8 Dec. 2021

Journées AlpesVIEW 2021

Faire du transfert de fichiers en SFTP avec LabVIEW

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SSH et LabVIEW

Problématique

Transférer des données en utilisant le protocole SSH, supporté en natif sur MacOS, Windows Raspberry Pi OS …mais pas LabVIEW!

Programme LabVIEW sur PC ou Mac

SSH

SFTP

Raspberry

Capteur

Capteur

Capteur

Capteur

Actionneur

SSH et LabVIEW

Solution NI

LabVIEW Tools for SSH and SFTP

Updated May 28, 2021

Issue Details

- I want to transfer files in LabVIEW using SFTP, but I cannot find any libraries to implement this.
- I want to communicate with a remote client via SSH using LabVIEW, but I cannot find any tools to implement this.

Solution

Secure File Transfer Protocol (SFTP) employs Secure Shell (SSH) protocol to provide file access, file transfer and file management over any reliable data stream.

NI doesn't currently have any SFTP or SSH software of its own, but Labvolution (NI Alliance partner) and LABWERX do. Labvolution provides LabSFTP and LabSSH library for free. LABWERX provides LabSSH, which is available for purchase.

Disclaimer: Third-Party Add-Ons for LabVIEW are offered by independent third-party providers who are solely responsible for such products. NI shall have no responsibility whatsoever for the performance of the Third-Party Add-Ons.

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Solution Logiciel tiers

Labvolution

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SFTP File Transfer for LabVIEW

April 11, 2016 GregPayne LabVIEW, Linux, SFTP

Please note that this project is no longer being supported and does not support some of the newer connection methods.

Leading on from the LabSSH Library that I shared a while back, I have also created a LabSFTP LabVIEW library.

From Wikipedia, SFTP can be described as follows:

> In computing, the SSH File Transfer Protocol (also Secure File Transfer Protocol, or SFTP) is a network protocol that provides file access, file transfer, and file management over any reliable data stream.

Scrum Alliance CSM CERTIFIED

NATIONAL INSTRUMENTS Alliance Partner

NATIONAL INSTRUMENTS LabVIEW CERTIFIED ARCHITECT

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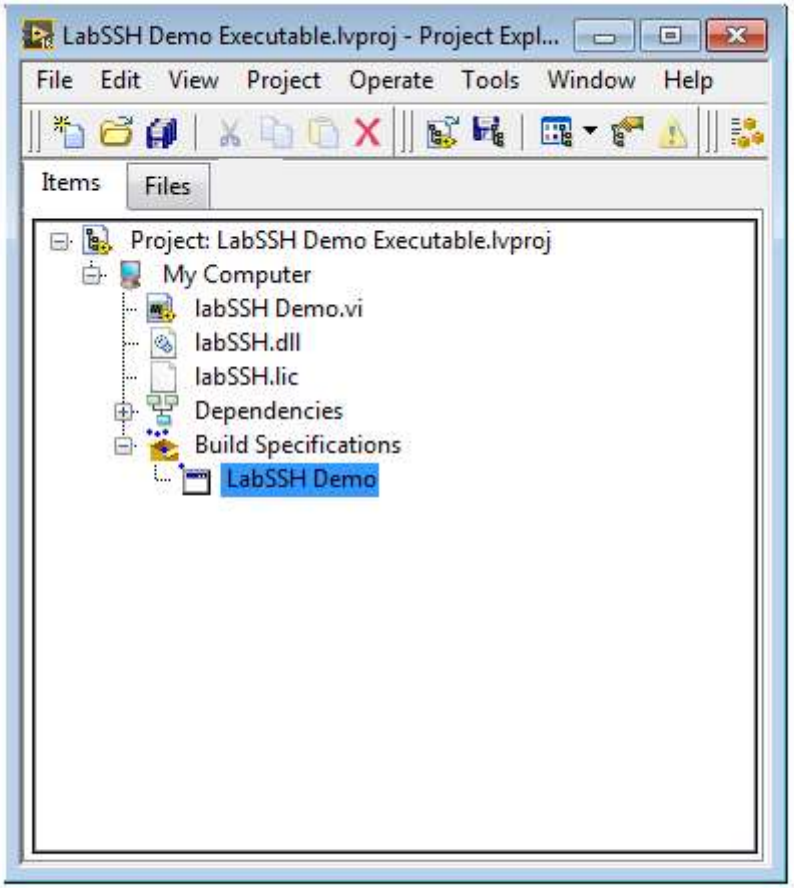

LABWERX LabSSH

Basic

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- SCP
- SFTP
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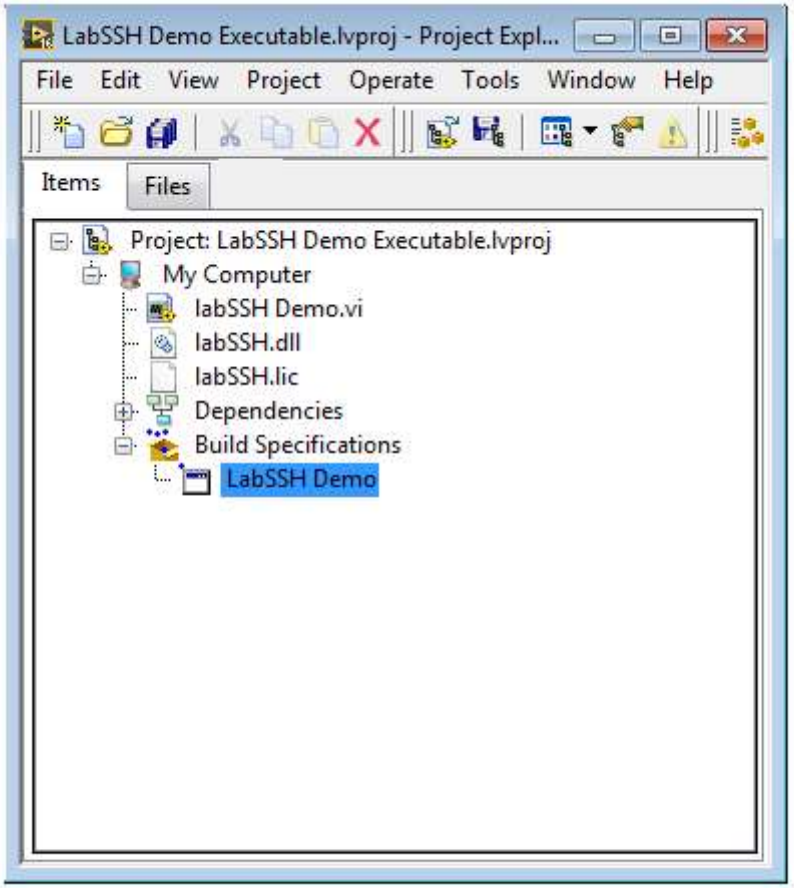

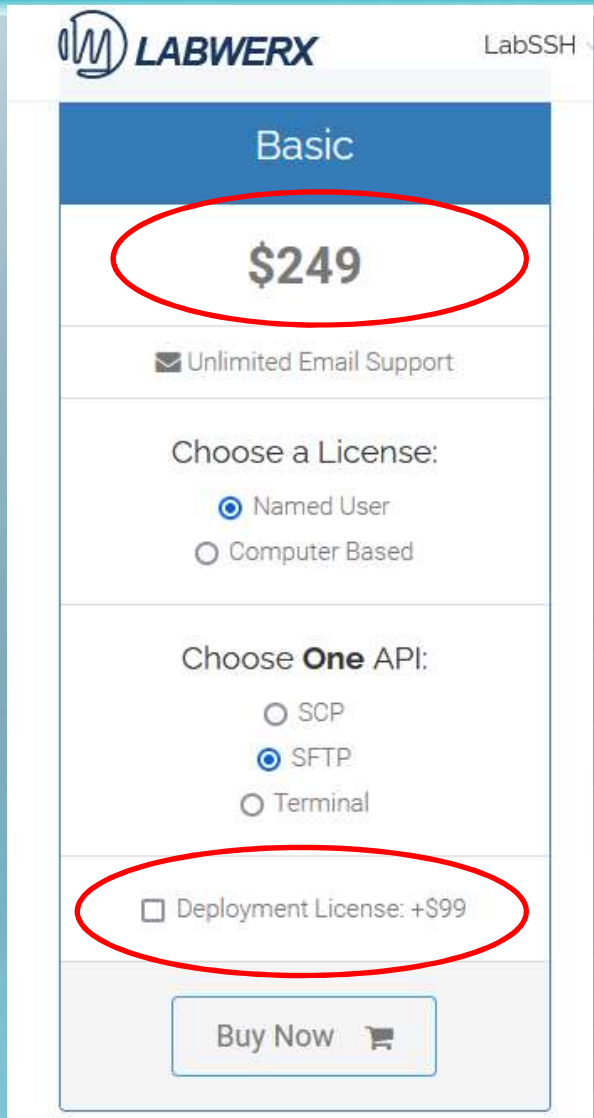

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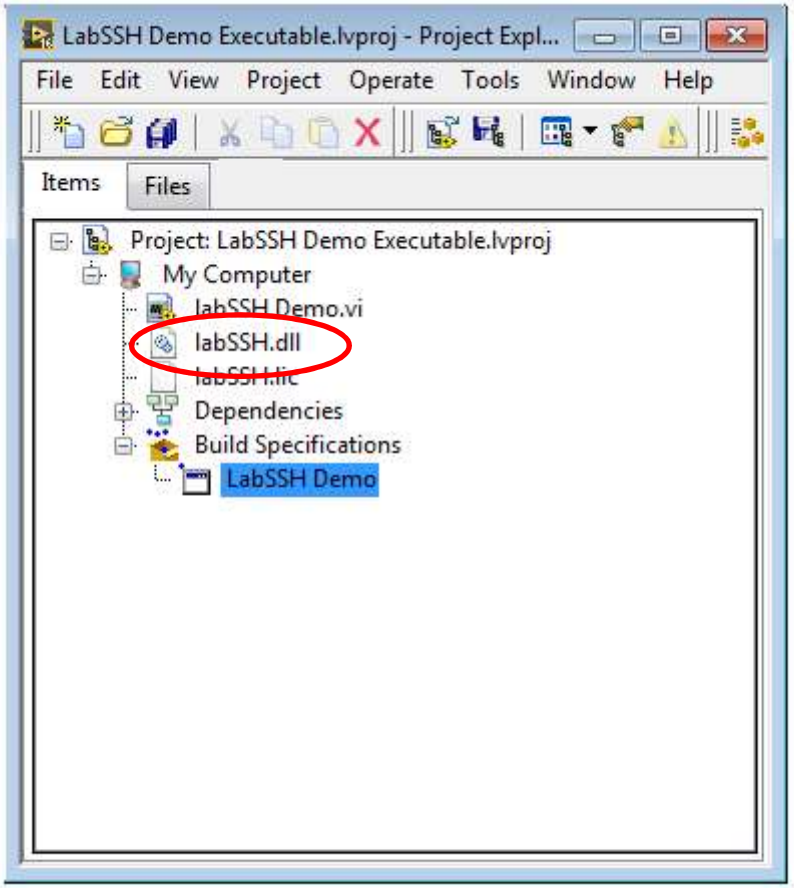
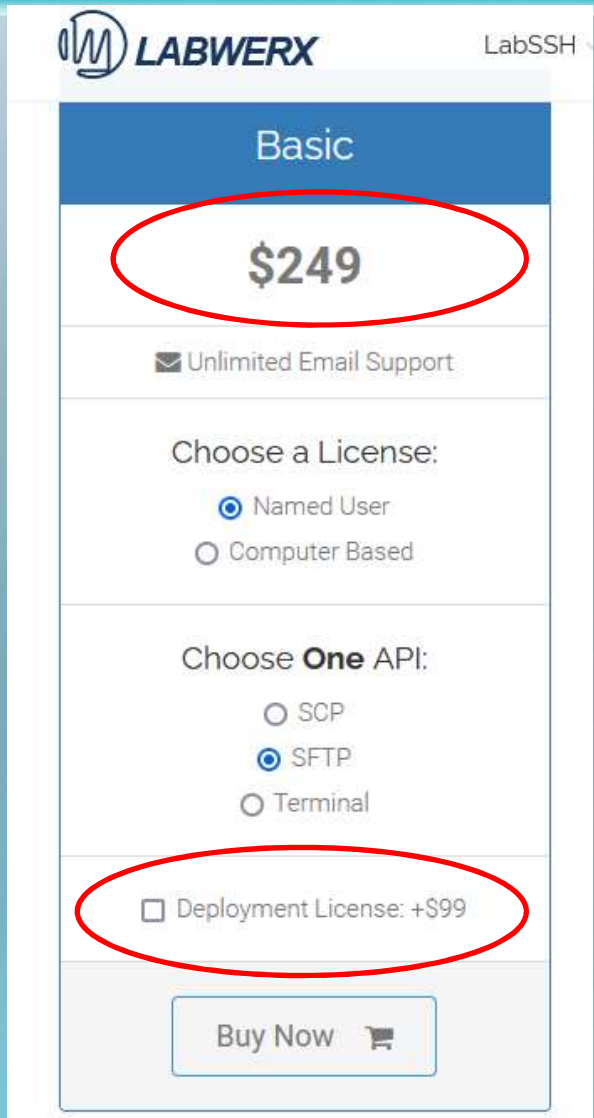
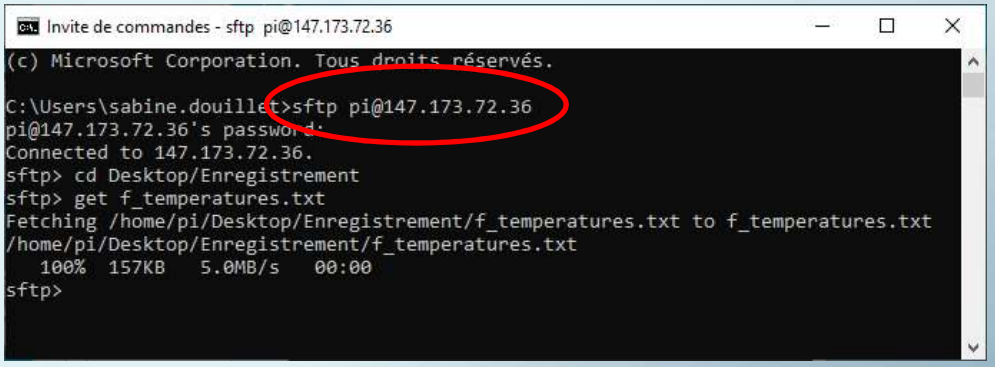
Solution *Logiciel tiers*

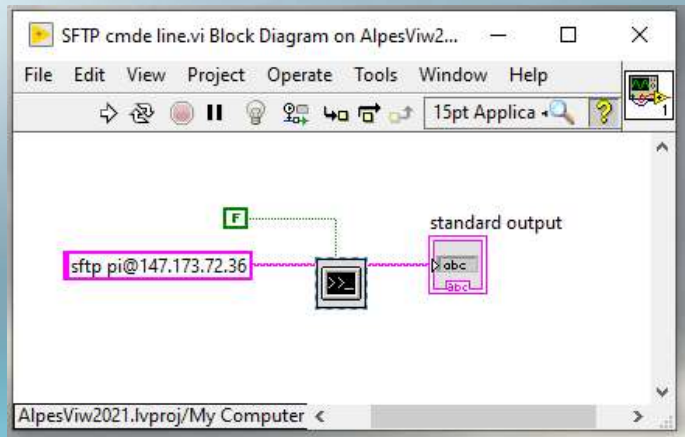


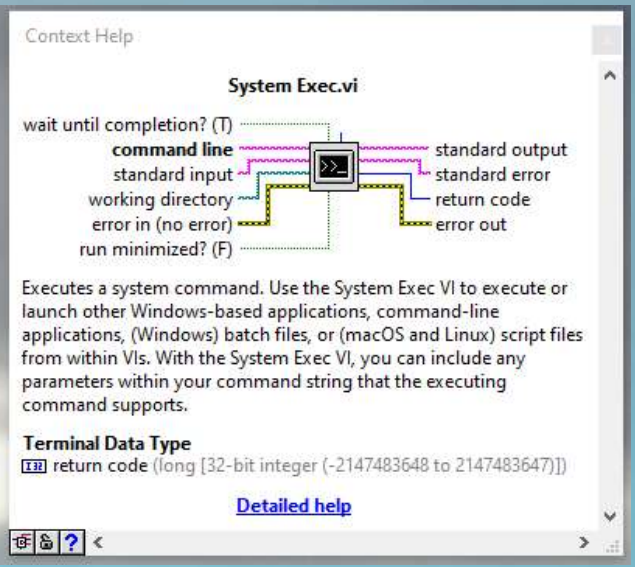


SSH et LabVIEW

Solution Invite de commandes







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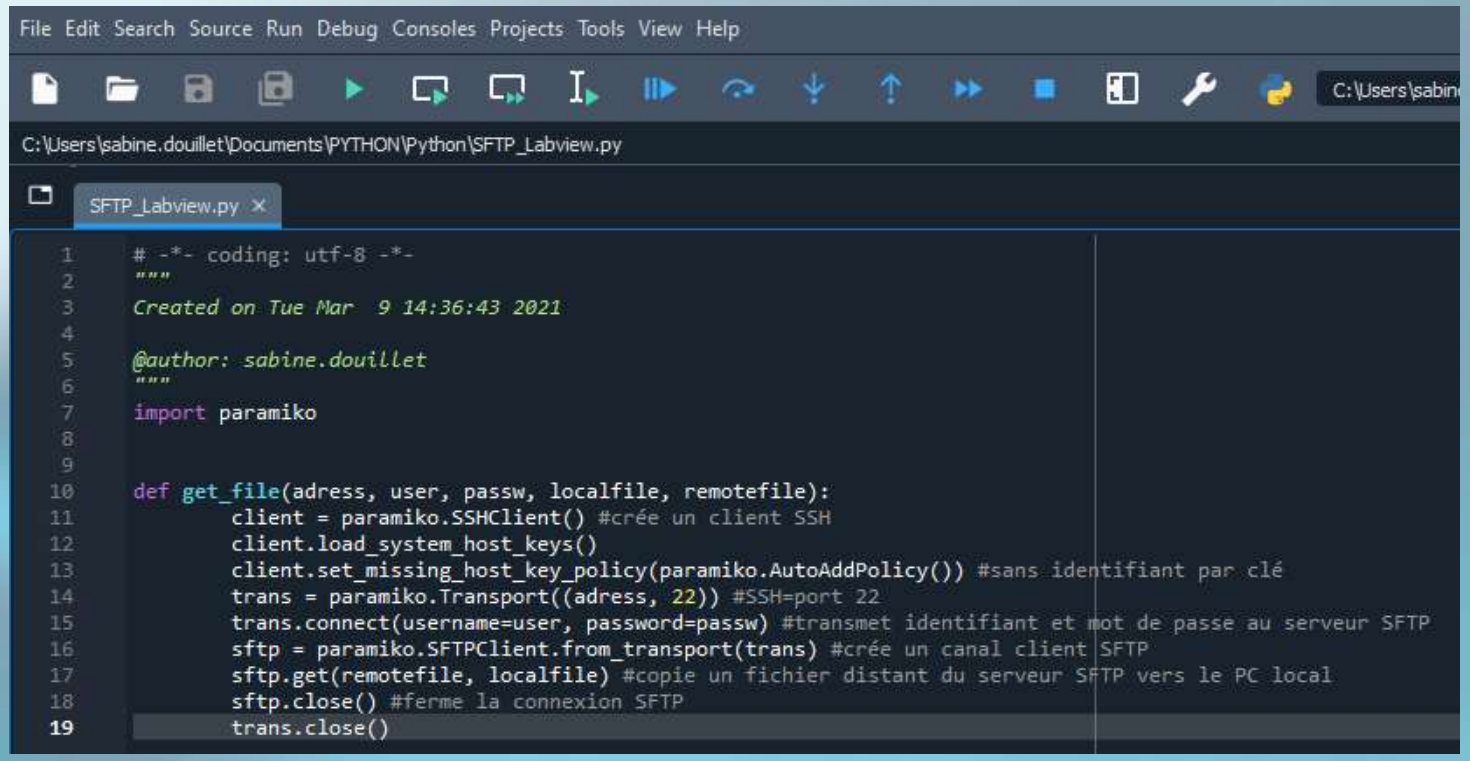
LA solution → Python

- Il existe une bibliothèque Python (gratuite) qui gère le protocole SSH (et SFTP), elle s'appelle **Paramiko** *(elle est inclue dans le package Anaconda et dernières versions de Spyder sinon sur Paramiko.org)*
- On peut intégrer facilement du code Python dans LabVIEW,
- Alors allons-y …



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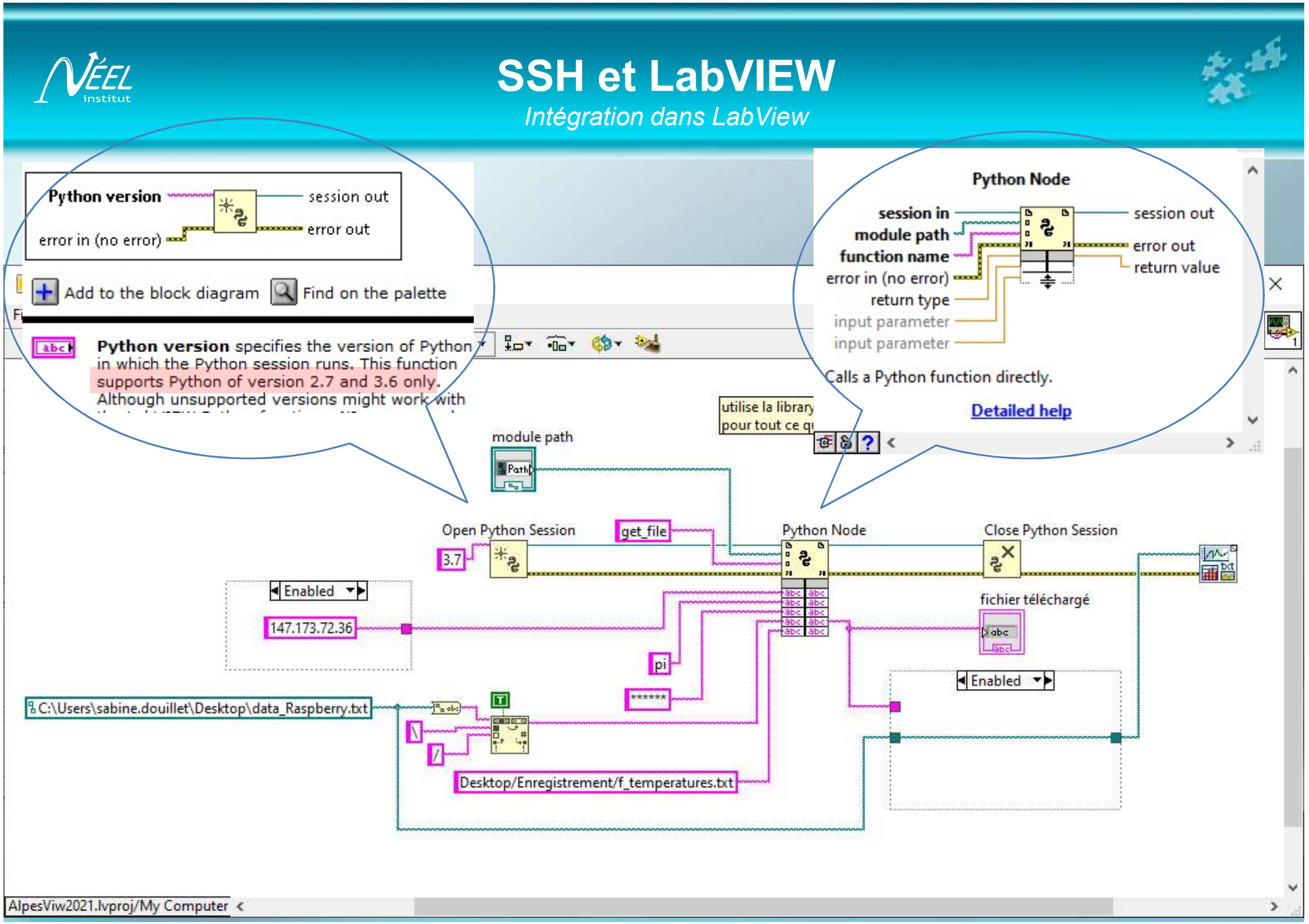
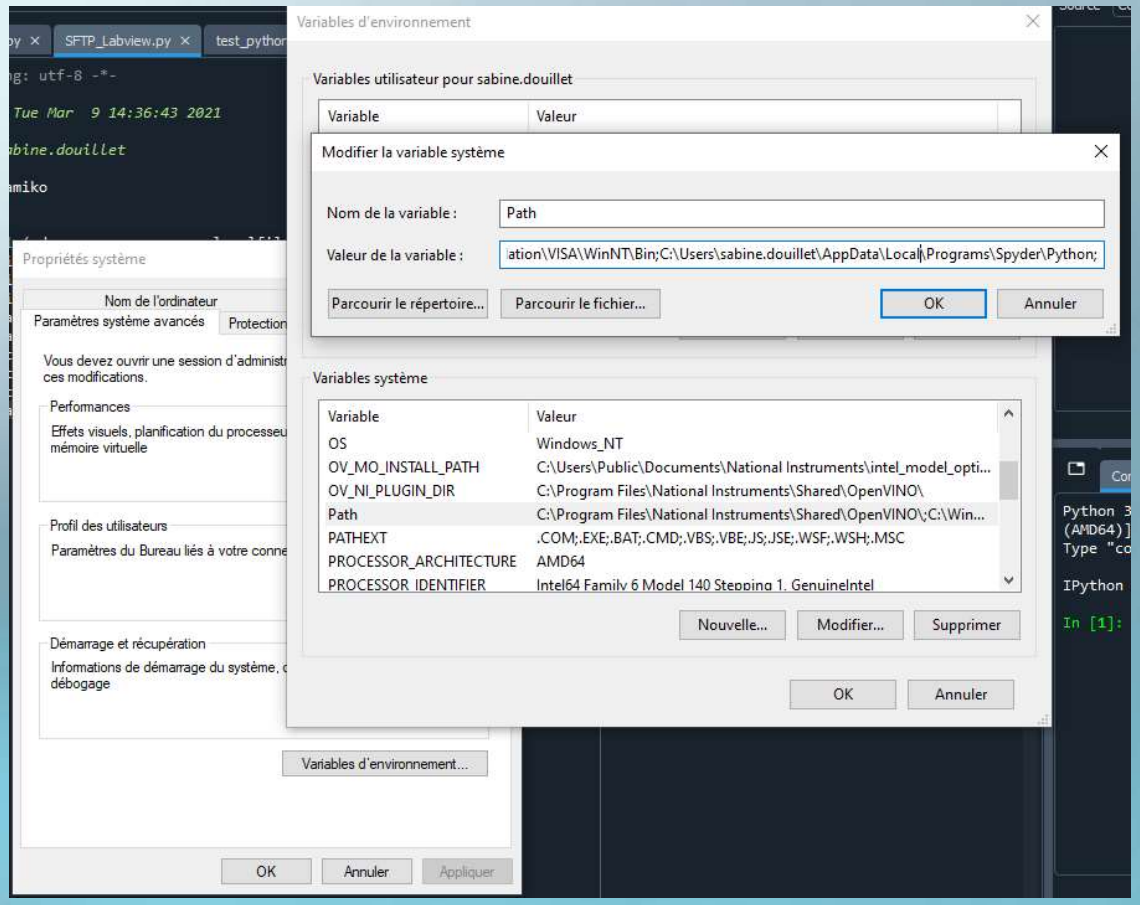
Intégration dans LabView



Modifier le Path



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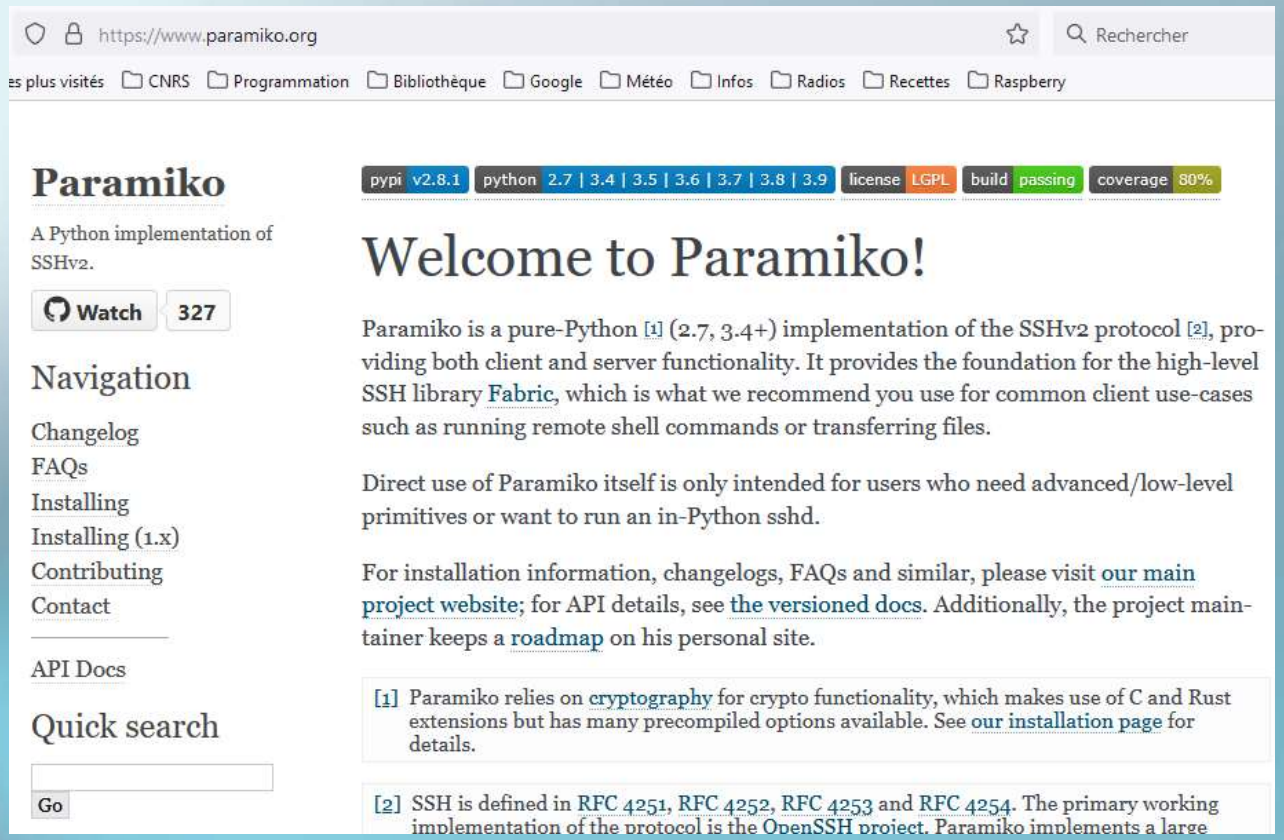
Prérequis

Installer, utiliser Paramiko



SSH et LabVIEW

Solution Python

Plus

- Solution gratuite, multiplateforme et pérenne
- Facile à mettre en œuvre même avec des connaissances réduites de Python

Moins

- Si on distribue notre application, en plus de l'application installée grâce au Builder de LabVIEW, il faudra aussi installer Python, la Librairie Paramiko et paramétrer le Path du système hôte

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Conclusion, questions

- Ne pas se priver d'intégrer des morceaux de code Python (bcp plus de codes Python que de VI partagés sur Internet)
- Vous arrive-t-il d'acheter des modules complémentaires à LabVIEW (hors driver pour matériel spécifique) à des partenaires NI?
- Votre expérience? Support, pérennité…

Merci