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CASCADE-PC Version 10.5
Installation Manual
for customers of Clearstream Banking

November 2023

CASCADE-PC Version 10.5 Installation Manual

Clearstream Banking AG Frankfurt

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1. Installation Manual

1.1 About this Manual

This version of the installation manual refers to CASCADE-PC version 10.5 and it is intended for all customers wishing to install CASCADE-PC and for all administrators who are in charge of maintaining CASCADE-PC.

Some screen shots used in this document were taken under previous Windows and previous CASCADE-PC versions. On the whole, however, the contents are identical for CASCADE-PC Version 10.5 as well as Windows. Differences are mainly to be found in the layout or in the version number.

Please use the latest version of Adobe Acrobat Reader to view this document. You can download the Reader from the Internet. The setting 'Smooth Text and Images' should be enabled. If need be, print out the document.

1.2 Trademarks and Applications

In certain countries, the following names are trademarks or applications of other companies:

Personal Communications	IBM Corporation
Inno Setup	JR Software
VA Smalltalk	Instantiations Corporation
Internet Explorer Windows	Microsoft Corporation
InstallShield	Flexera Software
Oepn Text Host Explorer	Open Text Corporation
Acrobat Reader	Adobe
J-Term RD VPN	HOB Elektronik GmbH

1.3 Support

Clearstream Banking Frankfurt
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65760 Eschborn
Germany

Customer Service   **Technical Helpdesk**
Telephone   +49 (0)69 211 1 11 77   Telephone   +49 (0)69 211 1 10 00
Fax   +49 (0)69 211 61 11 77   Fax   +49 (0)69 211 1 10 01

Installation Manual

1.4 CASCADE–PC Download Area in the Internet

The software and manuals are available for downloading in the dedicated Download Area in the Internet. You can access this area via:

- CASCADE-PC Software Download, User and Installation Manuals
  http://www.clearstream.com/
  Clearstream > Products and Services > Connectivity > CASCADE > CASCADE Online

- Or directly via:
  http://www.clearstream.com/cascadepc

If you use the Clearstream site the first time you will have to register yourself. You will be provided with the required registration code if you enter your personal details and e-mail address and then click on **submit**. The code will be sent directly to you via e-mail.
To download either the German or English version of the CASCADE-PC software, please click on the corresponding link. Upon entry of this data, the basic download process is started. We recommend using 'download save'.

Please note, the setup program for the installation of CASCADE-PC version 9.7 has changed. Depending on the internal distribution of the software, adjustments may become necessary, especially with regards to the client server installation. Please see chapter 3 for details.

To start the installation of CASCADE-PC please double click on the downloaded file cpcv[nnn]97win[64].exe

1.5 What's New in CASCADE-PC Version 10.5?

CASCADE-PC has been enhanced by the following functionality:
- Vaults: Update values for evidence type and withdrawal act
- SECU
  These special characters are now in passwords allowed: .<(+$*);-/,%_>?#=
- Bug fixes and continuous improvements

For further information, please see "CBF Release Information" available for downloading on the Internet: http://www.clearstream.com/

1.6 Mandatory Release Implementation of CASCADE-PC Version 10.5

CASCADE-PC version 10.5 will go into production on 20th November 2023. This release has been defined as a mandatory release, i.e.:

CASCADE-PC customers may work exclusively with CASCADE-PC version 10.4 up until and including Friday, 17th November 2023. Version 10.5 will not be up and running by that date. However, the new version 10.5 must be used as from 20th November 2023. Version 10.4 will no longer be up and running as from 20th November 2023.

Hence, de-installation of CASCADE-PC version 10.4 and installation of the new version 10.5 should take place after 17th November 2023 eob, but before the first logon on Monday, 20th November 2023.

Both versions of CASCADE-PC can also be installed at the same time without problems. Parallel installation of CASCADE-PC is the default for the standard installation. The paths for a parallel client/server installation must be adjusted accordingly. Please refer to chapter 3.1 for additional information on parallel installation.

With the parallel installation, the old CASCADE-PC version can be de-installed at a later date.

Please note:

Customers that still log on with the old **CASCADE-PC version 10.4 as from 20th November 2023** will receive the following error message:

E00060:	Your currently installed program version is 9.7, but you need version: 10.5. Please terminate this application.
E00061:	Please contact the user service.

It is now impossible to call up any other CASCADE-PC functions. Please close the application and install version 10.5.

Customers that log on with the new **CASCADE-PC version 10.5 before 20th November 2023** will receive the following error message:

E00059:	Your currently installed program version is 10.5, but you need version: 9.7. Please terminate this application.
E00061:	Please contact the user service

It is now impossible to call up any other CASCADE-PC functions. The user has to stop the application and (re)install version **10.4** for the time until 17th November 2023 eob.

2. Technical Specifications

The installation or upgrade of the product CASCADE-PC and the configuration in connection with the terminal emulation are described separately below. The installation routines are in line with normal standards. No particular technical knowledge is required to install the product. Customization (drive and paths) is available through dialog boxes.

In addition to CASCADE-PC, a 3270 terminal emulation (only IBM or Open Text Host Explorer) is required for the operation of the system.

CASCADE-PC communicates with the mainframe computer of Deutsche Börse AG through 3270 data stream (LU2) via a EHLLAPI interface for the terminal emulation which must always be started before CASCADE-PC. An active connection to Deutsche Börse's CASCADE backend must also be established.

The CASCADE-PC application has been developed with "VA Smalltalk" on Windows available for Windows as the target platform.

Please note that various software and hardware requirements are to be met prior to installation.

2.1 Hardware Requirements

The following minimum configuration is prerequisite for using CASCADE-PC:

- an IBM compatible PC with a Pentium III, or a compatible processor with at least 800MHz
- 64 MB free RAM
- around 100 MB free hard disk space (Standard and Server Installation)
- another 100 MB temporary free hard disk space for the duration of installation
- around 1 MB free hard disk space (Client Installation)
- At least XGA resolution (min 1024 x 768 pixels)
- mouse or another pointing device

If the connection to the host of Deutsche Börse is to be established via Webtrading Station / Internet, please also take into account requirements stipulated by Deutsche Börse AG.

Please note:
For performance reasons it is recommended to install CASCADE-PC on a local hard disk and not on a server drive. The client/server version is only recommended for sufficiently high-performance networks ($\geq$ 100MBit).

2.2 Software Requirements

2.2.1 Operating System

One of the following operating systems (English version recommended) is required for using CASCADE-PC:

- Microsoft Windows 8.1
- Microsoft Windows 10

Please note that the Windows system locale has to be set to a SBCS (Single Byte Character Set), e.g. English. DBCS (Double Byte Character Set) configurations like Simplified Chinese are not supported. CASCADE-PC will stop executing in this case.

Please note that the Windows scaling has to be set to 100%. Other values are not supported. If not set to 100% this can cause GUI items to become unreadable or unusable.

2.2.2 Terminal Emulation

Due to TLS 1.2 one of the following terminal emulation is prerequisite for using CASCADE-PC:
* IBM Personal Communications for Windows version 6.08
* Open Text Host Explorer Version 15 SP4 (or higher)

Very Important:

CASCADE-PC can be operated using either IBM Personal Communications or Open Text Host Explorer.
CASCADE-PC does not support any other terminal emulation!

Parallel installation of numerous terminal emulations will lead to problems and should be avoided at all costs. This is also true for the parallel installation of IBM Personal Communications and Open Text Host Explorer in 64-Bit..

Please contact the competent staff at Clearstream Banking Frankfurt for information on suitable terminal emulation.

2.3 Communications Lines

CASCADE-PC supports the following types of connection:

* Dedicated line to host of Deutsche Börse (LU2 – 3270 data stream)
* Internet connection

Please contact the competent staff at Clearstream Banking Frankfurt for information on appropriate adapters for your host connection.

2.3.1 Dedicated Line

The dedicated line has to provide a 3270 data stream (LU2 protocol). The following connection types have been tested for the terminal emulation:

* Protocol IEEE802.2 via LAN interface
* Linkup via LAN interface using Netware for SAA Personal Communications version 4.2 with IBM Fix W3242HLL is required for linkup with Netware for SAA
* Linkup via LAN interface with Microsoft SNA
* TCP/IP Telnet 3270.

Other types of linkups should be discussed in advance.
The dedicated line and the settings for the terminal emulation have to be set up by your network / infrastructure division in cooperation with Deutsche Börse AG.

Technical Specifications

2.3.2 Access via Internet

Deutsche Börse AG provides a connection to the host via Internet to a Web Trading Station. All transferred data are encrypted.
The settings for the terminal emulation have to be set up by your network / infrastructure division in cooperation with Deutsche Börse AG.

2.4 Overview

Please find the possible and supported combinations in terms of 32-bit / 64-bit, type of connection and 3270 emulations:

CASCADE-PC [32 bit/64 bit]	Connection [Leased line /Internet]	3270 [32 bit/64 bit]	Product [IBM PCOM/Open Text Host Explorer]
32 bit	Leased line	32 bit	IBM Personal Communications
32 bit	Leased line	32 bit	Open Text Host Explorer
64 bit	Leased line	64 bit	IBM Personal Communications
64 bit	Leased line	64 bit	Open Text Host Explorer

Please note:
- 32-bit CASCADE-PC and 64-bit 3270 emulation must not be mixed.
- 64-bit CASCADE-PC and 32-bit 3270 emulation must not be mixed.

2.5 CASCADE Backend Security

A security release of the technical and functional CASCADE functionalities is required for access to the CASCADE backend. For the assignment of transaction and function to the CASCADE-PC main menu please have a look at the graphic next page.

To be able to use all CASCADE functions offered by CASCADE-PC, the required transactions / functions must be released for each user. It is possible to create and administrate user account data directly in CASCADE-PC by the customer's security manager. So the security managers will have at any time exact control to which users' authorizations were assigned.

The customer's security manager itself and all rights for transaction 'SECU' cannot be created via CASCADE-PC. Clearstream Banking Frankfurt is still responsible for the creation of the customer's security manager. Should this not have yet been carried out, please contact Clearstream Banking Frankfurt.

⚠ **Please note:**
The use of CASCADE-PC renders mandatory the release of the transactions 'MENU' and 'KVAV PC'.

For a detailed list of CASCADE-PC functions and associated CASCADE backend transaction, function codes please refer to chapter 8.

Technical Specifications

CASCADE - PC

OTC OTC pending instructions cash movements/positions CBF vaults RS custody messages bank info settings security help

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OTC

enter

delivery...(KVEE WE)
receipt...(KVEE MI)
TEFRA-D release...(KVEE/KVEA)
RS position transfer...(KVEE BV)
RS account transfer...(KVEE DV)
conversion...(KVEE UT)
re-conversion...(KVEE RT)
split of warrants...(KVEE OT)
merger of warrants...(KVEE OZ)

unverified instructions

modify/delete/display...(KVEA/KVEB/KVEI)
verify...(KVEI/KVIE/KVEC)

vaults

enter (CBF Vaults)

new admission/ mark up...(KVEW NV)
withdrawal...(KVEW AL)

display

positions of certificates...(KCKI IS/IH)
instruction history...(KPHI)

OTC

pending instructions

modify/delete...(KVAA)
block/unblock...(KVAS)
match service...(KVAM)
information...(KVAI)
instruction history...(KVA HA)
link-service..(KVAL LC)

bank info

bank search...(KVAV IA)
user information...(DIIN IG/IK)
processing/accounting information...(KVAV D)
system information...(KVAV IS)

registered shares

RS

shareholder data...(KVCA)
registration...(KVCE)
re-registration...(KVCU)
positions instructions...(KVCB)

custody

display...(KVGI)

cash

cash monitoring

commercial bank money...(KVGC)

messages

message journal...(MAMJ)

movements/positions

movements

booked movements...(KVDU ID)
movements statistics...(KVDU IS)
booked movements custody...(KVDU IN)
internal cash movements...(KVDU IC)

positions

final positions...(KVBA EB)
positions registered owners...(KVBA EW)

Version 10.4 Beta IMS22 production T2S Windows 10 64-bit

7999260021 A KVAV PC 03-04-23 01:23:07 pm

3. Installation of CASCADE-PC

CASCADE-PC can be installed as standard installation (standalone) or as client/server version. Parallel installation of different CASCADE-PC versions is default for the standard installation. The client/server version can still be installed independent of any version (by merely exchanging the server). The paths for a parallel client/server installation must be adjusted accordingly. Please refer to chapter 3.1 for additional information on parallel installation. The automatic installation of the German and English manuals for CASCADE-PC is also coming with the installation.

The actual operation of CASCADE-PC does not require the system settings to be changed or entries to be made in the registry. Only the installation routine requires registry entries for the de-installation of CASCADE-PC.

3.1 CASCADE-PC Installation Options

Name conventions for different installation versions of CASCADE-PC, where '10.x' stands for any version, for instance, x=5 for CASCADE-PC version 10.5.

Standard Installation (standalone)
The proposed default installation directory contains the version number and the term "Standard". This facilitates the parallel standard installation of different CASCADE-PC versions.

Default target path:	C:\Users\[User]\AppData\Local\Programs\CASCADE-PC 10.x Standard
Default name of program folder:	CASCADE-PC 10.x [(64)]
Name of shortcut:	CASCADE-PC 10.x [(64)]
Name of entry for de-installation:	CASCADE-PC version 10.x [(64)]

Cpcv[nnn]win [64].exe will install CASCADE-PC per default only for the actual user, corresponding to the parameter */CURRENTUSER* of Inno Setup . CASCADE-PC will not be installed for other users. Via the parameter */ALLUSERS* CASCADE-PC can be installed in administrative mode. CASCADE-PC will be installed for all other users too.
All parameters are available via https://jrsoftware.org/ishelp/topic_setupcmdline.htm on the Inno Setups homepage.

If parallel installation is not required and if a CASCADE-PC directory already exists, then this directory can be selected as installation directory. The existing installation will then be overwritten.

Server Installation
The proposed default installation directory contains the term 'Server'.

Default target path:	T:\CASCADE-PC Server [(64)]
Default name of program folder:	(not required for server installation)
Name of shortcut:	(not required for server installation)
Name of entry for de-installation:	CASCADE-PC version 10.x [(64)]

Installation of CASCADE-PC

The default installation directory should be changed to facilitate parallel server installation of different CASCADE-PC versions. It is recommended to make a reference to the version numbers in the name of the installation directory
(e.g.: ...\CASCADE-PC 10.x Server).

Please note:
In this case CASCADE-PC client components must always be re-installed each time the server is installed.

If parallel installation is not required and if a server directory already exists, then this directory can be selected as installation directory. The existing server installation will then be overwritten. In this case, the client need not be re-installed.

Client Installation
The proposed default installation directory contains the term 'Client'.

Default target path:	C:\CASCADE-PC [(64)] Client
Default name of program folder:	CASCADE-PC [(64)] Client
Name of shortcut:	CASCADE-PC [(64)] Client
Name of entry for de-installation:	CASCADE-PC version 10.x [(64)]
Default name of server folder:	\\<SERVER>\<SHARE> [\<PATH>]\CASCADE-PC Server

The default installation directory should be changed to facilitate parallel client installation of different CASCADE-PC versions. It is recommended to make a reference to the version numbers in the name of the installation directory (e.g.: ...\CASCADE-PC 10.x Client).

Please note:
In this case, parallel installation of the server is paramount.

If parallel installation is not required and if there already is a client directory, it should be selected as installation directory. The existing client installation will then be overwritten. The client need not be re-installed if the corresponding server directory has not changed.

3.2 Transfer of User Settings of a Former Version

User-specific settings relating to CASCADE-PC are stored in the file CPCSYS.INI. This file can still be used without problems as it provides the familiar options in the new version as well.

Therefore, please observe the following procedure:

- First, the file *CPCSYS.INI* has to be secured from the CASCADE-PC directory. This file comprises the settings of the old version (e.g. language, user ID, etc.) and is fully compatible with the new version. After installation of the new CASCADE-PC version, the file can be initialized again. Saving of the file is not necessarily required but recommended as otherwise all requested settings have to be entered manually.

- The former version should be removed by de-installation routine before starting to install the new version, unless you wish to carry out parallel installation of several CASCADE-PC versions.
  The existing version can be de-installed through the icon 'Add or Remove Programs' of the control panel. (See chapter 3.3.2 of this Manual).

- Installation of the new version as standard (standalone) or as client/server.
  The separate steps are itemized in the following chapters.

- After installation of the new version, the secured *CPCSYS.INI* must be initialized again. In this way, the parameters of the old version are adopted automatically and the user can work with his usual settings.

Should any problems arise in connection with the use of the former CPCSYS.INI, the file can be deleted. When restarting the new version of CASCADE-PC, this file can be retrieved with default settings by clicking on settings/options. However, in this case, the user-relevant settings have to be entered manually.

Please note:
Please consider that during a client/server installation, the file *CPCSYS.INI* is not copied into the server directory but into the client directory.

Installation of CASCADE-PC

3.3 Standard Installation (Standalone)

3.3.1 Standard Installation

Please ensure that there is enough hard disk space on the drive where CASCADE-PC is to be installed. The application requires approx. 100 MB. Another 100 MB are temporarily required for the duration of installation. Administrator privileges are mandatory for the installation.

Please make sure that Windows has been started, close all other applications and download the CASCADE-PC Internet download file to a temporary folder e.g. \CASCADE.PC.

The installation has to be started manually.

Via the [Start] button, call up the dialogue Run and enter:

X:\CASCADE.PC\cpcv[nn]win[(64)].exe

where X has to be replaced by the letter representing your drive and [nn] the version of CASCADE-PC.

This command starts the Inno Setup assistant which will guide you through the installation.
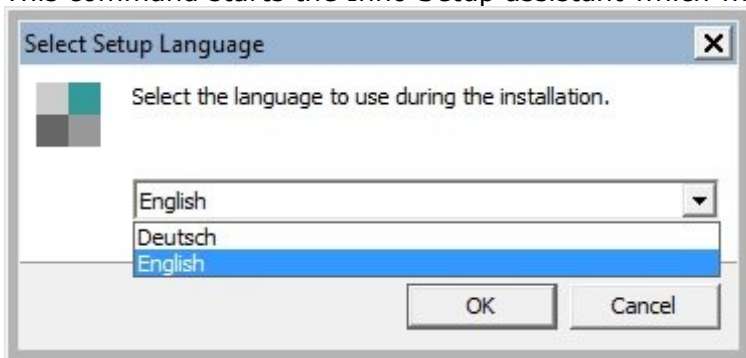
Please start by choosing the language in which the installation program shall be performed and confirm your choice with **OK**.
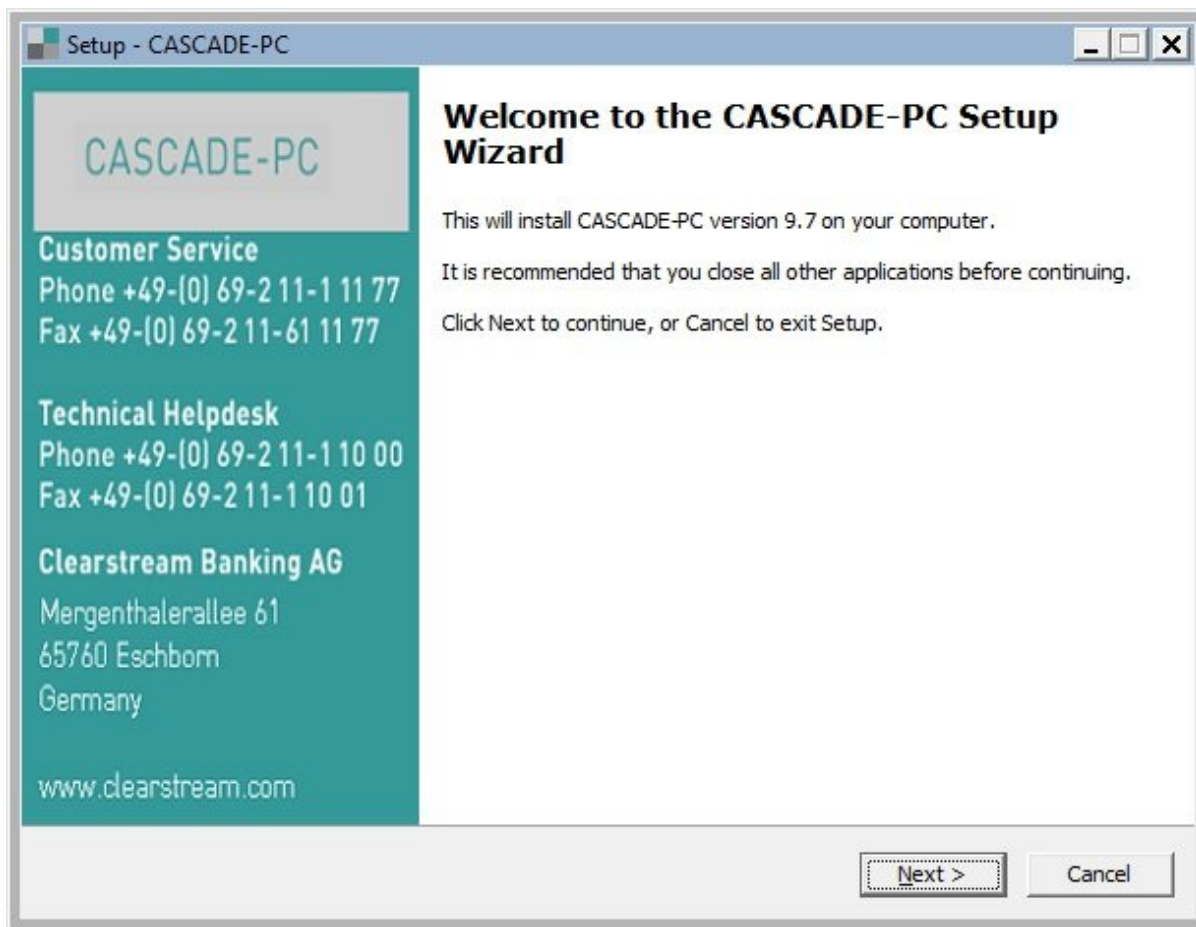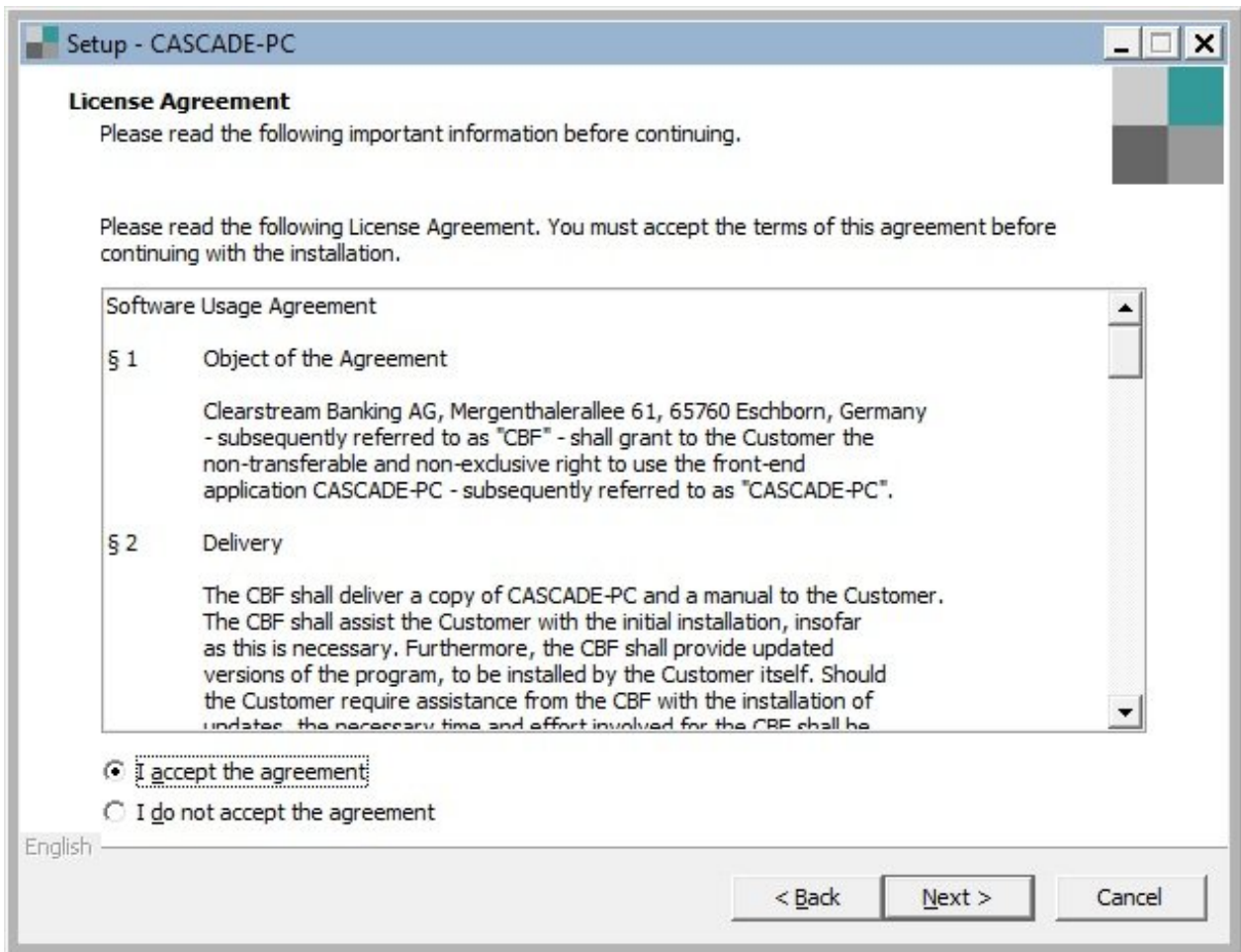
The welcome window of the CASCADE-PC installation program appears. The support numbers of the Customer Service team at Clearstream Banking AG Frankfurt and those of the Technical Helpdesk of Deutsche Börse AG are displayed for your information.

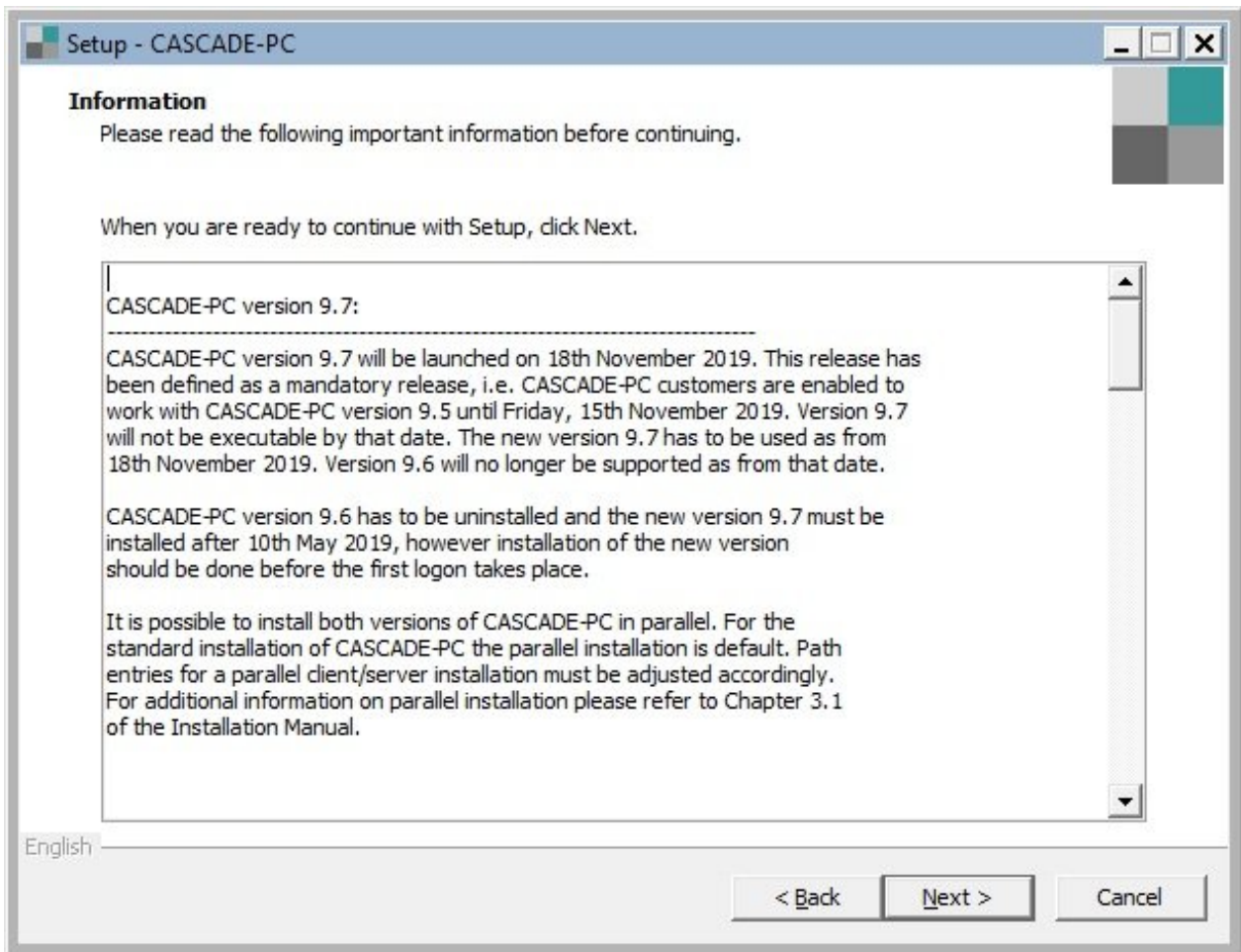The installation process is started by clicking on the button **Next**.

Installation of CASCADE-PC

The first window displays the Software Usage Agreement. You should read this information carefully. To continue with the installation, you have to accept it.
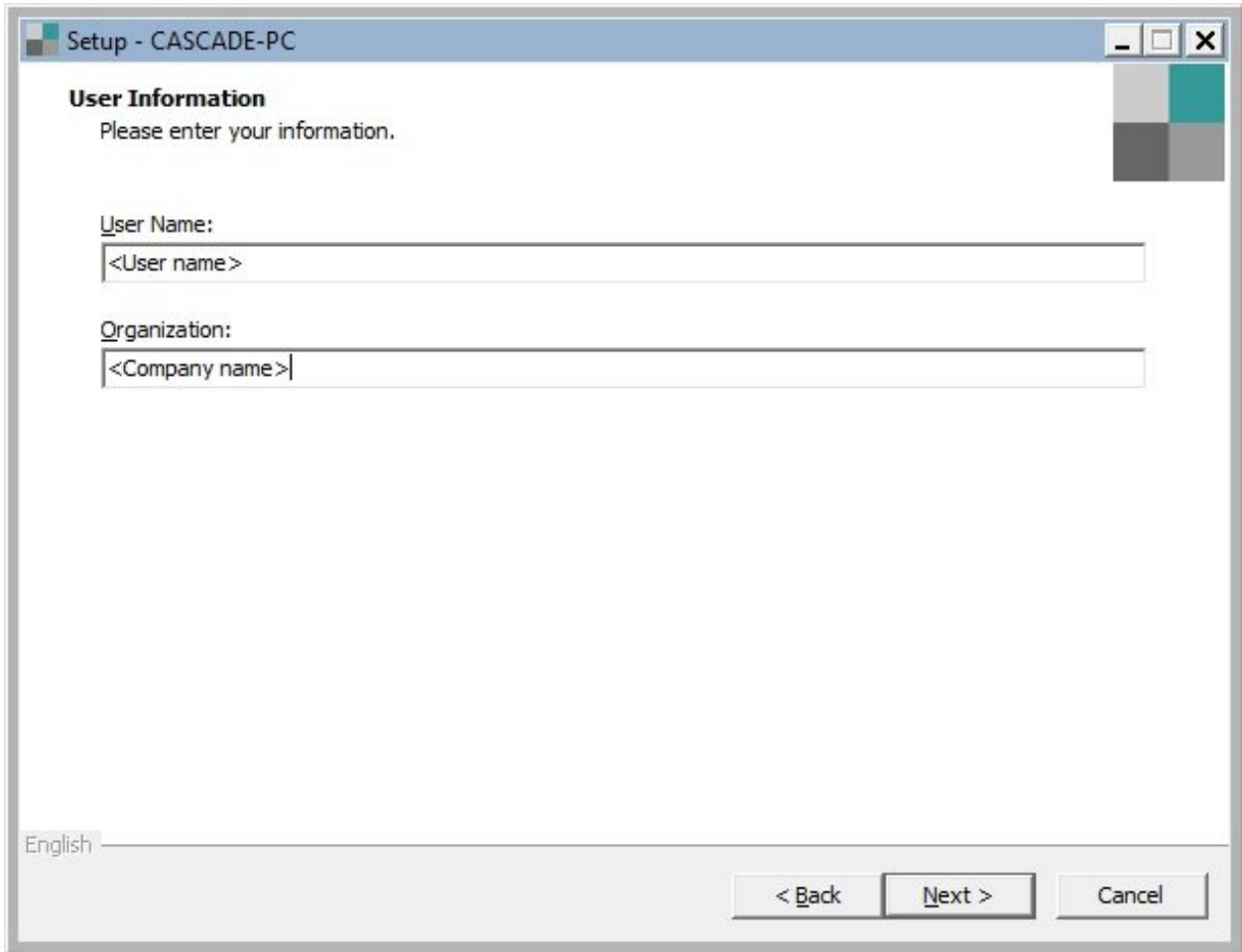
Click on the **Next** button to continue.

Setup - CASCADE-PC

Information
Please read the following important information before continuing.

When you are ready to continue with Setup, click Next.

CASCADE-PC version 9.7:

CASCADE-PC version 9.7 will be launched on 18th November 2019. This release has
been defined as a mandatory release, i.e. CASCADE-PC customers are enabled to
work with CASCADE-PC version 9.5 until Friday, 15th November 2019. Version 9.7
will not be executable by that date. The new version 9.7 has to be used as from
18th November 2019. Version 9.6 will no longer be supported as from that date.

CASCADE-PC version 9.6 has to be uninstalled and the new version 9.7 must be
installed after 10th May 2019, however installation of the new version
should be done before the first logon takes place.

It is possible to install both versions of CASCADE-PC in parallel. For the
standard installation of CASCADE-PC the parallel installation is default. Path
entries for a parallel client/server installation must be adjusted accordingly.
For additional information on parallel installation please refer to Chapter 3.1
of the Installation Manual.

English

< Back   Next >   Cancel

This window displays the current README.TXT file in the language of your choice. You should read this file carefully. It contains the latest information and hints on installing and operating CASCADE-PC and may contain some information which was not available when the manual went to print.

Once you have finished reading the file, click on the **Next** button.

Installation of CASCADE-PC

Please enter your name and also the name of your company and press **Next.**
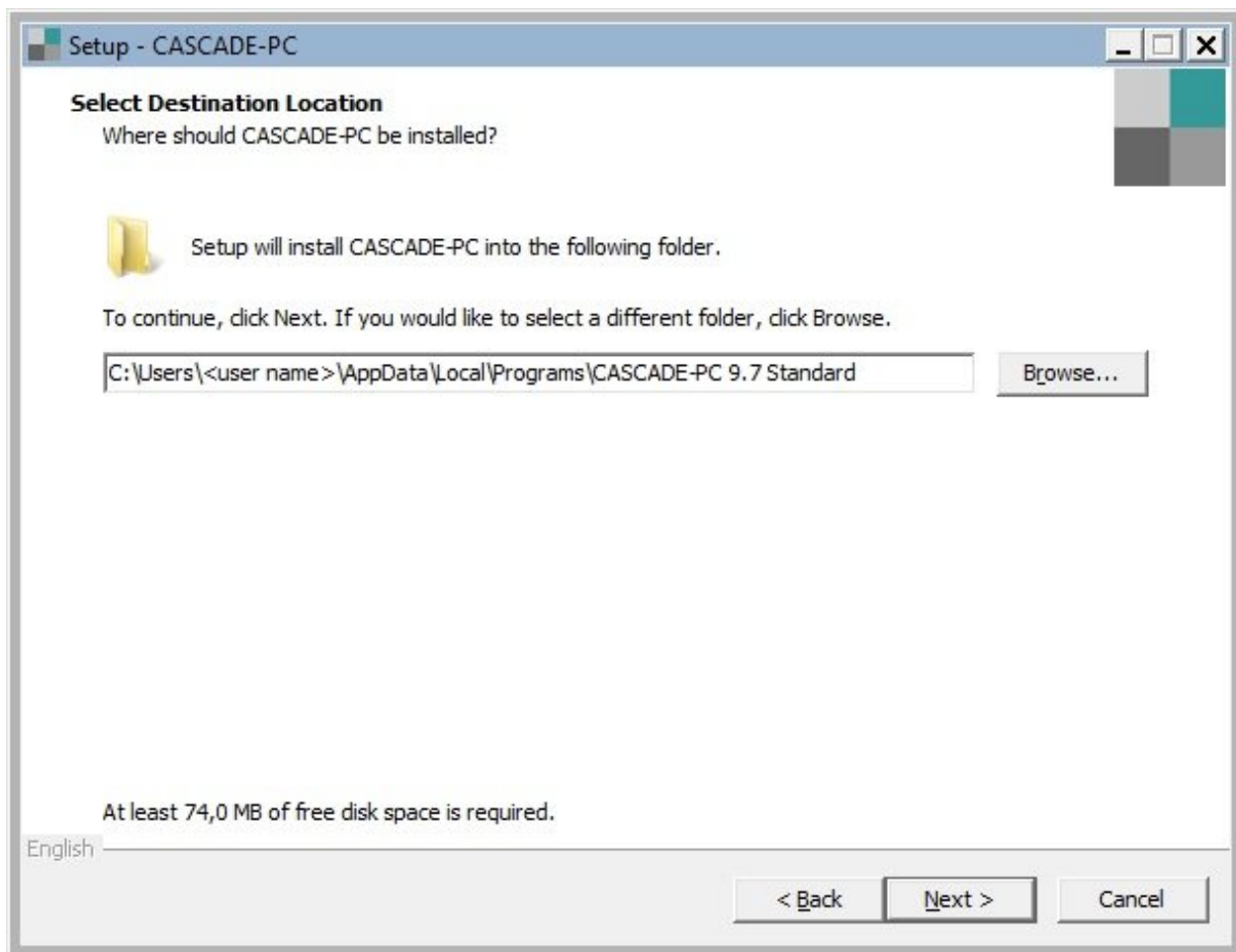
On this screen you can select another installation directory, or continue with the following screen by pressing the button **Next**.

With the button **Browse**, you can change the directory in which CASCADE-PC is to be installed. If you do not indicate a different directory, then the default directory "*C:\Users\<user name>\AppData\Local\Programs\CASCADE-PC 10.x Standard*" will be used as installation directory.

In case you indicated a new directory or the pre-set one is not yet available, it will be created automatically during installation.

Installation of CASCADE-PC
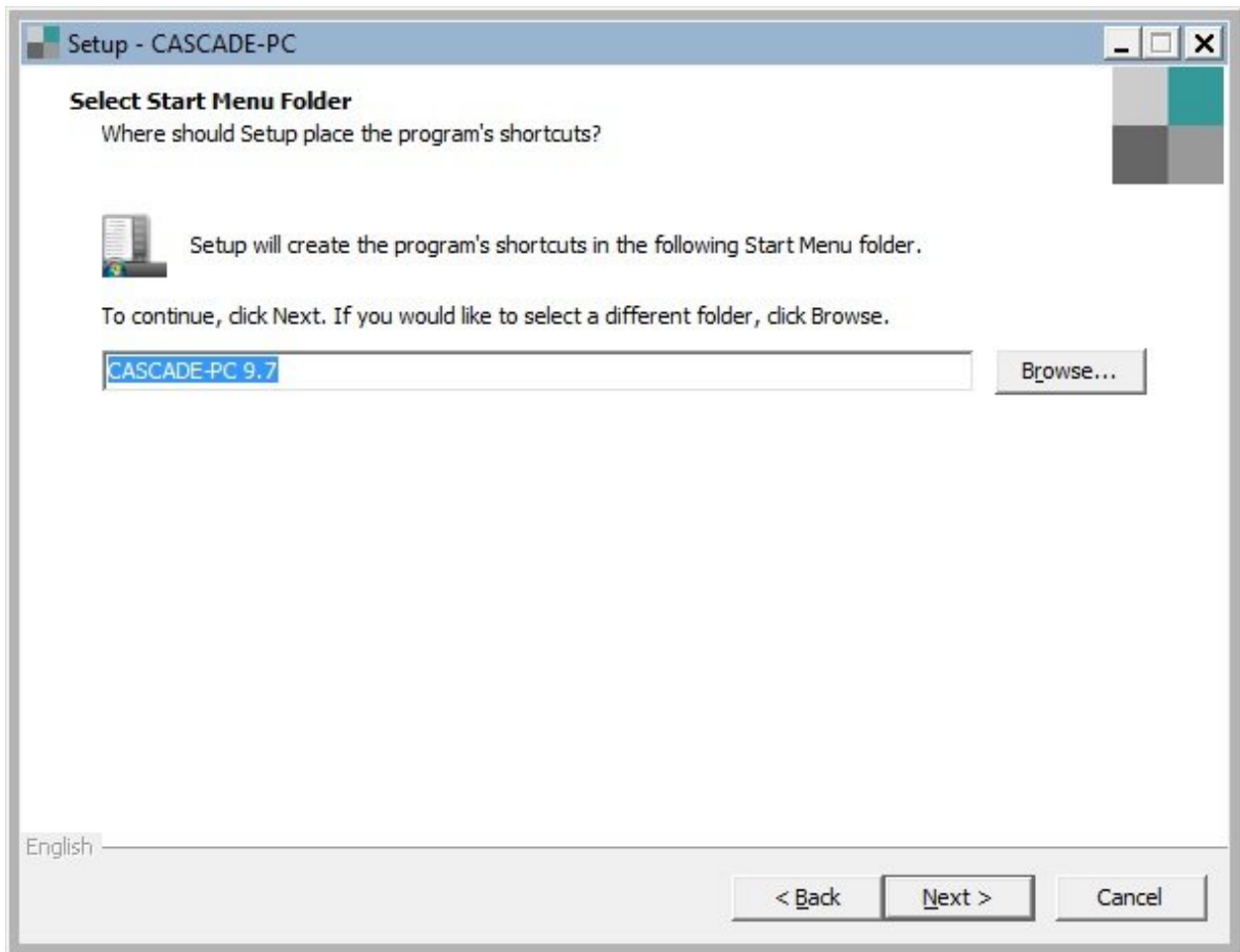
Choose a name for the program folder or confirm with **<u>Next</u>**.
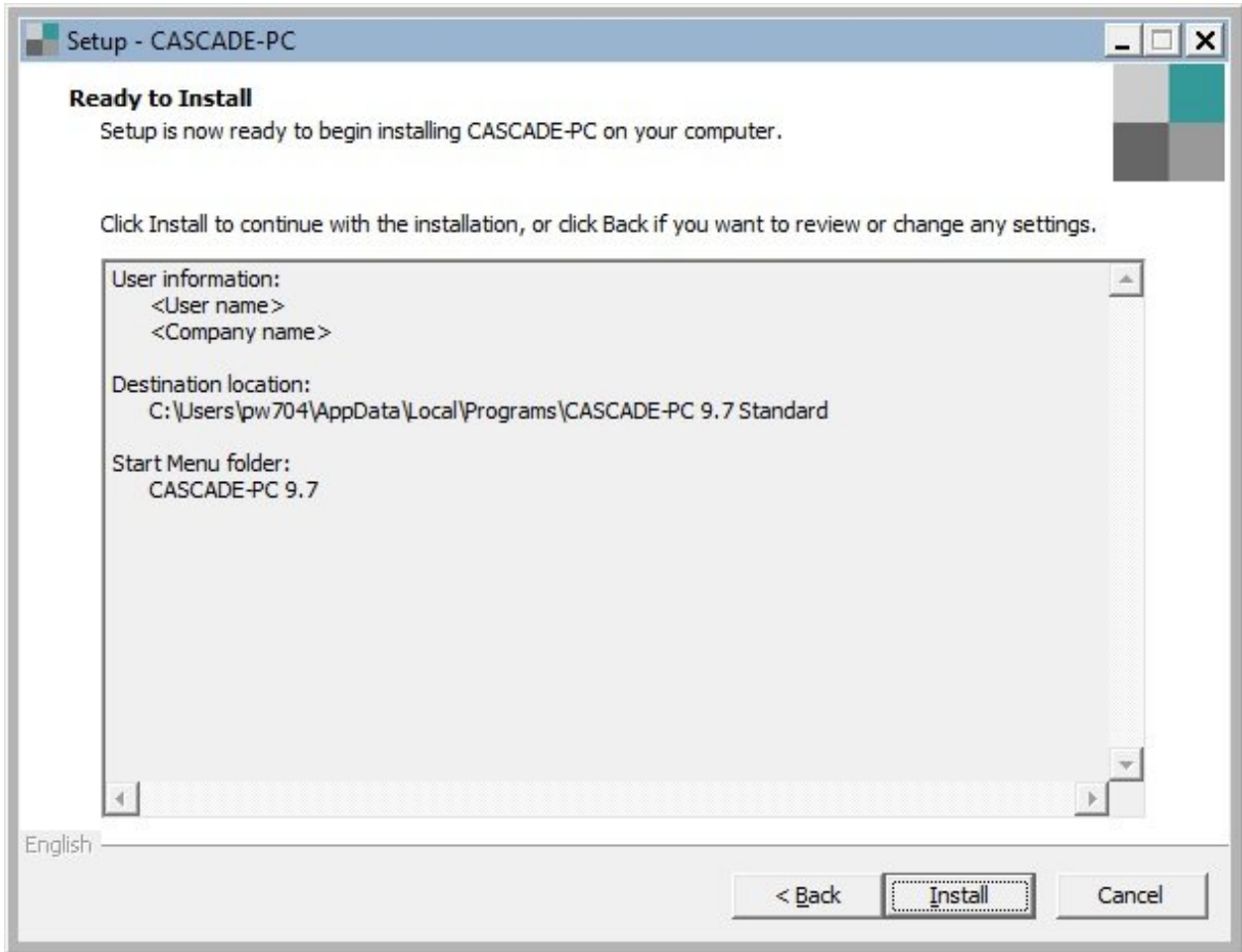
Then a summary of the options selected appears. Confirm these options with **Install** to start the installation.

Installation of CASCADE-PC
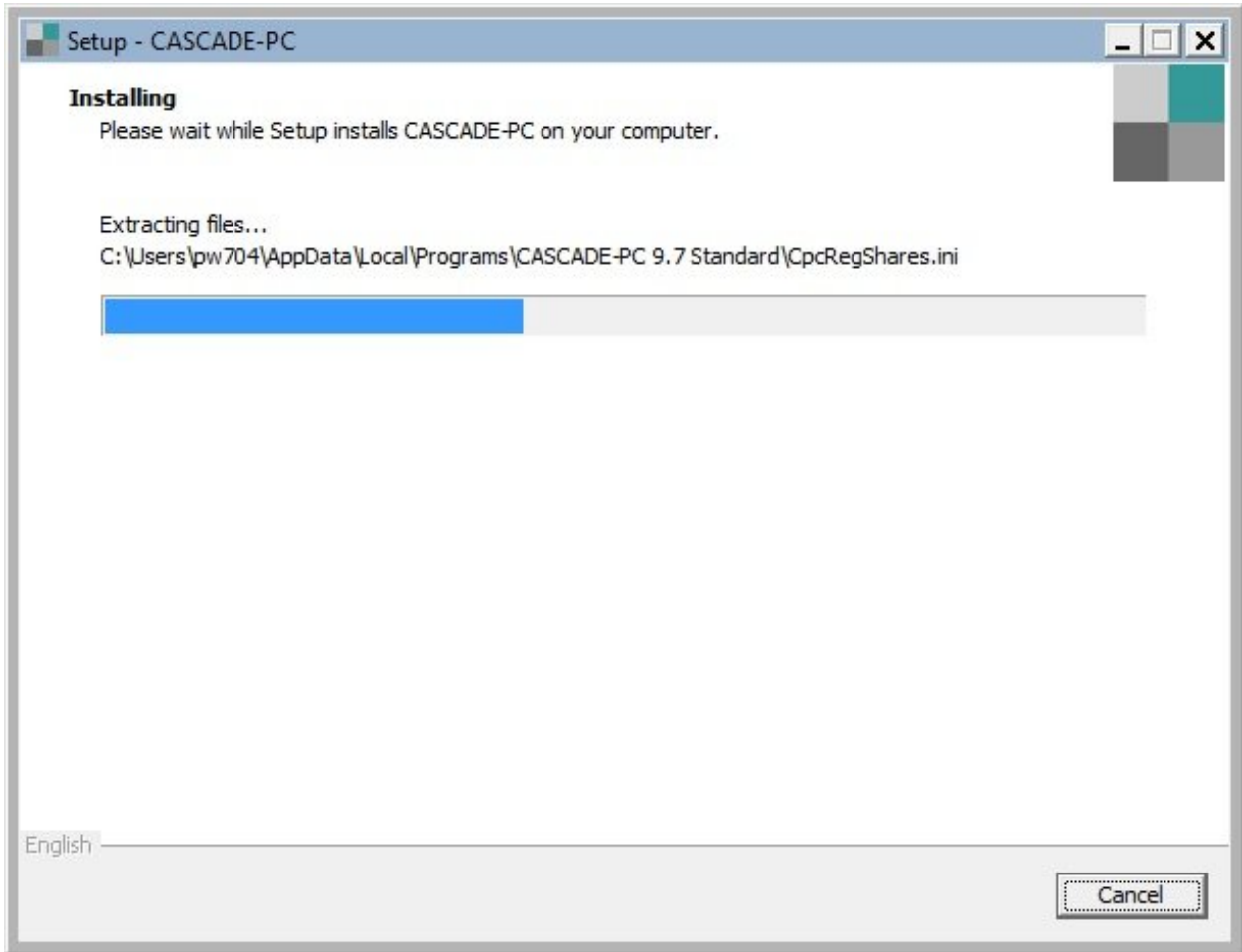
The rest of the installation is carried out automatically…
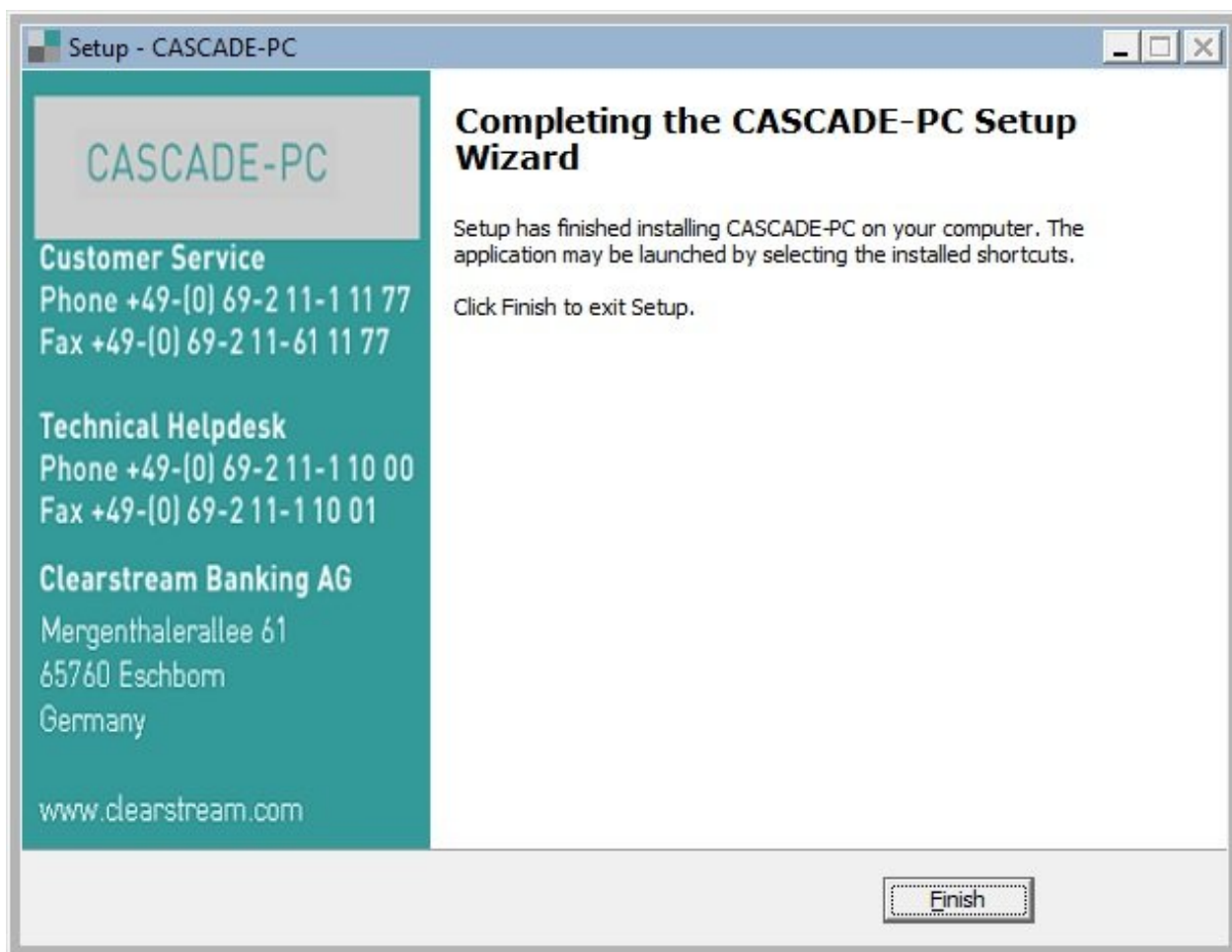
After confirmation through **Finish**, you have completed the installation and can start CASCADE-PC directly.
In the new program group **CASCADE-PC 10.x** there are now five icons which have been placed in the program's menu.

Please note:
In case you have selected a different name for the program folder name, you will find the program entries under this name.
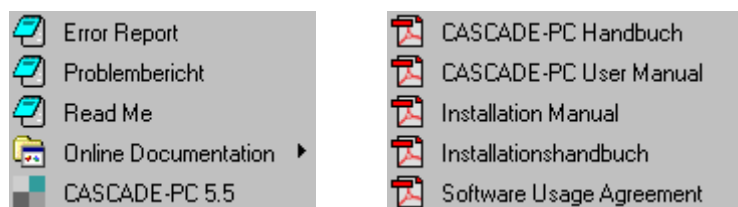
- The icon **CASCADE-PC 10.x** starts the application.

- Via the icons **Error Report** and **Problembericht**, the errors and problems connected with the program can be documented and reported to the Customer Service at Clearstream Banking Frankfurt.

- The icon **Read Me** allows you to view the information file. Here you may find some changes brought to the User Manual after it went to print.
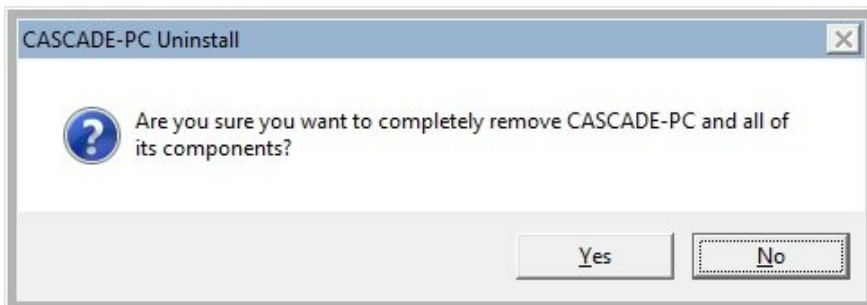
Installation of CASCADE-PC

- The English and German Manuals for CASCADE-PC can be retrieved via the icon **Online Documentation**.

3.3.2 De-installation of CASCADE-PC (Standard Installation)

You can reverse the installation at any time using the icon **Programs and Features** in the **Control Panel**.
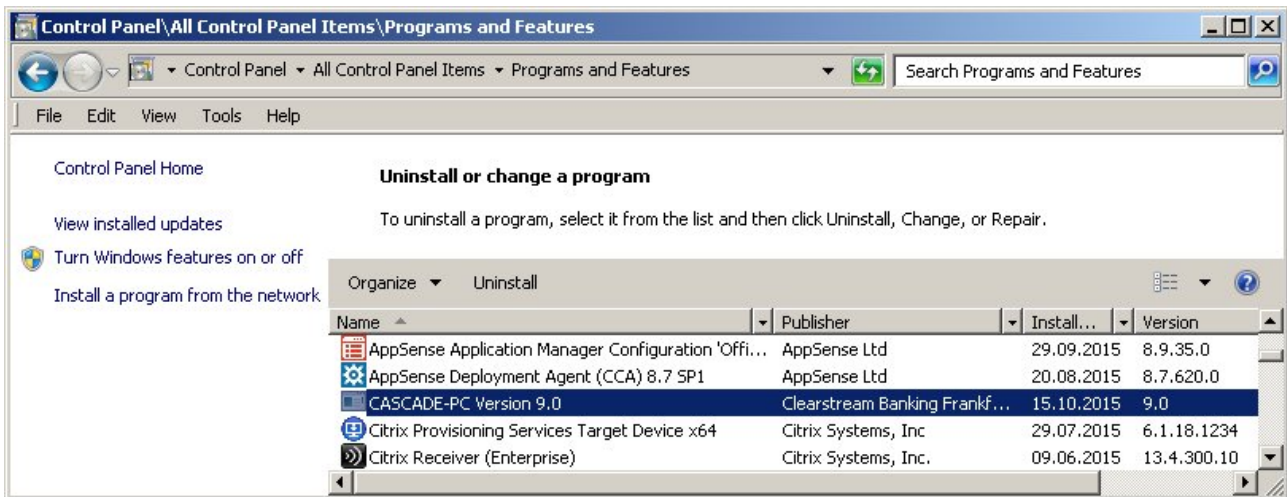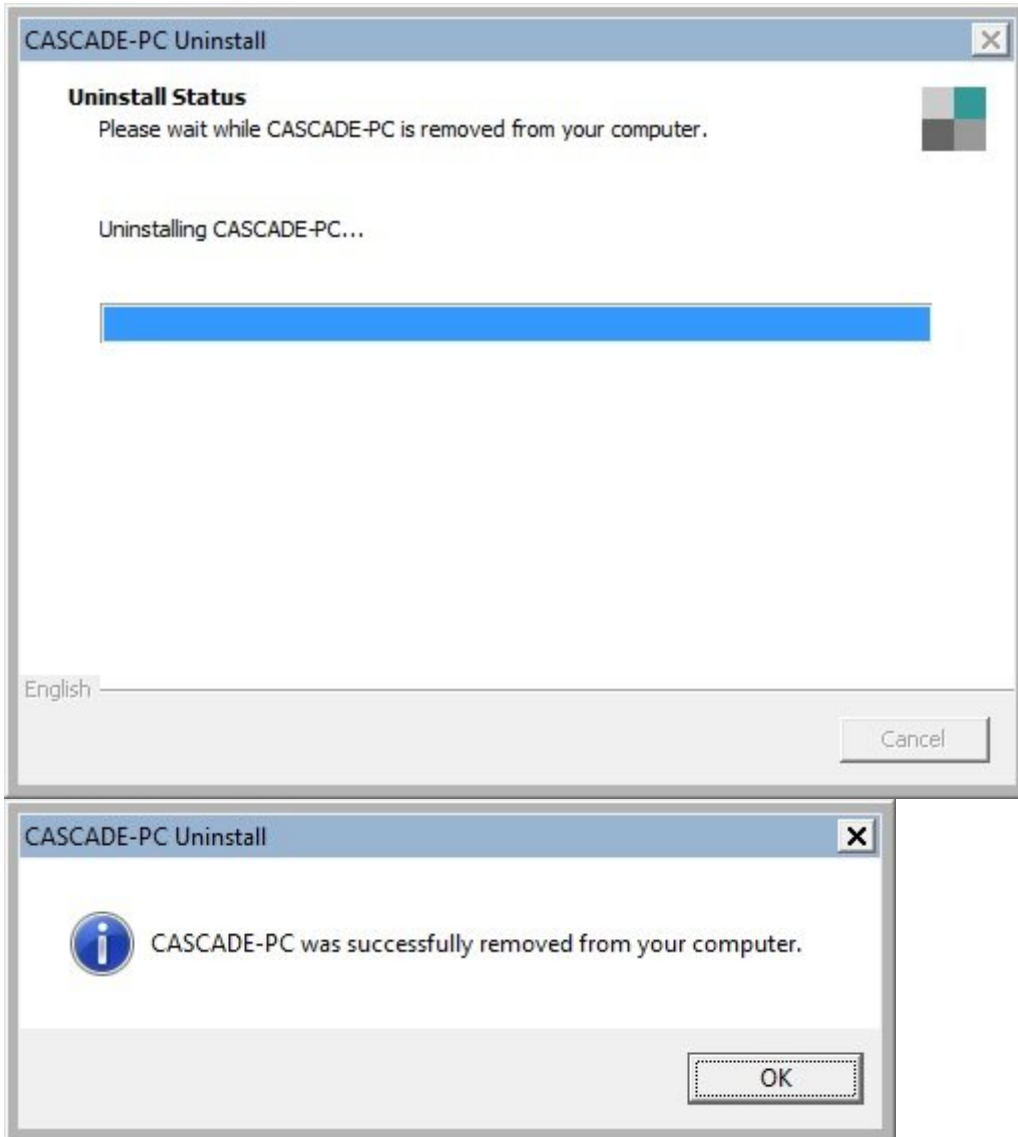

Select the entry CASCADE-PC Version 10.x and start the de-installation process by clicking on **Uninstall**

Answer the confirmation screen with **Yes**.

All directories / files of the selected CASCADE-PC installation will be removed from the current PC.

Installation of CASCADE-PC

3.4 Installation as Client/Server

If CASCADE-PC is to be installed on several PCs, which are linked by a network, it is possible to install CASCADE-PC as server/client version. In connection with the server installation, all necessary data will be installed on a network drive accessible to all PCs.

The clients do not require any write authorisation for the drive of the server. All files for which CASCADE-PC requires write authorizations will be stored per client, locally in a separate directory.

The next step is the client installation on every single PC. Here, the path to the server drive is entered and all the files are copied which have to be available separately for every PC.

For further updates of the CASCADE-PC product, only the server installation has to be initialized again as a rule. Data which is filed locally at the client installation is usually compatible with higher versions and does not have to be replaced.

A parallel client/server installation of different CASCADE-PC versions is also possible. In this case, the default installation directories have to be changed. It is recommended to make a reference to the version numbers in the name of the installation directory (e.g.: ...\CASCADE-PC 10.x Server).

Please note:
CASCADE-PC client components must always be re-installed each time a new server is installed parallel.

3.4.1 Server Installation

Please ensure that there is enough hard disk space on the drive where CASCADE-PC is to be installed. The application requires approx. 100 MB. Another 100 MB are temporarily required for the duration of installation. Administrator rights are mandatory for the installation.
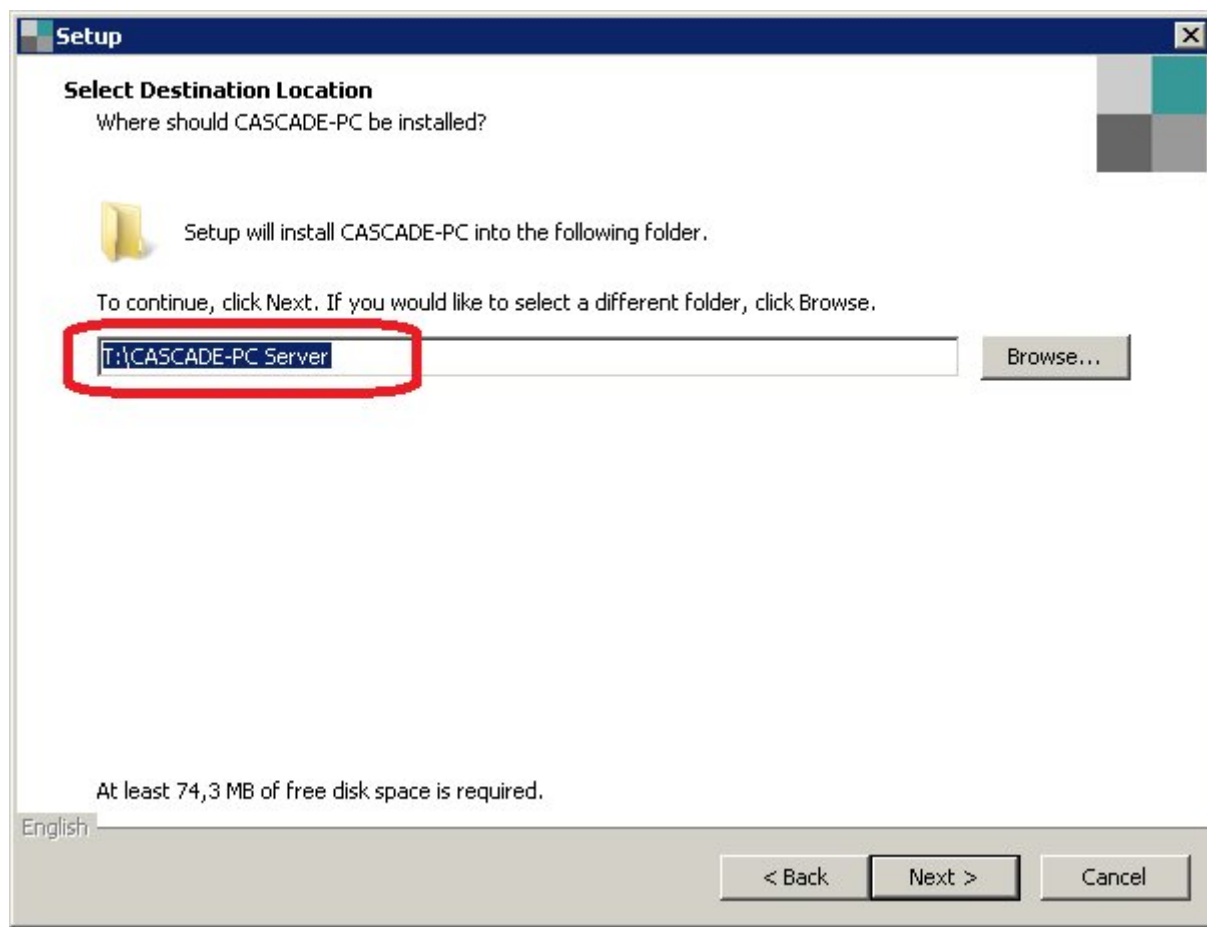
Please note:
The server **must** be set up **first** for a client/server installation.

Please make sure that Windows has been started close all other applications.

Perform the steps analogue to the standard installation (see chapter 3.3). Please go to chapter 3.1 of this Manual for additional details on the different installation versions and on parallel installation.

For the server installation please change the target directory to

- **"T:\CASCADE-PC Server [(64)]",**

or tailor the destination directory to your specific needs according to your network drive configuration.

For the execution of CASCADE-PC (not for the installation) the clients need read access to this directory. If you have specified a new directory, this will be created automatically during the installation.

The installation is then carried out analogously to the standard installation.

⚠ **Please note:**
If the PC where the server installation was performed is also to be used for CASCADE-PC as well, the client installation has to be carried out in addition.

3.4.2 De-installation of CASCADE-PC Server

The de-installation of the server installation is analogue to the de-installation of the standard installation (see chapter 3.3.2).

⚠ **Please note:**
If you have installed a client installation after installing the server on the same PC, the client and the server installation will both be deleted upon de-installation.

Installation of CASCADE-PC

3.4.3 Client Installation

During the client installation, which refers to the program file on the server, (see chapter 3.4.1 Server Installation) all files necessary for the client installation are copied. Please go to chapter 3.1 of this Manual for additional details on the different installation versions and on parallel installation.

Please note:
The server **must** be set up **first** for a client/server installation.

Administrator rights are mandatory for the installation. Please make sure that Windows has been started and close all other applications.

Please go to the installation directory of your CASCADE-PC <u>server</u> installation and copy the folder "CASCADE-PC [(64)] Client" to your client's root directory "C:\".

For a default installation please copy the client folder
- "CASCADE-PC [(64)] Client"
  from
  " T:\CASCADE-PC Server [(64)]**CASCADE-PC [(64)]Client**"

- to the destination folder on the client PC
  C:**CASCADE-PC [(64)] Client**

The user requires full write and read authorizations for directory "C:\CASCADE-PC (64) Client".

The client folder contains the following files:
- CASCADE-PC [(64)] Client.lnk
- cpcnextrel.ini
- cpcscreen.ini
- CpcSys.bak
- CPCSYS.INI
- walkback.log

For the client installation of CASCADE-PC the call of cpcmain.exe is done via shortcut. For the shortcut the .lnk file "Target:" properties have to be extended by the parameters -n and -w:

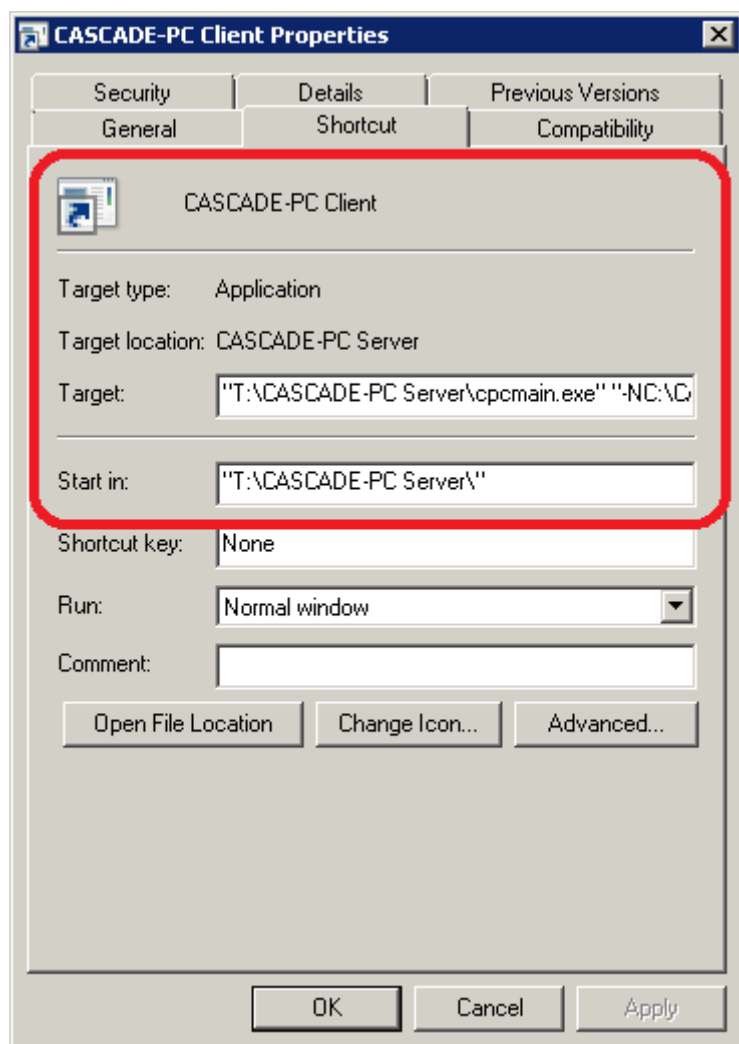|	
-n<path name >[<file name>]	default: CPCSYS.INI
-w<path name >[<file name>]	default: WALKBACK.LOG

For example:

```
"\\<SERVER>\<SHARE> [\<PATH>] \CASCADE-PC Server [(64)]\CPCMAIN.exe" - NC:\CASCADE-PC
[(64)] Client\cpcsys.ini -WC:\CASCADE-PC [(64)] Client\walkback.log"
```

(The term"\\<SERVER>\<SHARE>[\PATH>]" has to be replaced by the actual server name).

The "Start in:" property has to be set to the CASCADE-PC server directory.

Please note:
If the program paths are changed (e.g. network drive for server installation), the properties of the program shortcut have to be adjusted manually.

3.4.4 De-installation of CASCADE-PC Client

Please just delete the CADCADE-PC client folder on your client PC. This has to be done manually.

Installation of CASCADE-PC

3.5 Right of Access (Windows)

Please ensure that every user account has sufficient rights to access CASCADE-PC, particularly with regard to Windows 7.

Standard Installation (Standalone)
This process installs the configuration files, the log files and the program files into the selected program folder. For the successful use of CASCADE-PC you need to allocate the following rights to the program folder (Default: "C:\Users\[User]\AppData\Local\Programs\CASCADE-PC 10.x") and all files:

- Read,
- Write,
- Modify,
- Execute

Please note:
If there is a need to separate the program files from the configuration files and the log files the client/server-installation has to be selected.

Server-Installation
Like the standard Installation this process installs all the program files to the target folder. In addition, the installation of the configuration and log files takes place during the client installation. When installing the server, it is sufficient to have the rights

- Read,
- Execute

to the program folder (Default: "T:\CASCADE-PC Server [(64)]") and all files.

Client-Installation
This process copies the configuration files and the log files to the selected folder. For the successful use of the program you need to allocate the rights

- Read,
- Write,
- Modify

to the selected folder (Default: "C:\CASCADE-PC [(64)] Client ") and all files.

4. IBM Personal Communications for Windows

The following screen shots were taken with IBM Personal Communications Version 6. The contents of version >= 5.x are basically identical. Differences are mainly to be found in the layout.

⚠️ **Please note:**
In case HOB J-Term was installed on the PC, the HOB J-Term path must be removed manually from the System Environment panel. Parallel operation of the EHLLAPI interface of both terminal emulations is not possible.

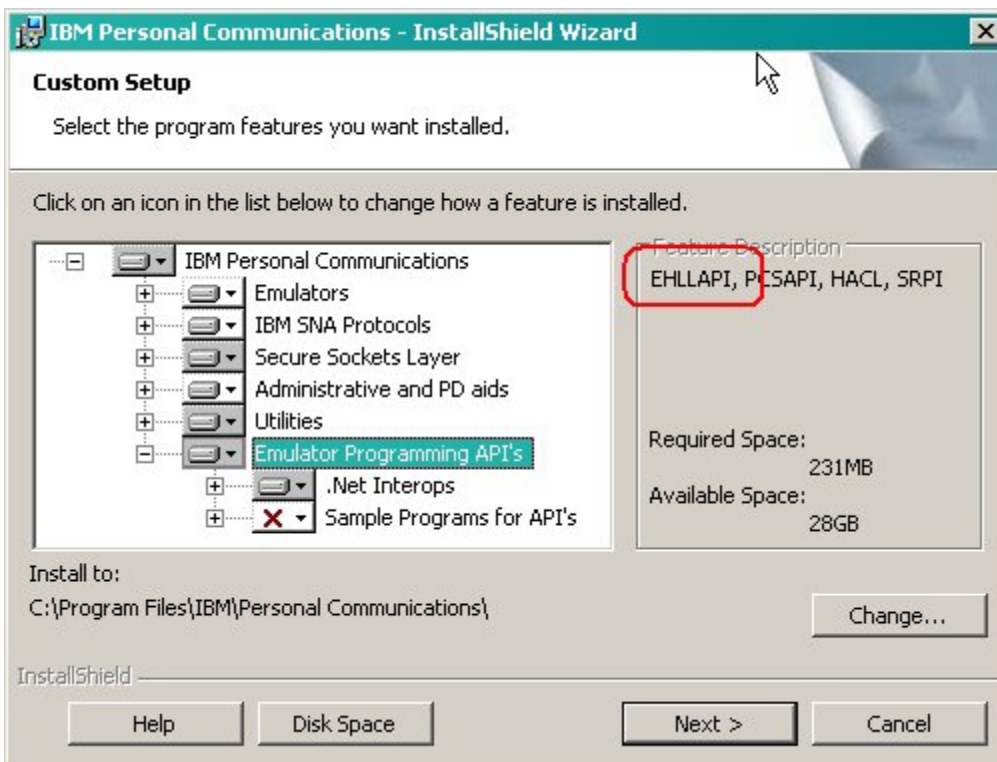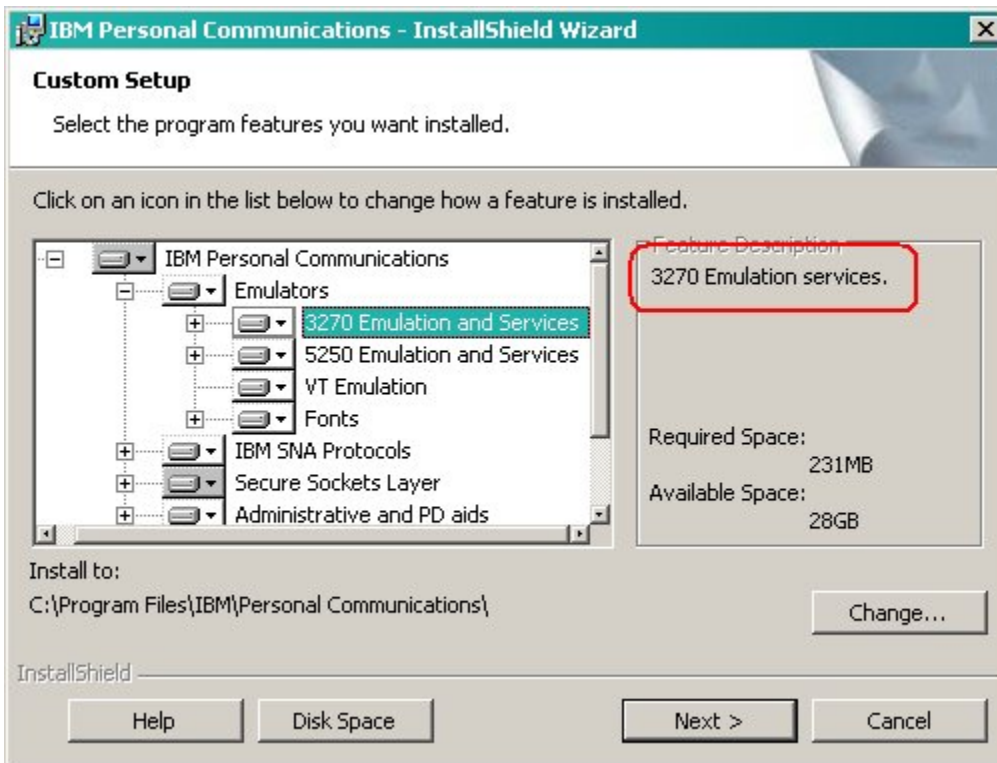Install the terminal emulation on your client according to the installation instructions.

⚠️ **Please note:**
You may either choose <Typical> or <Custom> installation, but please make sure to install the 3270 and the EHLLAPI communication APIs in any event.

# IBM Personal Communications for Windows

4.1 Dedicated Line

The required connection (linkup) settings correspond to the standards which are customary in your company and, as a rule, they need not be changed for CASCADE-PC.
If the IBM Personal Communications (LU2) to the host of Deutsche Börse AG has already been configured on your PC, no further actions should be taken, otherwise please contact your local systems support.

4.2 Host Code Page

It is absolutely mandatory that you change the host code page of Personal Communications to "German" for CASCADE-PC so that special characters can be displayed correctly. Please refer to the respective IBM manual for details on the configuration. In the different versions of the PC3270, the respective setting can be accessed as follows:

- V 6 / V 5.x: Communication > Configure..., then button 'Session parameters...'
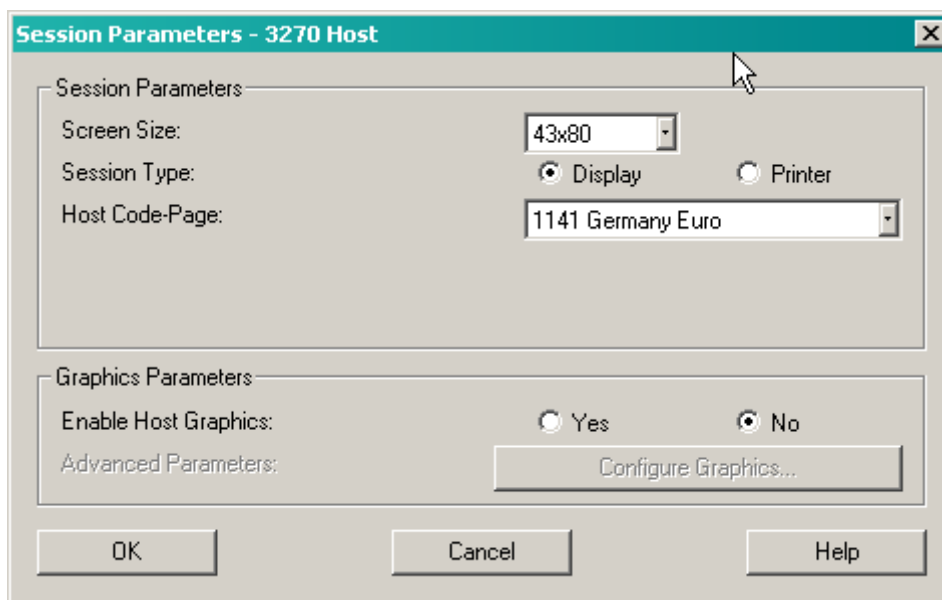
Select host code page 273 (Germany) or host code page 1141 which includes the euro sign.
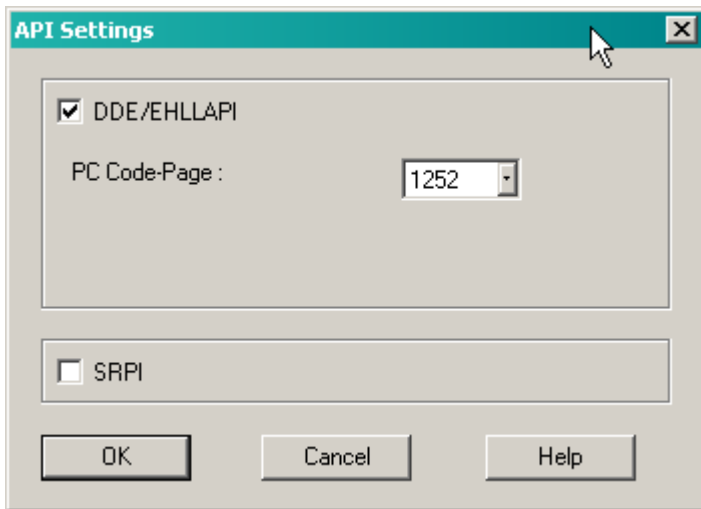
Confirm with **OK** and then save your settings.

4.3 PC Code Page / Enabling the EHLLAPI Interface

It is absolutely mandatory that you change the PC code page of Personal Communications to "German" for CASCADE-PC so that special characters can be displayed correctly. Please refer to the respective IBM Manual for details on the configuration. In the different versions of the PC3270, the respective setting can be accessed as follows:

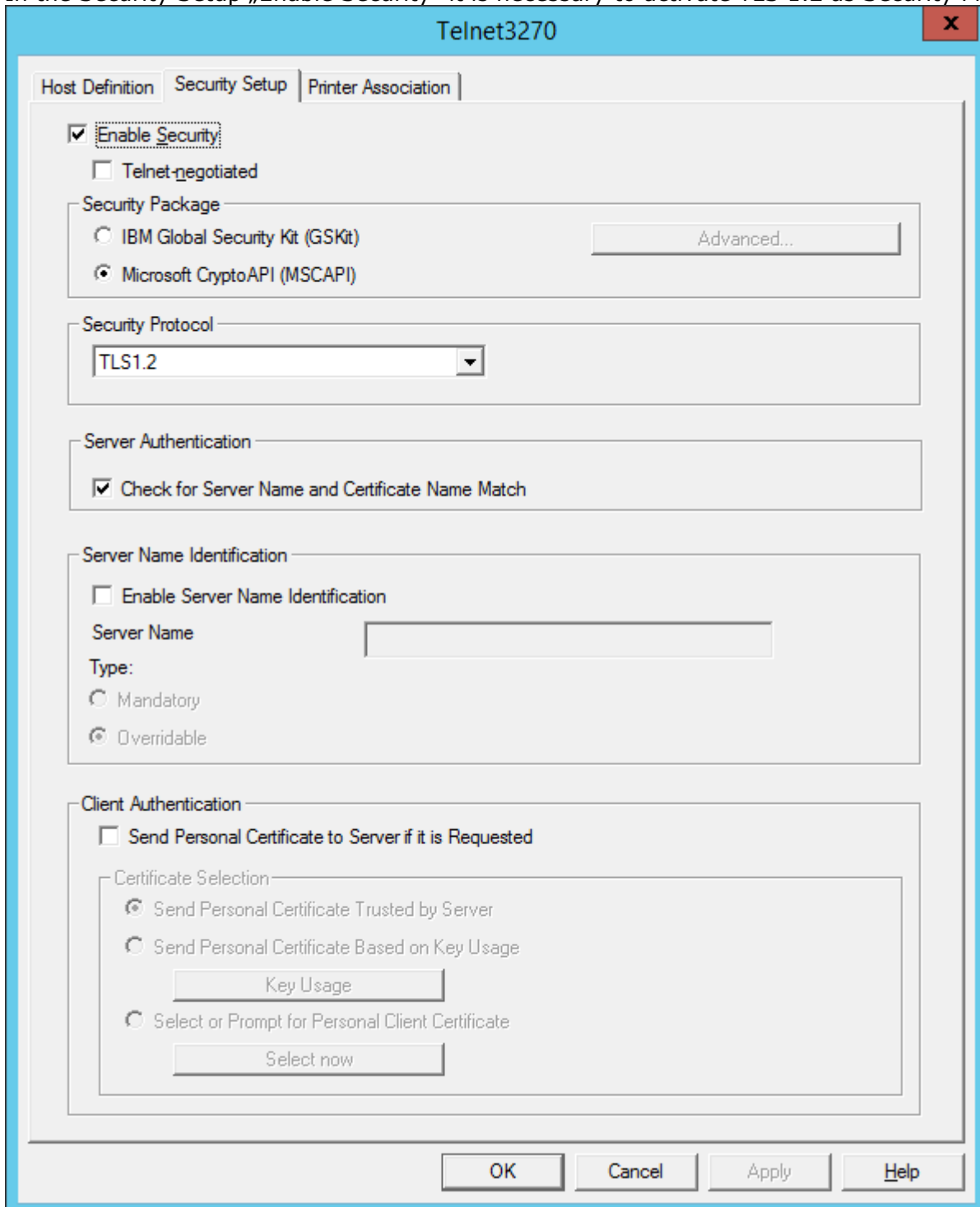- V 6 / V 5.x: Edit > Preferences > API...

IBM Personal Communications for Windows

Enable EHLLAPI and select PC code page 819 (Windows - Germany) or PC code page 1252 which includes the euro sign. Confirm with **OK** and then save your settings.
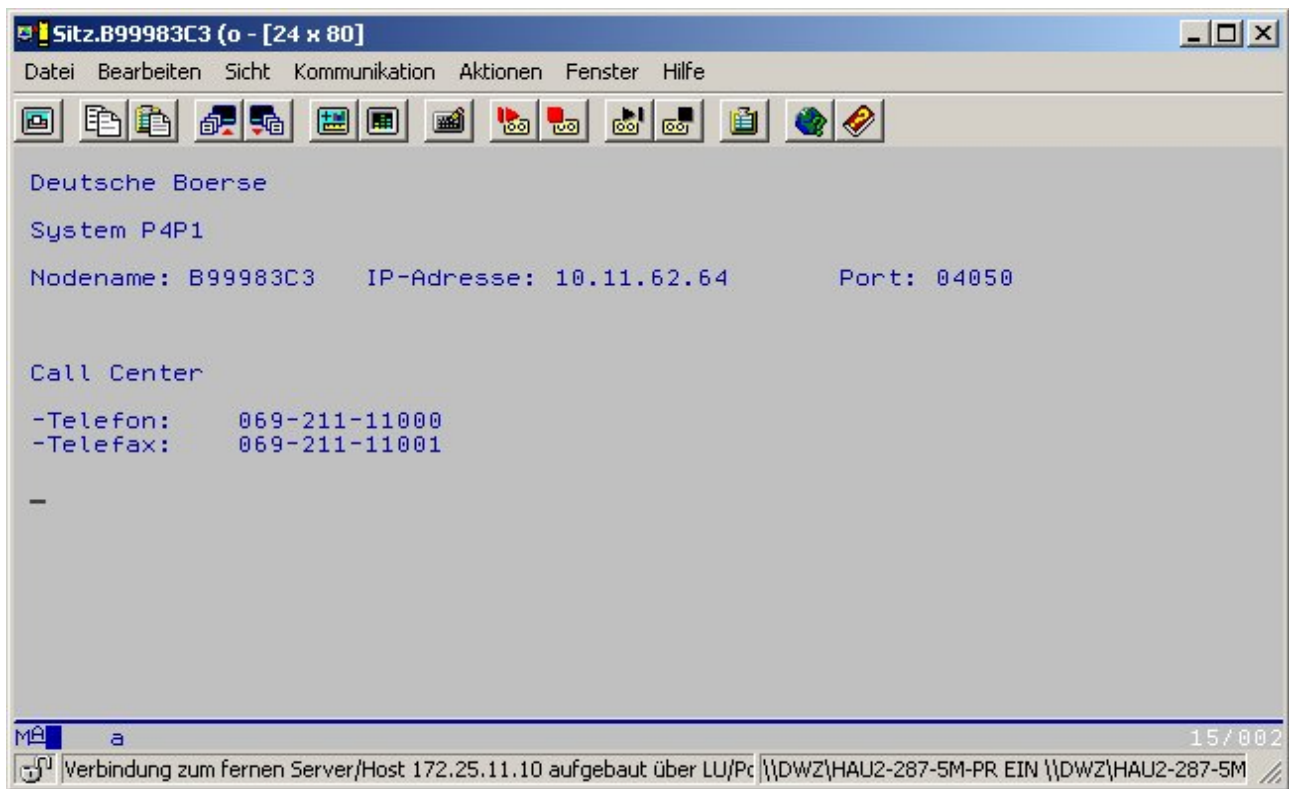
4.4 Security Setup

In the Security Setup „Enable Security" it is necessary to activate TLS 1.2 as Security Protocol.

4.5 Welcome Screen of Deutsche Börse

As soon as the connection has been established, the welcome screen of Deutsche Börse AG's mainframe will appear.

IBM Personal Communications for Windows

⚠ **Please note:**
Only now can CASCADE-PC be started!

5. Open Text Host Explorer

Install the terminal emulation on your client according to the installation instructions. Please make sure to install the 3270 <u>and</u> the EHLLAPI communication APIs in any event.

Please note:
In case HOB J-Term was installed on the PC, the HOB J-Term path must be removed manually from the System Environment panel. Parallel operation of the EHLLAPI interface of both terminal emulations is not possible.

5.1 Dedicated Line

The required connection (linkup) settings correspond to the standards which are customary in your company and, as a rule, they need not be changed for CASCADE-PC.
If the Open Text Host Explorer connection (LU2) to the host of Deutsche Börse AG has already been configured on your PC, no further actions should be taken, otherwise please contact your local systems support.

5.2 Host Code Page

It is absolutely mandatory that you change the host code page of Host Explorer to "German" for CASCADE-PC so that special characters can be displayed correctly. Please refer to the respective Open Text manual for details on the configuration. The respective setting can be accessed as follows:

- V15 SP4:   Session properties > Terminal> Character Set…
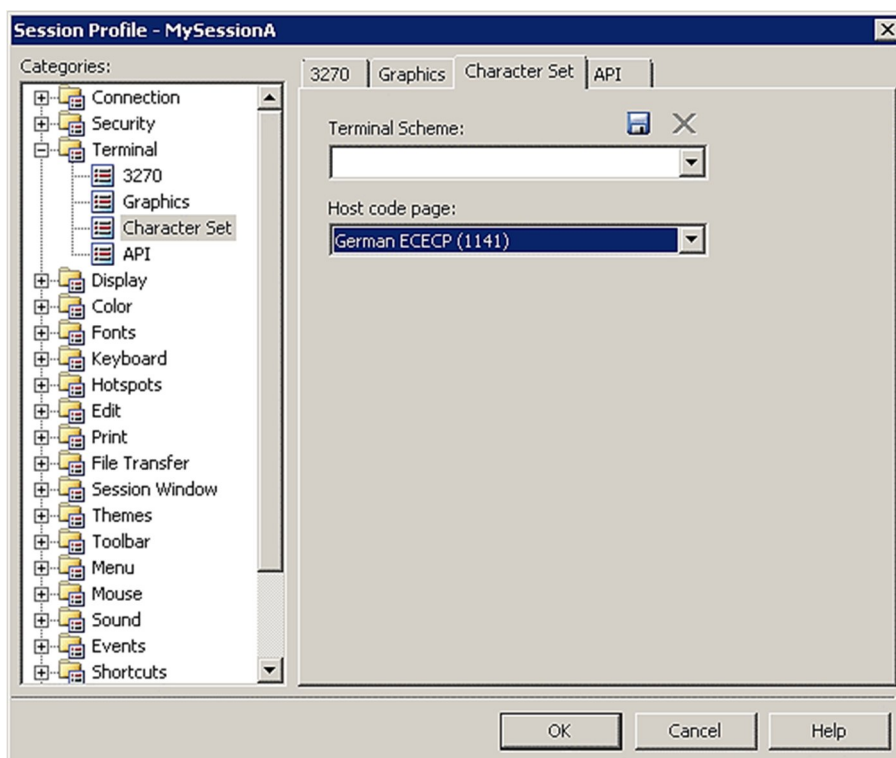
Open Text Host Explorer

Select host code page 273 (Germany) or host code page 1141 which includes the euro sign.

Confirm with **OK** and then save your settings.

5.3 LU name for enhanced TN3270

Deutsche Börse mainframe uses TN3270 Enhanced Protocol (TN3270E), thus LU name has to be provided. The LU contains the necessary information needed to connect to an SNA network. Please refer to the respective Open Text manual for details on the configuration. The respective setting can be accessed as follows:

- V15 SP4:   Session properties > Connection> Identity> LU name…
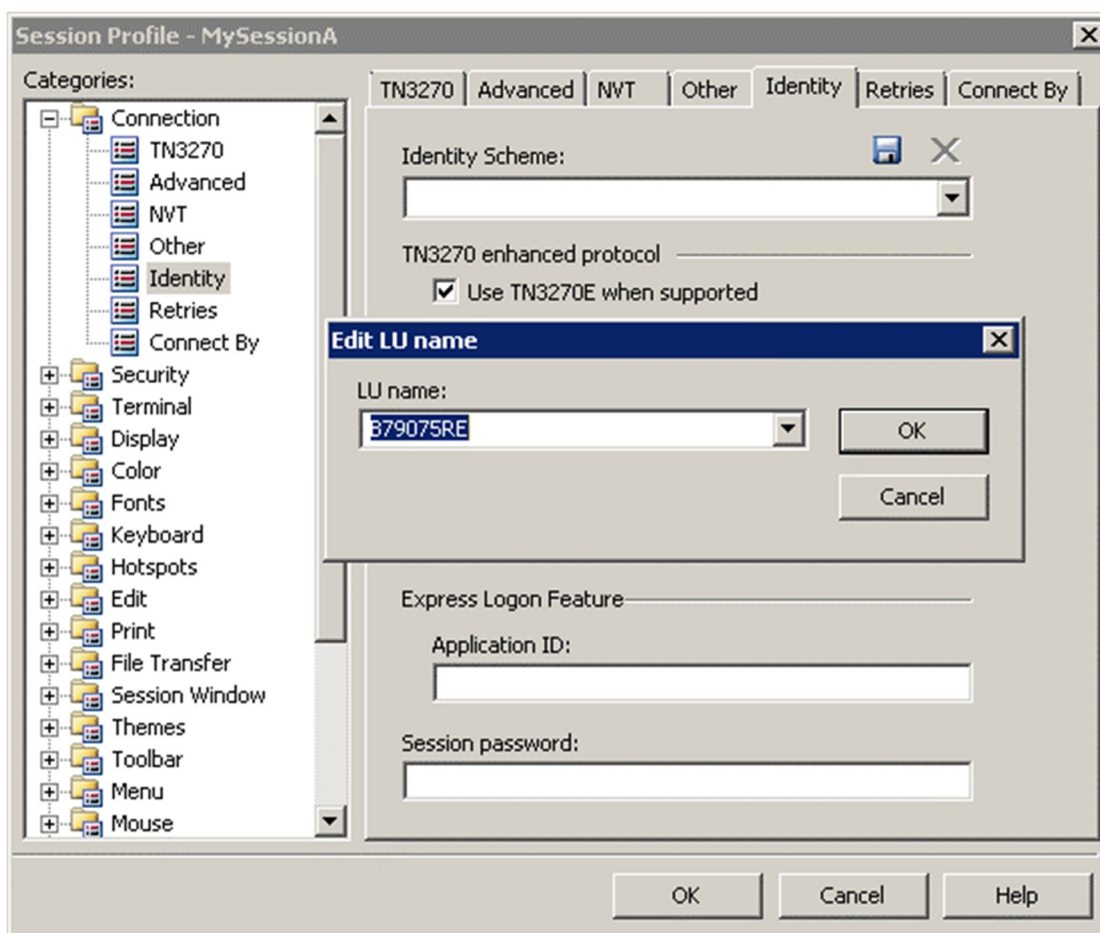
Please refer to your configuration settings provided by Deutsche Börse and enter your LU name.

Confirm with **OK** and then save your settings.

5.4 Short session ID

Please use the API settings to set the session short name which enables the EHLLAPI interface. The session short name is used by CASCADE-PC to access a particular session.

For CASCADE-PC you must use:
- Character "A", "B", "C "or "D" for a 3270 session.
- Character "E" for a printer session

Please refer to the respective Open Text manual for details on the configuration. The respective setting can be accessed as follows:

- V15 SP4:   Session properties > Terminal> API…
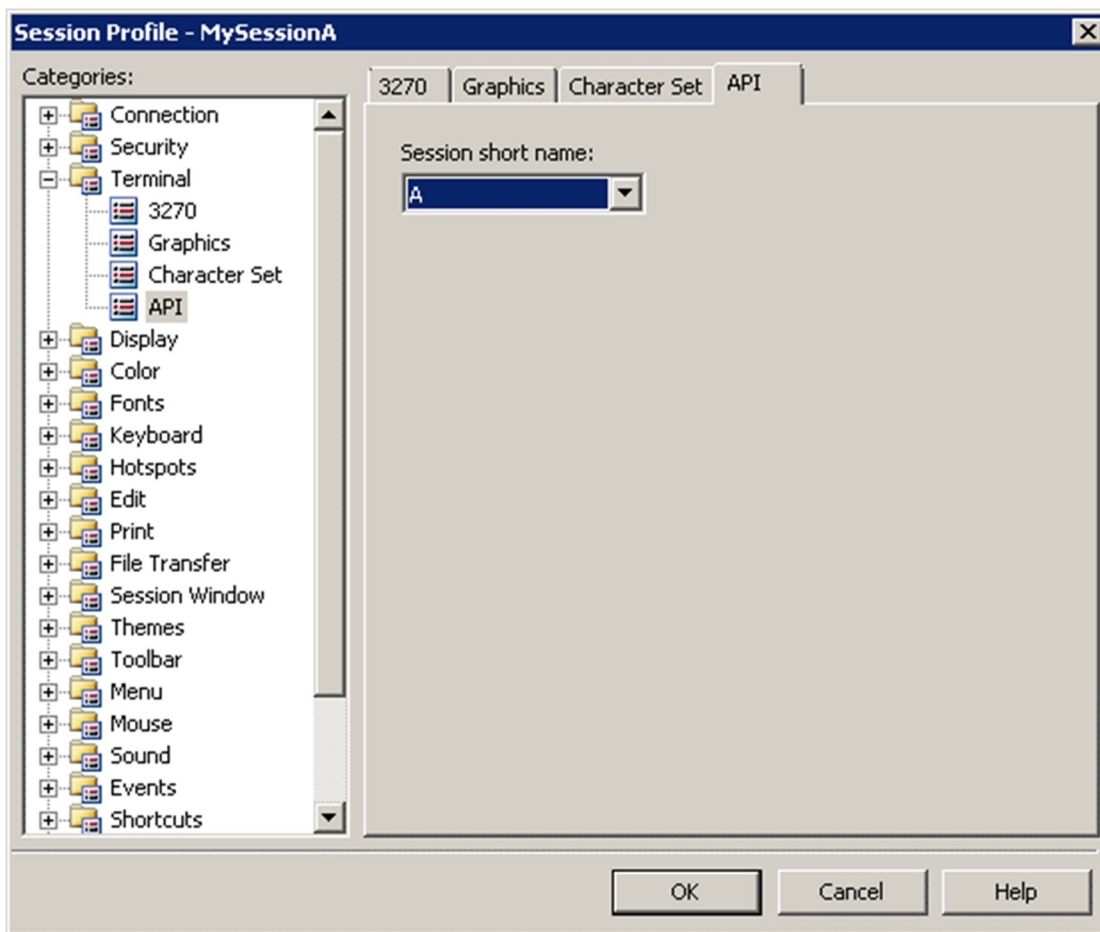
Confirm with **OK** and then save your settings.

Open Text Host Explorer

5.5 Security Setup

It is necessary to activate in the Security Setup „Highest TLS Version" for „SSL/TLS". TLS 1.2 will be selected automatically.
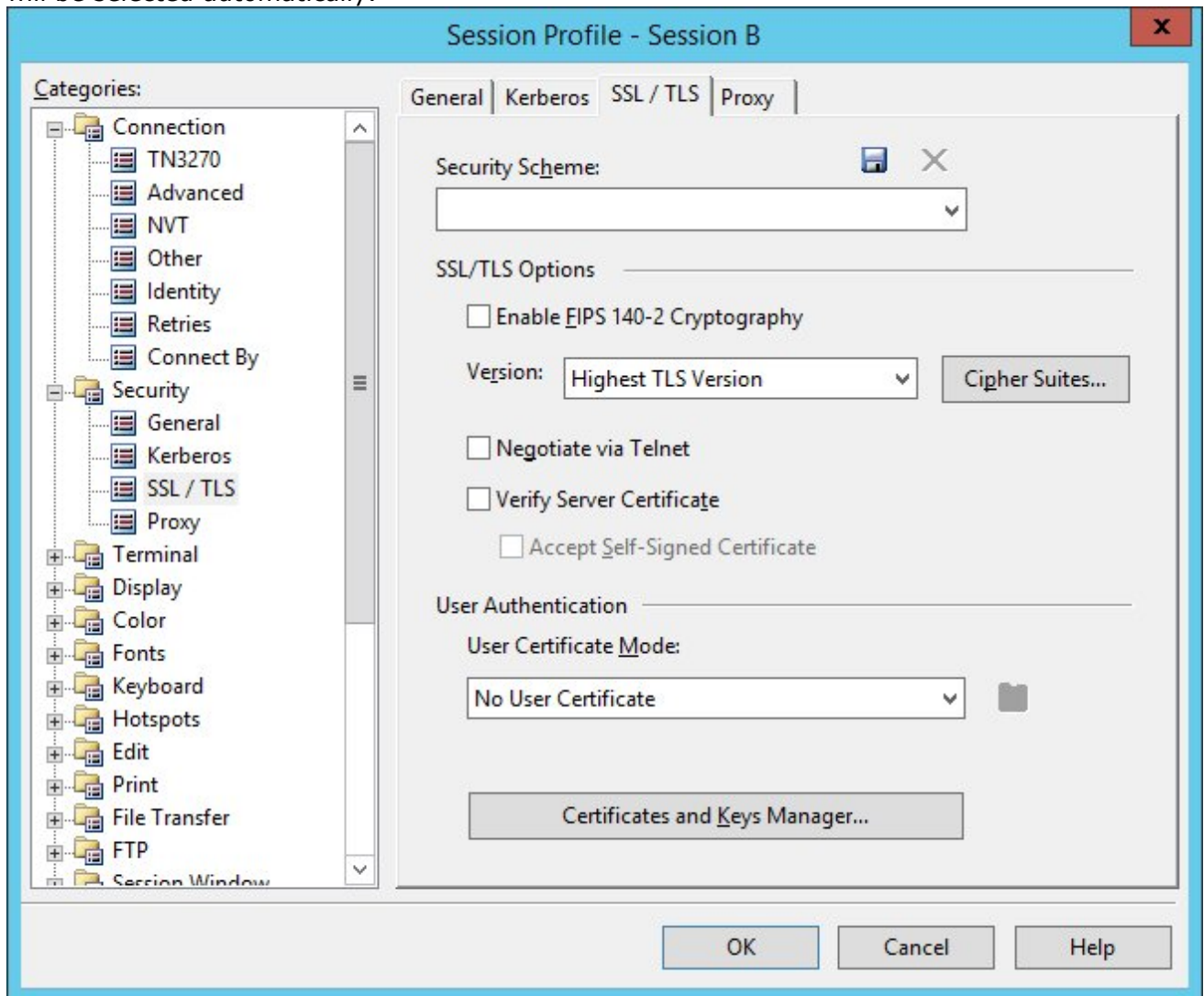
Confirm with **OK** and then save your settings.

5.6 Welcome Screen of Deutsche Börse

As soon as the connection has been established, the welcome screen of Deutsche Börse AG's mainframe will appear.

Please note:
Only now can CASCADE-PC be started!

6. CASCADE-PC

6.1 Configuration of CASCADE-PC
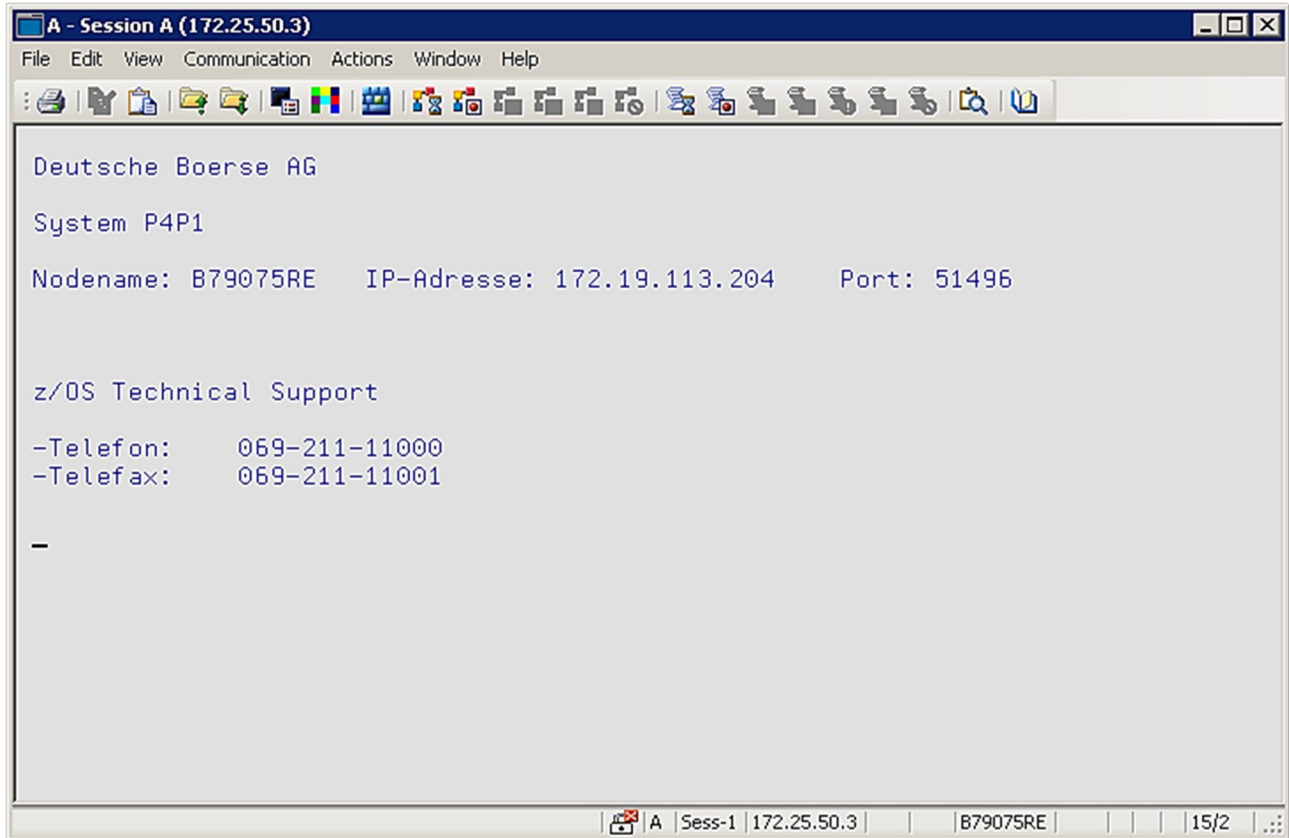
After successful installation of CASCADE-PC and double-click on the created program icon, the logon screen appears.

The terminal emulation serves as the basis for CASCADE-PC. If the terminal emulation has not been started first, a CASCADE-PC error message will pop up and CASCADE-PC will be terminated automatically.

In this case you will have to start the terminal emulation and then CASCADE-PC.

Should the message be repeated, re-boot the PC and start the applications in the required order.

After starting CASCADE-PC, the logon screen should look like this:
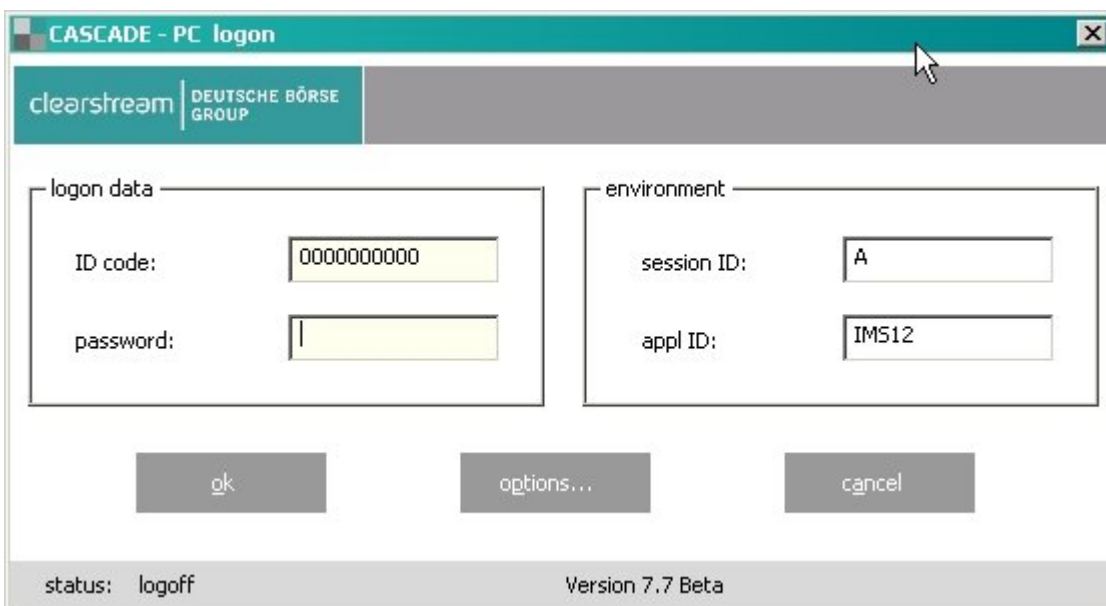
In cases where the user-specific settings were stored in the file CPCSYS.INI prior to installation and initialized after the installation, the settings of the old version are adopted and the user can continue to work with the usual settings.

With a mouse-click on the button **Options**… the user is guided to the options screen where he can change the user-specific entries.
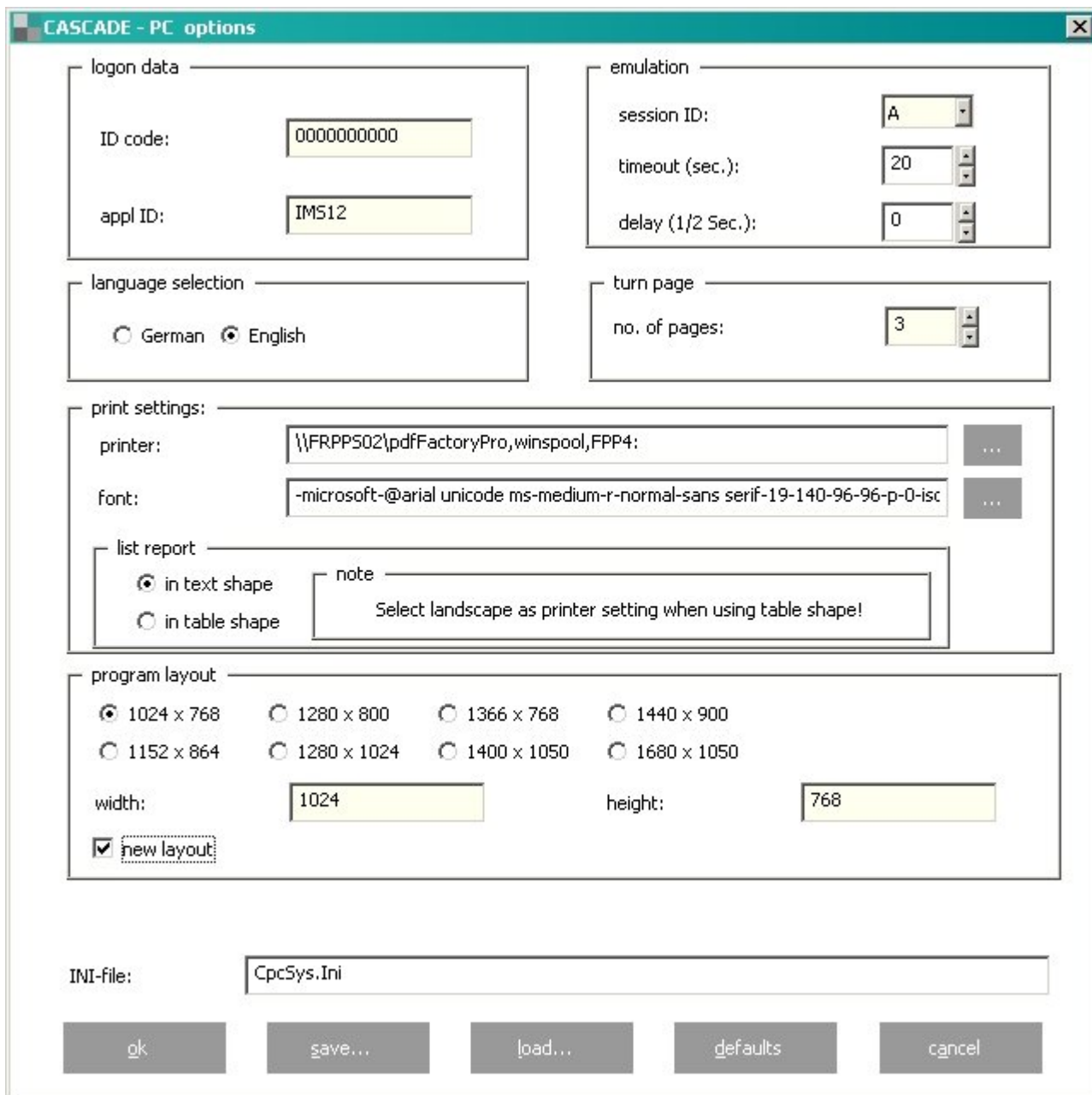
The entries have to be made only once and stored by the user.
- *ID Code*:   User identification for CASCADE-PC
- *AppID:*   IMS12 (production system)
- Printer & Font

By pressing the button **save**... the settings are stored in an INI file to be available for the next logon.

You can leave the options screen by pressing **OK**. The entered parameters are now displayed in the logon screen.

CASCADE-PC

6.2 Logon in CASCADE-PC

Now enter the password for CASCADE-PC.

Now you are logged on to the system you have chosen and can start with the entries. The logon process is completed.

7. Error Handling

7.1 E00041, E00012: Timeout

This error

(pressing the button **<u>Cancel</u>** displays the following message:)
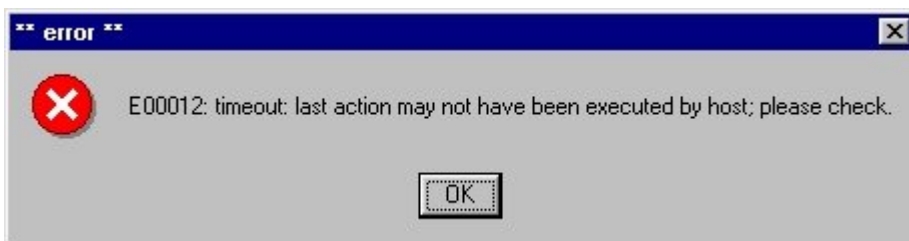
is caused by the following:

1. The reference message E00041 indicates that CASCADE-PC is still waiting for data from the host. Please press **<u>OK</u>**. If the message E00041 re-appears, terminate the process by pressing **<u>Cancel</u>**. Please take note of the following:

   The length of time (in seconds) CASCADE-PC spends waiting for a reply from the CASCADE Backend Host can be set in CASCADE-PC under Settings>Options: Timeout (sec.) The default is set at 20 seconds and should not be changed. Please check whether a value that is too small has been entered.

2. If a reply from the host has not been received upon expiry of the Timeout, the message E00041 is displayed. Press **<u>OK</u>** to wait again, or cancel the process with **<u>Cancel</u>**. Error message E00012 is displayed. Please check your last entry.

   If the required result does not appear after pressing **<u>OK</u>** several times, please contact your local systems support. Please refer to the CASCADE-PC program group for the respective error reporting form.

Error Handling

7.2 E00045: PCSHLL32.DLL not found

This error
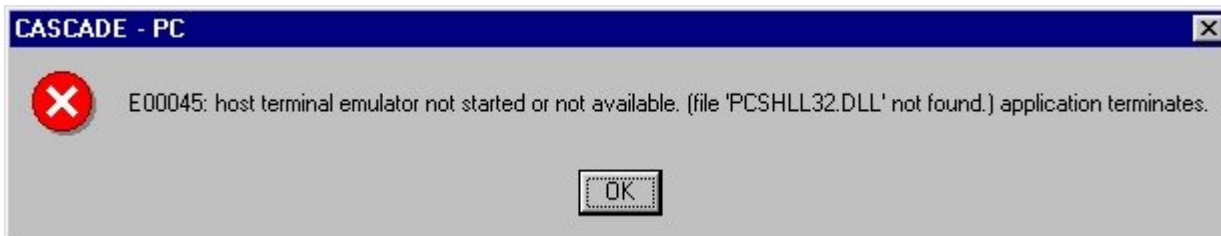
is caused by the following:

1. The terminal emulation (IBM Personal Communications or Open Text Host Explorer) was started after CASCADE-PC (in some cases the PC has to be rebooted).

2. EHLLAPI option not enabled (see "Enabling the EHLLAPI Interface" for IBM PCom chapter 4.3 or Open Text Host Explorer chapter 5.4).

3. In some cases, the path to the file **PCSHLL32.DLL** is not included in the path variable. In this case, the path must be entered **according to your system environment,**

     for example:

IBM Personal Communications:	"C:\Personal Communications"
Open Text Host Explorer:	"C:\Program Files[(x86)]\ \Hummingbird\Connectivity\15.00\ HostExplorer
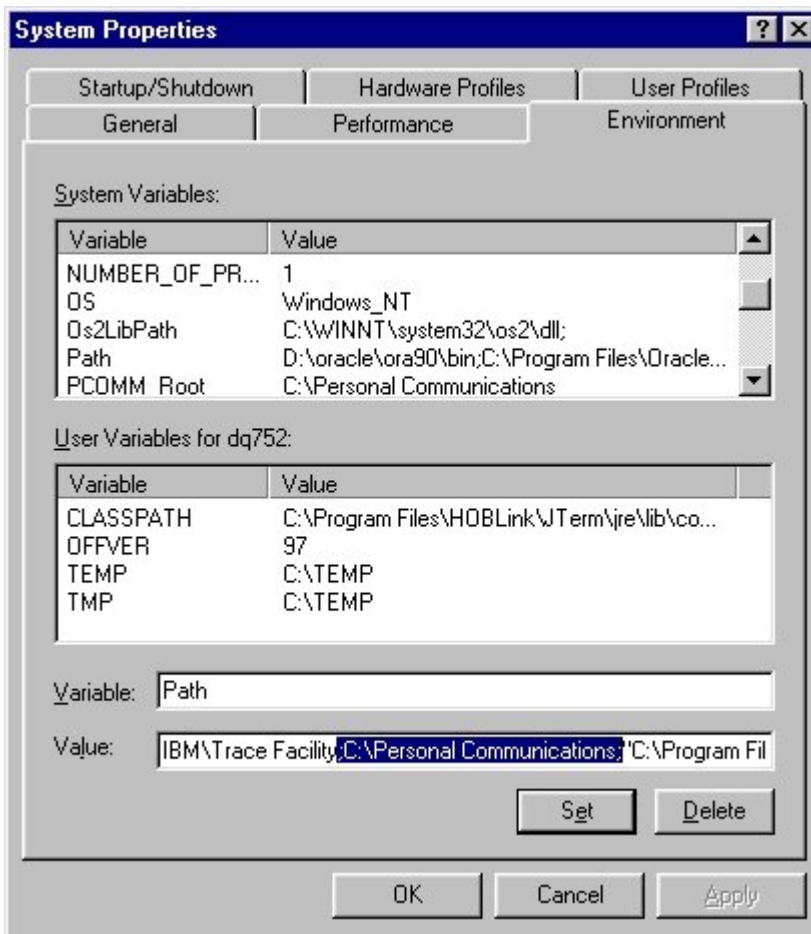
Please note:
If there is more than one terminal emulation on your computer, all other paths must be removed manually from the System Environment panel. Parallel operation of the EHLLAPI interfaces of several terminal emulations is not possible.

4. An old version of the Internet-Explorer is installed; especially the version of **mfc42.dll** is older than 6.00.8665.0.

   In that case please install a new version of the Internet Explorer (> version 5) or a newer version of mfc42.dll.

Error Handling

7.3 E00049, E00024: System error – Wrong host position

This error

(pressing the button **OK** displays the following message:)
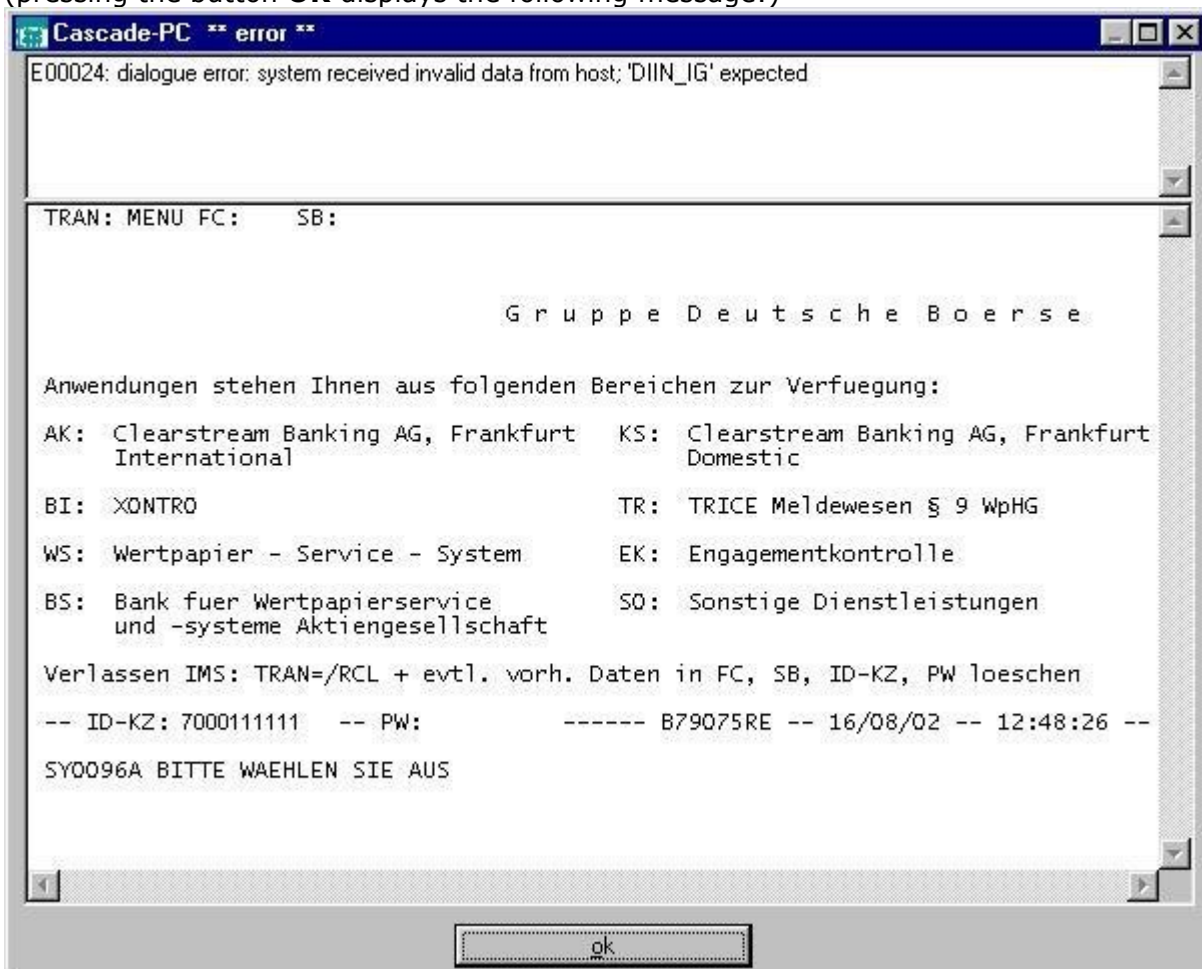
is caused by the following:

1. This is a flow control error in CASCADE-PC. It is paramount that you make a copy of the CASCADE-PC error screen. It contains program-related information for error analysis. Please also note down the steps that lead to this error and contact your local systems support. Please refer to the CASCADE-PC program group for the respective error reporting form.

7.4 E00051: Unable to write to file *WALKBACK.LOG*

This error

is caused by the following:

1. Your user account does not have the required privileges.

    Please contact your local system administrator. You need to have the Read, Write, Modify and Execute permission for the CASCADE-PC program folder and all program files (see "Right of Access (Windows)" chapter 3.5).

Error Handling

7.5 E00053: PCSHLL32.DLL not compatible

This error
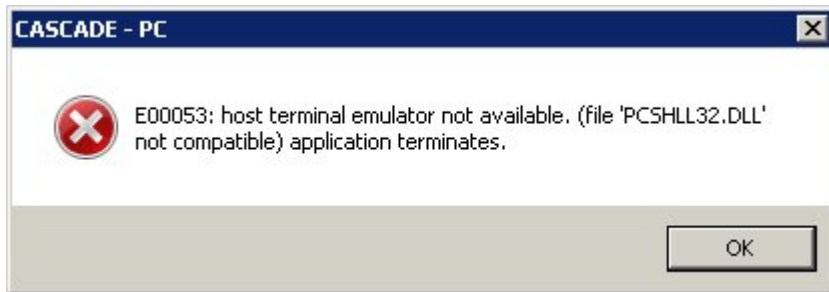
is caused by the following:

1. The CASCADE-PC software is 64 bit, but the EHLLAPI of the 3270 terminal emulation (file **PCSHLL32.DLL**) is 32 bit.

For possible and supported combinations please see: Installation Manual "Technical Specifications - Overview" chapter 2.4.

7.6 E00055: EHLLAPI error

This error

is caused by the following:

1. Communication between CASCADE-PC and the CASCADE-PC host has failed. After pressing the button **OK** all functional menu entries are deactivated. Please logon again to CASCADE-PC.

2. Please check whether several CASCADE-PC sessions are being run at once on your computer. Close all CASCADE-PC applications and re-start CASCADE-PC. Multiple CASCADE-PC sessions are not supported.

3. If you cannot logon to CASCADE-PC, close CASCADE-PC and then the terminal emulation. Now, first start the terminal emulation and, after the connection to the host of Deutsche Börse has been established successfully, start CASCADE-PC.

Error Handling

7.7 E00059, E00060: Incorrect Version

This error
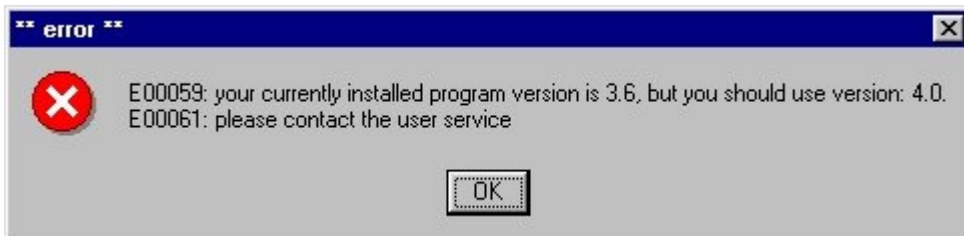
respectively
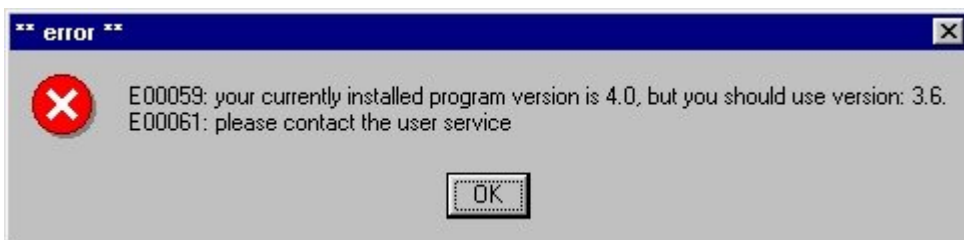
is caused by the following:

1. You are using an incorrect version of CASCADE-PC. Close CASCADE-PC. Please install the
    required CASCADE-PC version and logon again. (See also "Mandatory release
    implementation of CASCADE-PC version 10.5", chapter 1.6).
    Please also refer to chapter 3.1 (CASCADE-PC Installation Options) for information on
    parallel installation.

7.8 E00064: Incorrect EHLLAPI or Host Code Page

This error

is caused by the following:

1. It is absolutely mandatory that you change the **host code page** of the terminal emulation to "German" for CASCADE-PC so that special characters (such as § $ % & # @) can be displayed correctly. An incorrectly configured host code page may be the cause for this error. (See "Host Code Page" for IBM PCom chapter4.2 or for Host Explorer chapter 5.2).

2. It is absolutely mandatory that you change **the PC code page** of the terminal emulation to "German" for CASCADE-PC so that special characters (such as § $ % & # @) can be displayed correctly. An incorrectly configured PC code page may be the cause for this error. (See "PC Code Page" for IBM PCom chapter 4.3).

3. If the characters displayed on the screen are not the same as on the **keyboard**, incorrect settings in the Keyboard Setup of the IBM Personal Communication might be the source of the error. Select the correct entry to correspond with your keyboard layout.
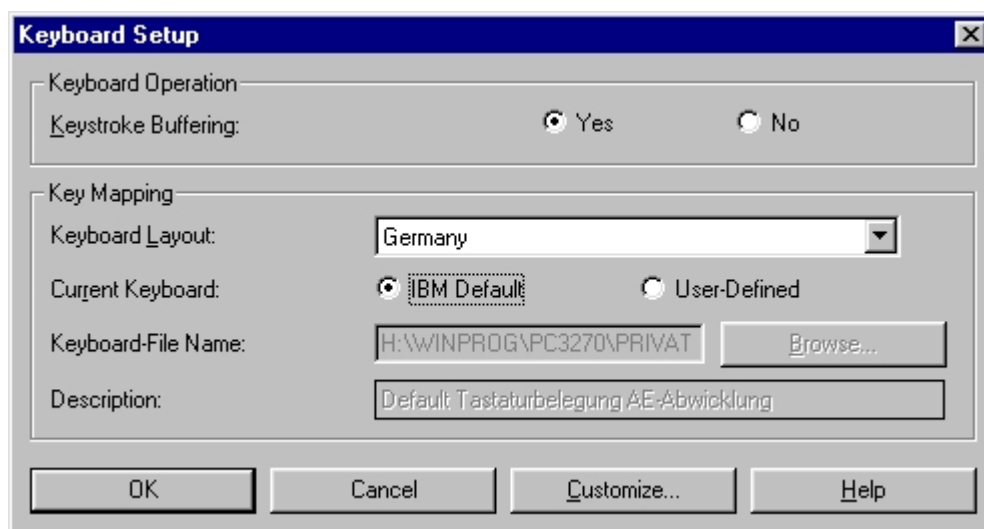
Error Handling

7.9 E00075, E00077: Printer and/or font not defined

This error

is caused by the following:

1. CASCADE-PC has no user definition for printer and font. The standard printer and font will be used.

   To define a printer or font, please choose **settings/options...** , make the desired selections and save settings.
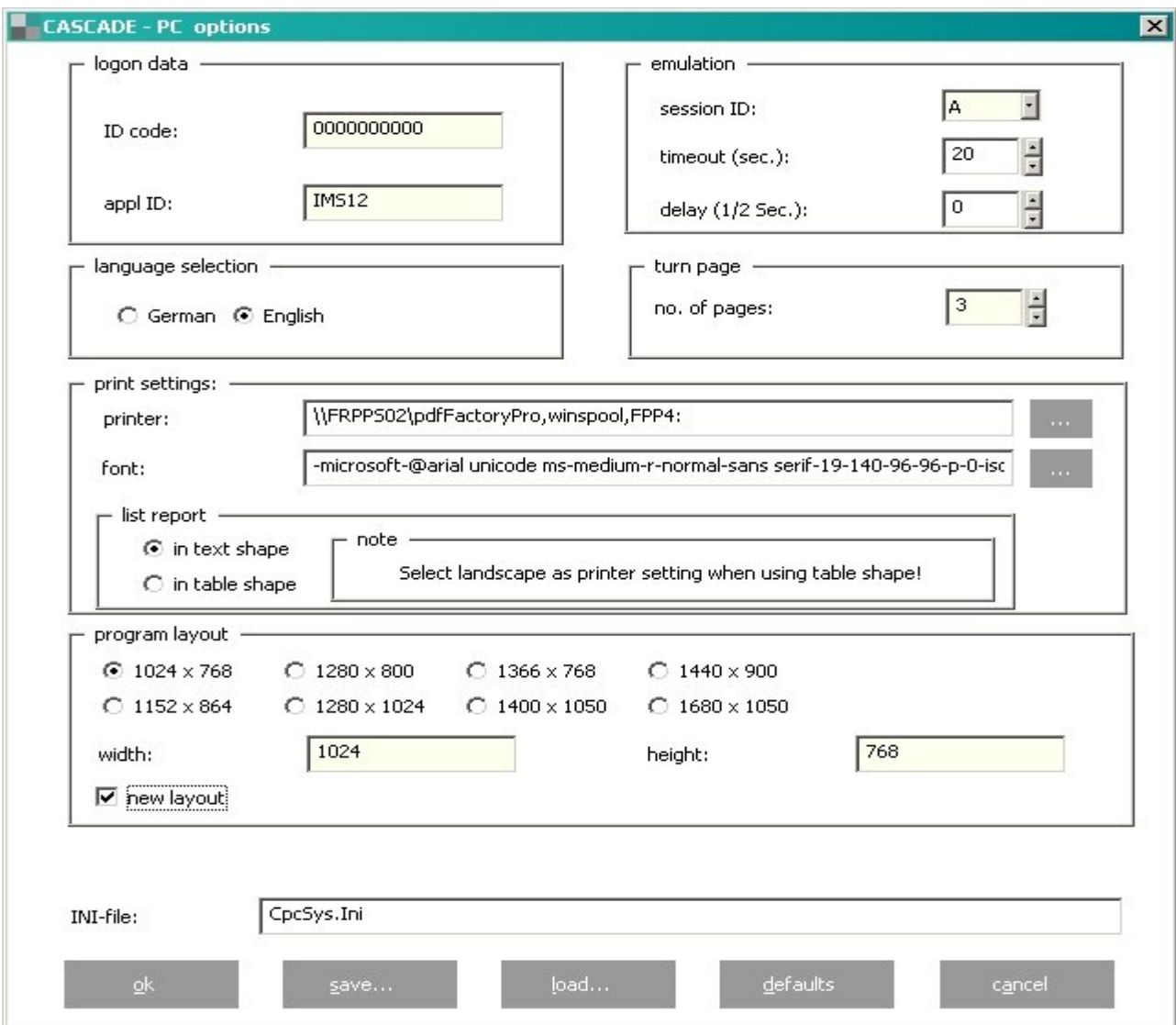
7.10 SY0006F: Action not allowed: xxxx

This error

is caused by the following:

1. A security release of the technical and functional CASCADE functionality is required for access to the CASCADE backend. To be able to use all CASCADE functions offered by CASCADE-PC, the required transactions / functions must be released for each user.

   Please note that after a password change performed by the Security Agent with instructor rights the modified user is in status "blocked". After the user changed his password the Security Agent with approver rights must release the user (status "released").

   Please note also that use of CASCADE-PC renders mandatory the release of the transactions **'MENU'** and **'KVAV PC'**.

Error Handling

7.11 Unknown Publisher

This error

is caused by the following:

1. An additional set of Data Execution Prevention security checks have been added to Windows XP SP2. These checks, known as software-enforced DEP, are designed to block malicious code that takes advantage of exception-handling mechanisms in Windows. Software-enforced DEP runs on any processor that can run Windows XP SP2. DEP can help block a class of security intrusions. Specifically, DEP can help block a malicious program in which a virus or other type of attack has injected a process with additional code and then tries to run the injected code. On a system with DEP, execution of the injected code causes an exception. Software-enforced DEP can help block programs that take advantage of exception-handling mechanisms in Windows.

   To prevent this message for CASCADE-PC Client/Server Installation, please deactivate the DEP checks as follows:

Please open the System Properties Window, choose tab "Advanced" and click on
<Performance - Settings>
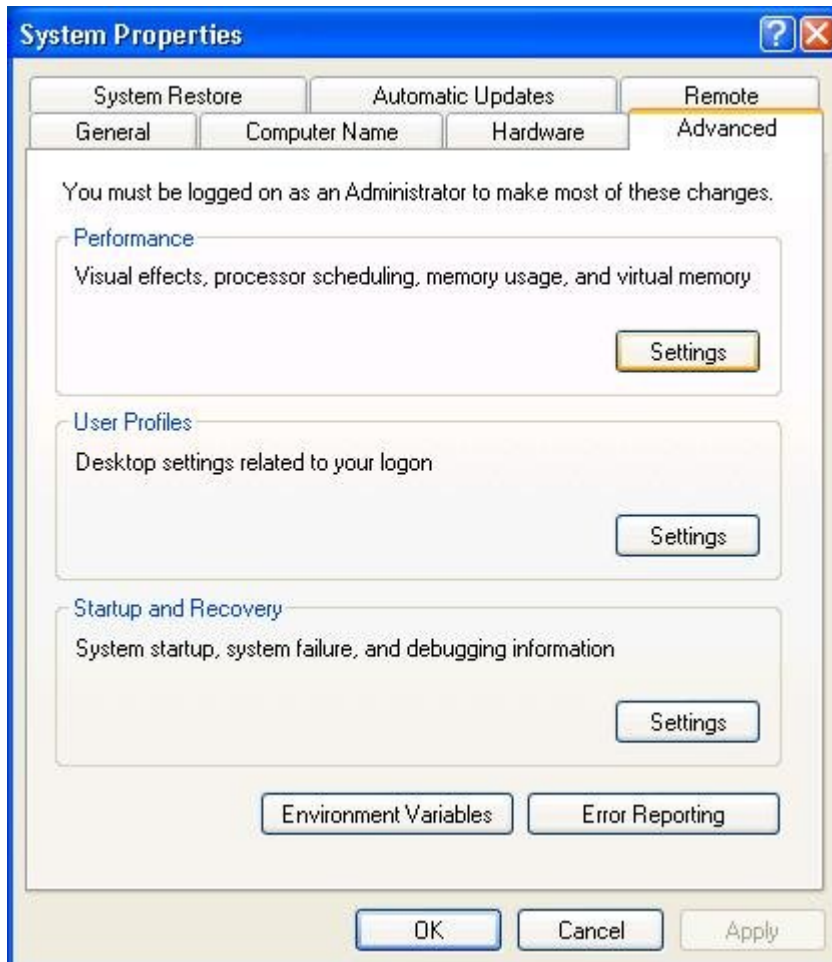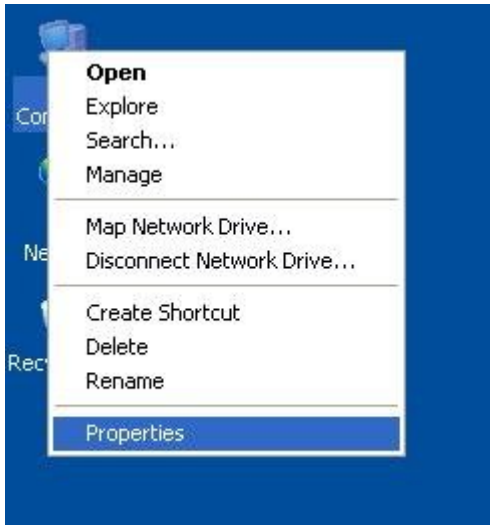
Error Handling

Please choose tab "Data Execution Prevention" and add CASCADE-PC (cpcmain.exe) as exception.
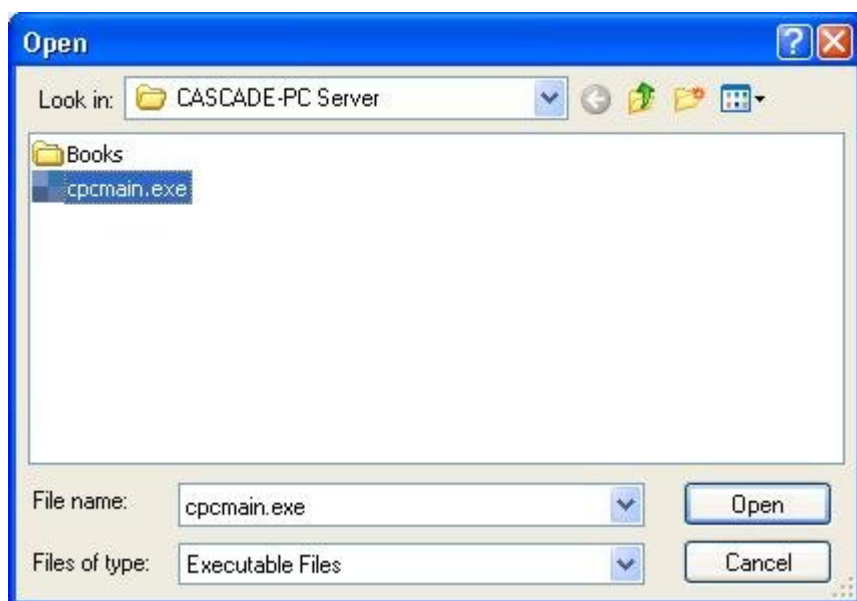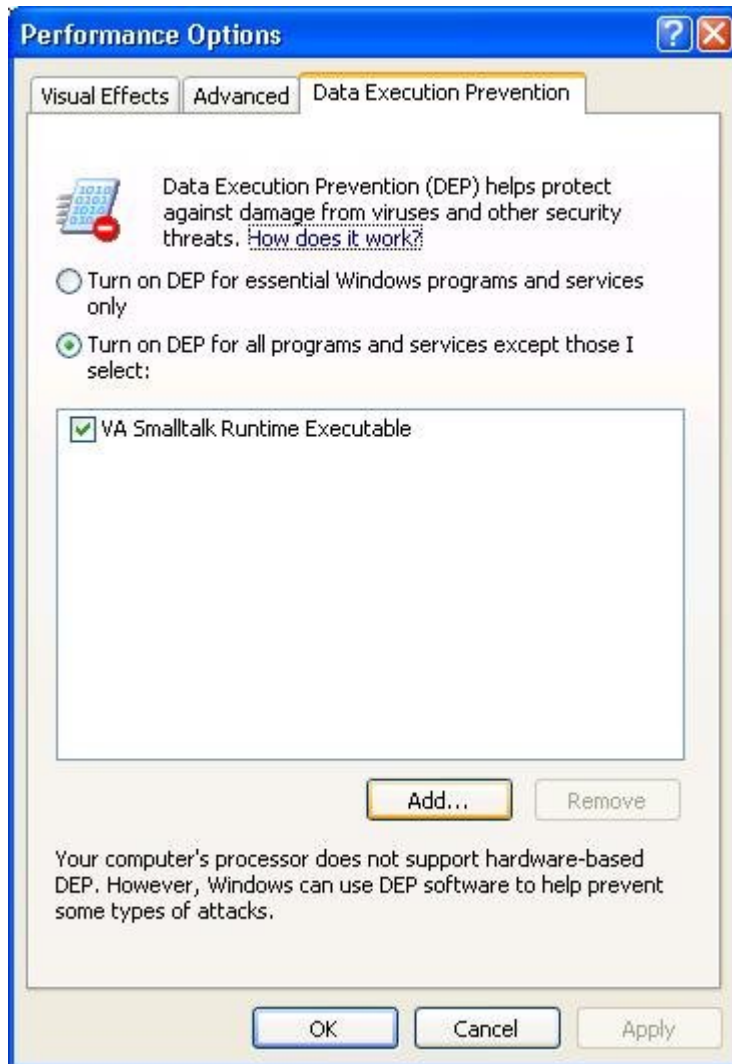
Error Handling

7.12 Primitive failed in: PlatformFunction (printer)

This error

> **"Primitive failed in: PlatformFunction>>**
> **#callWith:with:with:with:with:with: due to Floating point underflow"**

is caused by the following:

1. On checking the assigned printers CASCADE-PC can fail with the following error

   "Primitive failed in: PlatformFunction>> #callWith:with:with:with:with:with: due to Floating point underflow".

   CASCADE-PC will not start up. This is caused by the printer driver. In this case please contact the printer manufacturer, ask for an updated version of the printer driver and install it. Alternatively, remove all printers from the environment of the customer or CASCADE-PC can be started using the start parameter "-np" (no printer).

7.13 No blanks in command line allowed

Blanks in command line for file and directory names are not allowed

8. CASCADE backend transaction security codes

8.1 CASCADE-PC → CASCADE backend transaction security codes

CASCADE-PC Logon (KVAV PC)   *** mandatory for CASCADE-PC ***
CASCADE-PC Logon (MENU)   *** mandatory for CASCADE-PC ***
CASCADE-PC Change password (PWAD)   *** mandatory for CASCADE-PC ***

bank info: bank search: alpha search (KVAV IA)
bank info: processing/accounting information (KVAV ID)
bank info: system information (KVAV IS)
bank info: user information: English (DIIN IG)
bank info: user information: German (DIIN IK)

cash: information cash monitoring RTS: commercial bank money: information for buyer and seller (KVGC IG)
cash: information cash monitoring RTS: commercial bank money: information for seller (KVGC IV)

custody: display: all compensations per transaction type (KVGI KG)
custody: display: all mandatory non income corporate actions (KVGI AK)
custody: display: amount to be paid (KVGI AB)
custody: display: compensations (KVGI KO)
custody: display: income / redemptions (KVGI KE)
custody: display: non income corporate actions credit (KVGI EI)
custody: display: non income corporate actions debit (KVGI AU)
custody: display: non income corporate actions exchange (KVGI UM)
custody: display: non income corporate actions other (KVGI SO)
custody: display: provisions (KVGI PR)
custody: display: tax credit (KVGI SG)
custody: display: total income (KVGI UE)
custody: display: voluntary offers (KVGI GE)

messages: message journal: Clearstream Banking Frankfurt (CBF) - operational overview (MAMJ FU)
messages: message journal: Clearstream Banking Frankfurt (CBF) - rejected messages (MAMJ AB)
messages: message journal: Clearstream Banking Frankfurt (CBF) - technical overview (MAMJ TU)
messages: message journal: Clearstream Banking Luxemburg (CBL) - file transfer (MAMJ FL)

movements/positions: movements: internal cash movements (KVDU IC)
movements/positions: movements: booked movements (KVDU ID)
movements/positions: movements: booked movements custody (KVDU IN)
movements/positions: movements: movements statistics (KVDU IS)
movements/positions: positions: final positions (KVBA BB)
movements/positions: positions: positions registered owners (KVBA BW)

OTC: enter: conversion (KVEE UT)
OTC: enter: delivery (KVEE WE)
OTC: enter: merger of warrants (KVEE OZ)
OTC: enter: re-conversion (KVEE RT)
OTC: enter: receipt (KVEE MI)
OTC: enter: RS account transfer: enter (KVEE DV)
OTC: enter: RS position transfer: enter (KVEE BV)
OTC: enter: split of warrants (KVEE OT)
OTC: enter: TEFRA-D release (KVEE TD)
OTC: enter: TEFRA-D release: modification (KVEA AT)
OTC: pending instructions: block/unblock: block deliveries (KVAS SA)
OTC: pending instructions: block/unblock: block receipts (KVAS SI)

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OTC: pending instructions: block/unblock: unblock deliveries (KVAS FA)
OTC: pending instructions: block/unblock: unblock receipts (KVAS FI)
OTC: pending instructions: information: all orders to isin (KVAI CI)
OTC: pending instructions: information: Custody PFoD (KVAI AK)
OTC: pending instructions: information: delivery instructions (KVAI MA)
OTC: pending instructions: information: instruction no. (KVAI AN)
OTC: pending instructions: information: instruction type (KVAI AA)
OTC: pending instructions: information: instructions rejected in process (KVAI AD)
OTC: pending instructions: information: receipt instructions (KVAI MI)
OTC: pending instructions: information: reference (KVAI AR)
OTC: pending instructions: instruction history (KVAI HA)
OTC: pending instructions: link-service: link service CASCADE (KVAL LC)
OTC: pending instructions: match service: cancel matched instructions (KVAM RM)
OTC: pending instructions: match service: delivery instructions (KVAM MA)
OTC: pending instructions: match service: receipt instructions (KVAM MI)
OTC: pending instructions: modify/delete: deletion (KVAA ML)
OTC: pending instructions: modify/delete: modification (KVAA MA)
OTC: pending instructions: modify/delete: modification for Partial Settlement Indicator and Settlement Priority (KVAA AA)
OTC: unverified instructions: modify/delete/display (KVEB AN)
OTC: unverified instructions: modify/delete/display: delete (KVEA LN)
OTC: unverified instructions: modify/delete/display: delete (KVEB LN)
OTC: unverified instructions: modify/delete/display: list display: all instructions (KVEI AA)
OTC: unverified instructions: modify/delete/display: list display: all invalid instructions (KVEI AF)
OTC: unverified instructions: modify/delete/display: list display: credit bank (KVEI GK)
OTC: unverified instructions: modify/delete/display: list display: debit bank (KVEI LK)
OTC: unverified instructions: modify/delete/display: list display: file no. (KVEI PN)
OTC: unverified instructions: modify/delete/display: modification (KVEA AN)
OTC: unverified instructions: verify (KVEK VN)
OTC: unverified instructions: verify: display (KVEI NR)
OTC: unverified instructions: verify: full display: all instructions (KVEC VA)
OTC: unverified instructions: verify: full display: all instructions (KVEK VA)
OTC: unverified instructions: verify: full display: credit bank (KVEC VG)
OTC: unverified instructions: verify: full display: credit bank (KVEK VG)
OTC: unverified instructions: verify: full display: debit bank (KVEC VL)
OTC: unverified instructions: verify: full display: debit bank (KVEK VL)
OTC: unverified instructions: verify: full display: file no. (KVEC VP)
OTC: unverified instructions: verify: full display: file no. (KVEK VP)
OTC: unverified instructions: verify: full display: instruction no. (KVEC VN)
OTC: unverified instructions: verify: list display: all instructions (KVEK TA)
OTC: unverified instructions: verify: list display: all instructions (vaults) (KVEC TA)
OTC: unverified instructions: verify: list display: credit bank (KVEK TG)
OTC: unverified instructions: verify: list display: credit bank (vaults) (KVEC TG)
OTC: unverified instructions: verify: list display: debit bank (KVEK TL)
OTC: unverified instructions: verify: list display: debit bank (vaults) (KVEC TL)
OTC: unverified instructions: verify: list display: file no. (KVEK TP)
OTC: unverified instructions: verify: list display: file no. (vaults) (KVEC TP)
OTC: unverified instructions: verify: list display: instruction no. (KVEK TN)
OTC: unverified instructions: verify: list display: instruction no. (vaults) (KVEC TN)

RS: positions instructions: deletion (KVCB BL)
RS: positions instructions: display (KVCB BI)
RS: positions instructions: enter (KVCB BE)
RS: positions instructions: modification (KVCB BA)
RS: positions instructions: verify (KVCB BK)
RS: re-registration: delete (KVCU UL)
RS: re-registration: display (KVCU UI)
RS: re-registration: enter (KVCU UE)

CASCADE backend transaction security codes

RS: re-registration: modify (KVCU UA)
RS: re-registration: verify (KVCU UK)
RS: registration: delete (KVCE EL)
RS: registration: display (KVCE EI)
RS: registration: enter (KVCE EE)
RS: registration: modify (KVCE EA)
RS: registration: verify (KVCE EK)
RS: shareholder data: delete (KVCA AL)
RS: shareholder data: display (KVCA AI)
RS: shareholder data: enter (KVCA AE)
RS: shareholder data: modify (KVCA AA)
RS: shareholder data: verify (KVCA AK)

security: authorisations: copy administrator entitlements (SECU CS)
security: authorisations: copy user authorisations (SECU CO)
security: authorisations: delete all authorisations (SECU LT)
security: authorisations: modify/delete/display authorisations -detail- (SECU IT)
security: authorisations: modify/delete/display authorisations -overview- (SECU ET)
security: authorisations: verify authorisations -detail- (SECU FR)
security: authorisations: verify authorisations -overview- (SECU FR)
security: newsletter… (SECU IR)
security: user data: create new user (SECU EB)
security: user data: delete user (SECU LB)
security: user data: modify user (SECU AB)
security: user data: user information (SECU IB)
security: user data: user logon violations (SECU IF)
security: user data: user member directory (SECU IU)

vaults: display: instruction history: deposits (KPHI HE)
vaults: display: instruction history: new admission without certificate (KPHI HO)
vaults: display: instruction history: withdrawals (KPHI HA)
vaults: display: positions of certificates: certificates (KCKI IH)
vaults: display: positions of certificates: search of certificate numbers (KCKI IS)
vaults: enter (CBF Vaults): new admission/ mark up (KVEW NV)
vaults: enter (CBF Vaults): withdrawal (KVEW AL)

8.2   CASCADE backend transaction security codes → CASCADE-PC

MENU		**CASCADE-PC Logon**	*** mandatory for CASCADE-PC ***
KVAV	**PC**	**CASCADE-PC Logon**	*** mandatory for CASCADE-PC ***
PWAD		**CASCADE-PC Change password**	*** mandatory for CASCADE-PC ***

DIIN	IG	bank info: user information: English
DIIN	IK	bank info: user information: German
KCKI	IH	vaults: display: positions of certificates: certificates
KCKI	IS	vaults: display: positions of certificates: search of certificate numbers
KPHI	HA	vaults: display: instruction history: withdrawals
KPHI	HE	vaults: display: instruction history: deposits
KPHI	HO	vaults: display: instruction history: new admission without certificate
KVAA	AA	OTC: pending instructions: modification for Partial Settlement Indicator and Settlement Priority
KVAA	MA	OTC: pending instructions: modify/delete: modification
KVAA	ML	OTC: pending instructions: modify/delete: deletion
KVAI	AA	OTC: pending instructions: information: instruction type
KVAI	AD	OTC: pending instructions: information: instructions rejected in process
KVAI	AK	OTC: pending instructions: information: Custody PFoD
KVAI	AN	OTC: pending instructions: information: instruction no.
KVAI	AR	OTC: pending instructions: information: reference
KVAI	CI	OTC: pending instructions: information: all orders to isin
KVAI	HA	OTC: pending instructions: instruction history
KVAI	MA	OTC: pending instructions: information: delivery instructions
KVAI	MI	OTC: pending instructions: information: receipt instructions
KVAL	LC	OTC: pending instructions: link-service: link service CASCADE
KVAM	MA	OTC: pending instructions: match service: delivery instructions
KVAM	MI	OTC: pending instructions: match service: receipt instructions
KVAM	RM	OTC: pending instructions: match service: cancel matched instructions
KVAS	FA	OTC: pending instructions: block/unblock: unblock deliveries
KVAS	FI	OTC: pending instructions: block/unblock: unblock receipts
KVAS	SA	OTC: pending instructions: block/unblock: block deliveries
KVAS	SI	OTC: pending instructions: block/unblock: block receipts

CASCADE backend transaction security codes

KVAV	IA	bank info: bank search: alpha search
KVAV	ID	bank info: processing/accounting information
KVAV	IS	bank info: system information
KVBA	BB	movements/positions: positions: final positions
KVBA	BW	movements/positions: positions: positions registered owners
KVCA	AA	RS: shareholder data: modify
KVCA	AE	RS: shareholder data: enter
KVCA	AI	RS: shareholder data: display
KVCA	AK	RS: shareholder data: verify
KVCA	AL	RS: shareholder data: delete
KVCB	BA	RS: positions instructions: modification
KVCB	BE	RS: positions instructions: enter
KVCB	BI	RS: positions instructions: display
KVCB	BK	RS: positions instructions: verify
KVCB	BL	RS: positions instructions: deletion
KVCE	EA	RS: registration: modify
KVCE	EE	RS: registration: enter
KVCE	EI	RS: registration: display
KVCE	EK	RS: registration: verify
KVCE	EL	RS: registration: delete
KVCU	UA	RS: re-registration: modify
KVCU	UE	RS: re-registration: enter
KVCU	UI	RS: re-registration: display
KVCU	UK	RS: re-registration: verify
KVCU	UL	RS: re-registration: delete
KVDU	IC	movements/positions: movements: internal cash movements
KVDU	ID	movements/positions: movements: booked movements
KVDU	IN	movements/positions: movements: booked movements custody
KVDU	IS	movements/positions: movements: movements statistics
KVEA	AN	OTC: unverified instructions: modify/delete/display: modification
KVEA	AT	OTC: enter: TEFRA-D release: modification
KVEA	LN	OTC: unverified instructions: modify/delete/display: delete
KVEB	AN	OTC: unverified instructions: modify/delete/display
KVEB	LN	OTC: unverified instructions: modify/delete/display: delete
KVEC	TA	OTC: unverified instructions: verify: list display: all instructions (vaults)
KVEC	TG	OTC: unverified instructions: verify: list display: credit bank (vaults)
KVEC	TL	OTC: unverified instructions: verify: list display: debit bank (vaults)
KVEC	TN	OTC: unverified instructions: verify: list display: instruction no. (vaults)
KVEC	TP	OTC: unverified instructions: verify: list display: file no. (vaults)
KVEC	VA	OTC: unverified instructions: verify: full display: all instructions
KVEC	VG	OTC: unverified instructions: verify: full display: credit bank
KVEC	VL	OTC: unverified instructions: verify: full display: debit bank
KVEC	VN	OTC: unverified instructions: verify: full display: instruction no.
KVEC	VP	OTC: unverified instructions: verify: full display: file no.
KVEE	BV	OTC: enter: RS position transfer: enter
KVEE	DV	OTC: enter: RS account transfer: enter
KVEE	MI	OTC: enter: receipt
KVEE	OT	OTC: enter: split of warrants
KVEE	OZ	OTC: enter: merger of warrants
KVEE	RT	OTC: enter: re-conversion
KVEE	TD	OTC: enter: TEFRA-D release
KVEE	UT	OTC: enter: conversion

KVEE	WE	OTC: enter: delivery
KVEI	AA	OTC: unverified instructions: modify/delete/display: list display: all instructions
KVEI	AF	OTC: unverified instructions: modify/delete/display: list display: all invalid instructions
KVEI	GK	OTC: unverified instructions: modify/delete/display: list display: credit bank
KVEI	LK	OTC: unverified instructions: modify/delete/display: list display: debit bank
KVEI	NR	OTC: unverified instructions: verify: display
KVEI	PN	OTC: unverified instructions: modify/delete/display: list display: file no.
KVEK	TA	OTC: unverified instructions: verify: list display: all instructions
KVEK	TG	OTC: unverified instructions: verify: list display: credit bank
KVEK	TL	OTC: unverified instructions: verify: list display: debit bank
KVEK	TN	OTC: unverified instructions: verify: list display: instruction no.
KVEK	TP	OTC: unverified instructions: verify: list display: file no.
KVEK	VA	OTC: unverified instructions: verify: full display: all instructions
KVEK	VG	OTC: unverified instructions: verify: full display: credit bank
KVEK	VL	OTC: unverified instructions: verify: full display: debit bank
KVEK	VN	OTC: unverified instructions: verify
KVEK	VP	OTC: unverified instructions: verify: full display: file no.
KVEW	AL	vaults: enter (CBF Vaults): withdrawal
KVEW	NV	vaults: enter (CBF Vaults): new admission/ mark up
KVGC	IG	cash: information cash monitoring RTS: commercial bank money: information for buyer and seller
KVGC	IK	cash: information cash monitoring RTS: commercial bank money: information for buyer
KVGC	IV	cash: information cash monitoring RTS: commercial bank money: information for seller
KVGI	AB	custody: display: amount to be paid
KVGI	AK	custody: display: all mandatory non income corporate actions
KVGI	AU	custody: display: non income corporate actions debit
KVGI	EI	custody: display: non income corporate actions credit
KVGI	GE	custody: display: voluntary offers
KVGI	KE	custody: display: income / redemptions
KVGI	KG	custody: display: all compensations per transaction type
KVGI	KO	custody: display: compensations
KVGI	PR	custody: display: provisions
KVGI	SG	custody: display: tax credit
KVGI	SO	custody: display: non income corporate actions other
KVGI	UE	custody: display: total income
KVGI	UM	custody: display: non income corporate actions exchange
MAMJ	AB	messages: message journal: Clearstream Banking Frankfurt (CBF) - rejected messages
MAMJ	FL	messages: message journal: Clearstream Banking Luxemburg (CBL) - file transfer
MAMJ	FU	messages: message journal: Clearstream Banking Frankfurt (CBF) - operational overview
MAMJ	TU	messages: message journal: Clearstream Banking Frankfurt (CBF) - technical overview

CASCADE backend transaction security codes

SECU	AB	security: user data: modify user
SECU	CO	security: authorisations: copy user authorisations
SECU	CS	security: authorisations: copy administrator entitlements
SECU	EB	security: user data: create new user
SECU	ET	security: authorisations: modify/delete/display authorisations -overview-
SECU	FR	security: authorisations: verify authorisations -detail-
SECU	FR	security: authorisations: verify authorisations -overview-
SECU	IB	security: user data: user information
SECU	IF	security: user data: user logon violations
SECU	IR	security: newsletter…
SECU	IT	security: authorisations: modify/delete/display authorisations -detail-
SECU	IU	security: user data: user member directory
SECU	LB	security: user data: delete user
SECU	LT	security: authorisations: delete all authorisations

CASCADE backend transaction security codes

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