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The University of Texas at Austin

# Creating new tests for Lmod

Robert McLay

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# Outline

# Lmod

- ▶ Showing how to create a test for Lmod
- ▶ Tclmodule test
- ▶ New Principal: An unload cannot fail!
- ▶ An intel module failing on unload
- ▶ Break on unload?
- ▶ Future Topics

# A Tclmodule test

- ▶ A user reported that there was an extra space from a TCL modulefile
- ▶ This calls for a new test
- ▶ The following slides outline the steps

# Create a new tclmodule test

- ▶ Create directory `rt/tclmodule/mf`
- ▶ Create a new tcl file `a/1.0`

```
#!/Module
```

```
global env
set home $env(HOME)
set pkg "$home/foo"
prepend-path PATH $pkg/bin
setenv FOO_DIR $pkg
```

```
module-whatism "This $pkg"
```

# Create a tclmodule.tdesc

- ▶ Copy `rt/nvv/nvv.tdesc` to `rt/tclmodule/tclmodule.tdesc`
- ▶ Edit to fit
- ▶ Add steps
- ▶ Test tclmodules
- ▶ update \*.txt files
- ▶ run all tests
- ▶ update \*.txt files when necessary

```
runScript = [[
    . $(projectDir)/rt/common_funcs.sh

    unsetMT
    initStdEnvVars
    export MODULEPATH=$(testDir)/mf

    rm -fr _stderr.* _stdout.* err.* out.* .lmod.d

    runLmod --version                # 1
    runLmod whatis a                 # 2
```

# How to validate new test

- ▶ tcl2lua.tcl mf/a/1.0
- ▶ There is an extra space

```
tcl2lua.tcl mf/a/1.0
prepend_path"PATH", "/Users/mclay/foo/bin",delim=":",priority="0"
setenv("FOO_DIR", "/Users/mclay/foo")
whatis([===[This /Users/mclay/foo ]===])
```

# Change tcl2lua.tcl to use trimright

- ▶ The Tcl version appends the args together w/ a space
- ▶ Need to trim the trailing space

```
proc module-whatIs { args } {
    global g_outputA
    set msg ""
    foreach item $args {
        append msg $item
        append msg " "
    }

    regsub -all {[\n]} $msg " " msg2
    set msg2 [string trimright $msg2] # <=== add this line
    lappend g_outputA "whatIs(\[===\[ $msg2 \]===\))\n"
}
```

# Run all tests

- ▶ Problems with tests: `ck_mtree_syntax` and `softwarePage`
- ▶ Show diffs
- ▶ update \*.txt gold files

# New Principal: Unload can never fail

- ▶ A TACC colleague pointed out this problem
- ▶ In trying to unload a module it failed
- ▶ It has never been reported to me before
- ▶ ⇒ module unload should *never* fail

```
% ml init_openc1/2021.4.0
% unset INTELFPGAOCLSDKROOT
% ml -init_openc1/2021.4.0
Lmod has detected the following error:
/scratch1/projects/compilers/oneapi_2021.4.0.3422/modulefiles/init_openc1/2021.4.0:
(init_openc1/2021.4.0): can't read "::-env(INTELFPGAOCLSDKROOT)": no such variable
```

# Future Topics

- ▶ Write one new test.
- ▶ Explain how `Mname` object converts names into a filename.
- ▶ More internals of `Lmod`?