

best practices - testing strategies

Implemented features

- There are `pre-integration-test` and `post-integration-test` phases for preparing and cleaning up integration tests.

Proposed features to implement (short term)

- A project should be allowed to have both unit tests and integration tests sitting next to each other.
- Directory structure:

```
project/  
  |_ src  
    |_ main  
    |_ test  
      |_ java  
      |_ resources  
  |_ it  
    |_ java  
    |_ resources
```

- There's no need for introducing a third type of tests. Functional tests should be considered integration tests. If there's a need for more types of tests, it should be implemented by adding features to the surefire plugin to configure it in different executions but the 2 phases to attach tests to will be `test` (for unit tests) and `integration-test`.
- Modify the surefire plugin to add a new `surefire:it` goal. See [MSUREFIRE-50](#).
- Add new `<integrationTestSourceDirectory>` to the POM model. See [MNG-2009](#). Note: Does this need updating the minor version of the POM version?
- Add new phases for integration tests: `generate-integration-test-sources`, `process-integration-test-sources`, `generate-integration-test-resources`, `process-integration-test-resources` and `integration-test-compile`. See [MNG-2010](#)

Open short-term questions

- Should it be `src/it`, `src/itest`, `src/test-integration` or `src/integration-test`?
- Should the surefire plugin goal be `surefire:it`, `surefire:itest`, `surefire:integration`, `surefire:integration-test`?
- Should we add a `integration-test-package` phase too?
- Do we add a new `it` scope (or `itest` or `integration-test`)? (see [MNG-2011](#))

Ideas for the future

- An alternative directory structure:

```
project/  
  |_ src  
    |_ main  
    |_ test  
      |_ unit  
        |_ java  
        |_ resources  
      |_ integration  
        |_ java  
        |_ resources  
      |_ functional  
        |_ java  
        |_ resources
```

- Should we rename `src/test` into something more explicit like `src/test-unit`? BTW the same question will arise for the lifecycle which is currently named `test` even though it's meant to be only for unit tests. Same for `<testSourceDirectory>`.

Misc

Other issues/articles related to the testing strategy / testing best practices

- <http://jira.codehaus.org/browse/MNG-1922>: Rename maven-it-plugin plugin as its name implies it is for performing integration tests in general
- <http://jira.codehaus.org/browse/MNG-1381>: best practices: testing strategies
- <http://jira.codehaus.org/browse/MNG-591>
- <http://docs.codehaus.org/display/MAVENUSER/Review+of+Plugin+Testing+Strategies>

Older stuff:

- [Testing Strategies](#)