PUTTY DRIVER

INTRODUCTION

<u>PuttyDriver</u> aims to assist systems administration and legacy application testing (e.g., regression testing) using automation and robotics via an easy to use <u>Secure Shell Protocol (SSH)</u> interface. Planned future versions of <u>PuttyDriver</u>, include Windows Form applications (Visual Basic and C#) for integration of legacy applications with modern digital systems.

PuttyDriver has been built using Excel and Visual Basic and interfaces with the popular open source <u>Putty SSH and Telnet</u> <u>client</u> developed by Simon Tatham and others.

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The project files with source code can be found at https://github.com/christyler80/PuttyDriver.

PuttyDriver includes both record and replay functionality and uses the <u>Microsoft Windows Message Queue</u> to communicate interactively with one or more PuTTY sessions.

PuttyDriver currently consists of two application files - *PuttyDriver.xlsb* (Excel 32 bit) and *putty.exe*, together with a <u>SQLite</u> database. <u>ODBC driver for SQLite</u> must be installed and can be downloaded from <u>here</u>.

putty.exe is a slightly modified 0.81 version of PuTTY with a small amount of additional C code, to provide the message queue interface.

So far, the project scope has been 'proof of concept' for building and testing a robust communication interface with PuTTY.

Basic testing has successfully been undertaken with servers running a variety of Unix/Linux platforms. A sample script for a standard Raspberry Pi OS installation is included and is referenced in this document.

Please also see <u>DB Excel Data Manager</u> for additional database interface documentation

Important: At this time:

- PuttyDriver has only been tested with 32-bit versions of Microsoft Excel 2016 or later.
- Microsoft Excel 64-bit versions are not currently supported.
- 32-bit or 64-bit versions of Microsoft Windows 10 operating system or later are supported.
- Other operating systems (e.g., Apple, Linux) are not supported.

NEXT STEPS

Q2 2025 - .NET Windows Form application for integration of legacy applications with modern digital systems, via easy to use automation and robotics.

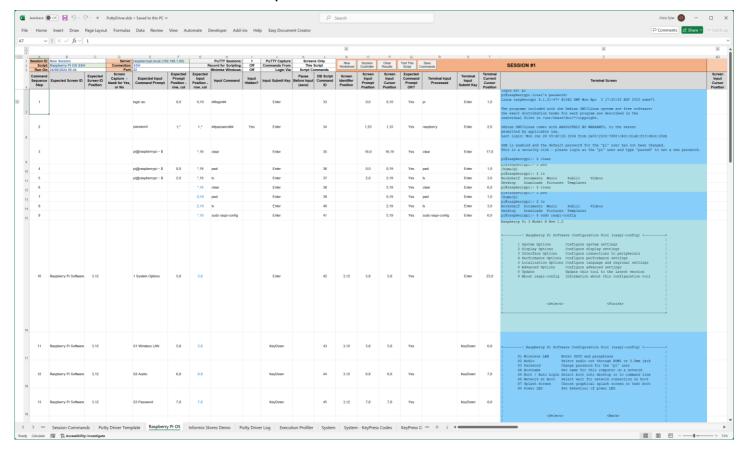
Please provide feedback via GitHub and/or by contacting me using the details below.

Chris Tyler, June 2024

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GETTING STARTED

- 1. Download the Zip file from GitHub and extract into a folder.
- 2. Run putty.exe and connect to a server using SSH (or Telnet), using its IP address or Server Name.
- 3. Check that login and password are both OK and close putty.exe.
- 4. Open the PuttyDriver.xlsb workbook and using the 'Example Template' worksheet, type the *IP address* or *Server Network Name* into cell E1. Leave the *Script Name* in cell B2 blank.



- 5. Press the 'Record New Script' button. PuTTY (putty.exe) should open.
- 6. Login into PuTTY as usual, i.e., using a valid user ID and password.
- 7. These commands and the PuTTY screen should be captured automatically, in rows 6 and 7 of the spreadsheet.
- 8. Type 2 or 3 additional commands Into PuTTY e.g., 'pwd' or 'ls'. These should also be captured in the spreadsheet.
- 9. When finished, close PuTTY as normal.
- 10. Passwords are usually often 'hidden'. If so, type 'Yes' Into the 'Input Hidden?' column 'G' on row 7 if not already present.
- 11. To replay these commands, press the 'Clear Results' button, followed by the 'Test This Script' button.
- 12. As before, PuTTY (putty.exe) should open but this time, PuttyDriver should log in automatically using the credentials used in step 6 and automatically run the commands typed in step 8.
- 13. The PuTTY screen(s) should be captured automatically, both in Excel and as text files, in a new 'Capture' folder.
- 14. Script execution can be controlled using the 'Expected Screen ID', 'Expected Screen ID Position', 'Expected Input Command Prompt', 'Expected Cursor Position' and 'Expected Cursor Position' columns.
- 15. See the 'Raspberry PI OS' worksheet for examples of how the 'Expected' fields can be set and use of '*' wildcard for Cursor position where X or Y are known, but not both (e.g., after running list files command).
- 16. After recording a new script, Use the 'Save Script Commands' function to save the script commands for future use.
- 17. Use the 'Session Controller' to manage servers and to access/re-run existing scripts.
- 18. Scripts can be also modified and changes saved using these worksheets (e.g., add screen identification text/numbers).