



IdentaMaster® / IdentaMaster® Pro

SDK

User Guide

Objectives:

IdentaMasterSDK® (IMSDK) enables developers – institutional or individual – to build custom authentication applications for PCs. Developers can set up users and perform biometric enrollment and authentication for these users. Each user is assigned a unique ID and Name, and is stored locally in a secure database (the storage system is managed by IdentaMaster® core application, provided by IdentaZone). Biometric enrollment and authentication components are pre-built and may be invoked from a developer's application system. These components do not need to be modified; they must be adapted the business logic of your application.

To proceed with the IMSDK, it is important to understand the IdentaMaster® application, IdentaZone's solution for biometric access to a PC. In short, it provides Windows logon and file/folders/drives encryption. Since it is only limited to Windows accounts, IMSDK is designed as a Toolkit that developers can extend for external application user management.

Users are free to select their own biometric factor (scanner/device/technology), which is a significant differentiator of the IdentaMaster® system. This can be achieved by installing a biometric plugin that enables use of a corresponding biometric device. If users need to

change to a different device, they must connect the new device to the USB port and install the particular plugin.

For IdentaMaster® reference, please go to our site and obtain following documents:

https://identamaster.com/manuals/how_to/im_comprehensive_guide.pdf

https://identamaster.com/manuals/how_to/how_to_start_fingerprint_scanner_im.pdf

More documents available also there:

<https://identamaster.com/support/doc/>

Prerequisites:

- IdentaMaster® / IdentaMaster® Pro application must be installed and licensed. It serves as base component to provide enrollment and authentication mechanism. IdentaMaster® and IdentaMaster® Pro versions are fully supported.
- IdentaZone Biometric Plugins (at least one) to be used to enable biometric devices and/or scanners. Scanners must be installed and licensed via IdentaMaster® / IdentaMaster® Pro application.
- IdentaMaster® SDK must be installed and licensed.

Review license policy while installing the application.

Platform:

OS MS Windows 7, 8, 8.1, 10 x64.

Development Environment:

MS Visual Studio 2017.

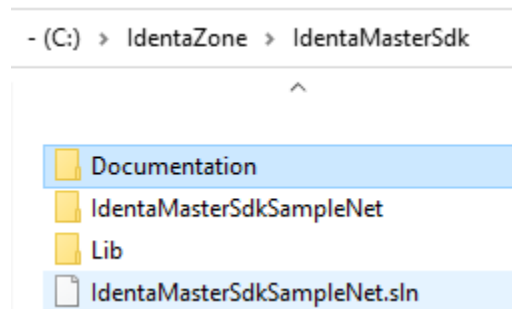
No special configurations are needed.

1. Install IdentaMaster® / IdentaMaster® Pro SDK.

Installation package includes one installation file:
IdentaMasterSdkSetup_<version_id>.exe.

Unpack and execute Insaller IdentaMasterSdkSetup_<version_id>.exe

Default installation directory will be <Root Drive>:/IdentaZone/IdentaMasterSDK



Upon installation is complete, you will get ready-to-use solution file (.sln) as Sample Authentication Application. As a developer, you may take advantage of this application to learn what functions are available. You may invoke the Sample application right away by running file:

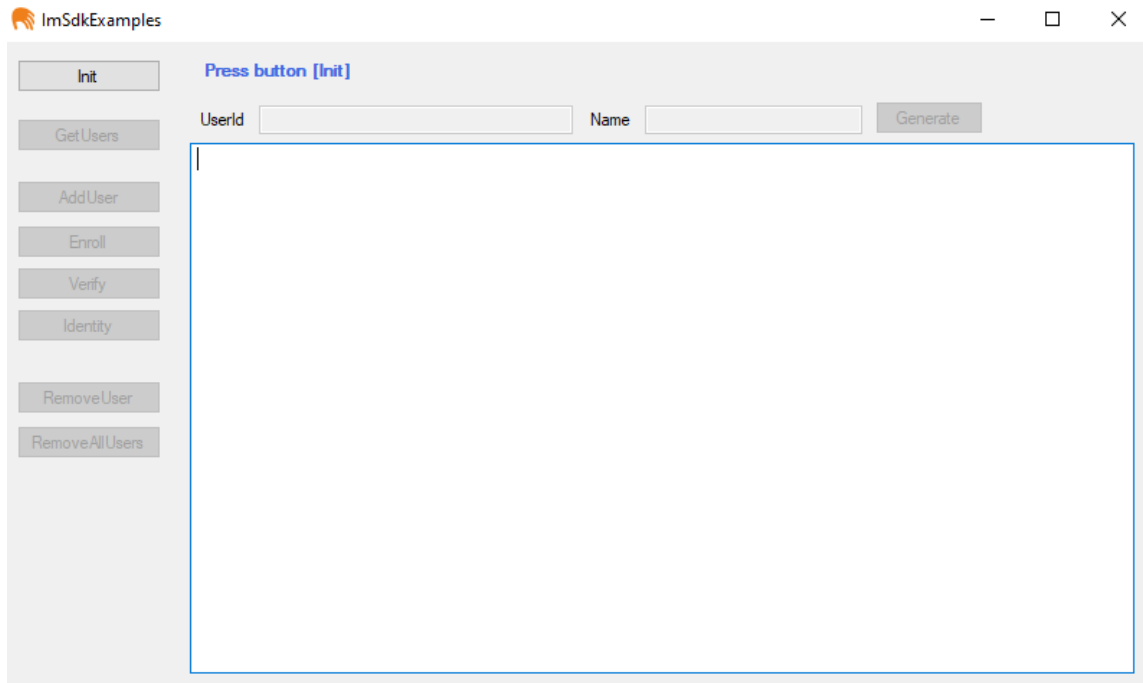
C:\IdentaZone\IdentaMasterSDK\IdentaMasterSdkSampleNet\bin\x64.Release\

IdentaMasterSdkSampleNet.exe

Further down we describe main available functions.

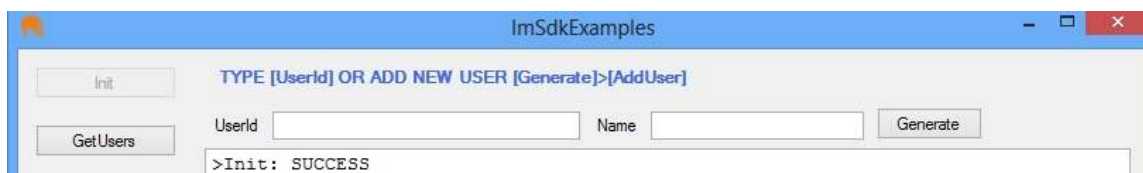
2. Start IdentaMaster® SDK.

Run IdentaMasterSdkSampleNet.exe as described above. For convenience, you may create shortcut on Desktop, pointed to **IdentaMasterSdkSampleNet.exe**:



3. SDK Initialization:

On the left side of Demo there is the button [Init]. Press the button. Other buttons are inactive. After pressing the [Init] button, system will inform you about the successful process.



If the license is not yet active, the following message appeared:

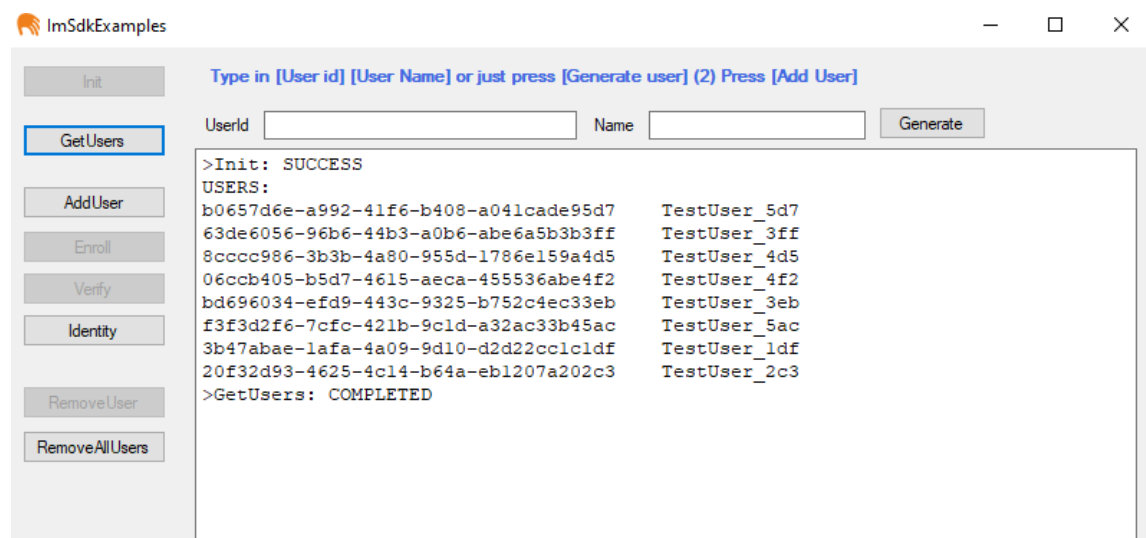
```
>Init: ERROR - IdentaMaster® SDK is not activated!
```

Start IdentaMaster® / IdentaMaster® Pro application, open Activation Tab, select [link](#)

Add license and enter license value. After getting successful activation message, close IdentaMaster, restart IdentaMaster® SDK Sample and press [Init] again.

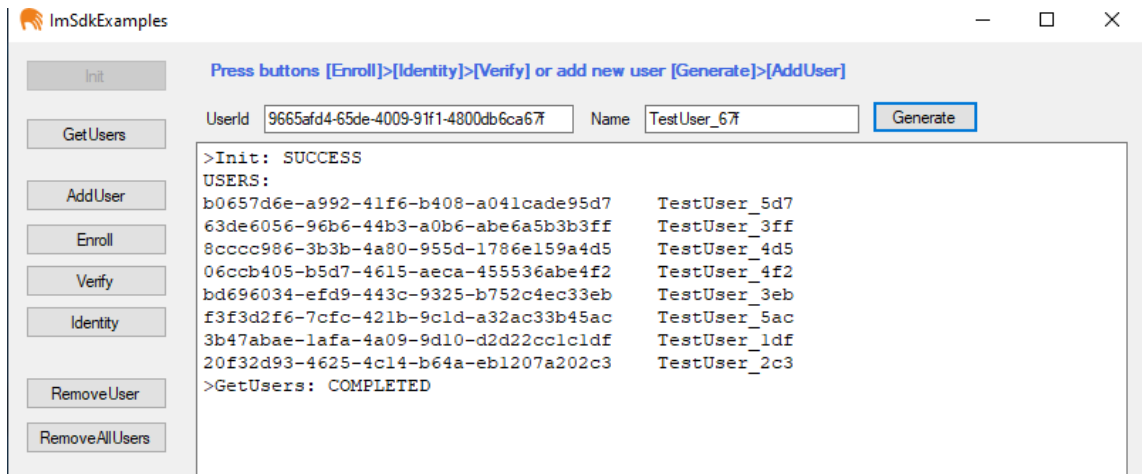
4. Getting user list.

Press the button [Get Users]. List of registered users will be printed. If you have not yet created any user, output will be empty.



5. Create new user.

You may add user manually by entering id and name. Or just press [Generate] button. Unique id (GUID) and random name well be created. If you add user manually, make sure that user identifier is unique and at least 32 characters long.



Press [Add user]. It will add a new user to local database.

6. Biometric Enrollment

Make sure, biometric device is connected. (All devices may be tested in IdentaMaster® application), Select [Enroll] button - it will brings Enrollment windows.



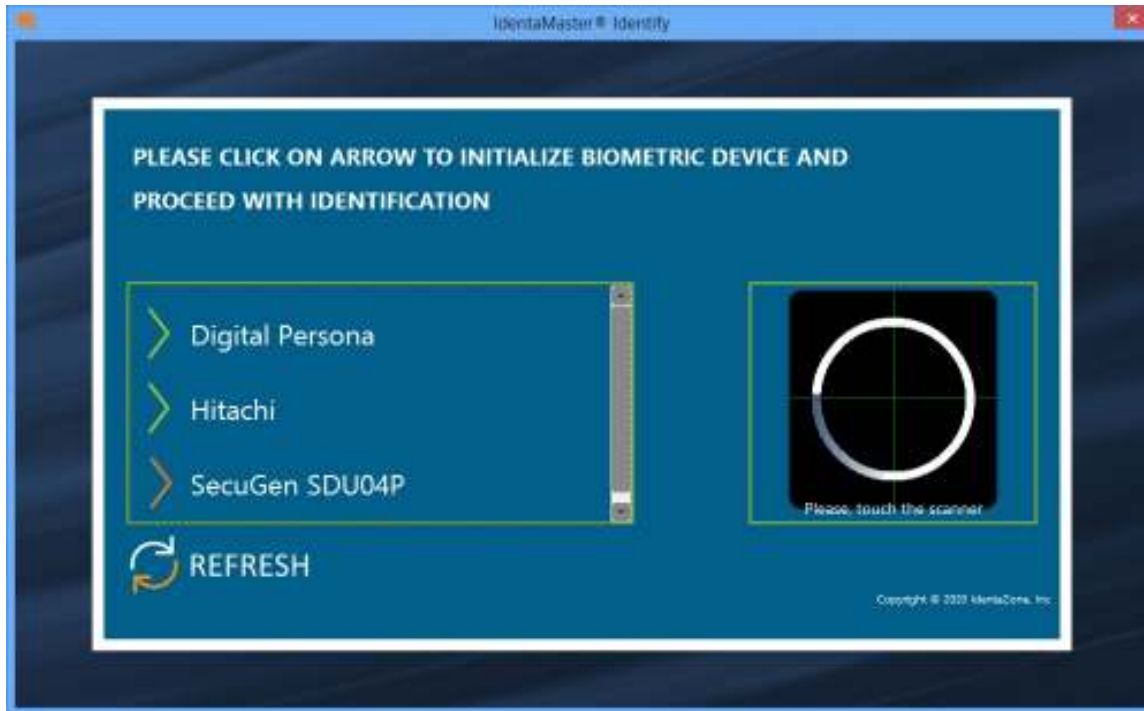
- Select Biometric Provider from the drop-down list above. You will see fingers marked with circle that are already enrolled on server.
- Select finger you would like to enroll (reenroll).
- You will be prompted to place finger on the scanner surface. Depending on the Biometric Provider selected, you are required to place, lift and place finger several times until good biometric data is collected.

Select [Apply changes] after you ready to store biometric records for the given user.

For the best result follow the rules listed below:

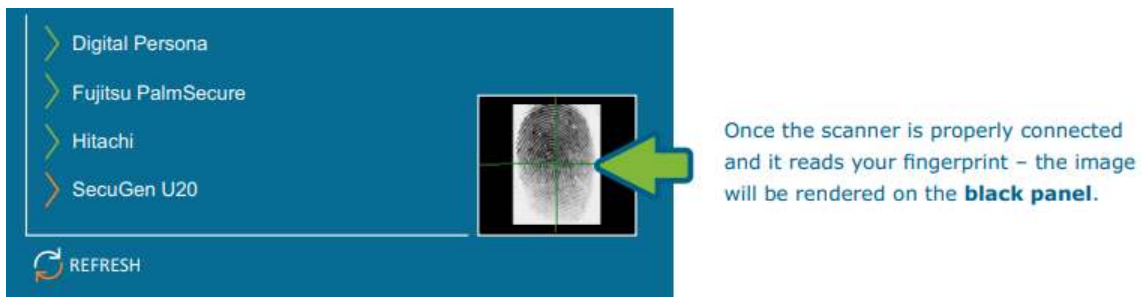
1. Place the center of the finger (core) tip in the middle of the sensor – this increases the chance of it being accepted.
2. Cover the sensor area completely with the finger to ensure the maximum fingerprint surface contact area – the sensor collects more information (i.e. minutiae) this way.
3. Use medium pressure on the sensor – too heavy or light pressure may result in a poor image and consequently poor enrollment data.
4. Keep finger movement to a minimum during the enrollment and use the same finger orientation during each image capture (unless otherwise instructed by particular Biometric Provider).
5. It is best not to have very a very wet or very dry finger during the enrollment procedure. If wet, wipe your finger with cloth or paper towel, too dry – moisturize the finger by breathing on it.
7. Calling "Verify" and "Identify" procedures.

Press the "Identify" button. Identification provide 1: N matching (or search). To proceed with identification follow instruction on Identify Windows:



Once the scanner is properly connected and it reads your fingerprint – the image will be rendered on the right black panel.

Select biometric device, press finger on the scanner as instructed



Program will check all users and will recognize user by the biometric information.

```
ID: 6054235d-be48-46eb-848f-723b19ae767b Name: TestUser_67b
>Identity: COMPLETED
```

Press the button "Verify". Program will check the current user. Verification Windows will be disapperd and "Completed" message will be printed to application console. Make sure, button [Verify] is enabled only if user id is presented in the text field output.

7. Removing users

Press [Remove User] to deleted particular user from local storage.

Press [Remove All Users] to delete all registered users.