WireFlow Fingerprint Reader, together with TestStand add-on, increases traceability in production

Abstract

This application note describes how authentication in TestStand can be extended by using the WireFlow WF 2111 USB Fingerprint Reader and a free TestStand add-on.

Together, these products make it easier to manage user accounts from a central location, while also increasing the traceability in the production of your products.

Problem

HMS Industrial Networks develops and produces high-end electronic products for industrial communication and the Industrial Internet of Things, IIoT, and has a high production volume, spread over many separate test stations. Many test stations means many operators, and this means that much time is spent just to login on a test station to get the traceability that is needed. The many test stations also introduce significant overhead when new operators are to be added to the system.

Solution

Since HMS Industrial Networks uses TestStand and LabVIEW from National Instruments, it was a small step to start using WireFlow's WF 2111 Fingerprint Reader for LabVIEW.

The WF 2111, together with the free TestStand add-on, solves the authentication and management challenges that multiple test stations and test operators introduce.

The TestStand add-on is based on the *WireFlow User Access Toolkit* (UAT) but created as a TestStand plugin to replace the standard TestStand login dialog.

Once the TestStand add-on is installed, a new login dialog will be used that allows both fingerprint and username/password credentials as authentication methods.
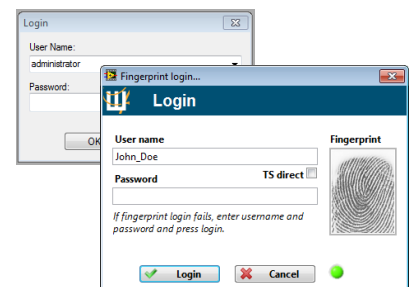
By storing the UAT configuration database on a network-share, multiple test stations can be updated simultaneously. To handle temporary network failures, all test stations use a cached version of the database.

The UAT configuration editor defines users and user-groups, and the TestStand add-on automatically creates those users and groups in TestStand. By defining user access levels as groups, the UAT configuration can specify the access level of each user. The test station then only checks that the user has the required access level by checking the group.
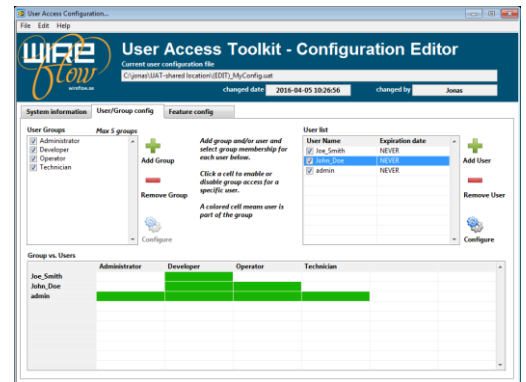
Summary

The WireFlow WF 2111 Fingerprint Reader simplifies the login process and increases traceability, and the free TestStand add-on enables easy multi-station user management and control.
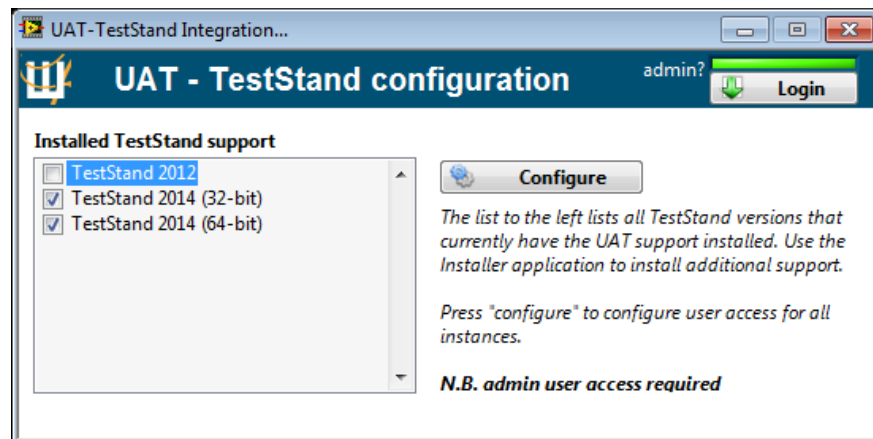
WireFlow products used in this application note

AE0016   WF 2111 – USB Fingerprint Reader for LabVIEW

AC0082   TestStand Add-on for WF 2111