

Neurotechnology Products Activation

User's guide

Copyright © 2008-2023 Neurotechnology. All rights reserved

Version: 13.0.0.0. Release date: 10/20/2023.

Table of Contents

1 About	1
2 License types	3
2.1 Serial numbers	4
2.2 Dongle	5
2.3 Internet licenses	6
2.4 Trial	7
3 Activation options	8
3.1 Activation wizard	9
3.1.1 Trial activation	9
3.1.2 Licenses activation	12
3.1.2.1 Serial Numbers activation	12
3.1.2.2 Internet Licenses activation	15
3.1.2.3 Dongle activation	15
3.1.2.3.1 Dongle update	16
3.1.2.3.2 Share dongle licenses over the network	17
3.2 Manual activation	19
3.2.1 Trial	19
3.2.2 Serial numbers (Single computer licenses)	19
3.2.3 Volume license manager (dongle)	22
3.2.3.1 Generating licenses for single computers activation	22
3.2.3.2 Managing licenses on network	23
3.3 Activation for Android	25
4 Advanced licensing	28
4.1 Licenses obtain in your application	29
4.2 Licenses deactivation	31
4.3 Changing from trial to non-trial	32
4.4 Virtual environments licensing	33
4.5 Disaster recovery licenses	34
4.6 Licenses generation from a dongle	35
4.7 Licensed API functionality	38
	iii

4.7.1 MegaMatcher Standard SDK	38
4.7.2 MegaMatcher Extended SDK	44
4.7.3 MegaMatcher On Card SDK	50
4.7.4 VeriFinger Standard SDK	50
4.7.5 VeriFinger Extended SDK	51
4.7.6 VeriLook Standard SDK	53
4.7.7 VeriLook Extended SDK	53
4.7.8 VeriEye Standard SDK	54
4.7.9 VeriEye Extended SDK	55
4.7.10 VeriSpeak Standard SDK	56
4.7.11 VeriSpeak Extended SDK	56
4.7.12 SentiVeillance SDK	57
4.7.13 SentiSight SDK	58
4.7.14 SentiSight Embedded SDK	58
4.7.15 SentiGaze SDK	58
4.7.16 SentiSculpt SDK	59

5 Troubleshooting

60

1 About

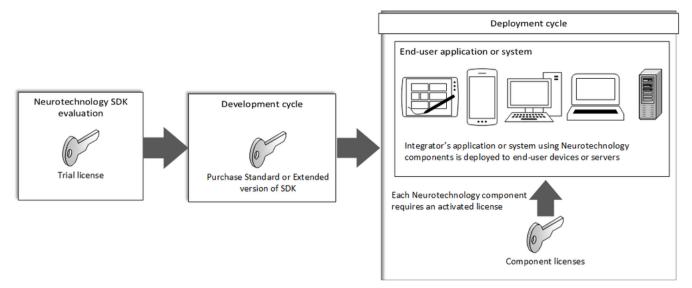
Neurotechnology allows to use the SDK on a development device and use the SDK components for an end user applications or large scale systems. Components and source code provided as samples and tutorials can be adapted by an integrator and redistributed as an end-user application when licenses were activated. We ask you to activate your product to verify that your installation is performed with a genuine Neurotechnology product. Also, product activation ensures that the product license has not been used on more devices than are permitted by the license agreement.

SDK activation is required for trial version and all purchased licenses, standard or extended versions of SDK. When you activate your SDK or license, no personal information is sent to Neurotechnology.

The SDK has the following licenses which should be activated:

- Trial. You can copy Neurotechnology SDK to use for 30 days free, no strings attached.
- Development. Products development using Neurotechnology technology requires a license for standard or extended version of SDK. SDK license includes several licenses for each component.
- **Deployment**. When Neurotechnology components are used in end-user applications, component licenses for each deployment device is required.
- VAR. This is the special licensing agreement between the Neurotechnology and the integrator, who wants to develop and sell the Neurotechnology SDK based development tool.
- Enterprise license. Individual licensing agreement for an unlimited use of Neurotechnology components.

The diagram below demonstrates which licenses are required during application life cycle:



Notes

Intellectual Property Notices

By buying, using trial version, copying to your computer or other device or activating a license of Neurotechnology SDK you indicate your acceptance of license agreement which is saved in \Documentation\SDK License.html. Neurotechnology software, documentation and other material in this SDK is Copyright © NEUROTECHNOLOGY. 1991–2023. ALL RIGHTS RESERVED.

Link List

- Pricing calculator online tool which helps to determine the cost of products and licenses.
- · Product advisor online tool which recommends Neurotechnology products based on your system requirements.
- Product schema overviews the component licenses included into the SDK.

Contacts

When you face troubles activating Neurotechnology licenses, please contact us by email support@neurotechnology.com

When you need an advice about Neurotechnology products or to estimate required licenses for your project, please contacts us by email info@neurotechnology.com

2 License types

Each particular SDK component has specific functionality and requires a license. You should note that a license is required for each computer or device that run a component. For example, if you are developing fingerprints enrollment system which will be deployed to 500 computer, you should have 500 fingerprint client licenses.

Typically, Neurotechnology products are activated using Single computer licenses. These licenses can be provided as a serial number, an internet license file or a dongle (a special hardware used to store licenses). Serial numbers are activated using internet connection or by email and after activation internet connection is not required.

Activation by serial number is not suitable for ARM-Linux, except BeagleBone Black and Raspberry Pi 3 devices, or virtual environments. In this case as well as in mobile devices internet licenses can be used. Neurotechnology provides a license file which is stored on a computer or a mobile/embedded device. This licensing option requires internet connection at least every 30 minutes. But the license can be generated (by Neurotechnology) with any suitable time up to 7 days.

When activation via internet is not suitable for your project, a convenient licenses management option is required or virtual environment is used, license may be stored in a dongle. Dongle also can be used in a computer distributing licenses across the devices in the same network.

2.1 Serial numbers

Serial numbers are used to activate licenses for particular SDK components on a computer or a device. Each serial number requires activation for a SDK component to run. The activation uses internet connection. When internet connection is not possible, a serial number can be activated by sending an email. After a successful activation the network connection is not required for this licensing.

Neurotechnology provides a way to renew the license if the computer undergoes changes due to technical maintenance.

Serial numbers activation is 3 steps task:

- 1. Neurotechnology generates serial numbers when a customer purchases licenses for components.
- 2. Customer using provided serial number generates hardware Id.
- 3. Generated Id is provided to Neurotechnology. Using this Id, a license file is generated and provided to a customer.

Serial numbers can be activated manually following these steps or automatically skipping these steps. The available activation options are listed in section Activation options (III) page 8).

Notes

- Activation by serial number is not suitable for ARM-Linux, except BeagleBone Black and Raspberry Pi 3 devices.
- Activation by serial number is not suitable for virtual environments.
- When a license was activated, client hardware cannot be changed. If hardware was updated or changed, a license should be deactivated (page 31).
- Generated hardware Id can be activated on Neurotechnology website.

See Also

Serial numbers activation for Android (a page 25)

2.2 Dongle

Neurotechnology SDK licenses may be stored in a dongle (volume license manager), hardware-based protection lock storing purchased licenses. When licenses are saved in the USB dongle, activation may be performed without connection to the Internet and is suitable for virtual environments.

The main benefits when using dongle compared to serial numbers are these:

- · One dongle can store many licenses for different Neurotechnology products.
- · Provides licenses to local devices or other devices over TCP network.
- Dongle can be remotely updated.
- License files can be generated offline from a dongle.
- Licenses are not tied to device's hardware when one device releases a license, it can be used by another device in the same network (after certain period of time depending on a license type this period is 15 minutes to 12 hours).

Dongle is used on site by integrators or end users to manage licenses for SDK components in the following ways:

- Single computer licenses activation. An installation license for SDK component will be activated for using on a particular device. The license quantity for the SDK component in the license manager will be decreased by the amount of activated licenses.
- Managing the single computer licenses on network. The license manager allows to manage licenses for SDK components across the computers on network. The number of managed licenses for a SDK component is limited by the number of licenses in the license manager. No license activation is needed and the license quantity is not decreased. Once issued, the license is assigned to certain computer on the network.
- Using a license manager as a dongle. The volume license manager containing at least one license for a SDK component can be used as a dongle that allows to run SDK component installation on a particular computer.

Notes

If licenses contained in dongle should be used from Docker (or other) containers, it is needed to launch License Activation Service (pgd) on host machine. For other licensing options License Activation service may be running on Docker. These restrictions apply only to License Activation Service, not on other Neurotechnology libraries and services.

2.3 Internet licenses

Special license file (called internet license) can be stored on a computer or a mobile/embedded device. This license is constantly checked over the Internet. Internet connection should be available periodically for a short amount of time.

Internet licenses are beneficial when you don't want to run Neurotechnology licensing service. Also, you do not need to activate these type of licenses. Only constant internet connection for a short period of time is required to check license. Also, internet licenses can be transferred to another computer or device by moving the license file there and waiting until the previous activation expires.

You've received internet licenses as *.lic file(s). Place these file(s) at the root directory of you application (e.g., if using Neurotechnology sample applications, place these files to \Bin\Licenses directory. For Android location is sdcard/Neurotechnology/Licenses. When an application is launched, internet licenses for components are obtained.

The main differences of internet licenses when compared to other license types:

- Internet licenses are not tied to hardware, hardware or device can be changed (devices count is specified in a license; can only obtain from that many different machines, further obtains will fail).
- Internet connection is required to check a license. Network traffic usage: 5-10 minutes connection interval; for 2 licenses ~270kB/day data usage.
- · Internet licenses can be used in virtual environments.
- · Internet license has time limit for offline usage.
- · License files are cached on server and are effective even if user deletes them.

Notes

Port 80 is used to check licenses over the Internet.

See Also

Internet licenses activation for Android (a page 25)

2.4 Trial

All Neurotechnology trial products allow 30 days trial period. After this period you will not be allowed to use trial product.

The following requirements should be met when using trial products:

- Internet connection. To use trial product, you must have constant internet connection. Otherwise, you will not be able to use trial product.
- Activate trial version. The activation can be performed by two methods: Activation Wizard (only for Windows) or manual activation (for all platforms). Read Activation options (page 8) for activation instructions.
- Use only trial product on a computer. If you want to use one of the Neurotechnology trial products, you are not allowed to use any of Neurotechnology licensed products on the same computer at the same time. If you have several licensed products running on a computer, activation services should be stopped when using trial products. This is done during trial products activation.

Notes

If there is at least one internet license file, SDK works as non-trial.

3 Activation options

Neurotechnology licenses can be activated in these ways:

- Using Activation Wizard (2 page 9) the activation application for Windows.
- Manual activation (a page 19) for Windows, Linux, Mac OS X
- Activation for Android (2 page 25)

3.1 Activation wizard

Activation wizard is a tool for Windows OS which is used to activated purchased licenses or enable trial version of Neurotechnology SDK.

Activation wizard program (ActivationWizard.exe) can be started from these locations:

- \Bin\Win32_x86\Activation\
- \Bin\Win64_x64\Activation\

When you start Activation wizard, you should select activation mode (alternatively, mode can be selected from the main screen with *Configure* button):

Configure Activation Wizard	
Select mode	
ls Trial?	Use Licensing Service?
Yes	Yes
O №	⊖ No
Licensing options	
Trial (local)	
O Share licenses over the network (trial	l/internet license)
Share licenses over the network (dor	ngle)
◯ Get licenses over the network (trial/ir	nternet license/dongle)
	< Back Next > Cancel

Let's review these activation modes:

- Trial products activation (2 page 9)
- Purchased licenses activation (a page 12)

3.1.1 Trial activation

This section covers how to activate Neurotechnology products for a trial period. Follow these steps to start your free trial:

1. Select Trial activation mode and press the *Next* button. Also, you can choose whether to use *Licensing Service* or no. If you select Yes, the Neurotechnology licensing service will run in the background.

Configure Activation Wizard	
Select mode	
ls Trial?	Use Licensing Service?
Yes	Yes
⊖ No	⊖ No
Licensing options	
Trial (local)	
O Share licenses over the network	(trial/internet license)
O Share licenses over the network	(dongle)
◯ Get licenses over the network (t	rial/internet license/dongle)
	< Back Next > Cancel

2. Select products which will be used for trial purposes. When products were selected, the Activation wizard will generate *NLicensing.cfg file* in the same directory.

Configure Activation Wi Products Selection In order to use the tr	tard
MegaMatcher	MegaMatcher Standard SDK
VeriFinger	MegaMatcher Extended SDK
VeriLook	MegaMatcher On Card SDK
VeriSpeak	MegaMatcher technology is intended for large-scale AFIS and
SentiVeillance	multi-biometric systems developers. The technology ensures high reliability and speed of biometric identification even when using large
SentiGaze	databases
SentiSculpt	
NCheck	
NVeiler	
Show Less	
	< Back Next > Cancel

Press Next button.

3. Configure proxy. The trial version of SDK requires a constant internet connection to check licenses. If you haven't a direct connection to the Internet, the proxy should be configured. Otherwise, use the *Proxy disabled* setting:

	se Manager Client Idress and port to continue
Use Proxy?	Use HTTPS?
Yes	○ Yes
⊖ No	No
Proxy setup	
Address 0.0.0.0	Usemame
Port 80	Password
NIC setup	
Address 0.0.0.0	
Port 80	

By default, the *No* (disabled) option is selected. This means that your computer is connected to the internet directly. If you use a proxy server for connecting the internet, enable proxy by entering these settings under the *Proxy setup*:

- Address. The IP address of your proxy server (e.g., http://192.168.2.10).
- Port. The number of a port for proxy server connections.

If more security is required, it is possible to use HTTPS/SSL (port 443). It can be enabled by selecting Yes under Use HTTPS? In this case you should enter username and password.

Also, when several network cards are used, it is possible to specify which one to use for licensing. Under *NIC setup* specify network interface card (NIC) address and port. When 0.0.0.0 is used as an address, all network cards are used. It is a default option.

4. Press *Finish* button. General information about product is displayed: time left for trial products, local and external IP addresses, licensing information (location of licensing service, configuration file mode and licensing file log).

<u>C</u> onfigure				<u>D</u> iagnostics				
Status:	Ok				X IIF	IRN t i	echno	nuv
ctivation type:	Trial			,		שפננפ	JUIIIU	սցյ
Details	Pg path: C:\! \Bin\Win64_ revision: 11.1	x64\Activat	s\Neurotec_Biometric_ ion\pg.exe	11_1_SDK_2019-0	5-21\Neurotec_	Biometric	:_11_1_S	DK
	Trial service:	Connected						
Products		Count	Details	F	Path			

5. If you want to add, remove or change product trial licenses, you should click the *Configure* button. It will open a window identical to the trial product selection window. Note, that if you choose different trial product licenses they will replace the current trial licenses.

6. If you have other Neurotechnology products running on a computer, after starting *Activation Wizard* you will see a dialog box prompting you to stop running licensing services (standard PC protection type).

If you choose Yes, running licensing services will be stopped and you'll be able to activate and use the Trial product. But if standard PC protection type licensing services will be stopped, you will not be able to use licensed products. If you need to use a licensed product again, stop the Trial product licensing service and start the one of the licensed product.

When you finish activation, fully functioning SDK will be available for the period of 30 days.

Notes

If you need to use licensed product, stop trial product licensing service and start the one of licensed product.

See Also

Trial (I page 7)

3.1.2 Licenses activation

Neurotechnology components are copy-protected. You should purchase licenses for Neurotechnology and activate them. The following licenses are available for activation:

- Serial Numbers (2 page 12)
- Internet Licenses (2 page 15)
- Dongle (2 page 15)

Start Activation Wizard application and select licensing option. Note, that if you have currently run the Neurotechnology Activation service (*pg.exe*) and it doesn't match the one you are installing (e.g., you were using a trial product), it will be removed.

Also, be sure to if the No for Is Trial is selected when activating purchased licenses.

Configure Activation Wizard	
Select mode	
ls Trial?	Use Licensing Service?
○ Yes	Yes
No	⊖ No
Licensing options	
Serial number	
 Internet license (local) 	
O Dongle (local)	
Share licenses over the net	twork (trial/internet license)
O Share licenses over the net	twork (dongle)
Get licenses over the netwo	ork (trial/internet license/dongle)
	< Back Next > Cancel

3.1.2.1 Serial Numbers activation

Serial numbers (single computer licenses) activation procedure:

1. Select Serial number from Licensing option.

2. Select whether to use *Licensing Service* or no. If you select Yes, the Neurotechnology licensing service will run in the background. Press the *Next* button.

3. Select whether to use *Proxy* server and *Https*. The SDK requires a constant internet connection to check licenses. If you haven't a direct connection to the Internet, the proxy should be configured. Otherwise, use the *Proxy disabled* setting:

Configure Activation Wiza	ard		
Configure Volume Lice Please enter valid IP	ense Manager Client address and port to continue		
Use Proxy?	Use HTTPS?		
Yes	Yes		
⊖ No	⊖ No		
Proxy setup			
Address	Username		
Port	Password		
	< Back	Finish	Cancel

By default, the *No* (disabled) option is selected. This means that your computer is connected to the internet directly. If you use a proxy server for connecting the internet, enable proxy by entering these settings under the *Proxy setup*:

- Address. The IP address of your proxy server (e.g., http://192.168.2.10).
- Port. The number of a port for proxy server connections.

If more security is required, it is possible to use HTTPS/SSL (port 443). It can be enabled by selecting Yes under Use HTTPS? In this case, you should enter your username and password.

Press the Finish button.

4. From the main screen of Activation Wizard select Add Licenses and specify the path to files where serial numbers are saved or enter serial numbers manually:

Add Licenses and Serial Numbers		
Add licenses and serial numbers		
In order to continue, please load some licenses and serials from	files or enter serial numbers manually	
Add from files		
C:\!Data\!Licenses\old\face_matcher.lic		💕 Browse
C:\!Data\!Licenses\old\face_extractor.lic		
C:\!Data\!Licenses\old\face_client.lic		
- Enter serial numbers		
Press here to enter new serial number		🖺 Paste
	< Back Finish	Cancel

Serial number details are displayed:

Serial Product Distri 28A-26BB-D173-C4F5-9 Fingerprint Matcher 10013	butor Number 3 17558	Status		
	5 17356			
Serial number activation requires internet connection. In order				
	r to start activation	on process, please pr	press	
				rdwar
Activate'. If you experience problems during activation proce	ess, you can save	e generated compute		rdwar
Serial number activation requires internet connection. In order				
ctivate III vou experience propiems during activation proce				rdware
	ess, you can save	e generated compute		rdware
	ess, you can save	e generated compute		rdware
	ess, you can save	e generated compute		rdware
	ess, you can save	e generated compute		rdwar
 Activate . If you experience problems during activation proce hardware id for selected failed activation and either try to activ 	ess, you can save	e generated compute		rdware

Check the provided information and press the *Activate* button. After successful activation, you will see the *Activated* status message. Press the *Finish* button.

5. The main window of the Activation Wizard displays activated licenses details and count:

Configure	Dongle updat	e	Diagnos	tics	
Configure	Dongie upudi	~	Didgitos		
itatus:	Activation servi	ice is runr	ning!	A MEURO t e	chnolo
ctivation type:	Single with Sen	vice			
etails			SentiVeillance_8_0_SDK_2021-07-21	\SentiVeillance_8_0_SDK\Bin\Win6	4_x64
Add Licenses	\Activation\pg.e revision: 12.1.2		99c7f63d2064e37117156a4210ac683	fe7925e0b	
	Service: Runnin	00			
Deactivate	Service. Numini	ig .			
Products		Count	Details	Path	
C:\!Data\SDKs\Se	ntiVeillance 8 0	SDK 20	21-07-21\SentiVeillance 8 0 SDK\Bi	n\Licenses\FingerMatcher_Wind	ows.lic —
Fingerprint	Matcher (O	1	Distributor id: 10013, Seque	C:\!Data\SDKs\SentiVeillan.	
C:\!Data\SDKs\Se	ntiVeillance_8_0	_SDK_20	21-07-21\SentiVeillance_8_0_SDK\Bi	in\Licenses\FaceClient_Windows.	lic —
Face Client	(OS: Windo	1	Distributor id: 10013, Seque	C:\!Data\SDKs\SentiVeillan.	
C:\!Data\SDKs\Se	ntiVeillance_8_0	_SDK_20	21-07-21\SentiVeillance_8_0_SDK\Bi	in\Licenses\FingerClient_Window	s.lic —
Fingerprint	Client (OS:	1	Distributor id: 10013, Seque	C:\!Data\SDKs\SentiVeillan.	

6. When all licenses are activated, you can start using the SDK. Activated SDK functionality is displayed in the main window of the Activation wizard.

If you need to unlock additional functionality of the SDK, you should obtain additional licenses and activate them following the above procedure. E.g. if you need to extract and match faces and irises, you should buy and activate face and iris extractor, matcher, or client licenses.

Note

Activated licenses are copied to the \Bin\Licenses folder of SDK. The preferred way is to call NLicense.Add() function/method from your application and manually set license content.

See Also

Serial numbers (page 4)

3.1.2.2 Internet Licenses activation

Internet licenses activation procedure using the Activation Wizard:

- 1. You've received internet licenses as **.lic* file(s). Place these file(s) in the \Bin\Licenses directory.
- 2. Select Is Trial? No.
- 3. Select in the Activation Wizard Internet license (local) under Licensing options. Press the Finish button.
- 4. Internet licenses are activated in the background and displayed on the main screen of the Activation Wizard.

See Also

Internet licenses (2 page 6)

3.1.2.3 Dongle activation

Neurotechnology SDK licenses may be stored in a dongle (volume license manager), hardware-based protection lock storing purchased licenses. When licenses are saved in the USB dongle, activation may be performed without connection to the Internet and is suitable for virtual environments.

Activation procedure when using a dongle:

1. Insert a Neurotechnology dongle into the USB port. Wait until dongle drivers are installed. While the dongle is inserted, you have access to all licenses it provides:

atus: Ok tivation type: Single tails Pg path: C:\IData\SDKs\S Add Licenses Deactivat Deactivat Multitenancy Unlimited	SentiVeillar 3c7r63d20 Count	nce <u>8_0_SDK_2021-07-</u> 064e37117156a4210ac6 Details	-21\SentiVeillance_8_0_SDK\Bin\Win64 583fe7925e0b Path	4_x64\Activation\pg.exe	nolo(
Add Licenses Pg path: C:\!Data\SDKs\S Deactivat revision: 12.1.20210721-99 Deactivat I oducts Dongle (Id: 43026, HW id: 23DFC4E4)	9c7f63d20)64e37117156a4210ac6	583fe7925e0b	4_x64\Activation\pg.exe	
Add Licenses Deactivat oducts Dongle (Id: 43026, HW id: 23DFC4E4)					
oducts Dongle (ld: 43026, HW id: 23DFC4E4)	Count	Details	Path		
Dongle (ld: 43026, HW id: 23DFC4E4)	Count	Details	Path		
Multitenancy Unlimited					
	1				
Server	1				
Face Extractor	1				
Dongle (ld: 3731, HW id: 9F4E0E4)					
Face Extractor Signed	1				
Face Matcher Signed	1				
Dongle (ld: 14692, HW id: DAB62FD)					
Cluster	1				
Face Capturer Concurrent	1				
Face Client	2				
Face Extractor	1				
Face Fast Matcher	2				
Face Matcher	1				
Fingerprint Capturer Concurrent	1				
Fingerprint Client Fingerprint Extractor	3 1				

In this example, a *Single PC* activation mode was selected. This licensing option allows installation and run of the licensed component on a single PC or one Server CPU. This means that licenses will be activated for a computer in which the dongle was inserted. When licenses from the dongle appear in the *Products* window, no further steps are required. You can call this license in your application (see Licenses obtain in your application (🗷 page 29)).

See Also

Dongle (2 page 5)

3.1.2.3.1 Dongle update

Activation wizard allows you to run Dongle update. This option allows adding new licenses to the dongle.

1. Click the Dongle update button on the main screen of the Activation wizard. A dongle update wizard will open. Click Next:



2. You will be presented with options for automatic or manual dongle update. Choose automatic update (manual update is potentially dangerous; consult Neurotechnology support if you plan on using manual update):

Dong	gle update
Se	lect mode
	Please select mode for dongle update procedure
	Automatic mode
	O Manual mode
	Manual mode is potentially dangerous operation. Do not continue, unless you are sure what you are doing.
Û	In automatic mode, dongle updater wizard will try to update dongle using specified ticket number issued either by Neurotechnology or distributor.
	< Back Next > Cancel

3. When you buy additional licenses for a dongle update, you will receive a ticket number. In the next window, you will be prompted to enter this number, provided by Neurotechnology or distributor (each ticket can only be used once). Click *Find*. Corresponding ticket data will be displayed, allowing you to add licenses to your dongle:

Dongle upd	ate	
	c mode: ticket selection e enter ticket number provided by Neurotechnolog	ogy or distributor
	to proceed with dongle update, please enter the number: 8CCC561 Fine	
Û	Selected ticket Number: 8CCC561 Date issued: 2021-07-28 05:18:23 Changes:	
	License name Face Extractor Face Matcher	License changes 1 1
Press 1	lext to apply the ticket on current dongle	
		< Back Next > Cancel

4. If all steps were successful you may test installation by running a sample application. Should you have any problems, please see Troubleshooting (I page 60) section.

3.1.2.3.2 Share dongle licenses over the network

Activation wizard allows managing licenses for SDK components across multiple computers or mobile/embedded devices in a LAN or over the Internet. This licensing option can be useful when a computer needs a license only for a limited period (to perform a certain task). After this period this license can be assigned to another device. In this way, the number of managed licenses for an SDK component is limited by the number of licenses in the dongle. No license activation is required and the license quantity is not decreased. Once issued, the license is assigned to a certain computer on the network.

Steps required to perform when sharing a dongle licenses over the network:

- 1. Select Configure on the main screen of the Activation Wizard.
- 2. Select these settings for an activation mode:
- Is Trial? No.
- Use Licensing Service? Yes
- Share licenses over the network (dongle)

Configure Activation Wizard					
Select mode					
ls Trial?	Use Licensing Service?				
○ Yes	Yes				
No	○ No				
Licensing options					
 Serial number 					
 Internet license (local) 					
O Dongle (local)					
O Share licenses over the network (trial/internet license)					
 Share licenses over the network (dongle) 					
O Get licenses over the network (trial/internet license/dongle)					
	< Back Next > Cancel				

2. Configure network interface for incoming connections. Enter an IP address and port of a computer where the dongle is connected and licensing server running:

Configure Activation Wizard						
Configure Volume License Manager Server Please enter valid IP address and port to continue						
Use Proxy?	Use	HTTPS?				
Yes	ΟY	es				
No	N	o				
NIC setup						
Address	0.0.0.0 ~					
Port	80					
		< Back	Finish	Cancel		

If IP value 0.0.0.0 is entered the server uses all available interfaces. Port tells the server which port to listen to for client connections.

On a computer where the server is running and there are unused licenses, Neurotechnology products will be registered.

3. After you click the Finish button, Activation service is running status is displayed on the main screen of the Activation Wizard:

ጰ Activation Wizard							_		Х
Configure	Dongle update	e			Diagnostics		<u> </u>		
Status: Activation type:	Activation service Server					Å	VEURD t		logy
Details	Pg path: C:\!Dat revision: 12.1.20	ta\SDKs)210721-	\SentiVeillance_8_0 -99c7f63d2064e371	_SDK_2021-07-21\ 17156a4210ac683f	SentiVeillance_8_0_SDK\Bin 97925e0b	(\Win64_x64)	Activation \p	g.exe	
+ Add Licenses	Service: Runnin								
Deactivate	Service: Harmin	9							
Products		Count	Details		Path				^
Dongle (ld: 14692,	HW id: DAB62F	D) —							-
Cluster		1							
	er Concurr	1							
Face Client		2							
Face Extrac		2							
Face Fast M		2							
Face Match		2							
	Capturer Co	1							
Fingerprint (3							
Fingerprint I		1							
	Fast Matcher	2							
Fingerprint I	Matcher Concurrent	1							
Iris Client	Concurrent	3							
Iris Extracto	-	3 1							
Iris Fast Mat	•	2							
Iris Matcher		1							
Palmorint Ca		1							\checkmark
IP address: 88.119.11.1	27 🔁 Refres	hing:							.:

Notes

If you haven't a direct connection to the Internet, the proxy should be configured in step 2. Select whether to use *Proxy* server and *HTTPS*.

3.2 Manual activation

Neurotechnology products can also be activated manually by customizing configuration file and starting licensing service manually. This licensing option is used for **Linux** and **Mac OS X** operating systems (if product supports them) or when Activation wizard for **Windows** can not be used. In this case a client should edit configuration file (*pgd.conf*) manually. Activation configuration file (*pgd.conf*) should be saved in *Activation* folder of the SDK (Bin\[platform]\Activation).

3.2.1 Trial

Open pgd.conf you licensing configuration file. You will see these settings:

- mode activation mode. 3 modes are available: single, server and gateway. When using trial product Server should be used.
- address IP address of a proxy server. It is an advanced setting when you are using proxy server for internet connection.
- trial enables trial period of SDK when trial = true is used.
- Port number of port for proxy server connections.

If proxy server is not used, address and port fields are not required.

3 different pgd.conf file configurations are available:

1. Direct license usage:

Mode = single

2. Licensing server without proxy:

Mode = server

3. Proxy server licensing option:

```
Mode = gateway
address = 192.168.2.10
port = 80
```

In the most cases, direct licensing mode is used for trial licenses:

```
Mode = single
trial = true
```

Save configuration file with these settings to Bin\[platform]\Activation dircetory.

Start licensing service:

For Linux and Mac OS X: sudo ./run_pgd.sh start For Windows: pg.exe -install

Using the same commands, licensing service can be stopped:

```
For Linux and Mac OS X: sudo ./run_pgd.sh stop
For Windows: pg.exe -uninstall
```

3.2.2 Serial numbers (Single computer licenses)

A single computer license allows running SDK component installation on one computer. Customers have to activate a license on each PC after before using SDK component.

Before license activation, you should edit configuration file (pgd.conf).pgd.conf file parameters:

Parameter	Values
Mode	Single - default for single computer licenses.
	• Server, Gateway - advanced activation option when licensing server or client is used.
	• <i>NoPg</i> - no licensing service running in the background. Use this mode for Single PC or dongle licensing. When using this mode activated licenses ([license_name].lic files) should be copied to Licenses folder. This folder should be placed in the root directory of your application. The preferred way is to call NLicense.Add() function/method from your application and manually set each activated license file content.
LicenseFile	License file path. License file should be placed in the same directory as pg.exe or pgd or full path to a license file should be specified.
LicenceUsageLogFile	Used to specify a location of license usage logs file.
address	IP address of a proxy server. It is an advanced setting when you are using proxy server for activation.

Linux and Mac OS X manual activation procedure

1. Generate computer ld file

To generate Neurotechnology. id file please use id_gen in appropriate directory:

Bin/Linux_x86/Activation/id_gen (32bit Linux platform)

Bin/Linux_x86_64/Activation/id_gen (64bit Linux platform)

Bin/MacOSX_universal/Activation/id_gen (OS X platform)

For example:

./id_gen sn.txt Neurotechnology.id

sn.txt - file with the serial number used to generate Neurotechnology.id (hardware ld file)

Note: these files should be saved in the same directory as id_gen.

2a. Get license file from Neurotechnology website

Generated computer ld file (Neurotechnology.id) should be activated online. Online activation is done by uploading ld file to site: http://www.neurotechnology.com/cgi-bin/nla.cg Alternatively, Id file can be sent to Neurotechnology (support@neurotechnology.com) or distributor from which SDK was acquired. Please send it only when online activation fails.

After a successful activation you will receive the activated license file. Generated license file should be saved in the same folder as pgd (Bin\linux_x86\Activation, Bin\linux_x86_64\Activation or Bin\MacOSX_universal\Activation depending on the platform).

If you need to save in another location, specify new location in pgd.conf file using LicenseFile variable. For example:

```
LicenseFile = C:/Neurotec_Biometric_6_0_SDK\Bin\Licenses\FaceClient_Linux.lic
Note: each license file should be specified separately.
```

2b. Run license activation tool

Another way to activate a license is license_activation tool. It is a command line program used to activate Neurotechnology products.

It can be found in appropriate directory:

Bin/Linux_x86/Activation/license_activation (32bit Linux platform)

Bin/Linux_x86_64/Activation/license_activation (64bit Linux platform)

Bin/MacOSX_universal/Activation/license_activation (OS X platform)

In order to use license_activation, enter this in command line:

```
license_activation [serial-number-file] [OPTION] ...
```

Available options:

Option	Description
-h	Prints usage information.
-s serial-number	Specifies serial number. Must be used together with -o parameter.
-o output-file	Specifies output file name.
-i	Generates device id.

Usage examples:

Obtains serial number from file serial-number.txt, activates it and saves license to serial-number.lic file:

license_activation serial-number.txt

Obtains serial number from file serial-number.txt, activates it and saves generated license to license.lic file:

license_activation serial-number.txt -o license.lic

Activates serial number XXXX-XXXX-XXXX-XXXX and saves generated license to license.lic file:

license_activation -s XXXX-XXXX-XXXX -o license.lic

Generates device id and saves to device.id file:

license_activation -i -o device.id

3. Run Neurotechnology licensing service

Run this command and start activation service:

./run_pgd.sh start

Make sure that Neurotechnology service is running while using SDK ("./run_pgd.sh log" command can be used to test status) and pgd.conf shows the right license file place.

```
pgd.conf example:
```

```
Mode = Single
LicenseFile = Neurotec_Biometric_6_0_SDK\Bin\Licenses\FaceClient_Linux.lic
```

Windows manual activation procedure

1. Generate computer Id file

Please run id_gen.exe with parameters:

[Activation_directory*]/id_gen.exe <serial number file name> <computer id file name>

This command generates computer Id file Neurotechnology.id. Example:

id_gen.exe sn.txt Neurotechnology.id

sn.txt - file with the serial number used to generate Neurotechnology.id (hardware Id file)

Note: these files should be saved in the same directory as ${\tt id_gen.exe}.$

2. Get license file

Generated computer ld file (Neurotechnology.id) should be activated online. Online activation is done by uploading ld file to site: http://www.neurotechnology.com/cgi-bin/nla.cg Alternatively, Id file can be sent to Neurotechnology (support@neurotechnology.com) or distributor from which SDK was acquired. Please send it only when online activation fails.

After a successful activation you will receive the activated license file. Generated license file should be saved in the same folder

as pg.exe (Bin\Win32_x86\Activation or Bin\Win64_x64\Activation depending on the platform).

If you need to save in another location, specify new location in pgd.conf file using LicenseFile variable. For example:

LicenseFile = C:/Neurotec_Biometric_6_0_SDK\Bin\Licenses\FaceClient_Windows.lic

Note: each license file should be specified separately.

3. Run Neurotechnology licensing service

After the configuration and license files were added to appropriate folders, licensing service should be started. To install licensing service on Windows, run this in command line (*pg.exe* is saved in *Activation* folder):

pg.exe -install

If you need to stop licensing service, you can run this command:

pg.exe -uninstall

Note: licensing service should be run with administrator privileges. If you are using command prompt, run it as an administrator.

It is recommended to use Activation wizard for Windows.

* Activation directory - folder where activation files are saved. One of these:

- Bin\Linux_x86\Activation
- Bin\Linux_x86_64\Activation
- Bin\MacOSX_universal\Activation
- Bin\Win32_x86\Activation
- Bin\Win64_x64\Activation

Notes

After these 3 commands, Neurotechnology license(s) were activated and functionality of SDK was unlocked. You should note that a particular license unlocks not all functionality. For instance, if you have face client license and need to perform fingerprints matching, you should obtain additional fingerprint licenses. See Product schema for detailed information.

3.2.3 Volume license manager (dongle)

As described in the chapter dongle activation for Windows (a page 15), volume license manager (dongle) is used to store purchased licenses. Dongle allows to manage licenses and activate them without internet connection. Dongle can be used in several ways for manual licenses management:

- Generating serial numbers for single computers activation.
- Managing licenses on the same network when the same license can be shared among devices.
- · Set up of server for licenses distribution or client receiving licenses.s

3.2.3.1 Generating licenses for single computers activation

Neurotechnology SDKs customers can generate single computer licenses independently from Neurotechnology or local distributor. Neurotechnology provides USB dongle with purchased licenses. In this case customers should develop their own licenses managing software which will be used to generate single computer licenses from a dongle. Licenses managing software is developed using Licensing library which is included into SDK. For more information about how to use this library, read SDK documentation.

Also, SDK package includes tutorials for C/C#/Java/VB.NET which demonstrates how to generate serial number from a dongle. These tutorials are saved in Tutorials\Licensing folder (*SerialNumberGenerationFromDongle*). Basically, you should call serial number generation function/method from *NLicenseManager* which is a part of *NLicensing library* and provides licenses

management functionality. For C# application will look like this:

```
//...
int sequenceNumber = int.Parse(args[0]);
uint productId = uint.Parse(args[1]);
int distributorId;
string serialNumber = NLicenseManager.GenerateSerial(productId, sequenceNumber, out
distributorId);
Console.WriteLine("serial number: {0}", serialNumber);
Console.WriteLine("distributor id: {0}", distributorId);
//...
```

NLicenseManager.GenerateSerial method uses provided product Id and user assigned sequence number to generate ld is returned. Product can the serial number. Also distributor Id be retrieved by calling NLicenseManager.GetProductIds() method.

Notes

For Windows serial numbers from a dongle can be generated using Activation wizard (Impage 15) (see *License generation using dongle*).

3.2.3.2 Managing licenses on network

The license manager allows sharing SDK installation licenses across the computers on the same local area network. The number of shared licenses is limited by the number of licenses in the attached dongle.

To share licenses on the network, Neurotechnology service configured as **server** (Volume license manager server) must run on one PC and dongle must be plugged in. In addition, Neurotechnology service configured as **client** (Volume license manager client) must run on all other PCs that are using SDK and need to retrieve a license.

Before starting license management services, you should edit license configuration file (pgd.conf) in each computer connected to the same network. This file is saved in Bin\[platform]\Activation folder.

Note: configurations for volume license manager (VLM) server and client differ. SDK distribution should be copied to each computer.

ParameterValues for dongle (VLM) serverValues for dongle (VLM) clientmodeservergatewayaddressIP address or host name of network card for incoming
connections.
0.0.0 - defaultVLM server address or host name.portPort to listen.
5000 - defaultLicense server port.
5000 - default

pgd.conf file parameters:

Volume license manager server setup

- 1. Plug in dongle into server computer
- 2. Configure pgd.conf file. This file should have the following structure:

mode = server # "server" is mandatory here to run as LAN manager(Dongle (VLM) Server)
address = 0.0.0.0 # <IP address of network card for incoming connections>
port = 5000 # <port, to listen>

Note: if 0.0.0.0 is used as address server will listen to all IP addresses used in networks cards.

3. Save pgd.conf file in Bin\[platform]\Activation folder.

4. Run Neurotechnology licensing service:

for Windows:

```
pg.exe -install
```

3

for Linux and Mac OS X:

./run_pgd.sh start

5. Make sure that Neurotechnology service is running while using SDK. To find the service in Windows: "Start -> Control Panel -> Administrative Tools -> Services -> Neurotechnology". Make sure that service is started. In Linux and Mac OS ./run_pgd.sh log command can be used to test status.

VLM client setup

When pgd.conf file for licenses distributing server was added to *Activation* folder and licensing service was started, client computers should be configured.

pgd.conf file for client should have the following structure:

```
mode = gateway # "gateway" is mandatory here to run as LAN client (Dongle (VLM) Client)
address = 192.168.1.1 # <license server address>
port = 5000 # <license server port number>
```

Using the same commands as for VLM server (pg.exe -install or ./run_pgd.sh start), Neurotechnology licensing server should be started.

After this configuration application running in client computers can obtain licenses for components. Server will share licenses for these computers across the network (for configured client computers).

Notes

When using this licensing option, the same license can be used only in one computer at the same time. When the license is not required any more in a client PC it is returned to the dongle. But you should note that it takes several hours. So if the amount of client computers exceeds the amount of licenses saved in a dongle, other computers will retrieve a license after several hours.

3.3 Activation for Android

Neurotechnology licenses for Android should be activated before using product. Activation methods varies depending on what license you have.

This section demonstrates how to activate a license using Multimodal sample for Android (\Bin\Android\multibiometric-sample-android.apk).

1. Copy multibiometric-sample-android.apk file to your Android device and and install it.

Note: installation can be run only when installation from *Unknown sources* is enabled. Go to your Android device settings and enable *Settings->Security->Unknown sources->OK->Trust*.

Trial licenses activation

2. Launch an installed application. By default this application is configured to obtain a trial license. Internet connection is required for trial licenses activation. If you do not have direct access to the internet, you can set-up trial product to work through proxy server. Proxy server settings can be entered in *Connection Settings* window. Choose *Settings->Activation* in the right corner. In this window you can configure licensing server - specify address and port.

Note: usage of the Trial SDK is limited up-to 30 days. Trial SDK requires constant internet connection. WiFi connection is required to activate trial licenses.

Tele2 🚟 📶 🚷 🔒 🖨	ୖ୕୕୕୕୕ ୲ୡ୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲୲
😥 Multimodal	
Licensing server	Activation
LICENSING SERVER	
Address /local	
Port 5000	
LICENSING	
Use Trial Mode	
Set default values Sets all preferences to fa	actory defaults

Purchased licenses activation

3. Disable trial mode (step 2 - uncheck "Use Trial Mode") and restart application.

4. When you want to activate purchased licenses, you should copy license files to this default directory: [Internal storage]/Neurotechnology/Licenses. Serial numbers and internet licenses must be copied to this directory, otherwise they will not be available. Activated licenses are moved from *Licenses* directory to application's sandbox.

Internet licenses do not require activation, only serial numbers should be activated.

Note: User can define other path to license file (source code changes are required). Also you should note that when using Standard licenses temporary internet connection may be required.

5. Go to Settings->Activation. These options for licensing are available:

- Activate activates selected serial number licenses. After a successful serial number activation, application functionality is unlocked.
- Deactivate deactivates selected licenses. You should note, that deactivated license can be used again for activation after several hours. Licenses deactivation require internet connection.
- *Import* imports selected internet licenses. Licenses (*.lic files) are imported from [Internal storage]/Neurotechnology/Licenses directory. Imported licenses unlock application's functionality. E.g., if you need to extract face template, you need to import *Face Client* and *Face Extractor* internet licenses.
- *Export* exports selected internet licenses to [Internal storage]/Neurotechnology/Licenses. Exported licenses are not available for application until they are imported again.

Tele2	७≵₽0€18% 🕒 18:32	Tele2 ,11 🗟 🕄 🖨 🤁 🚱	७≵⊧0⊧86% 페 11:40
Multimodal		Multimodal	
Licensing server	Activation	Licensing server	Activation
Activate	Deactivate	Activate	Deactivate
Import	Export	Import _09744100290011	Export
		Neurotechnology_P or_1468088032730	
		Neurotechnology_F 684050490469621	
		Neurotechnology_P r_62467454592458	
		Neurotechnology_F 109014095203938	PC_IrisExtractor_ ☑ 08054
		Neurotechnology_P 135344791928230	PC_VoiceClient_8 ☑ 632
		Neurotechnology_F or_1731448430433	PC_FingerExtract
		Neurotechnology_F r_61448345192282	PC_FingerMatche <mark>I</mark> 277202
		Neurotechnology_F 464339939742161	PC_IrisMatcher_1 ☑ 474
		Neurotechnology_F 105180576682629	PC_FingerClient_ ☑ 13309
		Imp	port

Notes

If you are using Trial version of SDK, sample application will try to activate licenses automatically. Usage of Trial SDK is limited up-to 30 days. Trial SDK requires constant internet connection.

Android licenses are activated per application sandbox. This also enables to use license deactivation feature. Please note, that during development application should be updated instead of deleting and installing again, otherwise license could be lost. Also, other activation options such as using licenses from PC's dongle can be more convenient for development purposes.

Each Android must contain specific license(s) activated depending on the functionality being used. If you get "Operation not activated" message, that means there is/are no required license(s) activated depending on the functionality you use.

4 Advanced licensing

4.1 Licenses obtain in your application

When you have activated a license(s), you can start using licensed biometric components in your application. Before using licensed functionality in your application, you should obtain licenses for each component. Some usage examples:

- Fingerprint enrollment from a scanner requires licenses for these components: *Biometrics.FingerExtraction,Devices.FingerScanners.*
- Face verification requires licenses for these components: Biometrics.FaceExtraction,Biometrics.FaceMatching.
- Facial features detection: Biometrics.FaceDetection,Biometrics.FaceExtraction, Biometrics.FaceSegmentsDetection.

Basically, each Neurotechnology API component requires a license. Developer's guide (e.g. *Neurotechnology Biometric SDK.pdf*) saved in *Documentation* folder of the SDK has the chapter named *Licensed API functionality* (About->Licensing). This section lists down which API functionality is enabled by which license. Using the table from this section you can check if a particular component is unlocked by the license you have. For example, if you have bought *Fingerprint Client* license then you can use such components as *Biometrics.FingerExtraction*, *Biometrics.FingerDetection* or *Media*. But if you need to perform fingerprint segmentation which is accessed from *Biometrics.FingerSegmentation* component, you should purchase additional license *Fingerprint Segmenter*.

Sometimes it can be a tricky task to decide which component you should use and which licenses are required. SDK includes tutorials (/*Tutorials* folder) for C/C#/VB.NET/Java languages which demonstrate how to perform a biometric task and how to obtain and release licenses. Also previously mentioned Developer's guide includes *API Reference* documentation.

Let's see how licenses are obtained in Detect facial features tutorial for C#:

```
//...
// Let's specify licensed components names. These names are taken from the previously
mentioned table
// Face detection and face features detection are performed by NBiometricClient.
// Face segments detection is defined as an additional component, because face
detection/extraction and segmentation
// are separate tasks and may require separate licenses.
const string licenses =
"Biometrics.FaceDetection,Biometrics.FaceExtraction,Biometrics.FaceSegmentsDetection";
//Checks whether TRIAL mode is enabled or not. To use purchased licenses, don't use below
code line.
//GetTrialModeFlag() method takes value from "Bin/Licenses/TrialFlag.txt" file. So to
easily change mode
//for all our examples, modify that file.
//Also you can just set TRUE to "TrialMode" property in code.
NLicenseManager.TrialMode = TutorialUtils.GetTrialModeFlag();
Console.WriteLine("Trial mode: " + NLicenseManager.TrialMode);
//Now let's try to obtain these licenses:
try
{
  // Obtains licenses for specified "licenses" from licenses manager server "local" using
"5000" server's port
  if (!NLicense.Obtain("/local", 5000, licenses))
  ł
    throw new ApplicationException(string.Format("Could not obtain licenses : {0}",
licenses));
  }
  // Perform Facial features detection. See tutorial source code
}
//It is required to release licenses after biometric task was performed
finally
{
  NLicense.Release(licenses);
}
```

As you see, licenses are obtained using NLicense.Obtain() function/method and released when not used with NLicense.Release(). Licenses for components are obtained in the same way for other biometric tasks.

You should note that all activated licenses by default should be saved in Licenses folder in the root directory of your application (single licenses scenario). If you need to change the location of licenses ([license_name].lic files) you should call NLicense.Add() function/method from your application and manually set each activated license file content.

4.2 Licenses deactivation

Neurotechnology licenses work only in a specific device on which activation was carried out (unique hardware ld for this device is generated). But in some cases a license should be stopped (deactivated) on this device and activated again. Some typical situation when licenses deactivation is required:

- User tested a license in one device and needs to transfer it to other device (a license can work only in one device at the same time.
- Device in which license was activated is malfunctioned or hardware components such as processor or hard disk have been changed.
- User changed a device (a computer).
- Also it is strongly recommended to deactivate a license before reinstalling an operating system or installing a different OS version.

Deactivation should be performed on the same device where it was activated. When you have internet connection, a license will be deactivated automatically by using *Activation Wizard* or *LicenseDeactivation* (*\Tutorials\Licensing\C*) tutorial. When a device is not connected to the internet, you should perform manual deactivation and upload generated deactivation Id and license's file to Neurotechnology website. If you generate deactivation Id using console (id_gen -dp product name>), a license stops working on a device it was activated and it is required to complete license's deactivation procedure by submitting license file and deactivation id so that license could be reactivate on another device (or even the same computer/device).

The simplest way to deactivate a license is using *Activation wizard* in a device connected to the internet. Press the *Deactivate* button and choose a license. After a short period of time a license will be deactivated and removed from the licenses list. Such license can be activated again in other device.

Also licenses deactivation can be performed manually using the command line tool called id_gen. id_gen is a command line program used to generate computer identifier file for Neurotechnology components registration or licenses deactivation. This tool is saved in the SDK's Bin\[platform]\Activation directory. Run it with administrator privileges and use this command to deactivate a license (Windows OS):

```
id_gen -dp <product name> <deactivation Id file name>
e.g.:
id_gen.exe -dp <VeriFinger> <deactivation.id>
```

The *deactivation.id* file from this example will be created in the id_gen tool directory. This file and license file can be uploaded to Neurotechnology website for a deactivation. Note: upload deactivation file only when you do not have internet connection in a device (computer).

4.3 Changing from trial to non-trial

When you download and start using the SDK, trial mode is enabled by default. As described in section Trial (I page 7), trial mode is limited to 30 days. When you've finished exploring SDK functionality, your 30 days trial is over or you purchased licenses, you can keep using the same SDK, only trial mode parameter should be disabled.

\Bin\Licenses directory of SDK contains *TrialFlag.txt* file. Using *TRUE* or *FALSE* values within this file are the simplest way to enable or disable the trial mode of SDK (TRUE - trial mode is enabled, FALSE - non-trial mode of SDK is used).

Also, the trial and non-trial version of the SDK is controlled by using the following methods/parameters:

- C:NLicManSetTrialMode()
- C++:NLicenseManager::SetTrialMode()
- Java: NLicenseManager.setTrialMode()
- C#/VB.NET:NLicenseManager.TrialMode

So change from trial to non-trial version of the SDK can be achieved in these ways:

- 1. Delete TrialFlag.txt file.
- 2. Modify *TrialFlag.txt* to FALSE.
- 3. Modify the source code of a sample/tutorial you want to use.

The first 2 options will change to non-trial version of the SDK for all samples and tutorials.

When you change from trial to non-trial, you need to activate purchased licenses (page 8) and correctly obtain them in your application (page 29).

4.4 Virtual environments licensing

Neurotechnology SDKs can be used in virtual environments as well. Like a physical machine, a virtual machine running any of Neurotechnology product requires licenses activation.

Trial version of SDK

The licensing for trial version of the SDK is not supported on virtual machine out of the box. It must be configured first. To use trial version of the SDK on a virtual machine you need:

- 1. Configure licensing service on a physical machine (VM host) and start it. Let's call it "Volume License Manager Server". See section Managing licenses on network (page 23) for more information.
- 2. When Volume license managers server is running, there are 2 options to use SDK from virtual machine:
 - 1. Use licensing service. In such case you need to configure licensing service to obtain licenses from "Volume License Manager Server".
 - 2. Do not use licensing service. In such case you need to change network address /local to an IP address of "Volume License Manager Server" when calling one of these functions/methods: NLicenseObtain() / NLicense::Obtain() / Nlicense.obtain().

Non-trial version of SDK

Virtual machine can get license from these sources:

1. *Dongle (December page 5) connected to the host machine* if virtual environment is configured to access host machine's USB port. This is not recommended way as some virtualization software have USB issues and solution can be not stable.

2. Dongle connected to some machine available over network (or even the same machine where VM is running). This host machine acts like Volume license manager server. Virtual machine connects to this server to obtain licenses. Licenses sharing over the network is described in Managing licenses on network (a page 23) section.

3. Neurotechnology licensing server. Internet licenses (page 6) can be used for virtual environments. In this case a virtual machine would communicate with Neurotechnology licensing server. If due some reason communication would be interrupted, a virtual machine can live without communication up to 1 week (if there is no need to restart it, but after restart internet connection is required immediately). By default internet based license requires internet connection every each 30 minutes.

Notes

Licenses provided as serial numbers are not supported on virtual machines.

4.5 Disaster recovery licenses

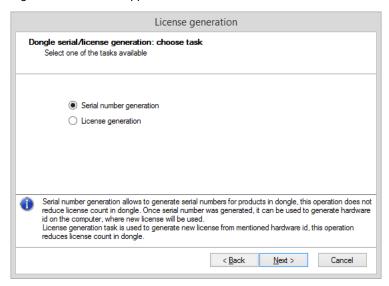
Disaster recovery licenses for server-side components of Neurotechnology products are intended for using in disaster recovery centers (DRC). A DRC is a location which has the same equipment as the primary site, completely mirrors the data environment of the primary site and is on standby while the primary site is working. If the primary site fails, the DRC takes over operations.

Disaster recovery units require the same licenses as the main units. Licenses for disaster recovery components are sold with a discount.

4.6 Licenses generation from a dongle

License generation using Activation Wizard

Licenses saved in a dongle can be used to generate a serial number or a license file. Select *License generation* in the top of Activation wizard. New license generation window appears:



In this window you can generate:

- Serial number. Serial numbers generation allows to generate serial numbers for products in a dongle, this operation does
 not reduce license count in dongle. Once serial number was generated, it can be used to generate hardware Id on a
 device, where new license will be used.
- License. When you have generated the serial number and used it to generate the hardware Id, License generation option should be used to generate a new license. License generation is performed using generated hardware Id from the previous step. Also, this option reduces license count in a dongle, because new license is generated.

License generation from a dongle is used by customers who need to manage licenses without connecting to the internet. Also it is an easy way to save many licenses.

Let's see how to generate a license:

1. Select Serial number generation and press Next. In the next window select the license (product) and number of serial numbers to generate (can not exceed the license count in dongle). Also you can add a description for licenses and change the sequence number (used for licenses enumeration):

oduct):	Face Client V
	1000 0001
unt in dongle:	3
nce number:	1
serial numbers:	: 1 🜲
c	FaceClient

2. Press Next. In the next window will be displayed generated serial number. Save it to your computer and press Finish.

	License generation				
	Generated serial numbers Serial numbers were generated successfully, please copy and save generated serial numbers				
🛕 Please save ge	A Please save generated serial numbers:				
Sequence number	Serial number				
1	57_3-5A9610-193_52F54-0000_DC61-%LDC				
	Image: Copy all Image: Copy selected Image: Save all				
	< Back Einish Cancel				

4. Generate hardware Id using serial number from the step 3. Open Activation wizard on a computer where you'll use the license. In the main Activation wizard window press *Add licenses* button and specify path to the saved serial number file or manually enter serial number(s) and press *Next* button. In the next window press *Show hardware Id*. Copy or save this Id. It will be used to activate previously generated serial number.

Activate serial numb	Copy		
	:0000003D2076137708B63A8ADDD202D3A1E866C959 A EBAED563BCA89234395315774BF9983F9C23E6EED290		
Serial Product	AEB62C3F165405F3EFCF3AB70CC9FF92829E0DA005EC F693AC562F5D5B75D3D8A15FF6B4D93288D92922D085		
8F66-5A96-1 Face Clier	4ED942D44DEFD46ADD267B4FB21BEC74B6F0FF9D6834 DE483B64F74B90B2499D22E129098A64183325B78BE1		
	9B5494C74ED00088EF26525E884759594B7548051A69 158050C23FDA52271BDA744059839DD6CCA2EA732B7D		
	A03DA43F7E7559BF9BE8AC24A8CC9D18DDBD2B6F3C8D AC9665DE67D9D5BDB6CC106FAD2B754A5193639619A1		
	4B937A19CCA5A7D1AF679E1006978060086267C450DB 7D18493242813F1F62F3F9F6080CF0C4429ED1210913		
	E5FC99E75FB263057E8550F24A197BDDF6AAC083D312 84EEEB7614C8E81B17F3C076B4232FD024687C6D210E 4B35BADD4BAC2DCA157A2C4AF4E59DFECBD971ED3450		
Serial number activa 'Activate'. If you ex	1DA9CFC93E3E6C8DA8E2C0A1C688A3DA2BA895EDD6E5 66F7433CF275A60397E0347F18E1C843BBA1E7CA4C52	ess r	Show hardware id
hardware id for select http://www.neurote support@neurotech	DCEEE173C43284E1C14D1129FE3A114A7D12F6E99947 9F0A91D50892C0C474C9B2558B9B2C0D86EB8BDEA8F5 BAB664D9A6ABD89A936EED5D3BAD5F502E7CC690D10B	: at	Activate
	EA704F80F72B8C23CF3FD5A577000BC30CDC668C2049 V Close	h	Cancel

5. Press *License generation* in the main window and open Dongle license generation wizard again. But this time choose *License generation* option. We will use the hardware ld from the step 4 to activate the serial number from the step step 2. Load or paste generated hardware ID and press next button:

				License	generatio	n				
Don	gle licens	e genera	tion							
Hardwa	ire id for acti	vation:							<u> P</u> aste	
					1E866C959E					^
					F3AB70CC9F 942DC1DDT1					
					1103325B78					
					71BDA74409 DAC9665DE6					
/E/33		Face C		2001000					75-095-4 0.05	
1	Product:	Face U	lient		Description:		6-9202 ANA 61-7030	a-104	ಡ-೧೯೮೪ ಲಕ್ಷಾ	•
	Sequence	number:	1							
	Distributor	ld:	14692							
			creases licer rdware id is e		n dongle. Press	s 'Next'	if you are sure	e that i	ntormation abo	ove
							N		C 1	
					< 1	<u>B</u> ack	<u>N</u> ext >		Cancel	

License file will be generated. This license can be used in the device where hardware Id was generated. In this device open Activation wizard and press *Add licenses* button.

Note: Generated license will not work on a different computer, only where hardware Id was generated.

4.7 Licensed API functionality

This section provides the list of Neurotechnology SDKs and which licenses are required to unlock a certain API component.

Notes

You can check your licenses in Activation Wizard tool Bin/Licenses directory.

4.7.1 MegaMatcher Standard SDK

MegaMatcher Standard SDK license names and licensed API components:

License name	API Component (functionality)
Fingerprint	Media
Client	Devices.FingerScanners
	Biometrics.FingerDetectionBase
	Biometrics.FingerDetection
	SmartCards
	Images.Processing.FFT
	Biometrics.FingerExtractionBase
	Biometrics.FingerExtraction
	Biometrics.FingerSegmentsDetectionBase
	Biometrics.FingerSegmentationBase
	Images.WSQ
	Images.IHead
	Images.JPEG2000
	Images.LosslessJPEG
	Biometrics.Standards.Base
	Biometrics.Standards.FingerTemplates
	Biometrics.Standards.FingerCardTemplates
	Biometrics.Standards.Fingers
	Biometrics.Standards.Other
	Biometrics.FingerDetectionMedium
	Biometrics.FingerExtractionMedium
	Biometrics.FingerSegmentsDetection
	Biometrics.FingerSegmentation
	Biometrics.FingerQualityAssessmentBase
	Biometrics.FingerQualityAssessment
	BioAPI.Base
	BioAPI.Fingers

Fingerprint	Media
	Devices.FingerScanners
	Biometrics.FingerDetectionBase
	Biometrics.FingerDetection
	SmartCards
	Images.Processing.FFT
	Biometrics.FingerExtractionBase
	Biometrics.FingerExtraction
	Biometrics.FingerSegmentsDetectionBase
	Biometrics.FingerSegmentationBase
	Media
Fast	Devices.FingerScanners
Extractor	Biometrics.FingerDetectionBase
	Biometrics.FingerDetection
	SmartCards
	Images.Processing.FFT
	Biometrics.FingerExtractionBase
	Biometrics.FingerExtraction
	Biometrics.FingerSegmentsDetectionBase
	Biometrics.FingerSegmentationBase
	Biometrics.FingerDetectionMedium
	Biometrics.FingerExtractionMedium
	Biometrics.FingerDetectionFast
	Biometrics.FingerExtractionFast
	-
1 A - C - L - L - L - L - L - L - L - L - L	Biometrics.FingerMatching
Matoriol	Biometrics.MatchingFusion
	Cluster.ClusterNode
	Biometrics.FingerMatching
Matcher	Biometrics.MatchingFusion
	Cluster.ClusterNode
	Biometrics.FingerMatchingFast
	Media
Capturer	Devices.FingerScanners
	Biometrics.FingerDetectionBase
	Biometrics.FingerDetection
	Biometrics.FingerSegmentsDetectionBase
Fast	Biometrics.FingerSegmentationBase
Segmenter	Biometrics.FingerSegmentsDetection
	Biometrics.FingerSegmentation
	Biometrics.FingerSegmentsDetectionFast
	Biometrics.FingerSegmentationFast

Face Client	Media
	SmartCards
	Images.IHead
	Images.JPEG2000
	Images.LosslessJPEG
	Biometrics.Standards.Base
	Biometrics.Standards.Other
	BioAPI.Base
	Devices.Cameras
	Biometrics.FaceDetectionBase
	Biometrics.FaceDetection
	Biometrics.FaceExtractionBase
	Biometrics.FaceExtraction
	Biometrics.FaceSegmentsDetectionBase
	Biometrics.FaceSegmentationBase
	Biometrics.Standards.Faces
	Biometrics.FaceDetectionMedium
	Biometrics.FaceExtractionMedium
	Biometrics.FaceSegmentsDetection
	Biometrics.FaceSegmentation
	Biometrics.FaceQualityAssessmentBase
	Biometrics.FaceQualityAssessment
	BioAPI.Faces
Face	Media
Extractor	SmartCards
	Devices.Cameras
	Biometrics.FaceDetectionBase
	Biometrics.FaceDetection
	Biometrics.FaceExtractionBase
	Biometrics, FaceExtraction
	Biometrics.FaceSegmentsDetectionBase
	Biometrics.FaceSegmentationBase
Face Fast	Media
Extractor	SmartCards
	Devices.Cameras
	Biometrics.FaceDetectionBase
	Biometrics.FaceDetection
	Biometrics.FaceExtractionBase Biometrics.FaceExtraction
	Biometrics.FaceSegmentsDetectionBase
	"Biometrics.FaceSegmentationBase
	Biometrics.FaceDetectionMedium
	Biometrics.FaceExtractionMedium
	Biometrics.FaceDetectionFast
	Biometrics.FaceExtractionFast
Face	Biometrics.MatchingFusion
Matcher	Cluster.ClusterNode
	Biometrics.FaceMatching

Face Fast	Biometrics.MatchingFusion
Matcher	Cluster.ClusterNode
	Biometrics.FaceMatching
	Biometrics.FaceMatchingFast
Face	Media
Capturer	Devices.Cameras
	Biometrics.FaceDetectionBase
	Biometrics.FaceDetection
Face Fast	Biometrics.FaceSegmentsDetectionBase
Token	Biometrics.FaceSegmentationBase
Image	Biometrics.FaceSegmentsDetection
	Biometrics.FaceSegmentation
	Biometrics.FaceQualityAssessmentBase
	Biometrics.FaceQualityAssessment
	Biometrics.FaceSegmentsDetectionFast
	Biometrics.FaceSegmentationFast
	Biometrics.FaceQualityAssessmentFast
Iris Client	Media
	SmartCards
	Images.WSQ
	Images.IHead
	Images.JPEG2000
	Images.LosslessJPEG
	Biometrics.Standards.Base
	Biometrics.Standards.Other
	BioAPI.Base
	Devices.IrisScanners
	Biometrics.IrisDetectionBase
	Biometrics.IrisDetection
	Biometrics.IrisExtractionBase
	Biometrics.IrisExtraction
	Biometrics.IrisSegmentsDetectionBase
	Biometrics.IrisSegmentationBase
	Biometrics.Standards.Irises
	Biometrics.IrisDetectionMedium
	Biometrics.IrisExtractionMedium
	Biometrics.IrisSegmentsDetection
	Biometrics.IrisSegmentation
	Biometrics.IrisQualityAssessmentBase
	Biometrics.IrisQualityAssessment
	BioAPI.Irises
Iris	Media
Extractor	SmartCards
	Devices.IrisScanners
	Biometrics.IrisDetectionBase
	Biometrics.IrisDetection
	Biometrics.IrisExtractionBase
	Biometrics.IrisExtraction
	Biometrics.IrisSegmentsDetectionBase
	Biometrics.IrisSegmentationBase

Iris Fast	Media
Extractor	SmartCards
	Devices.IrisScanners
	Biometrics.IrisDetectionBase
	Biometrics.IrisDetection
	Biometrics.IrisExtractionBase
	Biometrics.IrisExtraction
	Biometrics.IrisSegmentsDetectionBase
	Biometrics.IrisSegmentationBase
	Biometrics.IrisDetectionMedium
	Biometrics.IrisExtractionMedium
	Biometrics.IrisDetectionFast
	Biometrics.IrisExtractionFast
Iris	Biometrics.MatchingFusion
Matcher	Cluster.ClusterNode
	Biometrics.IrisMatching
Iris Fast	Biometrics.MatchingFusion
Matcher	Cluster.ClusterNode
	Biometrics.IrisMatching
	Biometrics.IrisMatchingFast
Iris	Media
Capturer	Devices.IrisScanners
	Biometrics.IrisDetectionBase
	Biometrics.IrisDetection
Palmprint	Media
Client	SmartCards
	Images.Processing.FFT
	Images.Wsq
	Images.IHead
	Images.JPEG2000
	Images.LosslessJPEG
	Biometrics.Standards.Base
	Biometrics.Standards.Other
	BioAPI.Base
	Devices.PalmScanners
	Biometrics.PalmDetectionBase
	Biometrics.PalmDetection
	Biometrics.Standards.Palms
	Biometrics.Standards.PalmTemplates"
	Biometrics.PalmDetectionMedium
	Biometrics.PalmExtractionBase
	Biometrics.PalmExtraction
	Biometrics.PalmExtraction
	Biometrics.PalmSegmentsDetectionBase
	Biometrics.PalmSegmentsDetection
	Biometrics.PalmSegmentationBase
	Biometrics.PalmSegmentation
	Biometrics.PalmQualityAssessmentBase
	Biometrics.PalmQualityAssessment
	BioAPI.Palms

Palmprint Matcher	Biometrics.MatchingFusion Cluster.ClusterNode Biometrics.PalmMatching
Palmprint Capturer	Media Devices.PalmScanners Biometrics.PalmDetectionBase Biometrics.PalmDetection
Voice Client	MediaSmartCardsBiometrics.Standards.BaseBiometrics.Standards.OtherBioAPI.BaseDevices.MicrophonesBiometrics.VoiceDetectionBaseBiometrics.VoiceDetectionBiometrics.VoiceDetectionBaseBiometrics.VoiceExtractionBaseBiometrics.VoiceExtractionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceQualityAssessmentBaseBiometrics.VoiceQualityAssessmentBioAPI.Voices
Voice Extractor	Media SmartCards Devices.Microphones Biometrics.VoiceDetectionBase Biometrics.VoiceDetection Biometrics.VoiceExtractionBase Biometrics.VoiceExtraction Biometrics.VoiceSegmentsDetectionBase Biometrics.VoiceSegmentationBase
Voice Fast Extractor	Media SmartCards Devices.Microphones Biometrics.VoiceDetectionBase Biometrics.VoiceDetection Biometrics.VoiceExtractionBase Biometrics.VoiceSegmentsDetectionBase Biometrics.VoiceSegmentationBase Biometrics.VoiceDetectionMedium Biometrics.VoiceExtractionMedium Biometrics.VoiceDetectionFast Biometrics.VoiceExtractionFast

Voice Matcher	Biometrics.MatchingFusion Cluster.ClusterNode Biometrics.VoiceMatching
Voice Capturer	Media Devices.Microphones Biometrics.VoiceDetectionBase Biometrics.VoiceDetection

4.7.2 MegaMatcher Extended SDK

MegaMatcher Extended SDK license names and licensed API components:

License name	API Component (functionality)
Fingerprint	Media
Client	Devices.FingerScanners
	Biometrics.FingerDetectionBase
	Biometrics.FingerDetection
	SmartCards
	Images.Processing.FFT
	Biometrics.FingerExtractionBase
	Biometrics.FingerExtraction
	Biometrics.FingerSegmentsDetectionBase
	Biometrics.FingerSegmentationBase
	Images.WSQ
	Images.IHead
	Images.JPEG2000
	Images.LosslessJPEG
	Biometrics.Standards.Base
	Biometrics.Standards.FingerTemplates
	Biometrics.Standards.FingerCardTemplates
	Biometrics.Standards.Fingers
	Biometrics.Standards.Other
	Biometrics.FingerDetectionMedium
	Biometrics.FingerExtractionMedium
	Biometrics.FingerSegmentsDetection
	Biometrics.FingerSegmentation
	Biometrics.FingerQualityAssessmentBase
	Biometrics.FingerQualityAssessment
	BioAPI.Base
	BioAPI.Fingers

Face Client	Media
	SmartCards
	Images.IHead
	Images.JPEG2000
	Images.LosslessJPEG
	Biometrics.Standards.Base
	Biometrics.Standards.Other
	BioAPI.Base
	Devices.Cameras
	Biometrics.FaceDetectionBase
	Biometrics.FaceDetection
	Biometrics.FaceExtractionBase
	Biometrics.FaceExtraction
	Biometrics.FaceSegmentsDetectionBase
	Biometrics.FaceSegmentationBase
	Biometrics.Standards.Faces
	Biometrics.FaceDetectionMedium
	Biometrics.FaceExtractionMedium
	Biometrics.FaceSegmentsDetection
	Biometrics.FaceSegmentation
	Biometrics.FaceQualityAssessmentBase
	Biometrics.FaceQualityAssessment
	BioAPI.Faces
Face	Media
Extractor	SmartCards
	Devices.Cameras
	Biometrics.FaceDetectionBase
	Biometrics.FaceDetection
	Biometrics.FaceExtractionBase
	Biometrics.FaceExtraction
	Biometrics.FaceSegmentsDetectionBase
	Biometrics.FaceSegmentationBase
Face Fast	Media
Extractor	SmartCards
	Devices.Cameras
	Biometrics.FaceDetectionBase
	Biometrics.FaceDetection
	Biometrics.FaceExtractionBase
	Biometrics.FaceExtraction
	Biometrics.FaceSegmentsDetectionBase
	"Biometrics.FaceSegmentationBase
	Biometrics.FaceDetectionMedium
	Biometrics.FaceExtractionMedium
	Biometrics.FaceDetectionFast
	Biometrics.FaceExtractionFast
Face	Biometrics.MatchingFusion
Matcher	Cluster.ClusterNode
	Biometrics.FaceMatching
	Diometries a deividue inty

Face Fast	Biometrics.MatchingFusion
Matcher	Cluster.ClusterNode
	Biometrics.FaceMatching
	Biometrics.FaceMatchingFast
Face Capturer	Media
	Devices.Cameras
	Biometrics.FaceDetectionBase
	Biometrics.FaceDetection
Face Fast	Biometrics.FaceSegmentsDetectionBase
Token	Biometrics.FaceSegmentationBase
Image	Biometrics.FaceSegmentsDetection
	Biometrics.FaceSegmentation
	Biometrics.FaceQualityAssessmentBase
	Biometrics.FaceQualityAssessment
	Biometrics.FaceSegmentsDetectionFast
	Biometrics.FaceSegmentationFast
	Biometrics.FaceQualityAssessmentFast
Iris Client	Media
	SmartCards
	Images.WSQ
	Images.IHead
	Images.JPEG2000
	Images.LosslessJPEG
	Biometrics.Standards.Base
	Biometrics.Standards.Other
	BioAPI.Base
	Devices.IrisScanners
	Biometrics.IrisDetectionBase
	Biometrics.IrisDetection
	Biometrics.IrisExtractionBase
	Biometrics.IrisExtraction
	Biometrics.IrisSegmentsDetectionBase
	Biometrics.IrisSegmentationBase
	Biometrics.Standards.Irises
	Biometrics.IrisDetectionMedium
	Biometrics.IrisExtractionMedium
	Biometrics.IrisSegmentsDetection
	Biometrics.IrisSegmentation
	Biometrics.IrisQualityAssessmentBase
	Biometrics.IrisQualityAssessment
	BioAPI.Irises
lui a	
Iris Extractor	Media SmartCards
	Devices.IrisScanners
	Biometrics.IrisDetectionBase
	Biometrics.IrisDetectionBase
	Biometrics.IrisExtractionBase
	Biometrics.IrisExtraction
	Biometrics.IrisSegmentsDetectionBase
	Biometrics.IrisSegmentationBase

Iris Fast	Media
Extractor	SmartCards
	Devices.IrisScanners
	Biometrics.IrisDetectionBase
	Biometrics.IrisDetection
	Biometrics.IrisExtractionBase
	Biometrics.IrisExtraction
	Biometrics.IrisSegmentsDetectionBase
	Biometrics.IrisSegmentationBase
	Biometrics.IrisDetectionMedium
	Biometrics.IrisExtractionMedium
	Biometrics.IrisDetectionFast
	Biometrics.IrisExtractionFast
Iris	Biometrics.MatchingFusion
Matcher	Cluster.ClusterNode
	Biometrics.IrisMatching
Iris Fast	
Matcher	Biometrics.MatchingFusion Cluster.ClusterNode
	Biometrics.IrisMatching
	Biometrics.IrisMatchingFast
Iris	Media
Capturer	Devices.IrisScanners
	Biometrics.IrisDetectionBase
	Biometrics.IrisDetection
D 1 1 1	
Palmprint Client	Media
Olient	SmartCards
	Images.Processing.FFT
	Images.Wsq
	Images.IHead
	Images.JPEG2000
	Images.LosslessJPEG
	Biometrics.Standards.Base
	Biometrics.Standards.Other
	BioAPI.Base
	Devices.PalmScanners
	Biometrics.PalmDetectionBase
	Biometrics.PalmDetection
	Biometrics.Standards.Palms
	Biometrics.Standards.PalmTemplates"
	Biometrics.PalmDetectionMedium
	Biometrics.PalmExtractionBase
	Biometrics.PalmExtraction
	Biometrics.PalmExtractionMedium
	Biometrics.PalmSegmentsDetectionBase
	Biometrics.PalmSegmentsDetection
	Biometrics.PalmSegmentationBase
	Biometrics.PalmSegmentation
	Biometrics.PalmQualityAssessmentBase
	Biometrics.PalmQualityAssessment
	BioAPI.Palms

Palmprint Matcher	Biometrics.MatchingFusion Cluster.ClusterNode Biometrics.PalmMatching
Palmprint Capturer	Media Devices.PalmScanners Biometrics.PalmDetectionBase Biometrics.PalmDetection
Voice Client	MediaSmartCardsBiometrics.Standards.BaseBiometrics.Standards.OtherBioAPI.BaseDevices.MicrophonesBiometrics.VoiceDetectionBaseBiometrics.VoiceDetectionBiometrics.VoiceExtractionBaseBiometrics.VoiceExtractionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBaseBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceSegmentsDetectionBiometrics.VoiceQualityAssessmentBaseBiometrics.VoiceQualityAssessmentBioAPI.Voices
Voice Extractor	Media SmartCards Devices.Microphones Biometrics.VoiceDetectionBase Biometrics.VoiceDetection Biometrics.VoiceExtractionBase Biometrics.VoiceExtraction Biometrics.VoiceSegmentsDetectionBase Biometrics.VoiceSegmentationBase
Voice Fast Extractor	Media SmartCards Devices.Microphones Biometrics.VoiceDetectionBase Biometrics.VoiceDetection Biometrics.VoiceExtractionBase Biometrics.VoiceExtraction Biometrics.VoiceSegmentsDetectionBase Biometrics.VoiceSegmentationBase Biometrics.VoiceDetectionMedium Biometrics.VoiceExtractionMedium Biometrics.VoiceExtractionMedium Biometrics.VoiceExtractionFast Biometrics.VoiceExtractionFast

Voice Matcher	Biometrics.MatchingFusion Cluster.ClusterNode Biometrics.VoiceMatching
Voice Capturer	Media Devices.Microphones Biometrics.VoiceDetectionBase Biometrics.VoiceDetection
Cluster	Cluster.ClusterServer

4.7.3 MegaMatcher On Card SDK

MegaMatcher On Card SDK license names and licensed API components:

License name	API Component (functionality)
Fingerprint Card Extractor	Media SmartCards Devices.FingerScanners Biometrics.Standards.FingerCardTemplates Biometrics.FingerDetectionBase Biometrics.FingerExtractionBase .FingerSegmentsDetectionBase Biometrics.FingerSegmentationBase Biometrics.FingerQualityAssessmentBase
Face Card Extractor	Media SmartCards Devices.Cameras Biometrics.FaceDetectionBase Biometrics.FaceExtractionBase Biometrics.FaceSegmentsDetectionBase Biometrics.FaceSegmentationBase
Iris Card Extractor	Media SmartCards Devices.IrisScanners Biometrics.IrisDetectionBase Biometrics.IrisExtractionBase Biometrics.IrisSegmentsDetectionBase Biometrics.IrisSegmentationBase

4.7.4 VeriFinger Standard SDK

VeriFinger Standard SDK license names and licensed API components:

License name	API Component (functionality)
Fingerprint	Media
Extractor	Devices.FingerScanners
	Biometrics.FingerDetectionBase
	Biometrics.FingerDetection
	SmartCards
	Images.Processing.FFT
	Biometrics.FingerExtractionBase
	Biometrics.FingerExtraction
	Biometrics.FingerSegmentsDetectionBase
	Biometrics.FingerSegmentationBase
Fingerprint	Biometrics.FingerMatching
Matcher	Biometrics.MatchingFusion
	Cluster.ClusterNode

4.7.5 VeriFinger Extended SDK

VeriFinger Extended SDK license names and licensed API components:

License name	API Component (functionality)
Fingerprint Client	Media Devices.FingerScanners Biometrics.FingerDetectionBase Biometrics.FingerDetection SmartCards Images.Processing.FFT Biometrics.FingerExtractionBase Biometrics.FingerSegmentsDetectionBase Biometrics.FingerSegmentsDetectionBase Biometrics.FingerSegmentationBase Images.USQ Images.JPEG2000 Images.LosslessJPEG Biometrics.Standards.Base Biometrics.Standards.FingerTemplates Biometrics.Standards.FingerTemplates Biometrics.Standards.FingerTemplates Biometrics.Standards.Other Biometrics.FingerDetectionMedium Biometrics.FingerDetectionMedium Biometrics.FingerSegmentsDetection Biometrics.FingerSegmentsDetection Biometrics.FingerSegmentsDetection Biometrics.FingerSegmentsDetection Biometrics.FingerSegmentsDetection Biometrics.FingerQualityAssessmentBase BioAPI.Base BioAPI.Fingers
Fingerprint Extractor	Media Devices.FingerScanners Biometrics.FingerDetectionBase Biometrics.FingerDetection SmartCards Images.Processing.FFT Biometrics.FingerExtractionBase Biometrics.FingerExtraction Biometrics.FingerSegmentsDetectionBase Biometrics.FingerSegmentationBase Biometrics.FingerSegmentationBase
Matcher	Biometrics.MatchingFusion Cluster.ClusterNode
Fingerprint Capturer	Media Devices.FingerScanners Biometrics.FingerDetectionBase Biometrics.FingerDetection

4.7.6 VeriLook Standard SDK

VeriLook Standard SDK license names and licensed API components:

License name	API Component (functionality)
Face	Media
Extractor	SmartCards
	Devices.Cameras
	Biometrics.FaceDetectionBase
	Biometrics.FaceDetection
	Biometrics.FaceExtractionBase
	Biometrics.FaceExtraction
	Biometrics.FaceSegmentsDetectionBase
	Biometrics.FaceSegmentationBase
Face Matcher	Biometrics.MatchingFusion
	Cluster.ClusterNode
	Biometrics.FaceMatching

4.7.7 VeriLook Extended SDK

VeriLook Extended SDK license names and licensed API components:

License name	API Component (functionality)
Face Client	Media SmartCards Images.IHead Images.JPEG2000
	Images.LosslessJPEG Biometrics.Standards.Base Biometrics.Standards.Other BioAPI.Base Devices.Cameras Biometrics.FaceDetectionBase Biometrics.FaceDetection Biometrics.FaceDetection
	Biometrics.FaceExtraction Biometrics.FaceSegmentsDetectionBase Biometrics.FaceSegmentationBase Biometrics.Standards.Faces Biometrics.FaceDetectionMedium Biometrics.FaceExtractionMedium Biometrics.FaceSegmentsDetection Biometrics.FaceSegmentation Biometrics.FaceQualityAssessmentBase Biometrics.FaceQualityAssessmentBase Biometrics.FaceQualityAssessmentBase
Face Extractor	Media SmartCards Devices.Cameras Biometrics.FaceDetectionBase Biometrics.FaceDetection Biometrics.FaceExtractionBase Biometrics.FaceSegmentsDetectionBase Biometrics.FaceSegmentationBase
Face Matcher	Biometrics.MatchingFusion Cluster.ClusterNode Biometrics.FaceMatching
Face Capturer	Media Devices.FingerScanners Biometrics.FingerDetectionBase Biometrics.FingerDetection

4.7.8 VeriEye Standard SDK

VeriEye Standard SDK license names and licensed API components:

License name	API Component (functionality)
Iris	Media
Extractor	SmartCards
	Devices.IrisScanners
	Biometrics.IrisDetectionBase
	Biometrics.IrisDetection
	Biometrics.IrisExtractionBase
	Biometrics.IrisExtraction
	Biometrics.IrisSegmentsDetectionBase
	Biometrics.IrisSegmentationBase
Iris	Biometrics.MatchingFusion
Matcher	Cluster.ClusterNode
	Biometrics.IrisMatching

4.7.9 VeriEye Extended SDK

VeriEye Extended SDK license names and licensed API components:

License name	API Component (functionality)
Iris Client	Media
	SmartCards
	Images.WSQ
	Images.IHead
	Images.JPEG2000
	Images.LosslessJPEG
	Biometrics.Standards.Base
	Biometrics.Standards.Other
	BioAPI.Base
	Devices.IrisScanners
	Biometrics.IrisDetectionBase
	Biometrics.IrisDetection
	Biometrics.IrisExtractionBase
	Biometrics.IrisExtraction
	Biometrics.IrisSegmentsDetectionBase
	Biometrics.IrisSegmentationBase
	Biometrics.Standards.Irises
	Biometrics.IrisDetectionMedium
	Biometrics.IrisExtractionMedium
	Biometrics.IrisSegmentsDetection
	Biometrics.IrisSegmentation
	Biometrics.IrisQualityAssessmentBase
	Biometrics.IrisQualityAssessment
	BioAPI.Irises

Iris	Media
Extractor	SmartCards
	Devices.IrisScanners
	Biometrics.IrisDetectionBase
	Biometrics.IrisDetection
	Biometrics.IrisExtractionBase
	Biometrics.IrisExtraction
	Biometrics.IrisSegmentsDetectionBase
	Biometrics.IrisSegmentationBase
Iris Matcher	Biometrics.MatchingFusion
	Cluster.ClusterNode
	Biometrics.IrisMatching

4.7.10 VeriSpeak Standard SDK

VeriSpeak Standard SDK license names and licensed API components:

License name	API Component (functionality)
Voice	Media
Extractor	SmartCards
	Devices.Microphones
	Biometrics.VoiceDetectionBase
	Biometrics.VoiceDetection
	Biometrics.VoiceExtractionBase
	Biometrics.VoiceExtraction
	Biometrics.VoiceSegmentsDetectionBase
	Biometrics.VoiceSegmentationBase
Voice	Biometrics.MatchingFusion
Matcher	Cluster.ClusterNode
	Biometrics.VoiceMatching

4.7.11 VeriSpeak Extended SDK

VeriSpeak Extended SDK license names and licensed API components:

License name	API Component (functionality)
Voice	Media
Client	SmartCards
	Biometrics.Standards.Base
	Biometrics.Standards.Other
	BioAPI.Base
	Devices.Microphones
	Biometrics.VoiceDetectionBase
	Biometrics.VoiceDetection
	Biometrics.VoiceExtractionBase
	Biometrics.VoiceExtraction
	Biometrics.VoiceSegmentsDetectionBase
	Biometrics.VoiceSegmentationBase
	Biometrics.VoiceDetectionMedium
	Biometrics.VoiceExtractionMedium
	Biometrics.VoiceSegmentsDetection
	Biometrics.VoiceSegmentation
	Biometrics.VoiceQualityAssessmentBase
	Biometrics.VoiceQualityAssessment
	BioAPI.Voices
Voice	Media
Extractor	SmartCards
	Devices.Microphones
	Biometrics.VoiceDetectionBase
	Biometrics.VoiceDetection
	Biometrics.VoiceExtractionBase
	Biometrics.VoiceExtraction
	Biometrics.VoiceSegmentsDetectionBase
	Biometrics.VoiceSegmentationBase
Voice	Biometrics.MatchingFusion
Matcher	Cluster.ClusterNode
	Biometrics.VoiceMatching
Voice	Media
Capturer	Devices.Microphones
	Biometrics.VoiceDetectionBase
	Biometrics.VoiceDetection

4.7.12 SentiVeillance SDK

SentiVeillance SDK license names and licensed API components:

License name	API Component (functionality)
SentiVeillance	Devices.Cameras
	Surveillance
	Biometrics.FaceDetectionBase
	Biometrics.FaceDetection
	Biometrics.FaceExtractionBase
	Biometrics.FaceExtraction
	Biometrics.FaceSegmentsDetection
	Biometrics.FaceMatching
	Devices.Cameras

4.7.13 SentiSight SDK

SentiSight SDK license names and licensed API components:

License name	API Component (functionality)
SentiSight	Media
	Devices.Cameras
	SentiSight

4.7.14 SentiSight Embedded SDK

SentiSight Embedded SDK license names and licensed API components:

License name	API Component (functionality)
SentiSight	Media
	Devices.Cameras
	SentiSight

4.7.15 SentiGaze SDK

SentiGaze SDK license names and licensed API components:

License name	API Component (functionality)
SentiGaze	Media
	Devices.Cameras
	SentiGaze

4.7.16 SentiSculpt SDK

SentiSculpt SDK license names and licensed API components:

License name	API Component (functionality)
SentiSculpt	Media
	Devices.Cameras
	SentiSculpt

5 Troubleshooting

If you encounter problems while installing or using the SDK, please contact Neurotechnology Support Department support@neurotechnology.com or your local distributor. It is desirable to send us additional information about your PC configuration and installation details.

On Windows, the PC information should be obtained through Activation Wizard:

- 1. Switch to the "Diagnostic" window in the Activation Wizard.
- 2. Copy the contents of the window to the clipboard or save the text to a file.
- 3. Paste the information to the email message or attach the file with the saved text.

On Linux, the PC information should be obtained in following way:

- 1. Run the diagnostic_report.sh script in Bin/Linux_x86/Activation or Bin/Linux_x86_64/Activation directory (use directory for your architecture). The script must be run as superuser (root).
- 2. Copy the output to the clipboard or save to a file.
- 3. Paste the information to the email message or attach the file with the saved text.