Installing LuaSocket

Install Mingw
Set environment variable for path to include c:/mingw/bin
This gives the c compiler

Install Lua5.1.5 (LuaRocks seems to want a 5.1 version)

Get the 5.1.5 version of Lua (the programming language) and extract the folder (not the tar but the folder inside)

Open msys (part of mingw) and move to the folder where Lua 5.1.5 is located
The Makefile should be seen in windows explorer

Run Make generic (for windows) this will make the compiler and executable command window
luac.exe and lua.exe

Install LuaRocks
First download LuaRocks from https://github.com/keplerproject/luarocks/wiki/Download
Get the latest release
Follow the install instructions for the computer you are working

Go to LuaRocks Folder
Change the install.bat file line
vars.LUA_LIB_NAMES = "lua5.1.lib lua51.lib lua5.1.dll lua51.dll liblua.dll.a"
so that it has the liblua.a listed

lualib.a is a statically linked library created when the Lua5.1.5 Makefile was run. The files.c were compiled and then the object files were put into the library. This library is made into a portion of the code before it is run creating luarocks.

Install LuaRocks

In a command prompt go in to luarocks folder where install.bat exists

Run the command --- install /f /MW

The /F gets rid of any old installs of luarocks
The /MW makes the mingw c compiler the one that will be used in compilation, otherwise the install will try to use the cp compiler (Microsoft c compiler) which requires visual studio to be installed.

Add the following to the environment variable Path under system variables

c:\lua\bin
C:\Program Files (x86)\LuaRocks
%APPDATA%\LuaRocks\bin

Add the following to the environment variables to LUA_PATH (create if needed)

C:\Users\Donald\AppData\Roaming\luarocks\share\lua\5.1\?.lua;

C:\Users\Donald\AppData\Roaming\luarocks\share\lua\5.1\?\init.lua;

c:\lua\share\lua\5.1\?.lua;

c:\lua\share\lua\5.1\?\init.lua;

C:\Program Files (x86)\LuaRocks\lua\?.lua;

C:\Program Files (x86)\LuaRocks\lua\?\init.lua;

Add the following to the environment variables to LUA_CPATH (create if needed)

%appdata%\luarocks\lib\lua\5.1\?.dll;

c:\lua\lib\lua\5.1\?.dll;

.\?.dll;

c:\lua\bin\?.dll;

c:\lua\bin\loadall.dll

Install LuaSocket

Download the luasocket rockspec from the luarocks download site
https://luarocks.org/modules/luarocks/luasocket/2.0.2-6

Go into the folder where the rockspec has been downloaded in a command prompt

Run the command --   luarocks install luasocket

After installation of luasocket run the command --   luarocks show luasocket

You should get the following in the command prompt

LuaSocket 3.0rc1-2 - Network support for the Lua language

LuaSocket is a Lua extension library that is composed by two parts: a C core
that provides support for the TCP and UDP transport layers, and a set of Lua
modules that add support for functionality commonly needed by applications that
deal with the Internet.

License: MIT
Homepage: http://luaforge.net/projects/luasocket/
Installed in: c:\lua\

Modules:
    ltn12 (c:\lua\/share/lua/5.1/ltn12.lua)
    mime (c:\lua\/share/lua/5.1/mime.lua)
    mime.core (c:\lua\/lib/lua/5.1/mime/core.dll)
    socket (c:\lua\/share/lua/5.1/socket.lua)
    socket.core (c:\lua\/lib/lua/5.1/socket/core.dll)
    socket.ftp (c:\lua\/share/lua/5.1/socket/ftp.lua)
    socket.headers (c:\lua\/share/lua/5.1/socket/headers.lua)
    socket.http (c:\lua\/share/lua/5.1/socket/http.lua)
    socket.smtp (c:\lua\/share/lua/5.1/socket/smtp.lua)
    socket.tp (c:\lua\/share/lua/5.1/socket/tp.lua)
    socket.url (c:\lua\/share/lua/5.1/socket/url.lua)

After installation LuaSocket now exists in the Lua interpreter

Installing in Lua Development Environment

Locate the interpreter for LDT in the c:/lua folder and add a new interpreter to the LDT system under
preferences/interpreters. Point to the lua.exe file as the interpreter.

Now fix the Execution Envionment by downloading a 5.1 environment from:
    https://github.com/tDwtp/lua-xXenv/raw/master/xXenv-5.1.zip?raw=true

The Execution environment allows auto-completion to take place correctly when the file in question is
loaded into the doc directory.

The interpreter allows the code to run correctly if it has the correct lunrocks install into it. It is necessary
to make a new interpreter outside of Eclipse to load in new luarocks.

Appendix (Run of the install.bat for LuaRocks)

LuaRocks 2.3.x installer.

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== Checking system... ==
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Admin privileges available for installing
Looking for Lua interpreter
   checking C:\Program Files\Java\jdk1.7.0_79
   checking C:\ProgramData\Oracle\Java\javapath
   checking C:\WINDOWS\system32
   checking C:\WINDOWS
   checking C:\WINDOWS\System32\Wbem
   checking C:\WINDOWS\System32\WindowsPowerShell\v1.0
   checking C:\Program Files (x86)\HP SimplePass
   checking c:\Python34
   checking C:\Program Files (x86)\Windows Live\Shared
   checking C:\Program Files (x86)\Skype\Phone
   checking C:\MinGW
   checking c:\lua5.1.2
   checking c:\lua
     Found .\bin\lua.exe
Interpreter found, now looking for link libraries...
   checking for c:\lua\\lua5.1.lib
   checking for c:\lua\\lua51.lib
   checking for c:\lua\\lua5.1.dll
   checking for c:\lua\\lua51.dll
   checking for c:\lua\\liblua.a
   checking for c:\lua\lib\\lua5.1.lib
   checking for c:\lua\lib\\lua51.lib
   checking for c:\lua\lib\\lua5.1.dll
   checking for c:\lua\lib\\lua51.dll
   checking for c:\lua\lib\\liblua.a
     Found liblua.a
Link library found, now looking for headers...
   checking for c:\lua\include\lua\5.1\lua.h
   checking for c:\lua\include\lua51\lua.h
   checking for c:\lua\include\lua5.1\lua.h
   checking for c:\lua\include\5.1\lua.h
   checking for c:\lua\include\\lua.h
     Found lua.h
Headers found, checking runtime to use...

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   c:\lua\bin\\lua.exe uses MSVCRT.DLL as runtime
Runtime check completed, now testing interpreter...
   Ok
Looking for Microsoft toolchain matching runtime MSVCRT and architecture x86
   Cannot auto-detect Visual Studio version from MSVCRT
   Cannot auto-detect Windows SDK version from MSVCRT


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== System check results ==
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Will configure LuaRocks with the following paths:
LuaRocks      : C:\Program Files (x86)\LuaRocks
Config file   : C:\Program Files (x86)\LuaRocks\config-5.1.lua
Rocktree      : c:\lua\

Lua interpreter : c:\lua\bin\\lua.exe
   binaries   : c:\lua\bin\
   libraries  : c:\lua\lib\
   includes   : c:\lua\include\
   architecture: x86
   binary link : liblua.a with runtime MSVCRT.dll

Compiler      : Microsoft (make sure it is in your path before using LuaRocks)

Press <ENTER> to start installing, or press <CTRL>+<C> to abort. Use install /? for installation options.



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== Installing LuaRocks... ==
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Installing LuaRocks in C:\Program Files (x86)\LuaRocks...
Created LuaRocks command: C:\Program Files (x86)\LuaRocks\luarocks.bat
Created LuaRocks command: C:\Program Files (x86)\LuaRocks\luarocks-admin.bat

Configuring LuaRocks...
Created LuaRocks site-config file: C:\Program Files (x86)\LuaRocks\lua\luarocks\site_config_5_1.lua
Created LuaRocks config file: C:\Program Files (x86)\LuaRocks\config-5.1.lua

Creating rocktrees...
Created system rocktree    : "c:\lua\"
Created local user rocktree: "C:\Users\Donald\AppData\Roaming\LuaRocks"

Loading registry information for ".rockspec" files

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== LuaRocks is installed! ==
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You may want to add the following elements to your paths;
Lua interpreter;
  PATH   : c:\lua\bin\
  PATHEXT : .LUA
LuaRocks;
  PATH   : C:\Program Files (x86)\LuaRocks
  LUA_PATH :   C:\Program Files (x86)\LuaRocks\lua\?.lua;C:\Program Files (x86)\LuaRocks\lua\?\init.lua
Local user rocktree (Note: %APPDATA% is user dependent);
  PATH   :   %APPDATA%\LuaRocks\bin
  LUA_PATH :
%APPDATA%\LuaRocks\share\lua\5.1\?.lua;%APPDATA%\LuaRocks\share\lua\5.1\?\init.lua
  LUA_CPATH: %APPDATA%\LuaRocks\lib\lua\5.1\?.dll
System rocktree
  PATH   : c:\lua\\bin
  LUA_PATH : c:\lua\\share\lua\5.1\?.lua;c:\lua\\share\lua\5.1\?\init.lua
  LUA_CPATH: c:\lua\\lib\lua\5.1\?.dll

Note that the %APPDATA% element in the paths above is user specific and it MUST be replaced by its actual value.
For the current user that value is: C:\Users\Donald\AppData\Roaming.

Press any key to close this window...