

Run Tests without kunit_tool

If we do not want to use `kunit_tool` (For example: we want to integrate with other systems, or run tests on real hardware), we can include KUnit in any kernel, read out results, and parse manually.

Note

KUnit is not designed for use in a production system. It is possible that tests may reduce the stability or security of the system.

Configure the Kernel

KUnit tests can run without `kunit_tool`. This can be useful, if:

- We have an existing kernel configuration to test.
- Need to run on real hardware (or using an emulator/VM `kunit_tool` does not support).
- Wish to integrate with some existing testing systems.

KUnit is configured with the `CONFIG_KUNIT` option, and individual tests can also be built by enabling their config options in our `.config`. KUnit tests usually (but don't always) have config options ending in `_KUNIT_TEST`. Most tests can either be built as a module, or be built into the kernel.

Note

We can enable the `KUNIT_ALL_TESTS` config option to automatically enable all tests with satisfied dependencies. This is a good way of quickly testing everything applicable to the current config.

Once we have built our kernel (and/or modules), it is simple to run the tests. If the tests are built-in, they will run automatically on the kernel boot. The results will be written to the kernel log (`dmesg`) in TAP format.

If the tests are built as modules, they will run when the module is loaded.

```
# modprobe example-test
```

The results will appear in TAP format in `dmesg`.

Note

If `CONFIG_KUNIT_DEBUGFS` is enabled, KUnit test results will be accessible from the `debugfs` filesystem (if mounted). They will be in `/sys/kernel/debug/kunit/<test_suite>/results`, in TAP format.