**Add notes so that most recent first**

**<Srinath 19 Jan 2017>**

**IDE for development** (especially debugging):

<https://studio.zerobrane.com/>

Even if you prefer the shell for coding and despise IDEs, in case of Lua the ZeroBrane studio seems to have the best debugger. And this IDE does minimal “magic” - so you can code and run from the shell, but use IDE just for debugging.

**Installation:** Simply download the Linux installer shell script from “Downloads” and execute it.

**Faqs** :<https://studio.zerobrane.com/doc-faq>

**Complete debugger feature set**: <https://studio.zerobrane.com/doc-lua-debugging>

**Interpreter**

The ZeroBrane studio defaults to using LuaJIT 2.0.2 as the interpreter.

The interpreter can be changed from Project->Lua Interpreter

**Note: Lua 5.1 isn’t shipped by default**

**Gotchas:**

1. Debugger steps into lua functions in another file **only if** the other file is open; otherwise it steps over. See faq question “Why stepping into function calls doesn’t work in some cases?”
2. **With LuaJIT**, occasionally it steps on same line multiple times; see <https://studio.zerobrane.com/doc-luajit-debugging>
3. If you *require* any other files, set *package.path* at start of script accordingly

package.path = package.path .. ';/home/foo/bar/Q/experimental/SUM/?.lua'

Setting *package.path* is least magic so I prefer this approach for now.

**Practical points:**

1. I set the project directory to the top-level folder (e.g. Q) – that gives me access to all files.
2. For a “project” setup, we should have an explicit “point of entry” lua file (e.g. main.lua), that sets paths, loads libraries etc. as needed

**TODOs:**

1. Debugging (stepping) into C functions invoked from Lua programs
2. Lua 5.1 interpreter

**Environment specific notes:**

While we test and support Ubuntu (14.04), this section captures any observations reported on other environments.

<Indrajeet Jan 17 2017>

On mac os x when I compiled and attached my dynamic libs I got an error stating "mach-o, but wrong architecture”. We need to compile the libs with a -m32 flag.

</Indrajeet Jan 17 2017>

**Alternate IDEs**

This section lists any other IDEs explored, observations, drawbacks.

**Eclipse LDT**

<https://eclipse.org/ldt/>

Pluses:

1. It’s eclipse :)
2. Multiple “projects” view etc

Minuses:

1. Debugger configuration has extra dependencies and was too time-consuming to get going
2. Does some “magic” w.r.t. paths, so command-line compatibility would require additional overseeing

**</Srinath 19 Jan 2017>**

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**From Ramesh: Jan 2nd, 2017**

Srinath, Here are some additional action items. I should have stated these requirements at the get go but I don’t think we are any the worse for it.

1. We are using Ubuntu for both development and deployment. This should work on a standard Ubuntu desktop configuration. The aim of this is to record dependencies, if any. E.g., if this IDE needs libcurl and that does not come as part of the default installation, then we need to document that and make it part of a setup script
2. Please document what steps you took to setup the IDE
3. Please test with a VM so that we are confident that it will work here as well. Otherwise, it might work on your machine and not on ours. In my experience, the thing that kills collaboration with remote teams the fastest is not having the same configuration on all the machines and then we quickly go down the rathole of “but it works on my machine”
4. Over time, we will decide on what our base machine (both server and desktop) should be configured with. For now, we live and learn
5. If there minor inconveniences (stopping twice at same line), please document in “Gotcha” section
6. A few things to confirm
   1. How does one specify which files are to be included in the project and which are not? Or do we just specify PATH variables so that files are searched for in a set of directories in a given order?
   2. How does one specify command line options?
   3. How does one include external Lua packages?
   4. Does it work on the Ubuntu desktop version? Must have
   5. Does it work on the Mac? Nice to have but not vital
   6. Can you do a simple example of breaking inside a hello world style C function invoked using LuaJIT’s FFI?

**From Srinath: Dec 28th,2016**

I find the IDE at <https://studio.zerobrane.com/> to be rather lightweight and easy to use. This one is mentioned on the LuaJIT wiki as well. It defaults to using LuaJIT (and ships with it). While debugging it steps on same line multiple times occasionally, but that’s ok. (See <https://studio.zerobrane.com/doc-luajit-debugging> )

I’m also looking at EclipseLDT (eclipse for Lua). It defaults to Lua, but I override it to use LuaJIT (that I got from ZeroBrane)… it looks fine too so far. But since it is not shipped with LuaJIT by default, I expect some trouble at some time.

**Gotchas and how to work around them**