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UEFI Self Certification Tests (UEFI-SCT) and Firmware Test Suite (FWTS)

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www.uefi.org



UEFI Self Certification Tests (UEFI-SCT) and Firmware Test Suite (FWTS)

UEFI Self Certification Tests (SCT)

Agenda



- Introduction
- History
- Status
- Build Instructions
- Reporting Issues
- Call to Action

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Introduction

- Modern, feature-rich, cross-platform firmware test environment for the UEFI specification.
- Test harness for executing built-in compliance tests.
- Scope for integrating user-defined tests.



History

- UEFI SCT existed in a private GitHub repository -
<https://github.com/UEFI/UEFI-SCT>
- Access to UEFI test tools -
<https://uefi.org/testtools>
- Binary releases with no access to source.



UEFI SCT Open Source Status

- Latest stable binary version - UEFI SCT 2.6 A is published at <https://uefi.org/testtools>
- UEFI SCT 2.7 A coming soon – edk2-test-stable201904.
- Open source repo is <https://github.com/tianocore/edk2-test>
- Stable tag each quarter.



Build UEFI SCT

- Steps for building uefi-sct binaries are documented here:
<https://github.com/tianocore/edk2-test/tree/master/uefi-sct/HowToBuild>
- Builds currently available for
 - X64/IA32 platforms.
 - AARCH64 platforms.



Reporting Issues

- UEFI-SCT follows same process as edk2 (TianoCore).
- Bugzilla for reporting bugs or requesting new feature -
<https://bugzilla.tianocore.org/>
- File a new bug or feature request in the “UEFI-SCT” component of the “Edk2 Test” product.



Call to Action

- Edk2-test follows the same contribution guidelines as edk2 (TianoCore) project - <https://github.com/tianocore/tianocore.github.io/wiki/How-To-Contribute>
- SCT source is under 2-Clause BSD License
- General questions on UEFI SCT with the subject [edk2-test] can be sent to edk2-list edk2-devel@lists.01.org.
- UEFI SCT open source project solicits your contributions with a humble thank you!



UEFI Self Certification Tests (UEFI-SCT) and Firmware Test Suite (FWTS)

ACPI SCT – Firmware Test Suite

Agenda

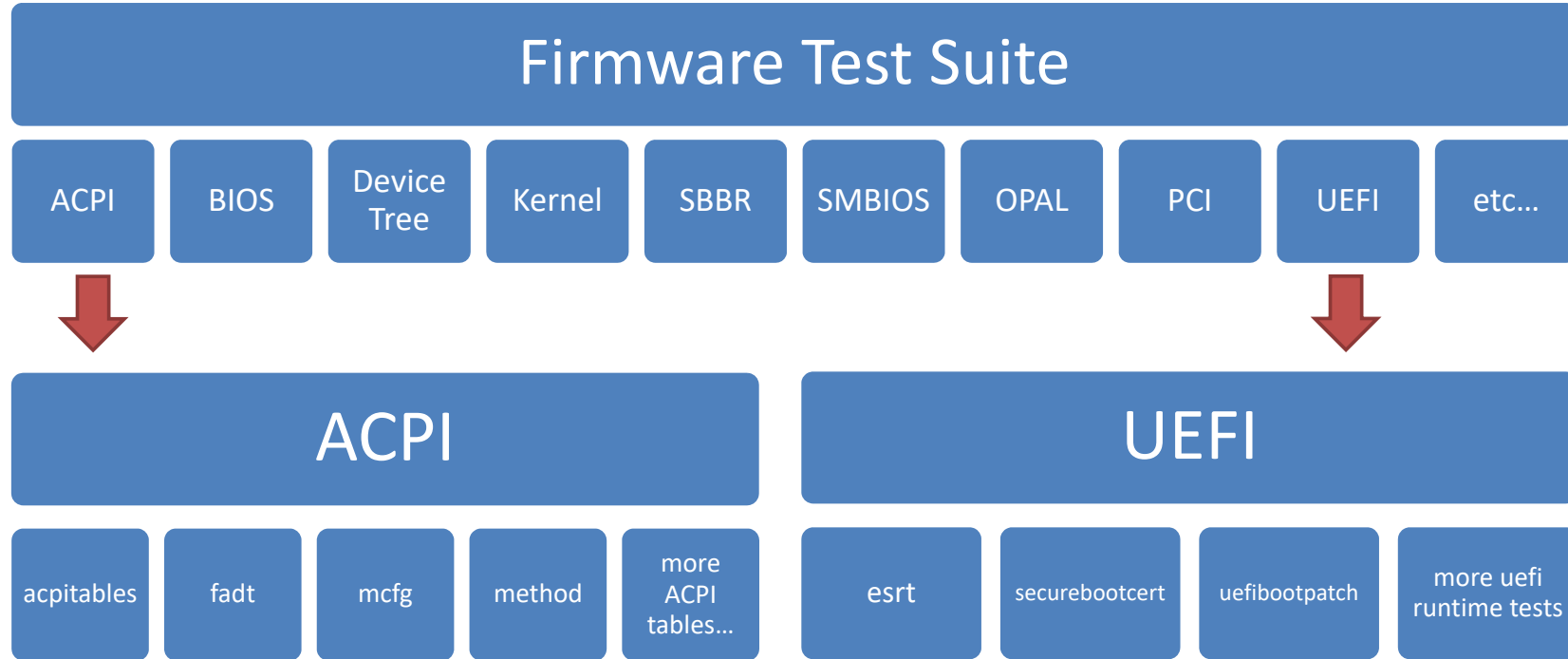


- What is Firmware Test Suite?
- FWTS Updates
- FWTS-LIVE Updates
- Building FWTS-LIVE
- Contributions to FWTS



What is Firmware Test Suite?

- The recommended ACPI SCT runs in Linux





FWTS Updates

- ACPI 6.3 was released in January 2019
- FWTS 19.02.00 updates tests for ACPI 6.3
- Call for Testing
 - Current version is 19.03.00
 - Report bugs or missing features
 - fwts-devel@lists.ubuntu.com
 - <https://bugs.launchpad.net/fwts>

FWTS-LIVE Updates



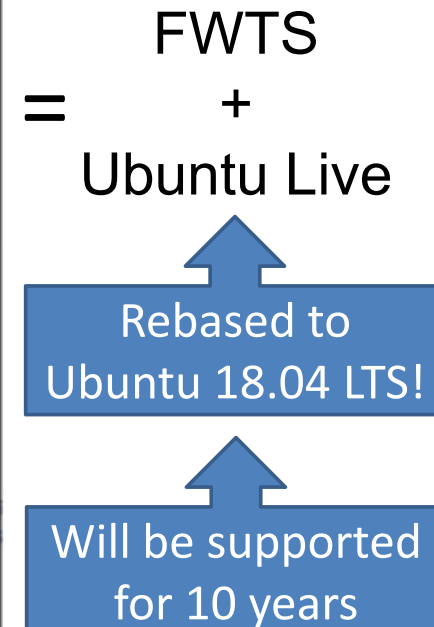
Select Tests

This will run a suite of firmware tests that will check the BIOS and ACPI tables. It can also find issues that can cause Linux problems.

The default below is to run just all the Batch Tests, but you can select more tests below if required.

Please select below (using cursor up/down and space) and press enter to continue.

<input checked="" type="checkbox"/> ALL	All Batch Tests	
<input type="checkbox"/> ACPI	ACPI Tests	
<input type="checkbox"/> UEFI	UEFI Tests	
<input type="checkbox"/> SBBR	ARM SBBR Tests	
<input type="checkbox"/> Recommended	Recommended Tests	
<input type="checkbox"/> Recommended for IFV	Recommended Tests for F/W Vendors	
<input type="checkbox"/> Selected	Select Individual Tests	
↓(+)		87%
< OK >	<Cancel>	< Help >





FWTS-LIVE Updates (cont'd)

- Newer Linux kernel
- Image size is larger, but compressed size is small
 - fwts.ubuntu.com/fwts-live/fwts-live-19.03.00.img.xz
 - Decompress FWTS-LIVE images
 - Linux: `unxz fwts-live-19.03.00.img.xz`
 - Windows: by [WinZip](#) and [7-Zip](#) ...
- Work in progress
 - Reduce image size
 - FWTS-LIVE for ARM

Building FWTS-LIVE



- In Ubuntu
 - git clone <https://github.com/alexhungce/script-fwts/>
 - ./build_new_fwts-live.sh 19.03.00

```
[ -e fwts-live ] || git clone https://github.com/alexhungce/fwts-live
cd fwts-live
sudo make
```

- FWTS-LIVE may be built in other OS too

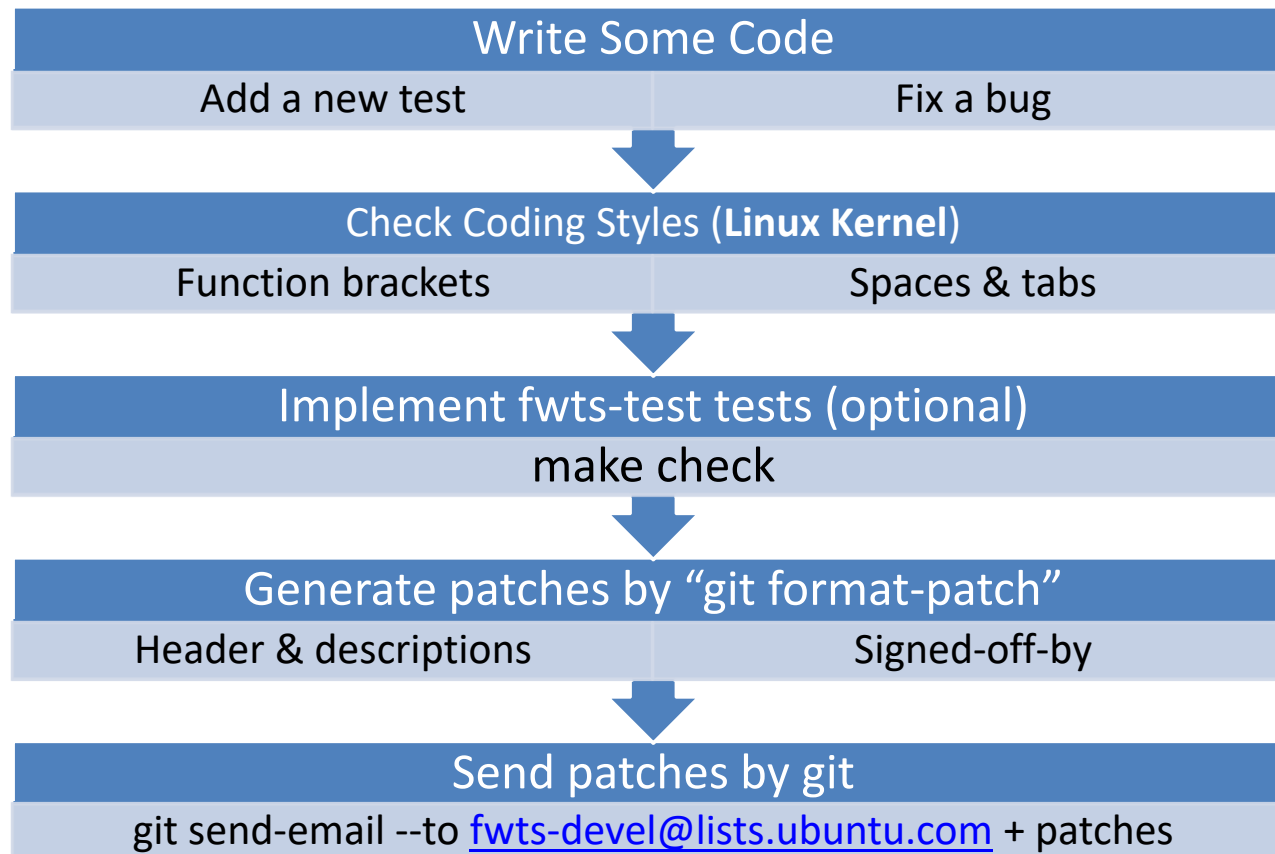
```
build:
docker build -t fwts-live .
docker run --privileged --rm -v `pwd`:/image fwts-live
```




Contributions to FWTS

- FWTS uses [GPLv2 License](#)
 - [Wikipedia](#): “guarantees end users the freedom to run, study, share and modify the software”
 - In purely private (or internal) use ... the software code may be modified and parts reused without requiring the source code to be released.
 - For sales or distribution, the entire source code need to be made available to end users
- Should I upstream my code?
 - It depends, but it is recommended

Contributions to FWTS (cont'd)



Thanks for attending the 2019 Spring UEFI
Plugfest

For more information on UEFI Forum and UEFI
Specifications, visit <http://www.uefi.org>

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