docker.md 2022/9/14

Docker image

We publish a docker image on docker hub. The size of this image is about 14.7GB.



```
$ sudo docker pull yiruzhaozhao/alphuzz:artifact
$ sudo docker run --privileged -it yiruzhaozhao/alphuzz:artifact /bin/bash
```

We put the datasets binaries and initial seeds under the root directory.

```
root@e17cfb1ea93f:/# ls
12-real-world boot
                      home
                             media
                                     opt
                                                    root
                                                          SIV
                                                               unifuzz
Python-3.8.1
                dev
                      lib
                             mnt
                                     ргос
                                                    run
                                                          sys
                                                               UST
                      lib64
bin
                etc
                             ninja
                                     psutil-5.9.2
                                                    sbin
```

We put the Alphuzz and Alpuzzplusplus under the /home directory.

```
root@e17cfb1ea93f:/home# ls
Alphuzz-main Alphuzzplusplus-main
```

Example

Take Unifuzz dataset for example.

Alphuzz

```
$ /home/Alphuzz-main/afl-fuzz -i /unifuzz/seeds/exiv2 -o /home/out -Q --
/unifuzz/binaries/exiv2 @@
```

docker.md 2022/9/14

```
root@e17cfb1ea93f:/# /home/Alphuzz-main/afl-fuzz -i /unifuzz/seeds/exiv2/ -o /ho
me/out -Q -- /unifuzz/binaries/exiv2 @@
afl-fuzz 2.52b by <lcamtuf@google.com>
[+] You have 8 CPU cores and 2 runnable tasks (utilization: 25%).
[+] Try parallel jobs - see docs/parallel_fuzzing.txt.
[*] Checking CPU core loadout...
[+] Found a free CPU core, binding to #0.
[*] Checking core pattern...
[*] Setting up output directories...
[+] Output directory exists but deemed OK to reuse.
[*] Deleting old session data...
[+] Output dir cleanup successful.
[*] Scanning '/unifuzz/seeds/exiv2/'...
[+] No auto-generated dictionary tokens to reuse.
[*] Creating hard links for all input files...
[*] Validating target binary...
[*] Attempting dry run with 'id:000000,orig:103.jpg'...
                        american fuzzy lop 2.52b (exiv2)
                                                           overall results
        run time : 0 days, 0 hrs, 3 min, 30 sec
   last new path : none seen yet
                                                           total paths : 100
                                                          uniq crashes : 0
 last uniq crash : none seen yet
  last uniq hang : none seen yet
                                                            uniq hangs : 0
  now processing : 0* (0.00%)
                                           map density : 12.44% / 12.50%
 paths timed out : 0 (0.00%)
                                        count coverage : 1.02 bits/tuple
                                        favored paths : 0 (0.00%)
  now trying : trim 256/256
 stage execs : 109/122 (89.34%)
                                         new edges on : 1 (1.00%)
 total execs : 1048
                                        total crashes : 0 (0 unique)
                                         total tmouts : 0 (0 unique)
  fuzzing strategy vields
                                                          path geometry
   bit flips : 0/0, 0/0, 0/0
                                                            levels : 1
  byte flips : 0/0, 0/0, 0/0
                                                           pending : 100
 arithmetics : 0/0, 0/0, 0/0
                                                          pend fav : 0
  known ints : 0/0, 0/0, 0/0
                                                         own finds : 0
  dictionary: 0/0, 0/0, 0/0
                                                          imported : n/a
       havoc : 0/0, 0/0
                                                         stability : 96.63%
```

Alphuzzplusplus

trim : n/a, n/a

```
$ /home/Alphuzzplusplus-main/afl-fuzz -i /unifuzz/seeds/cflow -o /home/out -Q -t
3000+ -- /unifuzz/binaries/cflow @@
```

[cpu000: 54%]

docker.md 2022/9/14

```
root@e17cfb1ea93f:/# /home/Alphuzzplusplus-main/afl-fuzz -i /unifuzz/seeds/cflow
/ -o /home/out -t 3000+ -Q -- /unifuzz/binaries/cflow @@
afl-fuzz++3.14a based on afl by Michal Zalewski and a large online community
[+] afl++ is maintained by Marc "van Hauser" Heuse, Heiko "hexcoder" Eißfeldt, A
ndrea Fioraldi and Dominik Maier
[+] afl++ is open source, get it at https://github.com/AFLplusplus/AFLplusplus
[+] NOTE: This is v3.x which changes defaults and behaviours - see README.md
[+] No -M/-S set, autoconfiguring for "-S default"
[*] Getting to work...
[+] Using exponential power schedule (FAST)
[+] Enabled testcache with 50 MB
[*] Checking core_pattern...
[!] WARNING: Could not check CPU scaling governor
[+] You have 8 CPU cores and 4 runnable tasks (utilization: 50%).
[+] Try parallel jobs - see docs/parallel fuzzing.md.
[*] Setting up output directories...
[*] Checking CPU core loadout...
[+] Found a free CPU core, try binding to #0.
[*] Scanning '/unifuzz/seeds/cflow/'...
```

```
american fuzzy lop ++3.14a (default) [fast] {0}
       run time : 0 days, 0 hrs, 0 min, 2 sec
   last new path : 0 days, 0 hrs, 0 min, 0 sec
                                                          total paths : 117
 last uniq crash : none seen yet
                                                        uniq crashes: 0
  last uniq hang : none seen yet
                                                           uniq hangs : 0
 now processing : 18.0 (15.4%)
                                            map density : 1.91% / 4.52%
paths timed out : 0 (0.00%)
                                         count coverage : 4.66 bits/tuple
 stage progress
 now trying : havoc
                                         favored paths : 34 (29.06%)
stage execs : 30/1824 (1.64%)
                                          new edges on : 45 (38.46%)
total execs : 1532
                                         total crashes : 0 (0 unique)
                                          total tmouts : 0 (0 unique)
 exec speed: 167.4/sec
  bit flips : disabled (default, enable with -D)
                                                          levels : 2
 byte flips : disabled (default, enable with -D)
                                                          pending: 117
arithmetics : disabled (default, enable with -D)
                                                        pend fav: 34
 known ints : disabled (default, enable with -D)
                                                       own finds: 16
 dictionary : n/a
                                                        imported : 0
havoc/splice : 0/0, 0/0 py/custom/rq : unused, unused, unused, unused
    trim/eff : 0.00%/13, disabled
                                                                 [cpu000: 37%]
```