

Power your Raspberry Shell on it's Core. Raspberry Pi + PowerShell Core

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About me

What do I do when on duty:

- .NET Core + EF Core + SQL Server;

What do I do when off duty:

- PowerShell Core IoT explorer;
- Projects with Raspberry Pi;
- Gaming;

Where else can you talk to me:

- Slack:
 - sqlcommunity - danielssilva;
 - powershell/aspnetcore - danielsilva



Agenda

- What's a Raspberry Pi (RPi)?;
- RPi 3b specifications;
- How is it possible?;
- How easy it is to setup PowerShell Core on it?;
- PowerShell Core IoT module;
- Example of a module developed with IoT one;
- Debug a script running on the RPi;



What is a Raspberry Pi (RPi)?

- Single Board Computer (SBC);
- Developed in the UK, by the Raspberry Pi Foundation;
- Designed to teach young people and help people to get access to digital content;
- By March 14th, 19 million units were sold (9 million of them were RPi 3b)¹;

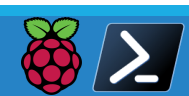


¹ <https://www.raspberrypi.org/blog/raspberry-pi-3-model-b-plus-sale-now-35>.

RPi 3b specifications

- Quad Core 1.2GHz Broadcom BCM2837 64bit CPU
- 1GB RAM
- BCM43438 wireless LAN and Bluetooth Low Energy (BLE) on board
- Ethernet port
- 40-pin GPIO
- 4 USB 2 ports
- Full size HDMI
- Micro SD port

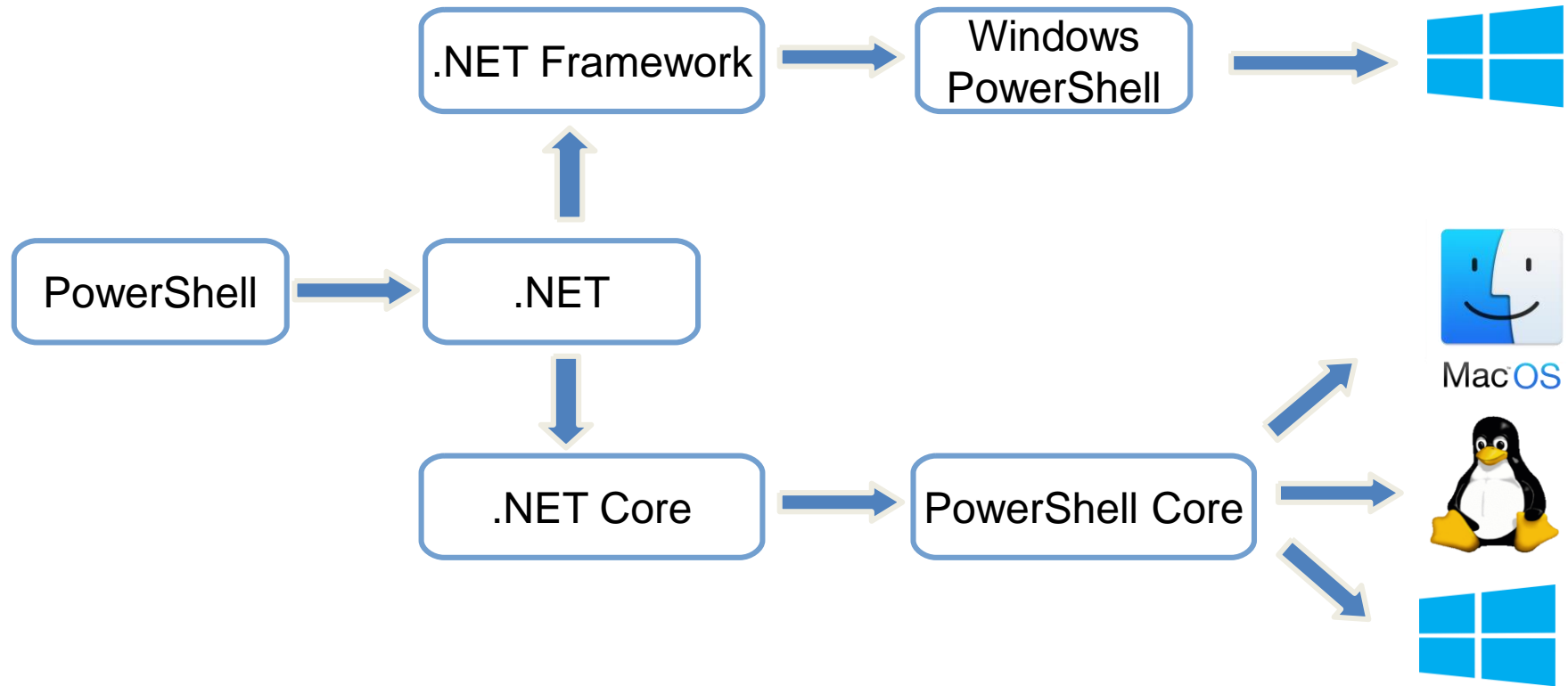
Adapted from: <https://www.raspberrypi.org/products/raspberry-pi-3-model-b/>



Why RaspberryPi?

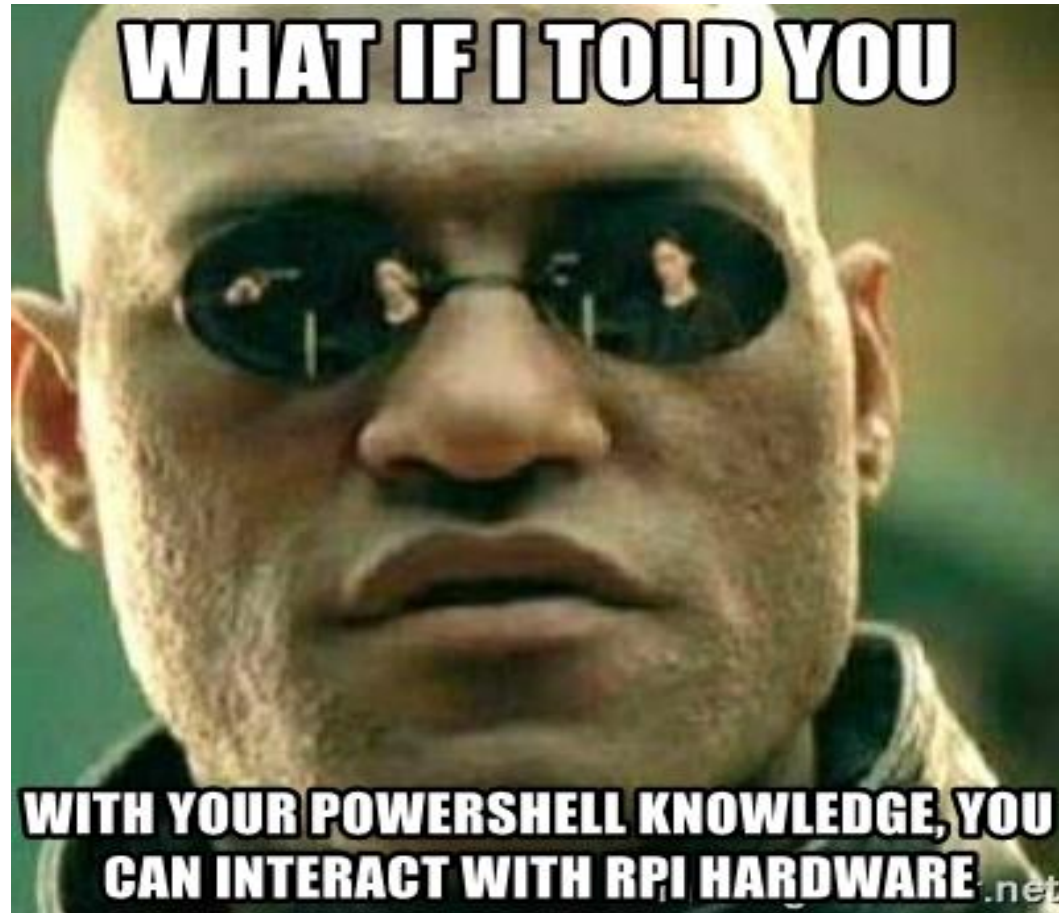


How is it possible?



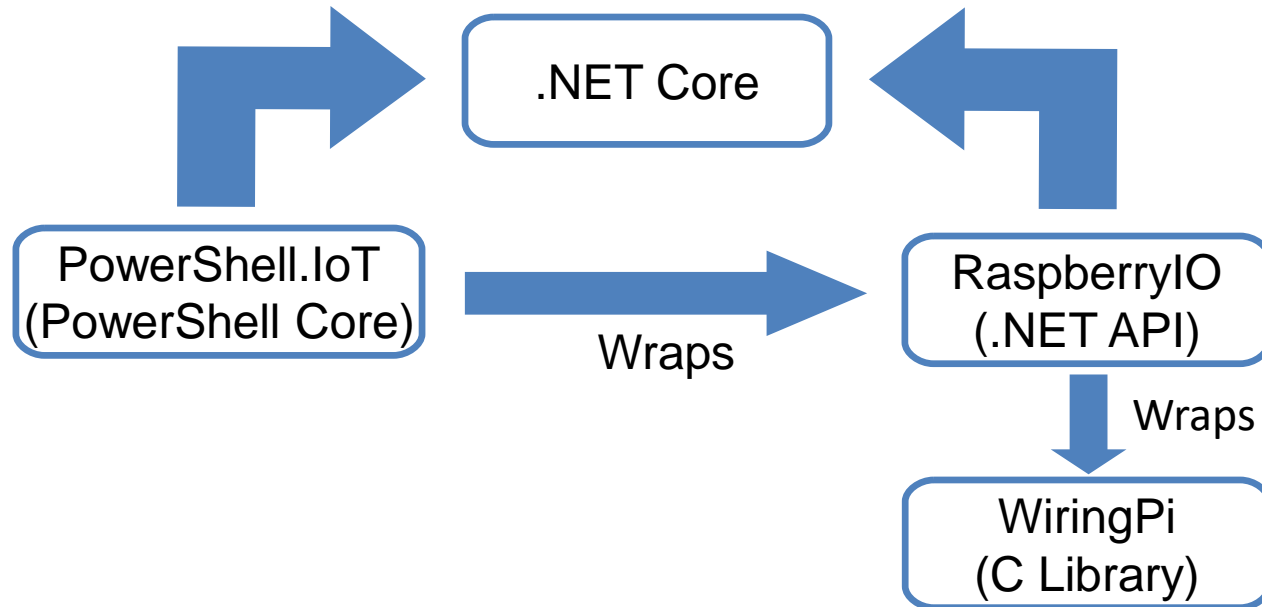
How easy it is to setup PowerShell Core on it? (Demo)



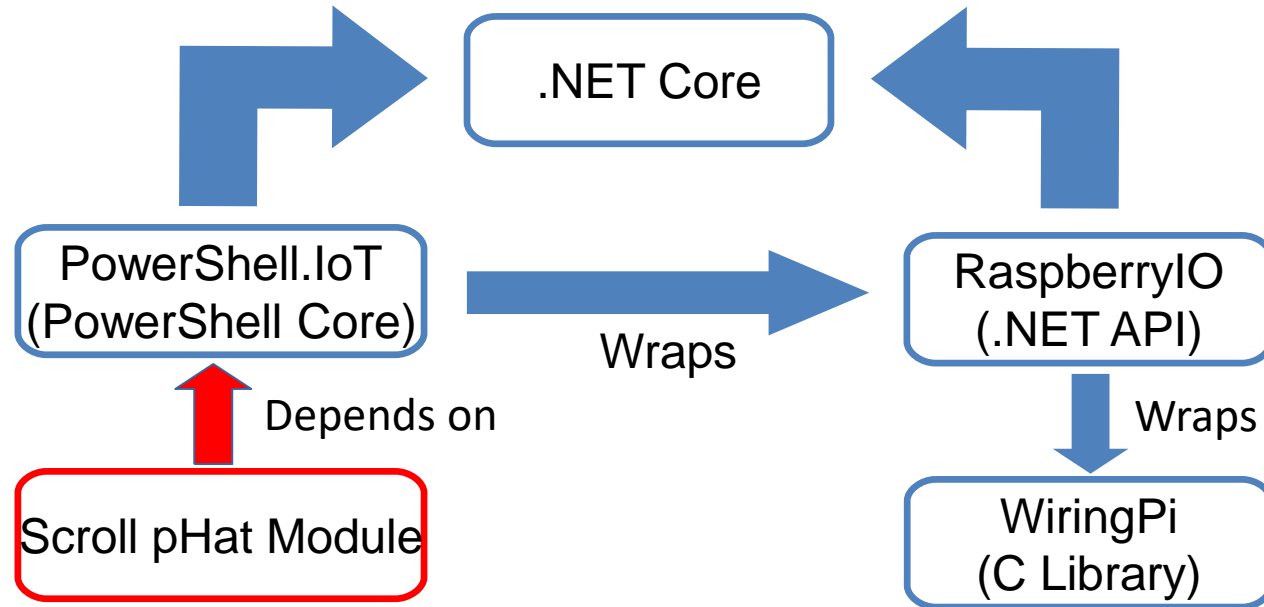


PowerShell Core IoT module

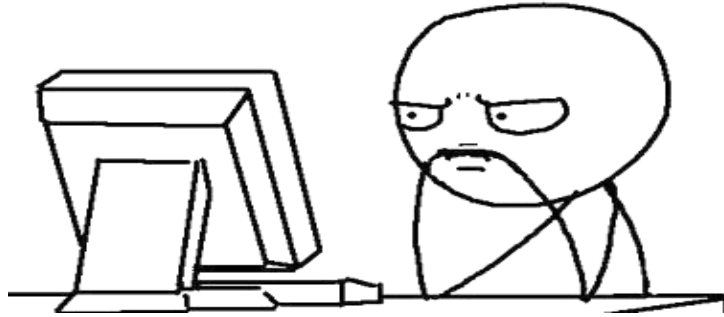
How does it work



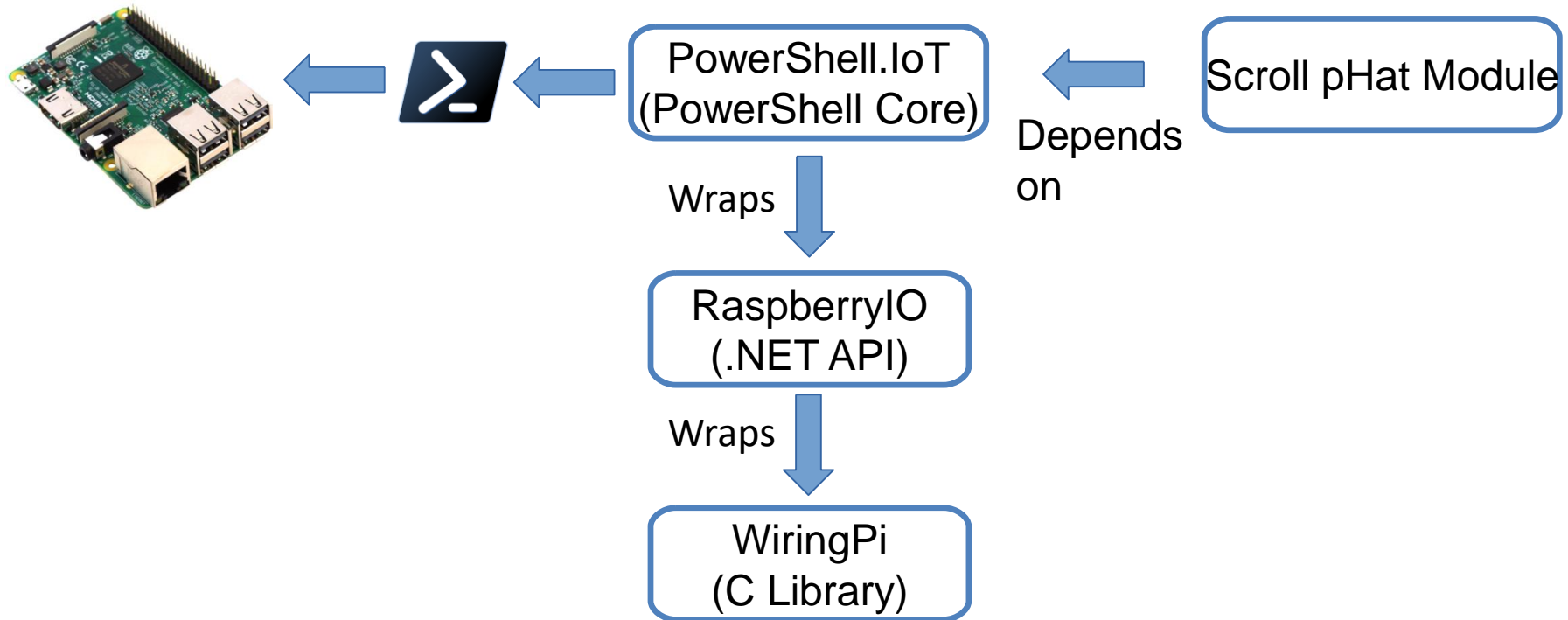
Scroll pHat module

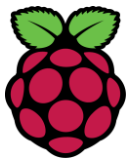


Debug a script running on the RPi (Demo)



Wrapping it up!





Thank You!



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References

PowerShell Core : <https://github.com/PowerShell/PowerShell>

Remoting: <https://github.com/PowerShell/PowerShell-IoT/blob/master/docs/remoting.md>

Modules:

- PowerShell IoT : <https://github.com/PowerShell/PowerShell-IoT>
- Scroll-pHat: <https://github.com/DanielSSilva/PowerShell-IoT---IS31FL3730-Driver>
- Posh-SenseHat: <https://github.com/DanielSSilva/Posh-SenseHat>
- LedStrip : <https://github.com/rpi-ws281x/rpi-ws281x-powershell>

