## Technology Arts Sciences TH Köln

#### Campus IT

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# Setting up VPN access at TH Köln

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### 1 Introduction

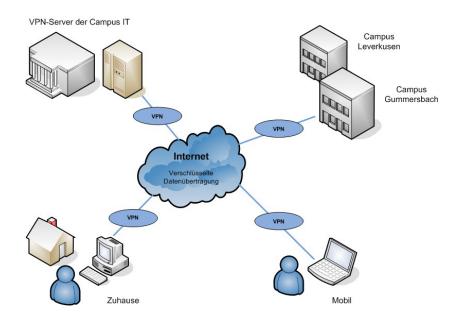
This manual explains in short steps how you, as a member of the University, can establish a secure connection to the network of Technische Hochschule Köln – University of Applied Sciences.

Data connections via the public network (Internet) are not secure. It is useful to secure your personal data, especially in public WLAN networks such as Internet cafés, at train stations and airports, and in shared accommodation with shared Internet access.

In order for you to have secure access to the network of Technische Hochschule Köln – University of Applied Sciences with your mobile devices or your PC from home, Campus IT offers you what is called a VPN connection.

VPN is to be understood as a secure personal line in your active Internet connection. This VPN connection is started in addition to your Internet connection and requires authentication.

Please be aware that the VPN client has been renamed from "Cisco AnyConnect" to "Cisco Secure Client". In addition, some minor adjustments have been made to the design.



### 2 What is VPN?

A Virtual Private Network (VPN) is a computer network that uses a public network, for example the Internet, to transport private data. The connection via the public network is usually encrypted. It thus enables secure transmission over an insecure network. Participants in a VPN can exchange data in the same way as in a LAN (local network). The individual participants themselves do not have to be directly connected to each other for this. The networks are connected via a tunnel between the VPN client and the VPN server.

The VPN client is software that establishes an encrypted and authenticated connection to the VPN server. The user receives an IP address from the network of Technische Hochschule Köln – University of Applied Sciences, which enables them to access services within the University.

### 3 Requirements for the use of VPN

To set up and use a secure Internet connection (VPN), you need:

- A WLAN-enabled device, e.g. notebook/PC with the operating system Microsoft Windows, MAC OSX, Linux or a smartphone or tablet with an active Internet connection
- A campusID. All University members receive a personal user account called a campusID. This user account allows access to various Campus IT services
- A Cisco VPN client. The use of this client is mandatory in order to use the offered services.
- A current version of Java. We recommend Java in its current version for the easy automatic installation of the Cisco VPN client. You can download Java free of charge here: <u>https://www.java.com/en/download/</u>

We have summarized the common VPN installation routines for you below.

You can find further information on the Campus IT website: www.th-koeln.de/campus-it

### 4 VPN access on Windows

- To set up VPN access, please enter the following address in your browser: <u>https://vpn.th-koeln.de</u> <u>https://vpn-gm.th-koeln.de</u> (if you are at the Gummersbach site)
- 2. Please enter the login details for your campusID on the website and then click on "Login".

Login
Please enter your campusID and password.
campusID: mmusterm
Password:
Login

3. Please click on "Continue" in the following window.

TH Köln
Campus IT - VPN-Service info : www.campus-it.th-koeln.de email: support@campus-it.th-koeln.de
Cancel

4. After a short verification phase, either the automatic installation will start or you will be asked to install manually. Please make sure that you have administrator rights on your computer, i.e. that you are authorized to install programs.

#### 4.1 VPN access on Windows - automatic installation

- 1. The automatic installation starts automatically if all requirements are met.
- <u>Note:</u> If you do not have Java installed or you block the applet, follow the instructions for manual installation. You can already download the installer in this window.

2. You may receive security warnings.

In each case, check the box "*I accept the risk and want to run the application*" and click "Run".

Möchten Sie diese Anwendung ausführen?								
	Name:	AnyConnect Secure Mobility Client						
e e e e e e e e e e e e e e e e e e e	Anbieter:	Cisco Systems, Inc.						
	Verzeichnis:	https://vpn.th-koeln.de						
Diese Anwendung wird mit uneingeschränktem Zugriff ausgeführt. Dies kann ein Risiko für Ihren Rechner und Ihre persönlichen Informationen darstellen. Führen Sie diese Anwendung nur aus, wenn Sie dem Speicherort und dem oben angegebenen Anbieter vertrauen.								
Für Anwendungen dieses Anbieters und aus diesem Speicherort nicht mehr anzeigen								
Mehr I	nformationen	Ausführen Abbrechen						

3. Please confirm the message "Do you want to install this software?" by clicking on "Install".



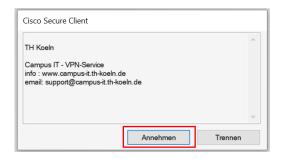
4. To use the Secure Client now, open the program and click on "Connect".

🕲 Cisco Secu	e Client	-		×
	AnyConnect-VPN: Bereit zur Verbindung, TH Koeln (Koeln)	~	Verbinden	
<b>‡</b> ()				cisco

5. Then please enter your campusID login details.

Sisco Secure Client   TH Koeln (Koeln)										
Please enter your campusID and password.										
Benutzername: mmusterm										
	Passwort:									
		OK Abbrechen								

6. There is now an active VPN connection. Confirm the connection notification with "Accept".



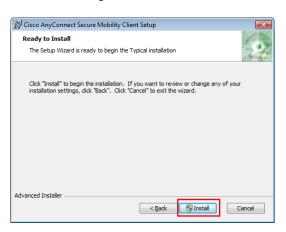
<u>Please note:</u> You can launch the Secure Client manually at any time to connect with it or disconnect the existing connection. You can find the program in the Windows Start menu.

#### 4.2 VPN access on Windows - manual installation

1. If the automatic installation fails, please click on the suggested link in the window below.

CISCO AnyConnect Secure Mobility Client										
🚳 WebLaunch	Manual Installation									
✓ Platform Detection	Web-based installation was unsuccessful. If you wish to install the Cisco AnyConnect Secure Mobility Client, you may download an installer package.									
- ActiveX	Install module(s) below in the listed sequence. Platforms supported: Windows Desktop									
Java Detection	AnyConnect VPN									
Java										
- Download	Alternatively, retry the automatic installation.									
Connected										
	Help Download									

2. In the following window, confirm the start of the installation by clicking on "Install".



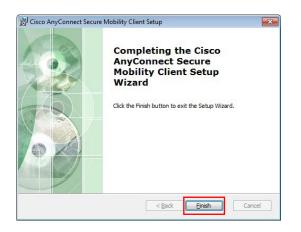
3. Please click on "Next" in the following window.

🗒 Cisco AnyConnect Secure	Mobility Client Setup	×
	Welcome to Cisco AnyConnect Secure Mobility Client Setup Wizard	
	The Setup Wizard will install Cisco AnyConnect Secure Mobility Client on your computer. Click Next to continue or Cancel to exit the Setup Wizard.	
	< <u>B</u> ack Next > Cano	al

4. Please read the Software License Agreement and select "I accept the terms in the License Agreement" and then click on "Next":

Please read the following license agreement carefully	End-User License Agreement		RE
AnyConnect Secure Mobility and other related Client Software IMPORTANT: READ CAREFULLY This Supplemental End User License Agreement ("SEULA") contains additional terms and conditions for the Software Product licensed under the End User License Agreement ("EULA") between You © Eaccept the terms in the License Agreement © I go not accept the terms in the License Agreement	Please read the following license ag	reement carefully	1
Software IMPORTANT: READ CAREFULLY This Supplemental End User License Agreement ("SEULA") contains additional terms and conditions for the Software Product licensed under the End User License Agreement ("EULA") between You • I accept the terms in the License Agreement © I go not accept the terms in the License Agreement			stems 🔺
This Supplemental End User License Agreement ("SEULA") contains additional terms and conditions for the Software Product licensed under the End User License Agreement ("EULA") between You • I accept the terms in the License Agreement O I do not accept the terms in the License Agreement		ity and other related chent	
additional terms and conditions for the Software Product licensed under the End User License Agreement ("EULA") between You © I accept the terms in the License Agreement © I go not accept the terms in the License Agreement	IMPORTANT: READ CAR	EFULLY	
under the End User License Agreement ("EULA") between You	This Supplemental End Liser	T STATE A STATE OF CETT A "	ontoine
I accept the terms in the License Agreement     I go not accept the terms in the License Agreement			
	additional terms and conditio	ns for the Software Product licens	eđ
	additional terms and conditio under the End User License	ns for the Software Product licens Agreement ("EULA") between Yo	eđ
	additional terms and conditio under the End User License accept the terms in the License	ns for the Software Product licens Agreement ("EULA") between Yo Agreement	eđ

- 5. In the following window, please click on "Install" to confirm the start of the installation.
- 6. After successful installation, please click on "Finish" in the following window.



7. To use the Secure Client now, open the program and enter vpn.th-koeln.de in the empty address field. Then click on Connect.

Ô Cisco Secure Client ────×								
	AnyConnect-VPN: Bereit zur Verbindung. vpn.th-koeln.de	~	Verbinden					
🌣 🛈				cisco				

8. A new login window will open. Enter your campusID login details in the fields Username and Password and click "OK". Then confirm the message from the VPN server with "Accept".

🔊 Cis	sco Secure Client   v	/pn.th-koeln.de ×
$( \mathbf{r} )$	Please enter you	r campusID and password.
	Benutzername:	mmusterm
	Passwort:	
		OK Abbrechen
Cisco	Secure Client	
тнк	peln	^
info :	ous IT - VPN-Service www.campus-it.th-koeln : support@campus-it.th-	

Annehmen

The Cisco Secure Client is now set up and you are connected. You can launch the Secure Client manually at any time to connect via it or to disconnect the existing connection.

Trennen

### 5 VPN access on MAC OS X from 10.6

To use the secured VPN connection, you need a Mac with the operating system MAC OS X Snow Leopard or later and a valid campusID.

With a Mac with OS X version 10.6 or higher, you have two options for setting up a secure VPN connection:

Installation of the Cisco Secure Client (automatic or manual).

Or setting up an OS X VPN connection (Cisco IP-Sec). No additional software needs to be installed for this. This connection offers the additional advantage that you still have network access at home to devices in the home network (NAS, PCs, network printers, etc.). Data transmission outside your home network or to the Internet is carried out via the secure and encrypted IP-Sec VPN connection.

#### 5.1 VPN access on MAC OS X – automatic installation

 To install the VPN client, please establish an Internet connection, e.g. via WLAN, and enter the following address in the Internet browser: <u>https://vpn.th-koeln.de</u> https://vpn-gm.th-koeln.de (if you are at the Gummersbach site)

VPN-Service der Technischen ×		C	Q, Suchen	☆自	۵	÷	Â	ø	\$ 0	ş	≡
Technology Arts Sciences VPN-Service der Tech TH Köln	nischen Hochs	chule	⊧ Köln								
	Please ent	er your	Login campusID and password.								
	campu Passw	ord:									
			Login								

2. Please enter the login details for your campusID on the website and then click on "Login".

3. Please click on "Continue" in the following window: After a short verification phase, either the automatic installation will start or you will be asked to install manually.

TH Köln	
Campus IT - VPN-Service info : www.campus-it.th-koeln.de email: support@campus-it.th-koeln.de Cancel Continue	

4. With the automated installation of the Cisco Secure Client, the download and installation is carried out automatically. Notification windows provide you with information on the installation status.

• • • VPN-Service der Technischen × +										
(+) (i) (i) (i) https://vpn.th-koeln.de/+CSCOE+/portal.html	G	Q Suchen	☆	Ê	•	+ 1	9	\$	0 \$	≡
🗎 https://vpn.th-koein.de das Ausführen von "Java" erlauben?						Weiter	hin block	deren	Erlaut	en) ×
Technology Arts Sciences VPN-Service der Technischen Hochsch TH Köln	nule Köln									
Image: WebLaunch       ✓     Platform        - ActiveX        - ActiveX        - Java	Attempting Sun Java ap seconds. Ple	scure Mobility Clin to use Java for Installation pick has started. This could ase walt	n							
- Download     - Connected		Help	Download							

- Installation requires you to enter your Mac's administrator ID.

	ogramm versucht, neue Software zu ben Sie Ihr Passwort ein, um dies zu
Benutzername:	Mustermann
Passwort:	
	Abbrechen Software installieren

- You may be asked to confirm the trustworthiness of certificates. Click on "Next" here.

5. Your Java version may be out of date and you will need to update it.

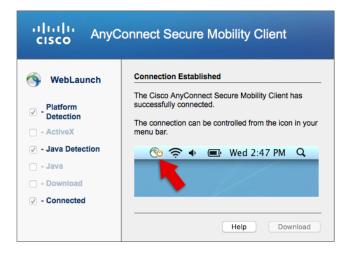


6. Then confirm the launch of the client with "Run".

cisco Anyo	Connect Secure Mobility Client	
S WebLaunch	Attempting to use Java for Installation	
	Security Warning Attempting to launch the Sun Java applet which is	Möchten Sie diese Anwendung ausführen?
<ul> <li>Platform</li> <li>Detection</li> </ul>	digitally signed by Cisco Systems. In order to properly download and install the plug-in, be sure to click "Yes"	Name: AnyConnect Secure Mobility Client
- ActiveX	on the security pop-up.	Anbieter: Cisco Systems, Inc.
- Java Detection	Yes No	Verzeichnis: https://vpn.th-koeln.de
- Java	$\Theta^-$	
- Download	-	Diese Anwendung wird mit uneingeschränktem Zugriff ausgeführt. Dies kann ein Ris für Ihren Rechner und Ihre persönlichen Informationen darstellen. Führen Sie diese
- Connected		Anwendung nur aus, wenn Sie dem Speicherort und dem oben angegebenen Anbieter vertrauen.
	Help Download	Für Anwendungen dieses Anbieters und aus diesem Speicherort nicht mehr anzei
		Mehr Informationen Ausführen Abbrecher

7. The following security warning can be confirmed with "Allow".





The Secure Client is now installed and launched.

A corresponding application icon is displayed on the taskbar and in the dock.

### 5.2 VPN access on MAC OS X – manual installation

- 1. For the manual installation, follow the steps above up to point 4 and then continue as follows:
- 2. Click on Download to open a confirmation dialog, which you confirm with OK.

WebLaunch	Manual Installation	
<ul> <li>✓ - Platform</li> <li>Detection</li> </ul>	Web-based installation was unsuccessful. If you wish to install the Cisco AnyConnect Secure Mobility Client, you may download an installer package.	
<ul> <li>ActiveX</li> <li>Java Detection</li> </ul>	Install module(s) below in the listed sequence. Platforms supported: Mac OS X 10.8+ (Intel) AnyConnect VPN	
- Java	Alternatively, retry the automatic installation.	
- Connected		
	Help Download	b-depl
	Sie möchten folgende Datei öffnen:	
	anyconnect-macosx-4.2.00096-web-deploy-k9.d	lmg
	Vom Typ: DMG-Datei (5,5 MB) Von: https://vpn.th-koeln.de	
	Wie soll Firefox mit dieser Datei verfahren?	
	Offnen mit DisklmageMounter (Standard)	
	Offnen mit DisklmageMounter (Standard)     Datei speichern	

3. Then launch the installer by double clicking on it.



4. Click on "Continue" in the welcome window.

\varTheta 🔿 🔿 🤤 "Ai	nyConnect Secure Mobility Client" installieren	8
	Willkommen bei: AnyConnect Secure Mobility Client	
😑 Einführung		
Lizenz		
Zielvolume auswählen	Sie werden durch alle Schritte geführt, die für die Installation dieser Software erforderlich sind.	
Installationstyp		
Installation		
Zusammenfassung		
cisco		
	Zurück	ren

5. Please read the Software License Agreement and then also click on "Continue" and accept the software license agreement by clicking on "Accept".



6. To perform the standard installation, click on "Install".



Please note: You may be asked for your password

		Fortfahre
	ogramm versucht, neue Software zu ben Sie Ihr Passwort ein, um dies zu	
Benutzername:	Mustermann	
	1	2 111

7. The installation routine is executed and completed with the notification of successful installation.

Now click on "Close" to end the manual installation.

000	, "AnyConnect Secure Mobility Client" installieren
	Installation erfolgreich abgeschlossen
🖯 Einführung	
🖯 Lizenz	
Zielvolume auswählen	
Installationstyp	
Installation	Die Installation war erfolgreich.
🖯 Zusammenfassun	9
	Die Software wurde installiert.
cisco	
	Zurück Schließen

8. You can launch the Cisco Secure Client manually at any time to establish the VPN connection or to disconnect the existing connection.

Select the corresponding program icon on the taskbar, in the dock or the finder (under Programs/Cisco).

9. To reconnect, select "Connect VPN".

0	AnyConnect-VPN: Bereit zur Verbindung.	
	TH Koeln (Koeln)	Verbinden

10. You will be asked to enter your campusID login details.

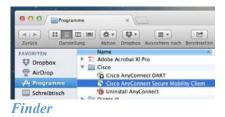
) Please enter you	r campusID and password.
Benutzername:	mmusterm
Passwort:	
	Abbrechen OK

If you want to disconnect an existing VPN connection, select "Disconnect VPN".



#### Taskbar





### 6 VPN access via integrated Mac VPN client

Instead of the Secure Client described above, it is also possible to use the Mac's own VPN client, Cisco IPSec, for the VPN connection. You will find the setup instructions below:

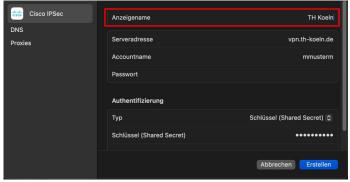
1. To do this, select the Network under System Preferences.



2. Select "Add VPN-Configuration" and then the sub item "Cisco-IPSec".



3. Give the new connection the name "TH Koeln".



4. On the same screen, type in vpn.th-koeln.de as the server address, enter the campusID (account name) and the campusID password (password). Then enter "KoelnerDom" as the shared secret and FHK-VPN as the group name.

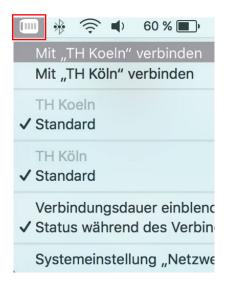
Cisco IPSec	Anzeigename	TH Koeln
DNS Proxies	Serveradresse	vpn.th-koeln.de
	Accountname	mmusterm
	Passwort	
	Authentifizierung	
	Тур	Schlüssel (Shared Secret) 😂
	Schlüssel (Shared Secret)	••••••
		Abbrechen

5. To finalise the setup, click on "create".

Cisco IPSec	Anzeigename	TH Koeln
DNS Proxies	Serveradresse	vpn.th-koeln.de
	Accountname	mmusterm
	Passwort	
	Authentifizierung	
	Тур	Schlüssel (Shared Secret) 💠
	Schlüssel (Shared Secret)	••••••
		Abbrechen

- 6. From now on, you can connect with VPN (Cisco IPSec) via Network in System Preferences. If the login is successful, a notification about the active VPN connection will appear and you can confirm it with "OK".
- 7. You can manually start the Mac IPSec VPN connection at any time to connect to the University VPN or to disconnect an existing connection.

 Select the corresponding program icon on the task bar. To reconnect, select: Connect with "TH Koeln".



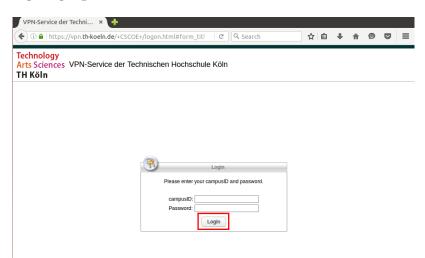
In the following window, please enter your campusID login details as usual.

9. If you want to disconnect an existing VPN connection, select "Disconnect connection to "TH-Koeln"" via the program icon.

### 7 VPN access on Ubuntu Linux – manual installation

1. Please enter the following address in your browser: https://vpn.th-koeln.de

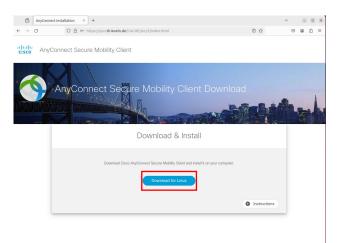
https://vpn-gm.th-koeln.de (if you are at the Gummersbach site)



2. On the website, please enter the login details for your campusID account and click on *"Continue"*.

TH Köln	
Campus IT - VPN- info : www.campus email: support@ca	
Cancel	Continue

3. Now you can download the installer by clicking on the AnyConnect VPN link.



4. The following file will be downloaded.

>_	anyconnect-linux64-4.10.07061-core-vpn-webdeploy-k9.sh Fertig — 8,0 MB
Alle	Downloads anzeigen

5. First execute the following command: *sudo apt-get update* 

6. Then launch the previously downloaded file with the following command: sudo sh /home/\*username\*/Downloads/ anyconnect-linux64-4.10.07061-core-vpnwebdeploy-k9.sh

 $\Box$ 

7. You will then see the installed Cisco Secure Client as a program



8. Launch the Secure Client and enter the address of the VPN server you want to connect to *vpn.th-koeln.de* or

*vpn-gm.th-koeln.de* (for the Gummersbach site)

		Cisco Secure Clier	nt	-	×
AnyConnect VPN		✓ Statistics	About		
		cisco			
Connect to:	vpn.th-ko	eln.de		~	\$ ł
		🗞 Connect			
Ready to con	nect.				

9. Click on "Connect" and then enter your campusID login details.

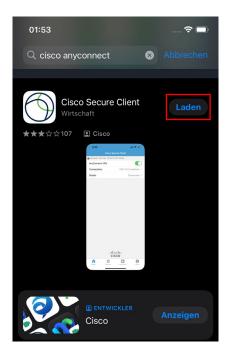
	Cisco Secure Clier		_	0 X
AnyConnect VPN	✓ Statistics	About		
	cisco			
Connect to: vpn.th-ke	peln.de		~	\$
Username: mmustern	n			
Password:				
	Connect			

10. Finally, confirm the message of the VPN server by clicking on "Accept".

(	Cisco Secure Clien	t - Banner	×	
TH Koel	n			
Campus IT - VPN-Service info : www.campus-it.th-koeln.de email: support@campus-it.th-koeln.de				
	🇞 Disconnect	Accept	:	

### 8 VPN access for the iPhone/iPad

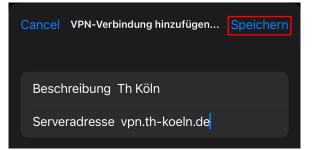
1. Search the AppStore for Cisco Secure Client and install the app.



 Configure VPN client: Settings -> General Select the menu item VPN and Add VPN configuration.

Description: TH VPN

Server address: vpn.th-koeln.de



3. Then enter your campusID login details and click on "Connect"



4. Also confirm the VPN connection message with "OK". You are now connected to the University VPN.

### 9 VPN access for smartphones/tablets with Android

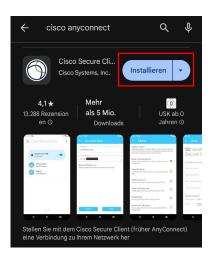
Supported devices for AnyConnect ICS (Ice Cream Sandwich):

According to information from Cisco, the AnyConnect app for Ice Cream Sandwich should work on all devices equipped with Android 4.0 and higher.

#### **Requirement** Android 4.0 and above

*Note:* To download the Cisco Secure Client-AnyConnect-app, you need Internet access on your device; this can be via WLAN or mobile communications. Another requirement is the Google Play app (AKA Play Store, formerly Market), which is installed on Android devices as standard. For more information, please refer to the rest of this manual.

- 1. Download Cisco Secure Client-AnyConnect from the Play Store. To do this, go to the program menu on your device and select "Play Store" (or the "Market").
- 2. In the Play Store (or the Market), please search for "AnyConnect" and install the app.



3. After you have selected and installed the appropriate version of the Cisco Secure Client-AnyConnect app, open the advanced settings in the app and select "Add new VPN connection".  As the description, choose the name: TH VPN. Then enter the following server address: *vpn.th-koeln.de*

*vpn-gm.th-koeln.de* (for the Gummersbach site)

$\leftarrow$ Verbindungseditor
Beschreibung TH VPN
Serveradresse vpn.th-koeln.de
Erweiterte Voreinstellungen Erweiterte Zertifikat- und Protokolleinstellungen ändern
Abbrechen Fertig

5. Enter your campusID login details in the following window and click on "Connect".



6. Then confirm the connection notification and you are connected to the VPN client.

### 10 LAN access

If you also want to access devices in your local network (e.g. printers in your home office) in parallel to the VPN connection, you can activate the "LAN access" option.

*Attention:* For security reasons, this option should not be activated in public networks (e.g. hotel, train, airport, café, ...).

First, launch the Secure Client software on your computer (Windows, Linux, Mac) and click on the gear wheel in the bottom left.



On the Settings tab, now select "Allow LAN access, ...".

S Cisco Secure Client	-		$\times$
Secure Client			()
Virtuelles privates Netzwerk (VPN) Einstellungen Statistik Routing-Details Firewall Nachrichtenverlauf	Diagnost	ik	
VPN starten, bevor Benutzer sich am Computer anmeldet         VPN starten, wenn Cisco Secure Client gestartet wird         Cisco Secure Client bei VPN-Verbindung minimieren         AN-Zugriff erlauben, wenn VPN verwendet wird (falls konfiguriert).         Erkennung von Captive Portal deaktivieren         Automatische VPN-Verbindungsherstellung aktivieren         Nach Zurückkehren aus dem Ruhemodus:         Neu verbinden	]		

Close the window and connect to the VPN as usual.

You can check whether access to the local network is active as follows:

Open the main window of the Secure Client and click on the gear wheel again. On the "Routing Details" tab, you will now find the information that the IP address range of your local network is not routed over the secure VPN connection.

	$\times$
Cisco Secure Client	()
Virtuelles privates Netzwerk (VPN)       Diagnostik         Einstellungen Statistik Routing-Details Firewall Nachrichtenverlauf       Nicht gesicherte Routen (IPv4)         Nicht gesicherte Routen (IPv4)       172.24.160.0/20         192.168.10.0/24       Gesicherte Routen (IPv4)         0.0.0.0/0       0	

Please note: You can only access your devices via the respective IP address.

### 11 Support

If you have any further questions, please contact Campus IT. You can reach us on +49 (0)221/8275-2323 during the following office hours:

http://www.campus-it.th-koeln.de/support/standort\_service/index.html

You can also contact us by e-mail at <a href="mailto:support@campus-it.th-koeln.de">support@campus-it.th-koeln.de</a>.