

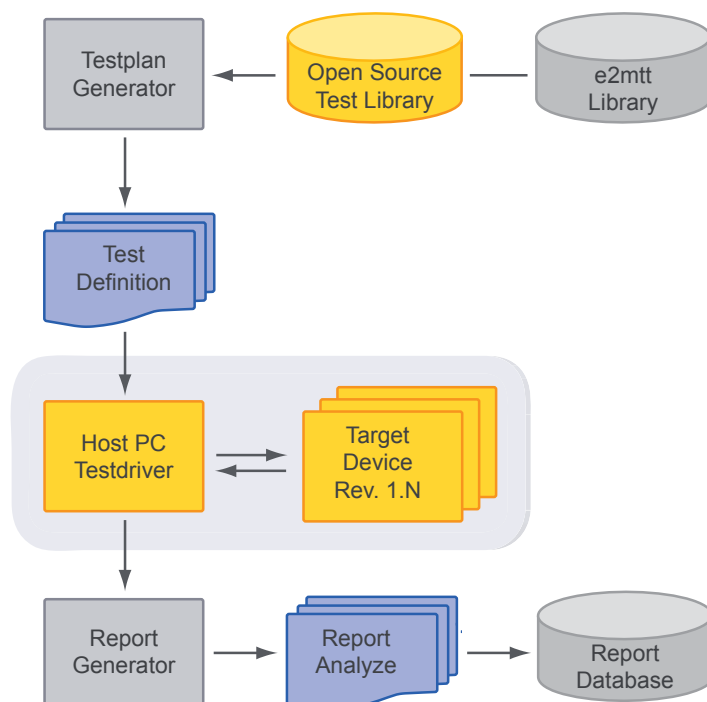


TAF – Test Application Framework

For professional embedded software development an efficient possibility for testing during development is essential. This especially applies for hardware-affiliated tests at the interface between system software and board or processor module. A flexible adaptable test automation also supports ongoing serial or release tests throughout the product life cycle.

Efficient Processes for Automated and Documented Quality Assurance

In case of parallelization of hardware and board support packages development the interaction between a certain hardware revision and the Linux system can be tested with little effort and therefore quite efficiently. These largely person-independent regression tests also allow a fast and reliable comparison of hardware revisions.



The emlix Test Application Framework (TAF) is a quality assurance tool for embedded Linux systems, which allows a development- and production-related quality assurance by continuous system-, module- and integration testing with a very good test coverage.

Developer tests are ideally supplemented. The documentation of the results is carried out automatically and reproducibly.

Benefits

The emlix Test Application Framework (TAF) offers:

- flexible, product specific test setup
- integration of additional, product-specific tests
- standardized, automated testing
- clear versioning of each test run
- various possibilities to control test procedure and order of tests
- comparative tests of different hardware revisions
- test runs on the target or on a host against the target
- reproducible archiving of test and test runs (traceability) in database
- reproducible generation of test reports

Within a project, emlix' customers have the option of ordering a TAF setup (one-time) and development-related test runnings (TAF Release Monitoring).

If desired the TAF can be used directly at the customers side in the framework of a subscription or maintenance contract (TAF workbench).

TAF workbench is a managed hosting solution which provides the customer's developers with the access to all TAF features. Furthermore TAF can also be used to test embedded Linux board support packages which have been externally developed or bought in addition (TAF Review).

Bild 1: Selection, implementation and documentation of tests using TAF

TAF Release Monitoring

For an extended quality assurance for embedded Linux board support packages we recommend a TAF setup and appropriate test runs parallel to the development of Linux based products. TAF release monitoring increases the test coverage and simultaneously enhances the efficiency through automation. Regression tests are especially suggested for a synchronous hardware/software development.

The product specific and where appropriate extended TAF setup can be continuously used during the maintenance phase. With every release our customers receive an extensive, reproducible test report.

Once the TAF set-up is done, the TAF test runs can be performed within less than four hours. Additional expenses only occur, if additional tests have to be developed or adapted.

TAF Review

For additional testing and extended external quality assurance of in-house or third-party developed embedded Linux board support packages emlix provides a TAF based review. In the context of serial production a TAF review is able to detect e.g. minor hardware modifications which have not been indicated by the supplier.

Thus the TAF review provides valid information for continuous qualification of products which are bought in addition from various sources.

TAF Workbench

TAF workbench is a managed hosting solution which provides the customer's developers with the access to all TAF features. The customer is able to perform test runs and to extend the test set-up with customer specific tests.

The TAF workbench for embedded Linux board support packages includes:

- operation of a server with all services for the customer-specific TAF installation
- installation for a TAF host PC to perform tests on the customer's side
- TAF introduction workshop at the customers site
- set-up of customer-specific test-sets
- TAF documentation and support for the TAF operation and test development
- updates and extensions during contract period

The operation of the server-based components as well as the TAF support is carried out by experienced emlix engineers in the framework of a subscription or maintenance contract. The TAF workbench allows flexibility and scalability.

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