



Report Number: SKD BG 2018-02-11-01

SKD LABS TEST REPORT

COMPANY: Sangfor Technologies Inc.

PRODUCT: Sangfor Engine Zero

TEST TIME: December 2018

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1 SKD Labs

SKD Labs is a leading independent testing facility and specializes in functionality testing, performance validation and certification of information security products and services. It develops and implements the highest testing standards to ensure maximum product effectiveness in functionality and performance. SKD Labs' independent testing and technical consultancy services benefit information security vendors to gain market advantage and to compete with established brands not only in Asia but also throughout markets worldwide. Through its conferences, seminars, and information publishing activities, SKD Labs develops awareness among users of security products—both consumers and business users—of the threats to information security and the products available to deal with those threats. Its Starcheck certification has been widely recognized by networking and information security industry, business and home users in the market.

SKD Labs Website: www.skdlabs.com

2 The Product

Sangfor Engine Zero is based on machine learning and designed to analyze files as malware or goodware. Analysis results are produced in real time.

3 Test Methodology

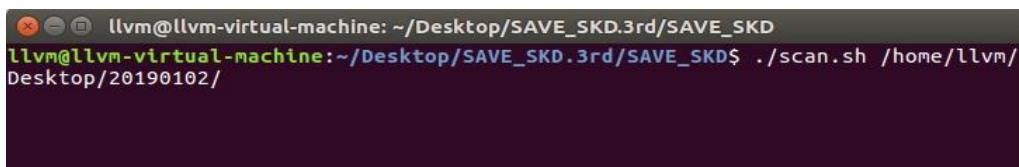
This test is to evaluate how effective and accurate Sangfor Engine Zero analyzes files as malware or goodware in real time.

1. From SKD Labs malware sample database, select 20,000 malware samples, including Trojan, infectious viruses, worms, WannaCrypt and other types of malicious samples.
2. Run Sangfor Engine Zero against the samples for detection.
3. Check the returned results for accuracy.
4. Run Sangfor Engine Zero against 5,000 standard Microsoft files from Microsoft Windows systems. Check the returned results for false positives.

The engine was run in Ubuntu 16.04.

4 Test Results

Among the 20,000 malware samples for analysis, 19,702 samples were returned with correct results very quickly. 298 samples were returned with incorrect detection.

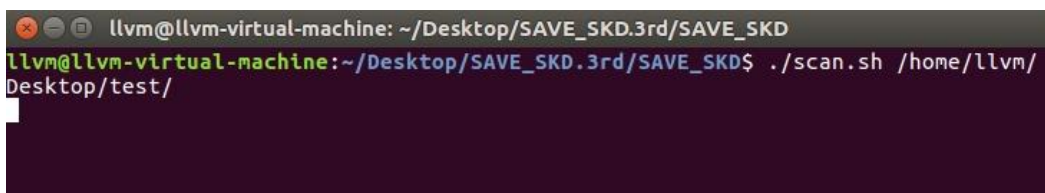


```
llvm@llvm-virtual-machine: ~/Desktop/SAVE_SKD.3rd/SAVE_SKD
llvm@llvm-virtual-machine:~/Desktop/SAVE_SKD.3rd/SAVE_SKD$ ./scan.sh /home/llvm/
Desktop/20190102/
```

Test Screenshot 1

```
[Scan File]:/home/llvm/Desktop/20190102//70d4896863372f8e71fe95e3b423f5419c26a705 [md5] bb0dea5ed16eb68819d2a8a9bb4a748c
[SAVE AI]:/home/llvm/Desktop/20190102//70d4896863372f8e71fe95e3b423f5419c26a705,4,1.0000000000,0
[Scan File]:/home/llvm/Desktop/20190102//63f8fb4bf6c92831fb30e28elf0ea96ec85f3b4c [md5] 23544f3635df7eedf9f092640d2d6999
[SAVE AI]:/home/llvm/Desktop/20190102//63f8fb4bf6c92831fb30e28elf0ea96ec85f3b4c,4,1.0000000000,0
[Scan File]:/home/llvm/Desktop/20190102//7e035b7cb004f4b3cc4ff748b2fc508a89c536c8 [md5] e635ea8cba76bf01f396b3dac289fcf9
[SAVE AI]:/home/llvm/Desktop/20190102//7e035b7cb004f4b3cc4ff748b2fc508a89c536c8,4,1.0000000000,0
[Scan File]:/home/llvm/Desktop/20190102//8c8de70373c0f79a574d6cef6194124c1318a31a [md5] 7e482c08baf7a716409bde01471086cd
[SAVE AI]:/home/llvm/Desktop/20190102//8c8de70373c0f79a574d6cef6194124c1318a31a,4,0.99969047308,0
[Scan File]:/home/llvm/Desktop/20190102//283f1188bf773bc032816de3c6842f433c8abbcl [md5] a88470356526c971d008e2e0c8d46484
[SAVE AI]:/home/llvm/Desktop/20190102//283f1188bf773bc032816de3c6842f433c8abbcl,4,0.99986720085,0
[Scan File]:/home/llvm/Desktop/20190102//9f8a4a8c15d8ba95efe2523788c9ee9eb4cf00fa [md5] 156d892b607c2ad119a0ee6071c5e3e3e
[SAVE AI]:/home/llvm/Desktop/20190102//9f8a4a8c15d8ba95efe2523788c9ee9eb4cf00fa,4,0.99639278650,0
[Scan File]:/home/llvm/Desktop/20190102//d40cb026cc62c6b92209df477aa3fbd9dd12e385 [md5] d0404f5ea863b04f3eadd9c6a2d6bcba
[SAVE AI]:/home/llvm/Desktop/20190102//d40cb026cc62c6b92209df477aa3fbd9dd12e385,4,0.99999183416,0
[Scan File]:/home/llvm/Desktop/20190102//4bc7deb2c18027371f9d306elf2d868fc7a9a051 [md5] 16387fa516f54eceb773815d7cddd702
[SAVE AI]:/home/llvm/Desktop/20190102//4bc7deb2c18027371f9d306elf2d868fc7a9a051,4,0.99969804287,0
[Scan File]:/home/llvm/Desktop/20190102//c22be868fe46ed4dd943e4e72b4alf98172750db [md5] bd9783c0359e4ba3fe8610caefa4b38c
[SAVE AI]:/home/llvm/Desktop/20190102//c22be868fe46ed4dd943e4e72b4alf98172750db,4,0.99988663197,0
[Scan File]:/home/llvm/Desktop/20190102//80abe6be43dd25e536bc89b8b0aeb85370f785aa [md5] 9c49d586a854a3758fd79a92ee04fc32
[SAVE AI]:/home/llvm/Desktop/20190102//80abe6be43dd25e536bc89b8b0aeb85370f785aa,4,0.99965912104,0
[Scan File]:/home/llvm/Desktop/20190102//61e7c1c4e4f3f41e40e6a738cdfef75b0ab8e332 [md5] b1d966fc7f5cff8d200da0f461f506b4
[SAVE AI]:/home/llvm/Desktop/20190102//61e7c1c4e4f3f41e40e6a738cdfef75b0ab8e332,4,0.99984675646,0
[Scan File]:/home/llvm/Desktop/20190102//1ccee3d5fc55d6aaa793a7e9b96bc3caff5fbc87 [md5] 438124af493f1368eaa85296e63246c3
[SAVE AI]:/home/llvm/Desktop/20190102//1ccee3d5fc55d6aaa793a7e9b96bc3caff5fbc87,4,0.99992609024,0
[Scan File]:/home/llvm/Desktop/20190102//6ae2b7df6df1a9627f40b84fad7c3abb8af734f [md5] 89eb0781bdce665f6f3f8052ed95297
[SAVE AI]:/home/llvm/Desktop/20190102//6ae2b7df6df1a9627f40b84fad7c3abb8af734f,4,0.9999022484,0
black:9765 white:235
```

Test Screenshot 2



```
llvm@llvm-virtual-machine: ~/Desktop/SAVE_SKD.3rd/SAVE_SKD
llvm@llvm-virtual-machine:~/Desktop/SAVE_SKD.3rd/SAVE_SKD$ ./scan.sh /home/llvm/
Desktop/test/
```

Test Screenshot 3

```
[Scan File]:/home/llvm/Desktop/test//d731eb7c6a2c010e692c34f96b1ba23c216a606d [md5] b8cf53bc97b7df873df251dc52c22b66
[SAVE AI]:/home/llvm/Desktop/test//d731eb7c6a2c010e692c34f96b1ba23c216a606d,4,0.99989479780,0
[Scan File]:/home/llvm/Desktop/test//87b738f26d465d622360241c625b607b56955b86 [md5] d4dbcf84149cfc0bd9cc8d24a9592ec0
[SAVE AI]:/home/llvm/Desktop/test//87b738f26d465d622360241c625b607b56955b86,4,0.99907845259,0
[Scan File]:/home/llvm/Desktop/test//8c8de70373c0f79a574d6cef6194124c1318a31a [md5] 7e482c08baf7a716409bde01471086cd
[SAVE AI]:/home/llvm/Desktop/test//8c8de70373c0f79a574d6cef6194124c1318a31a,4,0.99934124947,0
[Scan File]:/home/llvm/Desktop/test//fb690c548a857cbb535764b761abdc4acf668cf3 [md5] 0b62e738b68d0ccc85c433affdfab73
[SAVE AI]:/home/llvm/Desktop/test//fb690c548a857cbb535764b761abdc4acf668cf3,4,0.99999982119,0
[Scan File]:/home/llvm/Desktop/test//a09a8c699412d4e1bf254e1f51485442ebae98f4 [md5] 9615d3afe958adb6095838632a6675d
[SAVE AI]:/home/llvm/Desktop/test//a09a8c699412d4e1bf254e1f51485442ebae98f4,4,0.99999123812,0
[Scan File]:/home/llvm/Desktop/test//061c6a78f3ab68c351b0a318c2bc0ca15370f52 [md5] 5bafd701ca6f68dde7f3c890f8afe5e8
[SAVE AI]:/home/llvm/Desktop/test//061c6a78f3ab68c351b0a318c2bc0ca15370f52,4,1.00000000000,0
[Scan File]:/home/llvm/Desktop/test//4bc7deb2c18027371f9d306e1f2d868fc7a9a051 [md5] 16387fa516f54cecb773815d7cdd4702
[SAVE AI]:/home/llvm/Desktop/test//4bc7deb2c18027371f9d306e1f2d868fc7a9a051,4,0.99930155277,0
[Scan File]:/home/llvm/Desktop/test//49f3852f2d037ad7376b645509414185987111d1 [md5] 4a581dae1d344446a50e7c27bf525cf4
[SAVE AI]:/home/llvm/Desktop/test//49f3852f2d037ad7376b645509414185987111d1,4,0.99910354614,0
[Scan File]:/home/llvm/Desktop/test//ad7b17b2c61387c729ed31b60b443d0afa8419c9 [md5] 00c8880ee53b5a93711afaf3ddf71dd2
[SAVE AI]:/home/llvm/Desktop/test//ad7b17b2c61387c729ed31b60b443d0afa8419c9,4,0.99997073412,0
[Scan File]:/home/llvm/Desktop/test//a4bee1b4e6077b4d5970c718a61a8403daa9a018 [md5] de978b3c00e539cc4b45de10b222287cd
[SAVE AI]:/home/llvm/Desktop/test//a4bee1b4e6077b4d5970c718a61a8403daa9a018,4,0.99971294403,0
[Scan File]:/home/llvm/Desktop/test//59d591112b9e491c4237ce42a849ec627fd8f705 [md5] da3d85cd05df7f0ac6e8f61fb6cad8
[SAVE AI]:/home/llvm/Desktop/test//59d591112b9e491c4237ce42a849ec627fd8f705,4,0.99996256828,0
[Scan File]:/home/llvm/Desktop/test//6ae2b7df6dfla9627f40b84afad7c3abb8af734f [md5] 89eb0781bdce665f6f3f8052ed95297
[SAVE AI]:/home/llvm/Desktop/test//6ae2b7df6dfla9627f40b84afad7c3abb8af734f,4,0.99997371435,0
black:9937 white:63
```

Test Screenshot 4

Among the 5,000 standard Microsoft Windows files for analysis, no file was returned with incorrect detection.

5 Conclusion

The malware detection rate: 98.51%

The false positive rate: 0

SKD Labs certifies the ability of Sangfor Engine Zero to detect malware.

Test Date: December 2018

Certification Number: SKD ZS 2018-02-11-01

This certificate is valid until January 25, 2020

STARCHECK CERTIFICATE

NO.SKD ZS 2018-02-11-01

Sangfor Technologies Inc.
Sangfor Engine Zero

Certification info: www.skdlabs.com

Valid until January 25, 2020



赛可达实验室
Skd,labs

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