White paper
Fujitsu PalmSecure ™ ID Login Workplace Protect AD

Fujitsu PalmSecure™ ID Login with Workplace Protect AD ensures a secured Login to Windows with biometric palm vein authentication via Active Directory.

Content

Fujitsu PalmSecure - Security always at hand

PalmSecure offers simple and reliable personal identification

The most reliable form of personal authentication is based on biometric characteristics, and the veins in the palm of the human hand are especially well-suited for biometric authentication. Palm vein patterns are unique for each person – even twins have different patterns. Fujitsu PalmSecure is the most precise, versatile and convenient biometric technology of its kind on the market:

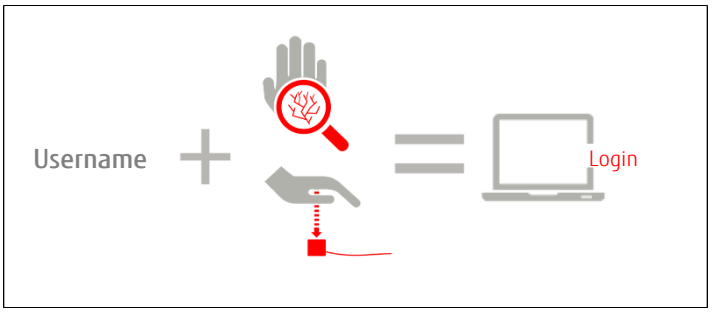
- Maximum security: Veins are concealed under the skin, and the identification is literally "live" and forgery-proof, because the process functions only when hemoglobin is flowing through a person's veins.
- Maximum accuracy: With a false acceptance rate of less than 0.00001percent (M1E or F Pro sensor), Fujitsu PalmSecure is the most precise authentication system in the world.
- Maximum performance: The registration process is complete in just ten seconds, and identification is complete in just one or two seconds – faster than any password solution.
- Highly accepted by users: The technology is touch-free and thus completely hygienic. The hand is simply held over the sensor – that makes PalmSecure easy to use.
- Quite versatile: The technology can be used for site access control, time recording and mobile applications, in the web and at the workplace.
- Used worldwide by airports, banks, business enterprises, data centers, governments, in the healthcare sector and in the retail sector.

Fujitsu PalmSecure has an additional advantage: It can be combined with other authentication methods. Fujitsu PalmSecure ID Login with Workplace Protect AD offers centralized biometric user authentication with Active Directory support.

Fujitsu PalmSecure ID Login - The digital handshake

Fujitsu PalmSecure ID Login with Workplace Protect (WPP AD) is designed to be used as logical access control for Active Directory login. Instead of the known credentials like passwords & user names it handles centralized palm vein templates for Windows login at user's client. Workplace Protect AD software can be used with different types of PalmSecure sensors at Fujitsu hardware.

Fujitsu PalmSecure ID Login prevents misuse caused by stolen or unsecured passwords. Unauthorized access to clients can be prevented.



Fujitsu offers a complete solution for logical access control comprising hardware, software and services for securing Active Directory login.

- Fujitsu PalmSecure ID Login can be used with the latest PalmSecure sensors
  - PalmSecure F Pro sensor (M5)
  - USB sensor Guide Kit
  - USB PalmSecure mouse
  - OEM sensor
  - PalmSecure U-Guide with OEM sensor
  - PalmSecure SL sensor
  - Embedded sensor at Fujitsu Lifebook
  - Embedded sensor at Fujitsu Workstation
  - Embedded sensor at Fujitsu ESPRIMO Q-series
  - External PalmSecure sensors with non-Fujitsu hardware (from version 1.01)
- To run Fujitsu PalmSecure ID Login the Fujitsu Workplace Protect AD software is required. It offers the following main functions:
  - Centralized biometric user enrollment
  - Administrating palm vein templates at Active directory
  - Modifying user data at Active directory
  - Handling client Windows login via Active Directory
  - Optional: Unique application key for maximum security
- Integration into existing Active Directory environment
  - Using an existing AD field – no structure change is necessary
  - Optionally a different AD field can be specified

Fujitsu PalmSecure ID Login - Functions and highlights

Workplace Protect AD

Fujitsu developed Workplace Protect AD especially for PalmSecure based login at Active Directory.
The software manages palm vein template storage and usage within Active Directory database. Once a user is enrolled centrally he can use his username and palm template to get Windows access at any device within the Active Directory environment. Users palm template replaces the password typing.
The user needs to type in his username to let the software find the stored palm template at active directory. Both templates, the recorded at login and the stored one at Active Directory are matched. When a user authorized his identity via username and valid palm template Workplace Protect AD decrypts his password stored at Active Directory and grants access to Windows.

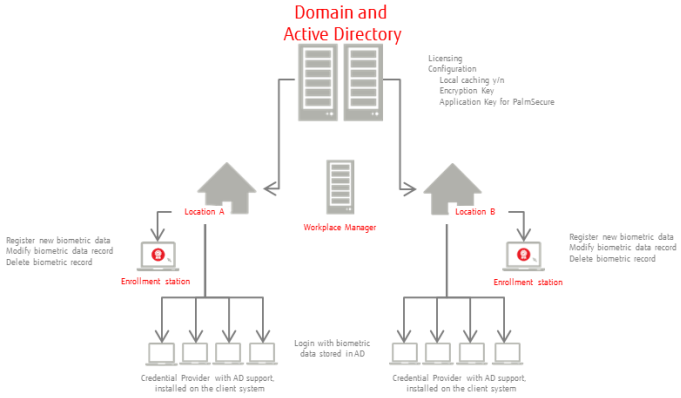
To grant maximum security the palm vein template encryption can be performed by a unique and customer specific application key based on AES technology. This is an optional component of the Fujitsu PalmSecure ID Login solution.

Workflow user access at Active Directory with Workplace Protect AD:

User action	Action WPP AD (credential provider)
Enter username	1. Reads encrypted biometric data at AD 2. Decrypts content of biometric data - Information about sensor type - Biometric template 3. Reads expire date of password
Place palm at PalmSecure sensor	1. Matching of scanned palm template to stored biometric data at AD 2. Matching is done at local device / system 3. After successful user verification the user password is decrypted
Login to Windows	Collect decrypted password from AD to credential provider

Fujitsu PalmSecure ID Login can be used location independent. Workplace Protect AD comes with a Workplace Manager to administrate all palm templates centrally.

Overview & Domain integration



PalmSecure sensors

PalmSecure technology is based on near infrared technology. All sensors work in a similar way.
As soon as a hand is placed over a sensor the sensor focusses the hand and does only detect living hands. The hand or more or less the palm is scanned with infrared light. The scanned palm veins are recorded within the sensor. Now the palm vein template is encrypted via AES the first time. This encrypted template is transmitted to the PC and will be encrypted for a second time with a (unique) application key and AES. After the second encryption the palm vein template is ready to be stored at a database.

Some further technical details:

- Mounting bracket: all directions
- Encryption method: AES 256 bit
- Authentication rate:
  - OEM sensor FRR: 0.01% (1 retry), FAR: less than 0.00001%
  - SL sensor FRR: 0.01 % or less (1 retry), FAR: less than 0.001 %
  - Integrated sensor: FRR: 0.01% (1 retry), FAR: ≦0.001%
- In 1-to-1 verification under ISO/IEC 19795
- MTBF: 1,000,000 hours
- Detection distance: 40 to 60 mm
- Electric power supply: 4.4 V to 5.4 V
- Power input: 2.5 W max. via USB cable
- Power use: 500 mA max./energy saving mode: 45 mA max.

Conclusion

Fujitsu PalmSecure ID Login with Workplace Protect grants maximum security due to unique precision of Fujitsu PalmSecure technology. It achieves highest user convenience by intuitive, contactless and hygienic usage, designed to support highest data privacy protection.

Fujitsu PalmSecure ID Login. Reliable verification of personal identities

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