

# HOWTO: Running module tests as part of MPS build

Executing module tests as part of MPS build usually requires writing non-trivial build scripts, which then need to be integrated into the main MPS build script at the correct place. This HOWTO describes the easier solution, which requires declaring a `TestModuleManifest` and keeping the `jetbrains.mps.build.tests.generatedTests` up-to-date.

## Inner working details

The module tests during the MPS build are executed by the ant script `build/test.xml`, which calls the targets "build" and "check" in the generated file `build/tests/mpsTestModules.xml`.

The prototype model of the latter file (`jetbrains.mps.ide.build.tests.generatedTests`) is itself generated from the user-defined test manifests collected in another auxiliary model (`jetbrains.mps.build.mps.testModules`).

This last model contains a single instance of `TestProjectConfiguration` enumerating the test module manifests to be included in the test process.

Following are the detailed instructions on using this functionality.

## Step-by-step guide

1. In your test model declare an instance of `TestModuleManifest` (a root node).
2. Populate this instance with the references to languages/solutions that execution of your test require.  
NOTE: only the modules in addition to the standard MPS configuration need to be listed.
3. Open the model `jetbrains.mps.build.mps.testModules` and add a reference to this manifest to the list in `mpsTestModules` root.  
NOTE: this model contains a single instance of `TestProjectConfiguration` named "mpsTestModules". It is not expected to contain anything beside this root node.
4. Invoke the action "[Refresh Test Project](#)" on the same root node `mpsTestModules`. This may require invoking "Go To Action".  
This action updates the contents of the model `jetbrains.mps.ide.build.tests.generatedTests`.  
NOTE: all manual changes in this model will be lost. DONT EDIT THIS MODEL.  
HINT: the action "Refresh Test Project" is defined by the plug-in solution `build.mps.testManifest.pluginSolution`.
5. After running make on the project, the build files should be updated and ready to run the tests.



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