

Windriver Workbench Debugger for MPC

Abstract

This document describes the usage of the Windriver Workbench debugger as target system. Tessy requires version **3.0** or later of the Windriver Workbench.

Please note: *The Windriver Workbench requires a special tcl-script file to be registered within the Host Shell Startup dialog (described later within this document) in order to communicate with Tessy.*

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1 Introduction

The communication between Tessy and the Windriver Workbench debugger is based on the tcl interface of the debugger (within the Host Shell). In order to prepare the Windriver Workbench for test execution, you need to start a predefined script (available within the Tessy installation like described below) that waits for test execution requests sent by the test driver master process of Tessy.

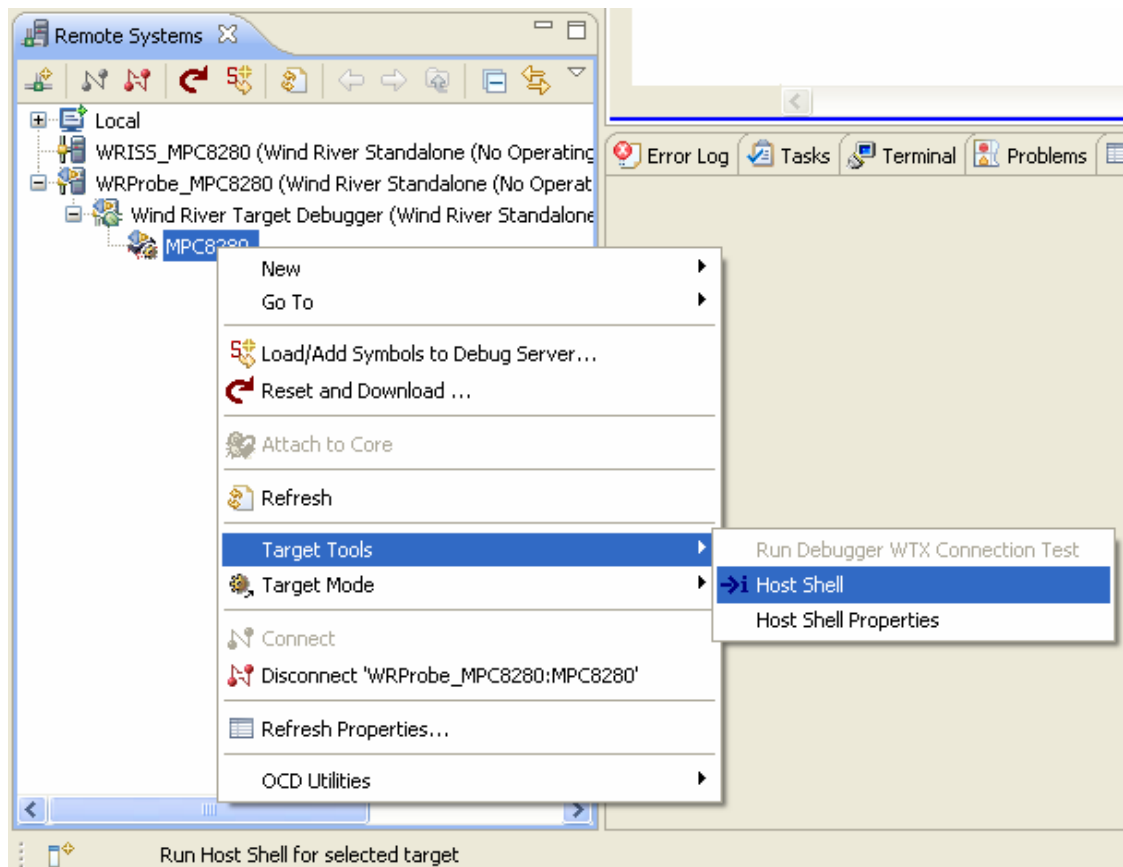
Please note: Tessy will connect to a running instance of Windriver Workbench. You need to start the Workbench before executing tests with Tessy.

2 Windriver Workbench Workspace Setup

In order to run tests within the Windriver Workbench, you need to prepare a workspace within the Workbench like for normal debugging. You may use your existing debugging workspace.

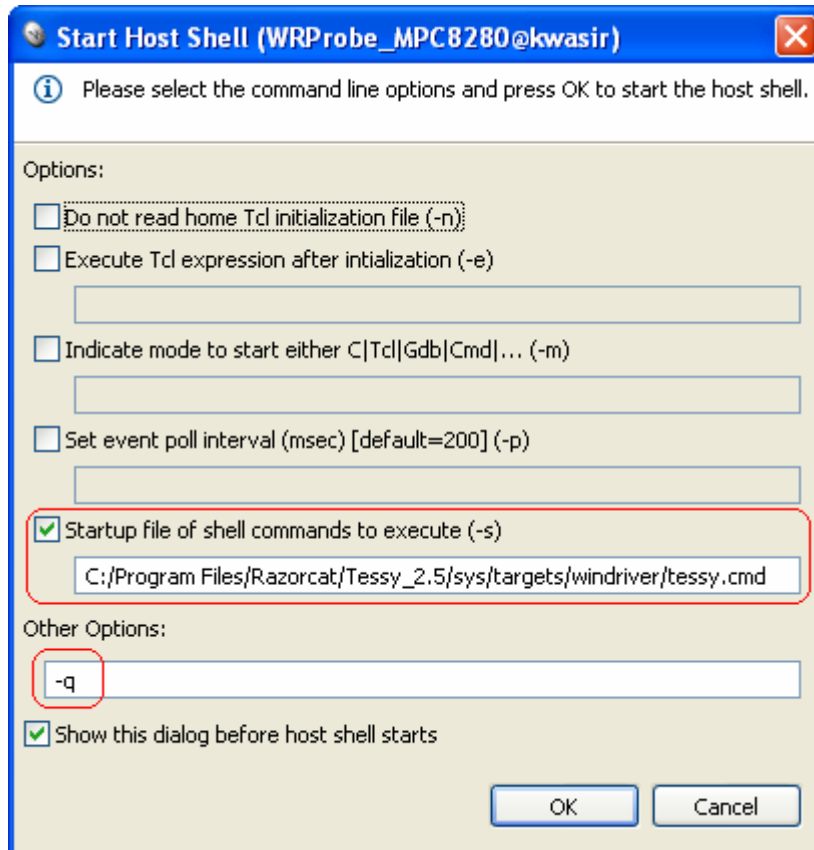
2.1 Starting the Host Shell

When your target (or simulator) is connected with the Windriver Workbench debugger, you need to start the **Host Shell** from the **Target Tools** menu like shown below:



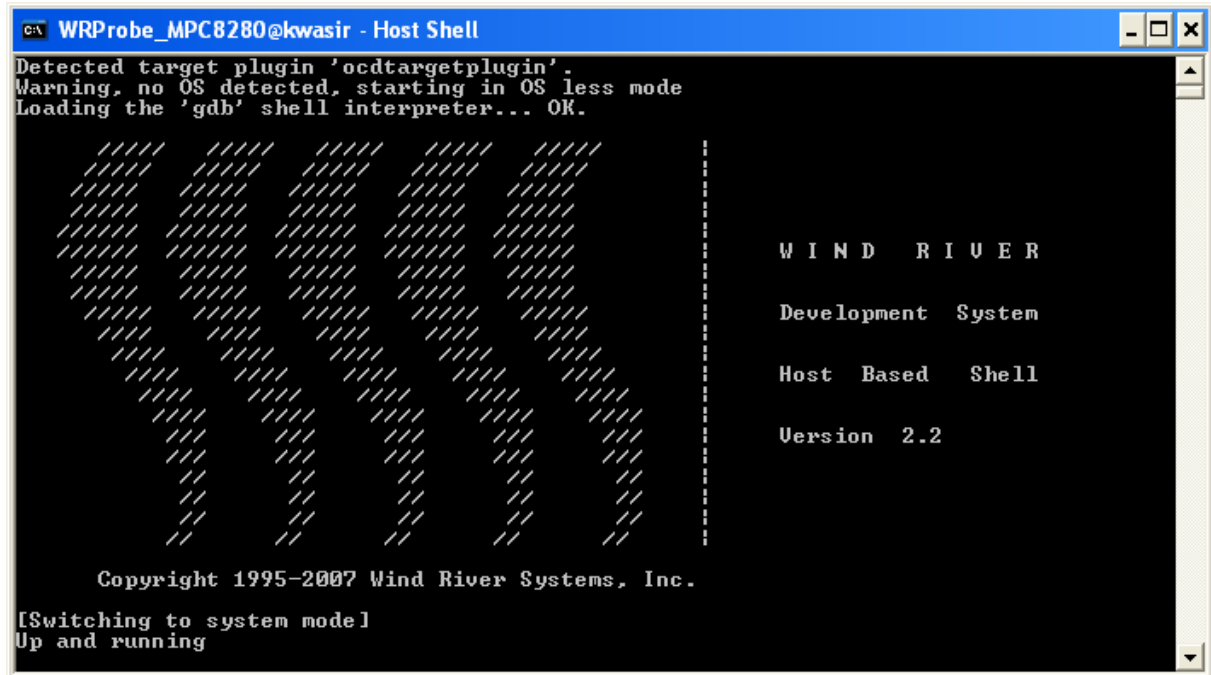
This will show the **Start Host Shell** dialog, where you need to provide the file name of the Tessy script to execute. You need to enter the path to the following script file:

```
C:\Program Files\Razorcat\Tessy_2.5\sys\targets\windriver\tessy.cmd
```



The option **-q** suppresses opening of an editor window (showing the script contents), when the script file is executed.

After pressing the **OK** button, the Host Shell window will appear:



```
WRProbe_MPC8280@kwasir - Host Shell
Detected target plugin 'ocdtargetplugin'.
Warning, no OS detected, starting in OS less mode
Loading the 'gdb' shell interpreter... OK.

WIND RIVER
Development System
Host Based Shell
Version 2.2

Copyright 1995-2007 Wind River Systems, Inc.
[Switching to system mode]
Up and running
```

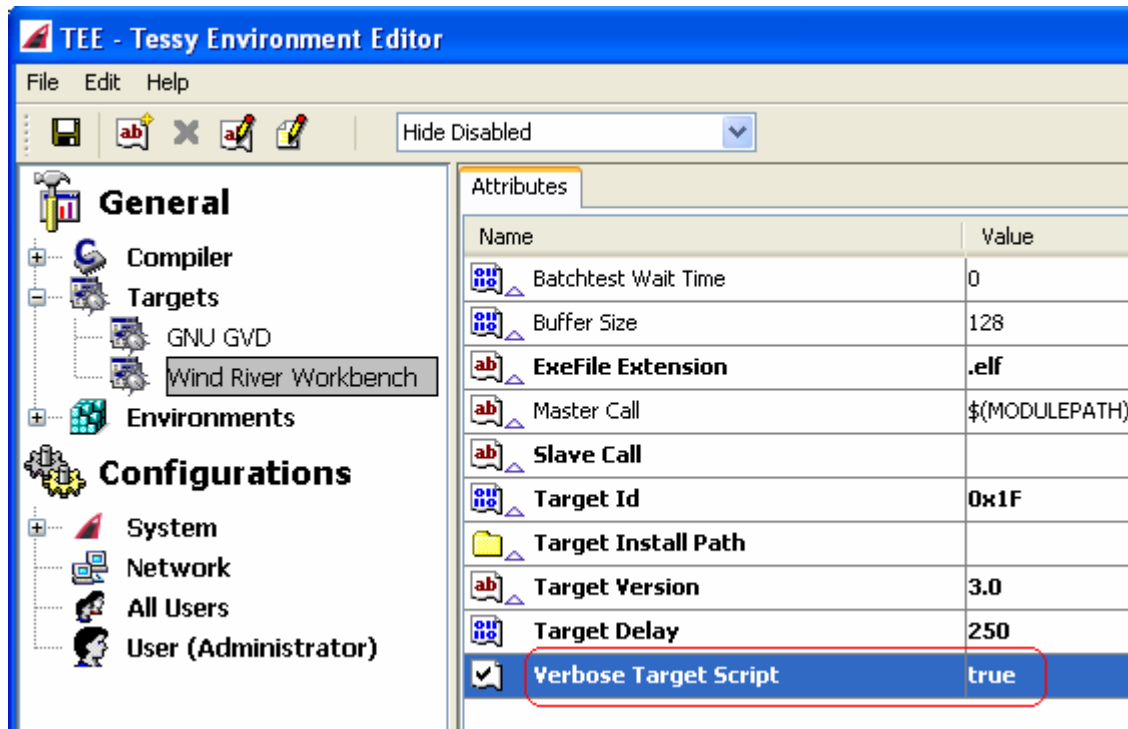
The system is now ready for test execution with Tessy. You should minimize the Windriver Workbench for best execution performance.

Please note: You should avoid doing anything within the Windriver Workbench during test execution since this may cause unpredictable reactions of the Workbench.

When checking the **Define Breakpoint** option within the Tessy test execution dialog, the test execution will stop at your test object. You may then use the normal debugger functions within the Windriver Workbench to step through your test object and inspect variables or resume the test run.

2.2 Verbose Output Messages

Tessy will show log messages within the Host Shell window. You may avoid these messages by changing the **Verbose Target Script** setting within the Environment Editor (TEE) of Tessy like shown below:

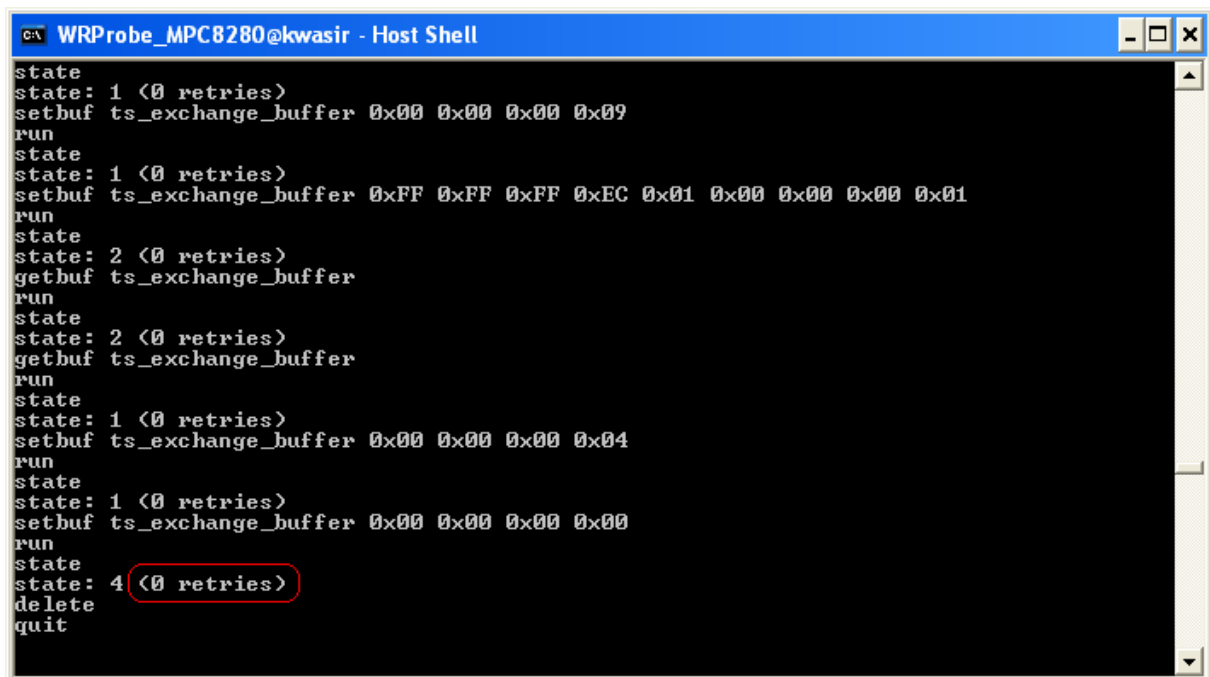


The default setting is to show messages.

3 Troubleshooting

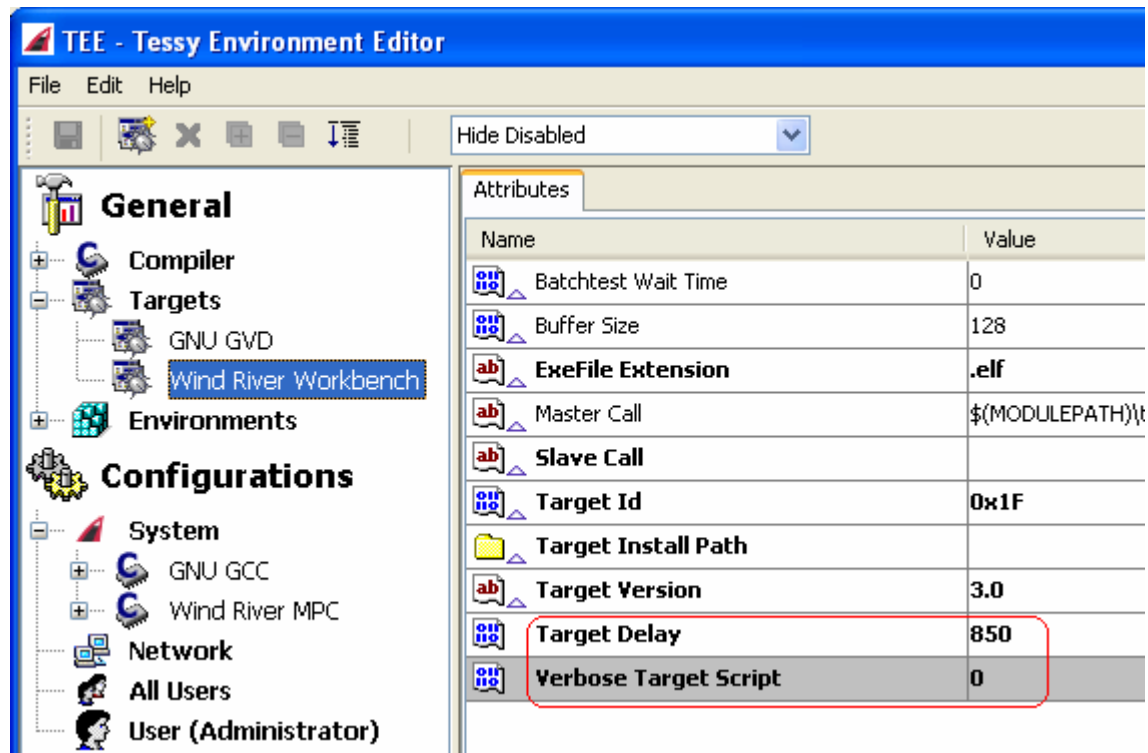
3.1 Timing problems

Depending on your hardware configuration, there may be timing problems during test execution. In this case, you need to switch on the verbose mode like described above and review the messages within the **Host Shell** window. The picture below shows the normal execution without problems:



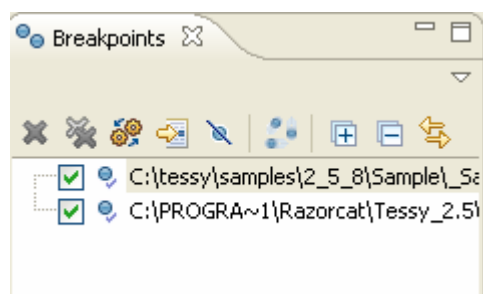
```
C:\ WRProbe_MPC8280@kwasir - Host Shell
state
state: 1 (<0 retries>)
setbuf ts_exchange_buffer 0x00 0x00 0x00 0x09
run
state
state: 1 (<0 retries>)
setbuf ts_exchange_buffer 0xFF 0xFF 0xFF 0xEC 0x01 0x00 0x00 0x00 0x01
run
state
state: 2 (<0 retries>)
getbuf ts_exchange_buffer
run
state
state: 2 (<0 retries>)
getbuf ts_exchange_buffer
run
state
state: 1 (<0 retries>)
setbuf ts_exchange_buffer 0x00 0x00 0x00 0x04
run
state
state: 1 (<0 retries>)
setbuf ts_exchange_buffer 0x00 0x00 0x00 0x00
run
state
state: 4 (<0 retries>)
delete
quit
```

If the number of retries is other than zero, you may increase the **Target Delay** time within the TEE like shown below:

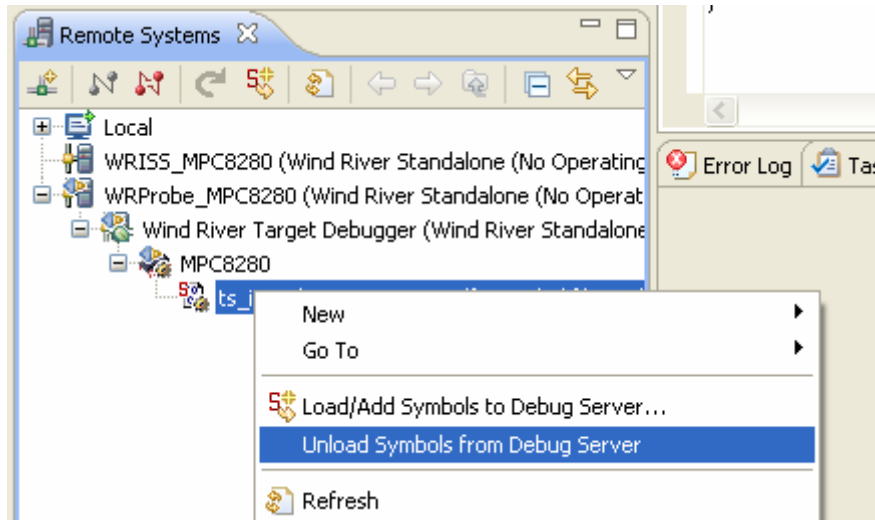


3.2 Execution errors

In case of errors during test execution or unexpected behavior of the Windriver Workbench, you should remove any remaining breakpoints from the **Breakpoints** list within the Windriver Workbench:



After this, you should unload the symbols:



You may now try to restart test execution from within Tessy. If the Windriver Workbench still behaves unexpectedly, you will need to restart the Workbench and start the Host Shell again like described above.