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🖳 tpetsas / **appscope-analyzer**

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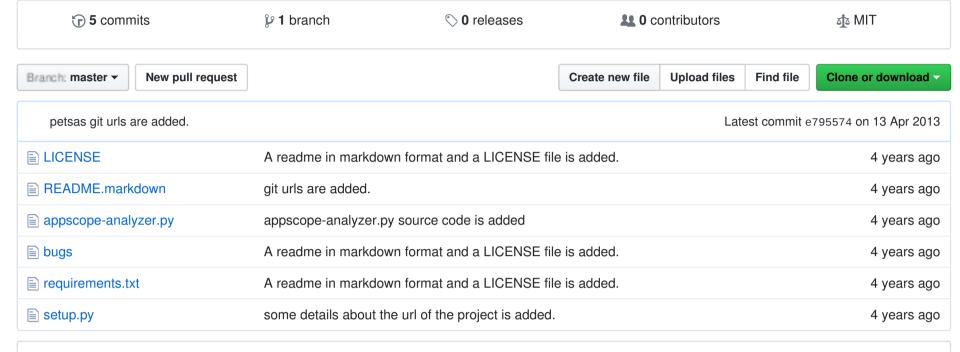‹› Code   ⊙ Issues 1   ⑂ Pull requests 0   ▦ Projects 0   ▦ Wiki   ⩘ Pulse   ⊪ Graphs

appscope-analyzer is a command-line tool that parses the AppScope logs and produces per process (PID) or per application (UID) power consumption information

🕐 **5** commits   ⑂ **1** branch   ⬡ **0** releases   👥 **0** contributors   ⚖ MIT

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petsas git urls are added.		Latest commit `e795574` on 13 Apr 2013
📄 LICENSE	A readme in markdown format and a LICENSE file is added.	4 years ago
📄 README.markdown	git urls are added.	4 years ago
📄 appscope-analyzer.py	appscope-analyzer.py source code is added	4 years ago
📄 bugs	A readme in markdown format and a LICENSE file is added.	4 years ago
📄 requirements.txt	A readme in markdown format and a LICENSE file is added.	4 years ago
📄 setup.py	some details about the url of the project is added.	4 years ago

📖 **README.markdown**

appscope-analyzer

`appscope-analyzer` is a command-line tool that parses the AppScope logs and produces per process (PID) or per application (UID) power consumption information

About AppScope

AppScope is an application energy metering framework for Android smartphones using kernel activity monitoring.

Understanding the energy consumption of a smartphone application is a key area of interest for end users, as well as application and system software developers. Other similar work has only been able to provide limited information concerning the energy consumption of individual applications because of limited access to underlying hardware and system software. The energy consumption of a smartphone application is, therefore, often estimated with low accuracy and granularity. AppScope is an Android-based energy metering system. This system monitors application's hardware usage at the kernel level and accurately estimates energy consumption. AppScope is implemented as a kernel module and uses an event-driven monitoring method that generates low overhead and provides high accuracy. Our preliminary evaluation results indicate that AppScope accurately estimates the energy consumption of Android applications expending approximately 35mW and 2.1% in power consumption and CPU utilization overhead, respectively.

Installing appscope-analyzer

`appscope-analyzer` requires Python 2.5 or newer, and some form of UNIX-like shell (bash works well). It works on Linux, OS X, and Windows (with Cygwin).

Installing and setting up `appscope-analyzer` will take about one minute.

First, download the tool or clone the Mercurial repository. Next, open your `~/.bashrc` file and put an alias there:

alias asa='python ~/path/to/appscope-analyzer.py'

Make sure you run `source ~/.bashrc` or restart your terminal window to make the alias take effect.

Using appscope-analyzer

`appscope-analyzer` is quick and easy to use.

List Monitored Apps

To show a list of the monitored apps use `asa -s HT181P8A0128/ -l`

```
PID     UID     APP PACKAGE
...     ...     ...
344     10066   com.webroot.security
659     10058   com.antivirus
660     10058   com.antivirus
665     10058   com.antivirus
1157    10075   jackpal.androidterm
...     ...     ...
```

(`-q` option is available to hide PID column)

Show Energy Of a Particular App/Process

To show the AppScope energy samples of a spesific app you can use: `asa -s HT181P8A0128/ -u 10066` or `asa -s HT181P8A0128/ -a com.webroot.security`

```
TIME  CPU       DISPLAY  GPS      WIFI     3G       TOTAL
2      34.2537  0.0000   0.0000   0.0000   0.0000    34.2537
3     548.0595  0.0000   0.0000   0.0000   0.0000   548.0595
4     542.8593  0.0000   0.0000   0.0000   0.0000   542.8593
5     542.3506  0.0000   0.0000   0.0000   0.0000   542.3506
6     542.6931  0.0000   0.0000   0.0000   0.0000   542.6931
7     559.4774  0.0000   0.0000   0.0000   0.0000   559.4774
8     553.9380  0.0000   0.0000   0.0000   0.0000   553.9380
9     548.0595  0.0000   0.0000   0.0000   0.0000   548.0595
10    548.1748  0.0000   0.0000   0.0000   0.0000   548.1748
...   ...       ...      ...      ...      ...       ...
```

To show the energy samlpes of a spesific process just use: `asa -s HT181P8A0128/ -p 344`

(`-q` option will produce an output with only the 'TIME' and 'TOTAL' columns `-v` option will produce a more detailed output containing usage information such as CPU frequency ticks, packets send and received through WIFI, display usage information etc.)

Tips and Tricks

You can search for a specific pattern in the output by using the `-g` option. e.g.

```
asa -s HT181P8A0128/ -l -g 'google'
```

```
PID     UID     APP PACKAGE
...     ...     ...
307     1000    com.google.android.backup
308     1000    com.google.android.backup
2765    10034   com.google.android.inputmethod.latin
5140    10026   com.google.android.syncadapters.contacts
5265    1000    com.google.android.backup
...     ...     ...
```

Problems, Contributions, Etc

If you need anything beyond the basics `appscope-analyzer` currenly provides you can find my contact details at my website.

If you want to contribute code to `appscope-analyzer` , that's great! Fork the Mercurial repository on BitBucket or the git mirror on GitHub and send me a pull request.

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