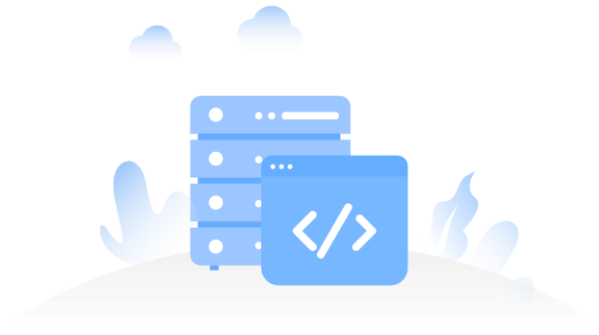


tclpysh

UNIFY TCL AND PYTHON

IN **ONE** SCRIPT

WITH NATIVE INTEROPERABILITY



WHY IS TCLPYSH UNIQUE?

tclpysh is a hybrid Tcl+Python interpreter built on DashThru FusionShell core, designed for modern EDA scripting workflows. Unlike traditional tools that separate Tcl and Python into distinct modes or environments, tclpysh enables both languages to be written in a single script, with real-time mode switching and native variable sharing.

Designed for flexibility, tclpysh can be launched directly, used as a script interpreter with shebang headers (#!), or imported into third-party tools with a Python mode. It brings the openness and extensibility of the Python ecosystem to traditional Tcl users, while also enhancing Tcl shell with features like interrupt enhancement, command completion, and procedure customization.

KEY FEATURES

Mode Switching

Switch seamlessly between Tcl and Python inside one shell without restarting or reloading the environment.

Hybrid Script

Write Tcl and Python together in a single script file with native language interoperability.

Variable Sharing

Access and update variables freely between Tcl and Python with zero-delay visibility and full cross-mode consistency.

Interrupt Enhancement

Enhanced Ctrl+C breaks the limitations of Tcl shell by supporting immediate loop/cond/proc interruption and post-interrupt actions.

Command Completion

Enhanced Tab completion supports commands, sub commands, options, variables, file paths, and nested commands.

Proc Customization

Create powerful user-defined procedures with option parsing, argument type checks, default values, and help information.

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Resources

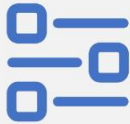
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HOW TO USE TCLPYSH

To accommodate different user scenarios and script deployment needs, tclpysh provides three flexible modes of usage: Direct Execution, Script Interpreter, and Third-Party Integration.

Direct Execution



```
% tclpysh
tcl> set a 123
123
tcl> pymode
py> print(f'a={a}')
a=123
py> exit()

% tclpysh mix_tcl_py.scr
(run hybrid script .....)
```

Script Interpreter



```
% cat mix_tcl_py.scr
#!/edatool/tclpysh_py39
_v2025.06/bin/tclpysh
set a 123
pymode
print(f'a={a}')

% mix_tcl_py.scr
(run hybrid script .....)
```

Third-Party Integration



```
% third_party_py_exec
Python 3.6.8 (default,
Oct 13 2020, 16:18:22)
>>> import tclpysh
tcl> set a 123
123
tcl> quit
>>> print(f'a={a}')
a=123
>>> exit()
```

USE CASE SCENARIOS

• CAD Teams

Import tclpysh into Python-capable tools to enable hybrid Tcl/Python scripting, enhancing tool flexibility without changing existing interfaces.

• Script Developers

Without launching an external Python environment, access thousands of open-source Python libraries within the familiar Tcl command-line for data processing, analysis, and customized EDA automation.

• Design Engineers

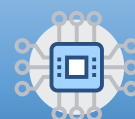
Traditional Tcl users can boost productivity with tclpysh enhancements like interrupt handling, command completion, and advanced procedure customization.

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