

Next Generation of the LuaRocks test suite

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Start of Next Generation of the LuaRocks test suite

- Google Summer of Code



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Old test-suite Ideas

- Black-box testing
 - build of 'local', 'isolated' LuaRocks environment for testing
- Isolation of tests
 - reset testing environment after test
- Multi-platform
 - another .bat files for Windows
- Coverage results just by TravisCI
- BUT, is it enough? What could we do better?

LuaRocks CI



New test-suite ideas

- Idea of black-box testing
 - based on old bash script used before
- Use testing environment as before
 - (minimal/full environment)
- Upgrade multi-platform of test-suite
- Merge coverage results + increase coverage
- Allow white-box testing

Lua Unit Testing Framework

Busted



- Busted is a unit testing framework with a focus on being **easy to use**. Busted works with **lua >= 5.1**, **moonscript**, **terra**, and **LuaJIT >= 2.0.0**.
- Multi-platform
- Based on “describe/it” blocks
- Asserts, Mocks, Async tests, Output handling, Script execution before tests, Moonscript, languages...

Structure of new test-suite

▼ test

> testfiles

- luarocks_site.lua
- mock-server.lua
- M↓ README.md
- test_environment.lua

▼ spec

- add_spec.lua
- build_spec.lua
- config_spec.lua
- deps_spec.lua
- doc_spec.lua
- download_spec.lua
- fetch_spec.lua
- fs_spec.lua
- help_spec.lua
- install_spec.lua
- lint_spec.lua
- list_spec.lua

Example of test

```
80 ✓ describe("LuaRocks install - more complex tests", function()
81 ✓   it('LuaRocks install luasec with skipping dependency checks', function()
82     assert.is_true(run.luaroeks_bool("install luasec " .. test_env.OPENSLL_DIRS .. " --nodeps"))
83     assert.is_true(run.luaroeks_bool("show luasec"))
84 ✓   if env_variables.TYPE_TEST_ENV == "minimal" then
85     assert.is_false(run.luaroeks_bool(test_env.quiet("show luasocket")))
86     assert.is.falsy(lfs.attributes(testing_paths.testing_sys_tree .. "/lib/luaroeks/rocks/luasocket"))
87   end
88   assert.is.truthy(lfs.attributes(testing_paths.testing_sys_tree .. "/lib/luaroeks/rocks/luasec"))
89 end)
90
91 ✓ it('LuaRocks install - handle relative path in --tree #632', function()
92   local relative_path = "./temp_dir_"..math.random(100000)
93   if test_env.TEST_TARGET_OS == "windows" then
94     relative_path = relative_path:gsub("/", "\\")
95   end
96   test_env.remove_dir(relative_path)
97   assert.is.falsy(lfs.attributes(relative_path))
98   assert.is_true(run.luaroeks_bool("install luafilesystem --tree="..relative_path))
99   assert.is.truthy(lfs.attributes(relative_path))
100   test_env.remove_dir(relative_path)
101   assert.is.falsy(lfs.attributes(relative_path))
102 end)
103
```


Mock of LuaRocks server

```
mock-server.lua x
1  #!/usr/bin/env lua
2
3  --- A simple LuaRocks mock-server for testing.
4  local restserver = require("restserver")
5  local server = restserver:new():port(8080)
6
7  server:add_resource("api/tool_version", {
8      {
9          method = "GET",
10         path = "/",
11         produces = "application/json",
12         handler = function(query)
13             local json = { version = query.current }
14             return restserver.response():status(200):entity(json)
15         end
16     }
17 })
18
19 server:add_resource("api/1/{id:[0-9]+}/status", {
20     {
21         method = "GET",
22         path = "/",
23         produces = "application/json",
24         handler = function(query)
25             local json = { user_id = "123", created_at = "29.1.1993" }
26             return restserver.response():status(200):entity(json)
27         end
28     }
29 })
```

Multi-Platform

- OS X
 - without big problems
 - few if conditions
- Windows
 - more complex problems
 - other way to build environment
 - quotes, not same commands/
rules in cmd, temp dir...



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Few Known Issues

- #ssh, #unix and #mock tests unavailable on Windows platform
- Problem with output on Windows platform
- Missing tests (88% of coverage on 1. February)

Questions?

