sep/2015:00:52:08 ] "GET /js/app/view/LoginView.js HTTP/1.1" 404 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_3) A
[10/Sep/2015:00:52:08 ] "GET /js/app/model/Chat.js HTTP/1.1" 404 0 "Mozilla/5.0 (Windows NT 6.2; WOW64) AppleWebKit/537.
[10/Sep/2015:00:52:12 ] "GET /js/app/view/HomeView.js HTTP/1.1" 404 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_3) Ap
[10/Sep/2015:00:52:18 ] "GET /js/app/view/NavView.js HTTP/1.1" 404 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_3) App
[10/Sep/2015:00:52:20 ] "GET /js/app/view/HomeView.js HTTP/1.1" 404 0 "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:20.0) Geck
[10/Sep/2015:00:52:34 ] "GET /js/app/view/DiscoverView.js HTTP/1.1" 404 0 "Mozilla/5.0 (Windows NT 6.2; WOW64) AppleWebk
[10/Sep/2015:00:52:35 ] "GET /js/app/view/DiscoverView.js HTTP/1.1" 404 0 "Mozilla/5.0 (Windows NT 6.2; WOW64) AppleWebk
[10/Sep/2015:00:52:37 ] "GET /js/app/model/ChatMessage.js HTTP/1.1" 404 0 "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:20.0)
[10/Sep/2015:00:52:37 ] "GET /js/app/view/TrackView.js HTTP/1.1" 404 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_3) A
[10/Sep/2015:00:52:38 ] "GET /js/app/view/ChatView.js HTTP/1.1" 404 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_3) Ap
[10/Sep/2015:00:52:41 ] "GET /js/app/router.js HTTP/1.1" 404 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_3) AppleWebk
[10/Sep/2015:00:52:41 ] "GET /js/app/app.js HTTP/1.1" 404 0 "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_8_3) AppleWebKit/
[10/Sep/2015:00:52:41 ] "GET /js/app/view/ChatView.js HTTP/1.1" 404 0 "Mozilla/5.0 (Windows NT 6.2; WOW64) AppleWebKit/5
[10/Sep/2015:00:52:42 ] "GET /js/app/view/CreateRoomView.js HTTP/1.1" 404 0 "Mozilla/5.0 (Windows NT 6.2; WOW64) AppleWe
[10/Sep/2015:00:52:44 ] "GET /js/app/view/HomeView.js HTTP/1.1" 404 0 "Opera/9.80 (Windows NT 6.1; WOW64) Presto/2.12.38
[10/Sep/2015:00:52:44 ] "GET /js/app/model/ChatMessage.js HTTP/1.1" 404 0 "Mozilla/5.0 (Windows NT 6.1) AppleWebKit/537.
```

```
/var/log/application.log  Awk  $6 == 400 && $3 == "\"HEAD\" {print $1m $2, $4; fflush();}
```

```
[10/Sep/2015:00:57:31] /js/app/view/NavView.js
[10/Sep/2015:00:57:31] /js/app/view/AppView.js
[10/Sep/2015:00:57:35] /js/app/view/TrackView.js
[10/Sep/2015:00:57:44] /js/app/router.js
[10/Sep/2015:00:57:45] /js/app/view/CreateRoomView.js
[10/Sep/2015:00:57:46] /index.html
[10/Sep/2015:00:57:46] /js/app/model/ChatMessage.js
[10/Sep/2015:00:57:46] /js/app/view/TrackView.js
[10/Sep/2015:00:57:47] /js/app/view/NavView.js
[10/Sep/2015:00:57:47] /js/app/view/NavView.js
[10/Sep/2015:00:57:47] /js/app/view/CreateRoomView.js
[10/Sep/2015:00:57:48] /js/app/model/ChatMessage.js
[10/Sep/2015:00:57:48] /js/app/view/ListenersView.js
[10/Sep/2015:00:57:49] /js/app/model/ChatMessage.js
[10/Sep/2015:00:57:49] /js/app/view/TrackView.js
[10/Sep/2015:00:57:50] /js/app/view/CreateRoomView.js
[10/Sep/2015:00:57:51] /js/app/view/NavView.js
[10/Sep/2015:00:57:51] /js/app/model/ChatMessage.js
[10/Sep/2015:00:57:51] /js/app/view/HomeView.js
[10/Sep/2015:00:57:52] /js/app/view/SignupView.js
[10/Sep/2015:00:57:53] /js/app/view/AppView.js
[10/Sep/2015:00:57:53] /js/app/view/SignupView.js
[10/Sep/2015:00:57:54] /js/app/model/ChatMessage.js
[10/Sep/2015:00:57:54] /index.html
[10/Sep/2015:00:57:55] /js/app/model/Chat.js
[10/Sep/2015:00:57:55] /js/app/router.js
[10/Sep/2015:00:57:55] /js/app/model/ChatMessage.js
[10/Sep/2015:00:57:55] /js/app/view/LoginView.js
[10/Sep/2015:00:57:56] /js/app/view/AppView.js
[10/Sep/2015:00:57:56] /js/app/view/SignupView.js
[10/Sep/2015:00:57:56] /js/app/model/ChatMessage.js
[10/Sep/2015:00:57:57] /js/app/app.js
[10/Sep/2015:00:57:58] /js/app/app.js
[10/Sep/2015:00:57:58] /js/app/view/DiscoverView.js
[10/Sep/2015:00:57:58] /js/app/view/ListenersView.js
[10/Sep/2015:00:57:59] /js/app/view/CreateRoomView.js
[10/Sep/2015:00:57:59] /js/app/model/Chat.js
[10/Sep/2015:00:57:59] /js/app/app.js
[10/Sep/2015:00:58:00] /js/app/view/NavView.js
[10/Sep/2015:00:58:00] /js/app/view/TrackView.js
[10/Sep/2015:00:58:01] /js/app/model/Chat.js
[10/Sep/2015:00:58:01] /js/app/app.js
[10/Sep/2015:00:58:02] /js/app/view/AppView.js
[10/Sep/2015:00:58:02] /js/app/view/HomeView.js
[10/Sep/2015:00:58:03] /js/app/view/ChatView.js
[10/Sep/2015:00:58:03] /js/app/view/NavView.js
[10/Sep/2015:00:58:04] /js/app/view/TrackView.js
[10/Sep/2015:00:58:05] /js/app/model/Chat.js
```

CHAPTER 2

Installation

The latest stable version of tailon can be installed from [pypi](#):

```
$ pip install tailon
```

The development version is available on [github](#) and can also be installed with the help of pip:

```
$ pip install git+git://github.com/gvalkov/tailon.git
```

Tailon works with Python 2.7 and newer. Using it with Python ≥ 3.3 is encouraged.

3.1 Tailon

Tailon is a command-line tool that spawns a local http server that serves your logfiles. It can be configured entirely from its command-line interface or through the convenience of a yaml config file.

To get started, run tailon with the list of files that you wish to monitor:

```
$ tailon -f /var/log/nginx/* /var/log/apache/{access,error}.log
```

If at least one of the specified files is readable, tailon will start listening on <http://localhost:8080>.

Tailon's server-side functionality is summarized entirely in its help message:

```
Usage: tailon [-c path] [-f path [path ...]] [-h] [-d] [-v]
           [--output-encoding enc] [--input-encoding enc] [-b addr:port]
           [-r path] [-p type] [-u user:pass] [-a] [-f] [-t num]
           [-m [cmd [cmd ...]]] [--no-wrap-lines]

Tailon is a web app for looking at and searching through log files.

Required options:
  -c, --config path          yaml config file
  -f, --files path [path ...] list of files or file wildcards to expose

General options:
  -h, --help                show this help message and exit
  -d, --debug               show debug messages
  -v, --version              show program's version number and exit
  --output-encoding enc     encoding for output
  --input-encoding enc      encoding for input and output (default utf8)

Server options:
  -b, --bind addr:port       listen on the specified address and port
  -r, --relative-root path   web app root path
```

```
-p, --http-auth type          enable http authentication (digest or basic)
-u, --user user:pass         http authentication username and password
-a, --allow-transfers        allow log file downloads
-F, --follow-names           allow tailing of not-yet-existent files
-t, --tail-lines num         number of lines to tail initially
-m, --commands [cmd [cmd ...]] allowed commands (default: tail grep awk)
```

User-interface options:

```
--no-wrap-lines              initial line-wrapping state (default: true)
```

Example config file:

```
bind: 0.0.0.0:8080           # address and port to bind on
allow-transfers: true        # allow log file downloads
follow-names: false          # allow tailing of not-yet-existent files
relative-root: /tailon      # web app root path (default: '')
commands: [tail, grep]      # allowed commands
tail-lines: 10               # number of lines to tail initially
wrap-lines: true             # initial line-wrapping state
```

files:

```
- '/var/log/messages'
- '/var/log/nginx/*.log'
- '/var/log/xorg.[0-10].log'
- '/var/log/nginx/'        # all files in this directory
- 'cron':                  # it's possible to add sub-sections
  - '/var/log/cron*'
```

```
http-auth: basic            # enable authentication (optional)
users:                      # password access (optional)
  user1: pass1
```

Example command-line:

```
tailon -f /var/log/messages /var/log/debug -m tail
tailon -f '/var/log/cron*' -a -b localhost:8080
tailon -f /var/log/ -p basic -u user1:pass1 -u user2:pass2
tailon -c config.yaml -d
```

Please note that if the file list includes wildcard characters, they will be expanded only once at server-start time.

Reverse proxy configuration

4.1 Nginx

1. Run `tailon`, binding it to `localhost` and specifying a relative root of your liking. For example:

```
$ tailon -f /var/log/nginx/* -b localhost:8084 -r '/tailon/'
```

2. Add the following location directives to `nginx.conf`:

```
location /tailon/ws {
    proxy_pass http://localhost:8084/tailon/ws;
    proxy_http_version 1.1;
    proxy_set_header Upgrade $http_upgrade;
    proxy_set_header Connection "upgrade";
}

location /tailon {
    proxy_pass http://localhost:8084;
}
```


Tailon runs commands on the server it is installed on. While commands that accept a script argument (such as `awk`, `sed` and `grep`) should be invulnerable to shell injection, they may still allow for arbitrary command execution and unrestricted access to the filesystem.

To clarify this point, consider the following input to the `sed` command:

```
s/a/b'; cat /etc/secrets
```

This will result in an error, as tailon does not invoke commands through a shell. On the other hand, the following command is a perfectly valid `sed` script that has the same effect as the above attempt for shell injection:

```
r /etc/secrets
```

The default set of enabled commands - `tail`, `grep` and `awk` - should be safe to use. GNU `awk` is run in `sandbox` mode, which prevents scripts from accessing your system, either through the `system()` builtin or by using input redirection.

By default, tailon is accessible to anyone who knows the server address and port. One way to restrict access is by using the built-in basic and digest http authentication. This can be enabled on the command-line with:

```
$ tailon -p basic -u joe:secret1 -u bob:secret2
$ tailon -p digest -u joe:secret1 -u bob:secret2
```


CHAPTER 6

Development

Code, bug reports and feature requests are kindly accepted on tailon's [github](#) page. Please refer to the development document for more information on developing tailon.

CHAPTER 7

Similar Projects

- [clarity](#)
- [errorlog](#)
- [log.io](#)
- [rtail](#)
- [wtee](#)

CHAPTER 8

Attributions

Tailon's favicon was created from [this](#) icon.

CHAPTER 9

License

Tailon is released under the terms of the [Revised BSD License](#).