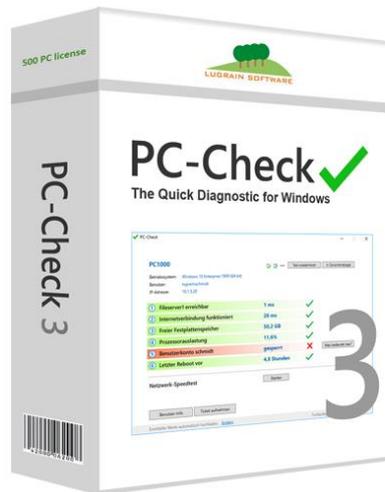


PC-Check 3.0

The Quick Diagnosis Software for Windows

Installation and Configuration Guide



Installation and Configuration Guide

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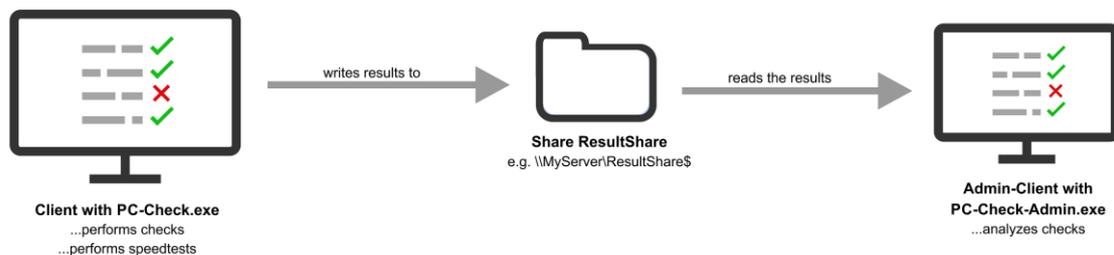
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How it works

PC-Check displays important system parameters within seconds and in an easy-to-understand way to the user and the ServiceDesk employee (hotline) in order to assess the condition of a computer. The checks can be customised to your company and provide valuable troubleshooting advice.

PC-Check runs as a Windows program with user rights under Windows 7, Windows 8, Windows 10 and Windows 11 (32 or 64 bit). The transfer of the obtained information to the ServiceDesk employee is done via a simple Windows share, so no server is needed and no exceptions have to be added to the Windows firewall.



Installation

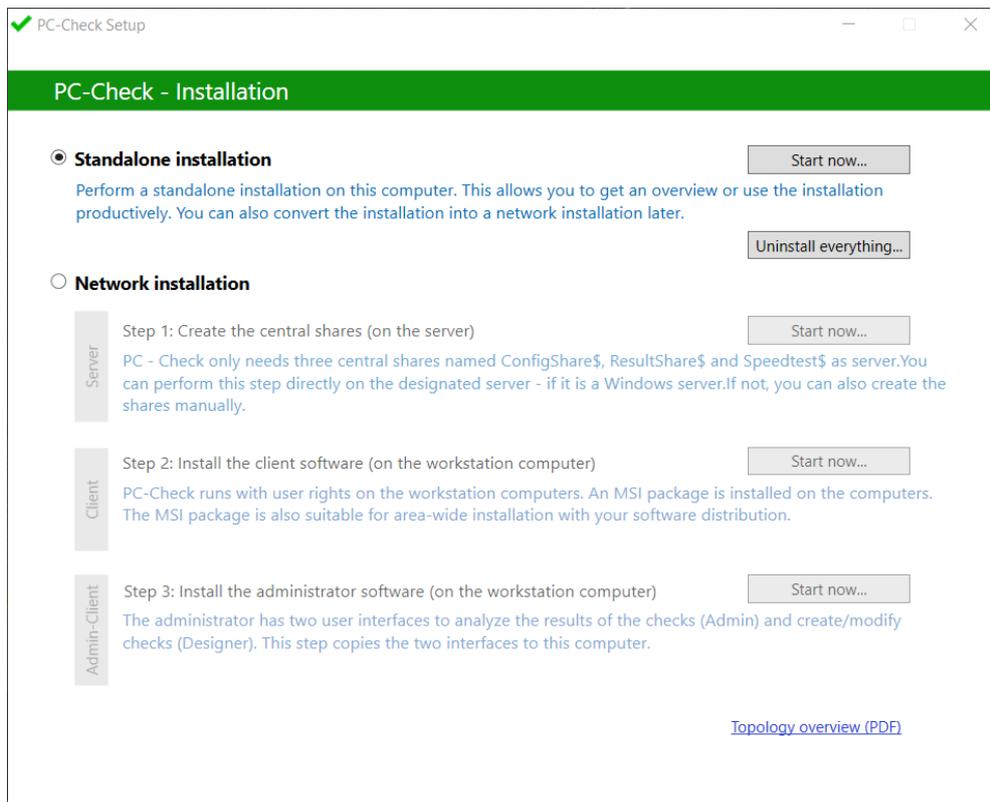
System Requirements

Clients: The client software as well as the Admin and Designer software require at least .NET Framework 4.0.

Server: Since the server functionality only consists of three Windows shares that all users must be able to access (see "Hardening the system" for details), any Windows server can be used without restriction. The use of a filer or NAS device is possible too.

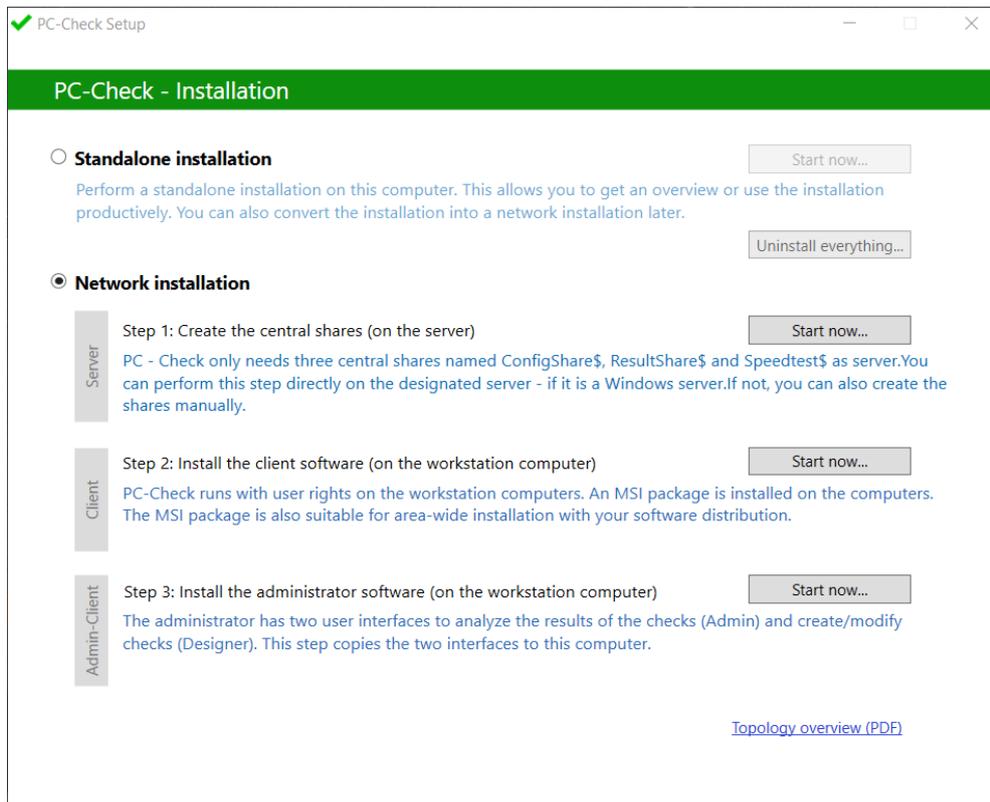
Standalone installation

The standalone installation will install PC-Check Client, Admin and Designer on one computer. This installation is best suitable for getting used to the functionality of PC-Check. However, you can also use the standalone installation productively, for instance on standalone-computers. Run the **Setup.exe** file with administrative privileges on a client computer and select "Standalone installation".



Network installation

With network-installation, the three functions PC-Check Client, Admin and Designer will be distributed to different computers. The client is usually installed on all client computers in your company. The PC-Check Admin is required by ServiceDesk employees and administrators to analyse performed checks. The PC-Check Designer is needed to modify the provided checks and adapt them to your needs. Run the **Setup.exe** file with administrator rights and select "Network installation".



Step 1 - Server installation (central shares)

Only three Windows shares are required as servers, which can be located on one (or more) servers of your choice.

Start Setup.exe and perform step 1. This creates the following three shares:

ConfigShare\$

The share from which the client fetches its configurations (checks). On this share the group EVERYONE needs read permissions and the administrators who create configurations with the PC-Check Designer need read/write permissions.

ResultShare\$

The share to which the results of the checks are written. The group EVERYONE needs read/write permissions.

Speedtest\$

The clients can perform the speed test via this share. This is a local speed test within your network. Files are copied from the client to this share and back again. The network speed (bandwidth) in Mbit/s. is determined from the duration.

Details on the permissions of the shares can be found in the section „Security – Hardening the system“.

Step 2 - Client installation

This step executes the file PC-Check.msi. During the installation, the target path and the names of the three shares from step 1 are requested. You can also enter or change the

names of the shares later in the PC-Check.ini file. You need a valid licence key for the installation, which is preset.

Testing of the Client Installation

Start the "PC-Check" shortcut located on the desktop. The supplied standard checks will be executed.

Silent Installation

You can perform the installation without user intervention as follows:

```
msiexec.exe /i PC-Check.msi /qb INSTALLDIR="C:\Program Files (x86)\PC-Check" LICENSEKEY=AAAAA-BBBBB-CCCCC-DDDDD-EEEE  
PCCHECK_CONFIG_SHARE=\\<Server>\ConfigShare$  
PCCHECK_RESULT_SHARE=\\<Server>\ResultShare$  
PCCHECK_SPEEDTEST_SHARE=\\<Server>\Speedtest$  
PCCHECK_SPEEDTEST_DELAY=60  
SHOWUPLOADOPTIONS=yes|no  
UPLOADOPTION=yes|no|ask  
LAUNCHER_STARTUP=yes|no
```

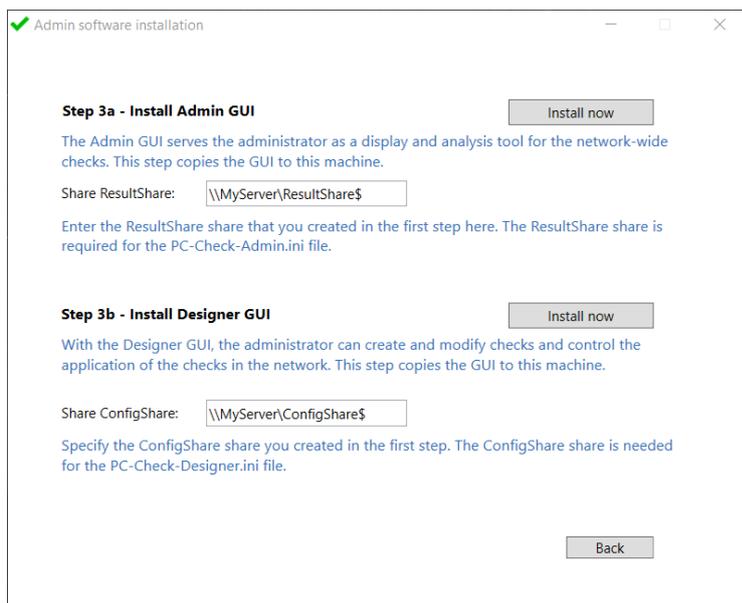
Enter your license key behind **LICENSEKEY=**. You can find the license key for a free private user licence as a text file in the download.

The uninstallation is done with: **msiexec /x PC-Check.msi /qb** or **msiexec /x PC-Check.msi /qn** (without window)

Step 3 - Installing the admin software

The Admin software is used to view and analyse checks performed by clients.

Enter the previously created share in "Share ResultShare". Click on "Install now".



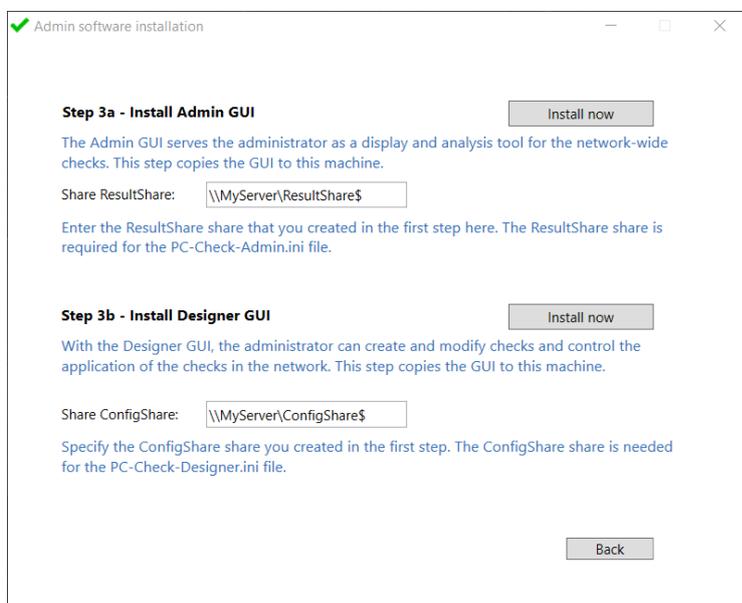
This process copies the PC-Check-Admin.exe file and two configuration files to the PC-Check directory (C:\Program Files (x86)\PC-Check or C:\Program Files\PC-Check).

Note: The path for the ResultShare share can be changed later in the PC-Check-Admin.ini file as well.

Installing the Designer-Software

The Designer software enables you to create new checks that will be used by the clients. The checks are saved in configuration files and made available to the clients via the ConfigShare\$ share.

Enter the previously created share in "Share ConfigShare". Click on "Install now".



This process copies the PC-Check-Designer.exe file and two configuration files to the PC-

Check directory (C:\Program Files (x86)\PC-Check or C:\Program Files\PC-Check).

Note: The path for the ConfigShare share can also be changed in the PC-Check-Designer.ini file later on.

Uninstallation

The client software can be uninstalled via Control Panel / Programs and Features.

PC-Check Admin

The admin interface allows the administrator to immediately analyse checks performed by the user without having to establish a remote session. All checks performed network-wide are immediately visible in the admin interface - they automatically appear at the top of the overview on the left. This eliminates the need to ask for the PC name and the user name.

The screenshot displays the PC-Check Admin interface. On the left, a table lists various computers and their associated users and check dates. The main area shows a detailed report for PC1076, including system information (Windows 10 Enterprise 20H2, user lugrain\smith, IP 10.1.5.20) and a list of 12 checks. Check 4, 'Internet connection', is highlighted in red and marked as 'not responding'. Below the checks, network speedtest results are shown: Download at 88.4 Mbit/s and Upload at 87.8 Mbit/s. The interface also includes a 'Clipboard' button and an 'Admin' sidebar.

Computer	User	Date
PC1076	smith	2022-04-16 14:39:54
PC1076	smith	2022-04-16 10:28:24
PC1028	bellenbaum	2022-03-31 16:01:19
PC1025	boyle	2022-03-31 09:22:33
PC0962	cromwell	2022-03-31 07:46:45
PC1008	hayman	2022-03-31 07:45:30
PC1068	marshal	2022-03-31 07:41:25
PC1076	smith	2022-03-30 16:00:53
PC0962	cromwell	2022-03-30 16:00:38
PC1076	miller	2022-03-29 12:09:46
PC1028	bellenbaum	2022-03-29 12:09:19
PC1028	bellenbaum	2022-03-29 12:08:57
PC1076	miller	2022-03-29 12:08:33
PC1076	miller	2022-03-29 10:16:11
PC1068	roberts	2022-03-28 08:32:32
PC1076	miller	2022-03-27 15:07:03
PC1008	hayman	2022-03-25 19:15:40
PC1068	marshal	2022-03-25 19:14:53
PC1068	scott	2022-03-25 19:11:18
PC1068	roberts	2022-03-25 19:09:19
PC1076	miller	2022-03-25 19:03:25
PC0962	roberts	2022-03-25 19:00:38
PC1076	miller	2022-03-25 18:58:34
PC1068	marshal	2022-03-25 11:59:05
PC0962	cromwell	2022-03-25 11:39:12
PC1028	bellenbaum	2022-03-02 10:24:05

PC1076 Clipboard

Operating system: Windows 10 Enterprise 20H2 (64 bit)
User: lugrain\smith
IP address: 10.1.5.20
Date: Saturday, April-16-2022 14:39:54

Check ID	Check Name	Value	Status	Action
1	Free RAM	1729 MB	✓	Explanation
2	Free disk space	58,7 GB	✓	Explanation
3	Processor load	36,3%	✓	Explanation
4	Internet connection	not responding	✗	Explanation
5	Last reboot	2,5 hours	✓	Explanation
6	Ping to default gateway	1 ms	✓	Explanation
7	Ping on fileserver	1 ms	✓	Explanation
8	User account smith	OK	✓	Explanation
9	Service Printer Spooler running	running	✓	Explanation
10	Exchange Server responding (Port 443)	2 ms	✓	Explanation
11	Oracle Server responding (Port 1521)	3 ms	✓	Explanation
12	CRM Server responding (Port 18443)	2 ms	✓	Explanation

Network speedtest
DOWNLOAD 88,4 Mbit/s.
UPLOAD 87,8 Mbit/s.

Buttons: Benutzer-Info, Ticket eröffnen

Bottom bar: Ping, FastViewer, Request Check, Account Info, DeviceTool

Footer: \\Fileserver1\ResultShare\$ Computer: PC1076 User: smith

Based on the results, the administrator can get an idea of the condition of the user's computer at a glance. Using the "To Clipboard" button, the administrator can copy the check's results to the clipboard in order to pass them on or store them in a support-ticket.

PC-Check-Admin.ini

The file PC-Check-Admin.ini contains entries which refer to the local admin GUI.

Most important is the entry for the directory where result files of the clients are stored:

ResultShare=\\MyServer\ResultShare\$

The following entry can be set in a terminal server environment:

TerminalServerOptimization=yes

The entry causes the user name to be passed on when the administrator requests checks. If the user name were not transferred, all users of a terminal server would execute checks simultaneously.

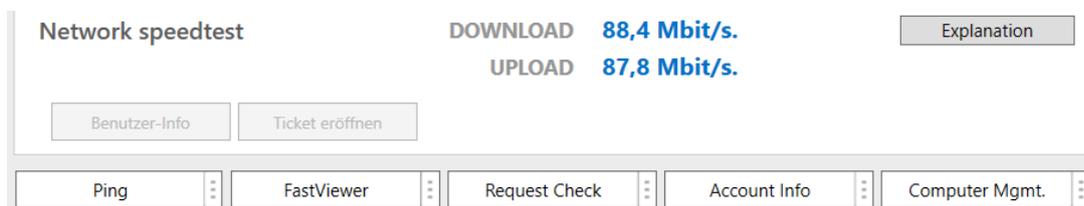
DomainSupport=no

By default, all domain users are retrieved in a domain in order to be able to perform admin actions (5 buttons) with them. With this entry, domain users are not read and the button for user selection is deactivated.

Buttons

Up to 5 freely definable buttons can be created for the administrator. The variables %computername% and %username% are available.

Example:



These buttons can be created with the following configuration in the PC-Check-Admin.ini:

Button1Text=Ping
Button1Function=RunProgram
Button1Program=ping.exe -t %computername%

Button2Text=FastViewer
Button2Function=RunProgram
Button2Program="C:\Program Files (x86)\FastViewer\FastMaster.exe"
/reautoconnect:%computername%

Button3Text=Request Check
Button3Function=RunProgram
Button3Program=<requestcheck>

Button4Text=Account information
Button4Function=RunProgram
Button4Program=<ShowUserInfo>

Button5Text=Computer Mgmt.
Button5Function=RunProgram
Button5Program=compmgmt.msc /computer=%computername%

Special built-in commands:

<ShowUserInfo>

Displays details of the user account.

<RequestCheck>

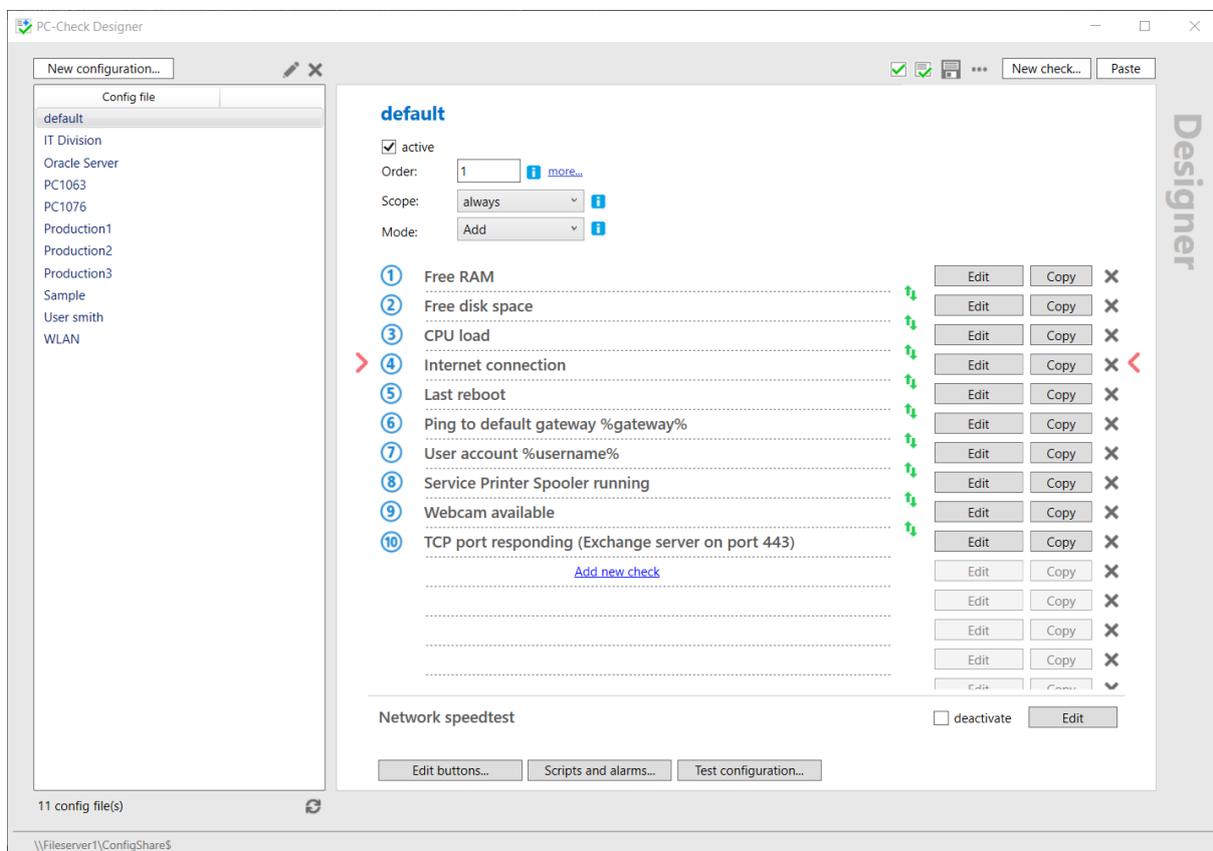
Requests a check from the PC or user in question. Works only if the requesting admin has write permissions to the **\\<Server>\ResultShare\$\Launcher** directory and the **PC-Check-Launcher.exe** process is started on the client.

<ShowDeviceTool>

Opens the DeviceTool. The DeviceTool is a very useful, free remote device manager - also a software of Lugin Software. The newest DeviceTool version can be downloaded from www.devicetool.de and must be located in the C:\Program Files (x86)\PC-Check\bin directory of the admin client.

PC-Check-Designer

The Designer GUI can be used to create new configurations and modify and extend existing ones. A configuration consists of a maximum of 16 checks that are executed one after the other.



Creating a new configuration

1. Click on "New configuration..." and enter any name for your configuration.
2. Click on "New check..." to get a selection of all existing check types. Select the desired type.
3. Configure the check according to your needs.

The name of your configuration file does not matter. Whether the configuration file is used or not is controlled by "Scope".

Order

If several checks are active for a user/computer, the configurations are applied in ascending order as specified here. The configuration with the number 1 is executed first, the configuration with the number 999 last. More than 16 checks are not executed. See [examples](#) below.

Scope

Specify the validity range of this configuration here. This gives you the option of providing individual configurations and still managing the configurations centrally. See [examples](#) below.

Always

This configuration is always valid, as long as the checkmark is set to "active".

User

Specify here one or more users (separated by commas) for whom this configuration should apply. Example: smith, johnson, williams. Domain\smith is also possible.

Computer

Specify here one or more computers (separated by comma) for which this configuration is to apply. Example: PC1734, NB0344

AD-Groups

Specify here one or more AD groups (separated by comma) for which this configuration should apply. Example: Domain\Marketing, Domain\Accounting

IP addresses

Enter one or more IP addresses (separated by comma) for which this configuration is to apply. For the IPv4 address scope, you can use wildcard * at the end. Example: 10.5.1.1 or 10.30.1.*

File exists

This configuration is valid if a specific local file exists on the machine. Specify the file name with path. Multiple files can also be specified separated by commas. As soon as one of them exists, the configuration is valid and will be applied.

The configuration option gives you a great flexibility. For example, you can only apply checks to the client if a certain software is installed. Example: C:\Program Files (x86)\MyCRM\MyCRM.exe

Mode

Determine whether these checks should be added to other checks from the client's point of view or whether they should replace other checks. This allows you - if desired - to design your checks very individually. For example, if you want to use the same configuration for all PCs in the company and only a different one for one computer, use "Replace" here. Also, set the order number higher than that of the default configuration. Details are explained in the examples below.

Variables

General variables that are always available and can be used in all texts:

`%username%` - username of the logged in user

`%computername%` - own computer name

`%gateway%` - IP address of the default gateway (router)

Additionally, there are variables that are only available in certain checks (see below).

Available Checks

User account

Create a check that verifies the account of the currently logged in user. Possible results are "OK", "locked", "password expired" or "account expired". You also have the possibility to offer the user account check via a button, see [Edit buttons](#).

Available variables:

`%result%` - Displays the result

`%username%` - Username of the logged in user

File available

Create a check that verifies if a specific file exists. Specify the file name including the path.

Available variables:

`%result%` - Displays the result

`%filename%` - File name

File content

Create a check that checks if a specific file contains a specific text. Specify the file name including the path. In the File content field, specify the text whose presence in the file should be checked. Case does not matter. If you want to search for several words, you can concatenate them with && or ||.

Available variables:

`%result%` - Displays the result

`%filename%` - File name

`%filecontent%` - Text that is searched for

Service running

Create a check that verifies if a specific Windows service is running. The display name or the short name can be used here.

Available variables:

`%result%` - Displays the result

`%service%` - Name of the service

`%computername%` - Your own computer name

Event exists

Create a check that checks if a specific event or several events exist in the Windows Event Viewer (Eventlog). Specify one or more event IDs (separated by commas) to search for in the Event Viewer. Use the asterisk * for all. Also specify the log file (Application / Security / System) and the time period in hours to be examined.

Available variables:

%result% - Displays the result
%resultdetails% - Found event with all information
%eventids% - IDs to search for
%eventlog% - Type of event log (Application / Security / System)
%eventseverity% - Severity level (information / warning / error)
%eventtimerange% - Time period in hours

Free RAM

Create a check that checks the free RAM.

Available variables:

%result% - Displays the result
%warningvalue% - The value above which a warning is generated (yellow exclamation mark)
%errorvalue% - The value above which an error is generated (red X)
%computername% - Your own computer name

Free disk space

Create a check that checks the free disk space. You can specify the desired drive (C:, D:, etc.).

Available variables:

%result% - Displays the result
%warningvalue% - The value above which a warning is generated (yellow exclamation mark)
%errorvalue% - The value above which an error is generated (red X)
%computername% - Your own computer name
%drive% - The drive letter

Device exists

Create a check that verifies that a specific device is present and turned on. Use a name from the Device Manager or from the DeviceTool. You can use the display name, the device instance path, or any other value. For example, "HP HD Webcam [Fixed]" or "USB\VID_0461&PID_4DFE".

Available variables:

%result% - Displays the result
%device% - Name of the device
%computername% - Your own computer name

Internet connection works

Create a check that checks the Internet connection. Works (so far) only for Internet access without proxy server.

Available variables:

%result% - Displays the result
%url1% - Name of the first URL
%url2% - Name of the second URL
%url3% - Name of the third URL
%warningvalue% - The value above which a warning is generated (yellow exclamation mark)
%errorvalue% - The value above which an error is generated (red X)
%username% - Username of the logged in user

Drives available

Create a check that verifies whether specific local or network drives are available. Specify multiple drives separated by commas. Example: D:,O:,S:

Available variables:

`%result%` - Displays the result
`%drives%` - Checked drives
`%computername%` - Your own computer name

Last reboot

Create a check that verifies when the computer was last booted. A FastBoot is also registered.

Available variables:

`%result%` - Displays the result
`%warningvalue%` - The value above which a warning is generated (yellow exclamation mark)
`%errorvalue%` - The value above which an error is generated (red X)
`%computername%` - Your own computer name

Member of AD group

Create a check that verifies whether the logged-in user is a member of a specific Active Directory group.

Available variables:

`%result%` - Displays the result
`%adgroup%` - Name of the AD group
`%username%` - Username of the logged in user

Member of local administrator group

Create a check that verifies that the logged-in user is a member of the local Administrators group. Note that PC-Check must actually be started with "Run as administrator" to get the correct result here.

Available variables:

`%result%` - Displays the result
`%username%` - Username of the logged in user

Ping

Create a check that performs an IPv4 ping on a network address.

Available variables:

`%result%` - Displays the result
`%host%` - Ping target
`%warningvalue%` - The value above which a warning is generated (yellow exclamation mark)
`%errorvalue%` - The value above which an error is generated (red X)

Ping to default gateway

Create a check that pings the default gateway (router).

Available variables:

%result% - Displays the result

%gateway% - The IP address of the default gateway (router)

%warningvalue% - The value above which a warning is generated (yellow exclamation mark)

%errorvalue% - The value above which an error is generated (red X)

Process exists

Create a check that verifies that a particular process is running (Task Manager)

Available variables:

%result% - Displays the result

%process% - Name of the process

Processor load

Create a check that verifies the current processor load.

Available variables:

%result% - Displays the result

%warningvalue% - The value above which a warning is generated (yellow exclamation mark)

%errorvalue% - The value above which an error is generated (red X)

%computername% - Your own computer name

Registry-Value

Create a check that verifies if a registry entry has a certain value.

Available variables:

%result% - Displays the result

%registrykey% - Registration key

%registryentry% - Registration entry

%registryexpectedvalue% - Expected value

TCP port responds

Create a check that verifies whether a device on the network is responding on a particular TCP port.

Available variables:

%result% - Displays the result

%host% - The checked host

%tcpport% - TCP port

%username% - Username of the logged in user

Universal Check

Create a check that checks the output of any command line command. The output of the command is searched for the presence of a certain text. Possible are simple texts like 'error' or 'switched on'. The case is not considered here. An OR operation is possible with '|', an

AND operation with '&&'. Regular expressions are also allowed. Prefix them with a REGEX:. Regular expressions can be used to describe any string, see for example Wikipedia --> [Regular Expression](#).

More about the Universal Check at [Universal Check](#).

Available variables:

`%result%` - Displays the result
`%command%` - Executed command
`%expectedtext%` - Expected text
`%output%` - Output text

The output text is truncated in the `%output%` variable if it exceeds 1024 characters.

Directory exists

Create a check that verifies if a specific directory exists.

Available variables:

`%result%` - Displays the result
`%foldername%` - The name of the directory

Website answers

Create a check that verifies whether a particular website responds.

Available variables:

`%result%` - Displays the result
`%website%` - Reviewed website
`%tcpport%` - TCP-Port
`%username%` - Username of the logged in user

Network speed test

Perform a speed test within your network. [More about the Network speed test](#).

Available variables:

`%result%` - Displays the result
`%computername%` - Your own computer name

The explanation window

Various design elements can be used in the explanation window that is displayed to the user and the admin.

HTML

You can work with HTML syntax in Designer, which will be displayed in the Client and Admin.

A few examples:

Font

`Bold`
`<i>Italics</i>`

<u>underlined font</u>

Font size

Specify a particular font size

The default font size is 15.

Font color

Specify a particular font color

Show image

If you specify the variable %files% as path, an image from the Files directory will be displayed (see below). The variable %pccheckdir% contains the path to the PC-Check directory, usually C:\Program Files (x86)\PC-Check.

Link on Website

Program calls and links

You can show the user up to three program calls in the bottom left corner. These can be system programs (Ping, Computer Management, Task Manager, etc.) as well as advanced explanations (PDF files, Word documents, URLs, etc.).

Images and other files

To display images within the PC-Check explanation window you can use the syntax (see above).

Likewise, you can use the %files% variable to access the path within the 3 program calls.

The Files directory

The Files directory is located in the ConfigShare directory (where the central .cfg files are located) and is synchronized with the local Files directory (%appdata%\PC-Check\Files) every time PC-Check is started. This ensures that images and other files are available to the client even in case of network failure. The %files% variable contains the path of the local files directory (see "Images and other files" for an example).

Example:

Task: You want to display the image of a network cable in the explanation window during a ping check. You also want to point to a more detailed PDF document and offer the option of a permanent ping.

Solution:

- Copy the network cable image and the PDF document to the ConfigShare\Files directory. Just double-click on the ConfigShare directory in the bottom left corner of the Designer to open it.
- Insert the following in the explanation text:
- At "Text link 1" insert the following: [More Details](#) and at "Program link 1":
"%files%\More Details.pdf"
- For "Text link 2" add: Execute [Permanent ping on %host%](#) and for "Program link 2":
`cmd /k ping -t %host%`

Edit buttons

It is possible to show up to 5 buttons to the user. Typical use cases would be a button to get

information about the own user account, a URL to open a support ticket or to start the computer administration.

The screenshot shows a dialog box titled "Edit buttons" with a "Manual" link in the top right. The main text reads "Edit the buttons available to the user in the explanation window." Below this, there are two rows of five buttons each. The first row, labeled "Text button 1" through "Text button 5", contains text boxes with the following values: "User account", "Create support request", "Computer Management", an empty box, and another empty box. The second row, labeled "Program button 1" through "Program button 5", contains text boxes with: "<showuserinfo>", "https://MyTicketSystem.", "compmgmt.msc", an empty box, and another empty box. Below these rows is a section titled "Text for explanation buttons" with a text box containing the word "Explanation". At the bottom right of the dialog are "OK" and "Cancel" buttons.

A very useful function is the information about the own user account. Simply enter "<showuserinfo>" in the field „Program“.

If several configurations apply to a particular user or PC, the button settings complement each other. In case of double assignment, the last configuration that applies wins.

Scripts and alarms

In certain cases, it may be useful to automatically run a script before or after performing the checks. For example, it can happen that a device does not respond immediately to a ping command, so that a ping check always indicates an error. A ping command before the execution of the checks provides a remedy here.

Before execution

Specify a command or script to run before the checks are executed. Note: It will not wait until the script is finished.

After execution

Specify a command or script to run after the checks are executed.

After execution in case of at least one error

Specify a command or script that will be executed when at least one check is terminated with a red X. This function can be used to implement a rudimentary monitoring.

These values are set per configuration. If several configurations are applied during a check run, the scripts add up.

Available variables:

%username% - Username

%computername% - Name of the computer

%allresults% - All check results

%timestamp% - Current timestamp, which can also be used in a file name

To generate a file in a network drive on at least one error, you can use the following command:

```
(echo %allresults%) >\\MyServer\MyShare\%computername%-%username%-%timestamp%.txt
```

Important: The parentheses at (echo %allresults%).

Example: Monitor a server

Task:

A server is to be monitored in such a way that a series of checks are performed at 5-minute intervals. If at least one error occurs, a file with the results is to be created in a network drive.

Solution:

Call PC-Check with the following command:

```
"C:\Program Files (x86)\PC-Check\PC-Check.exe" -t -p:300  
\\Server\ConfigShare$\default.cfg.
```

Replace **Server** with your server name.

You can create your own individual call in the Designer via "Test configuration". If necessary, use -h to run PC-Check invisibly in the background.

In "Scripts and alarms", enter the following for "After execution on at least one error":

```
(echo %allresults%) >\\MyServer\MyShare\%computername%-%username%-%timestamp%.txt
```

Replace **\\MyServer\MyShare** with a share on your network.

The Universal-Check

The universal check can be used all over. It allows to evaluate the output of any command line command and to determine the result from it.

Evaluate operating system commands

Enter any command line command in the 'Command' field. This can be a simple command like **dir**, but also a concatenation of commands like **ipconfig & route print** or **netstat -a | find "139"**. For 'Expected text', enter a text that is expected in the output. If the text is found, the result is 'OK' (green). If it is not found, the result is 'Error' (red). Case does not matter, except for the regular expressions.

Evaluate batch, VBS and Powershell scripts

Evaluate the output of your own batch, VBS and Powerhell scripts. Place the scripts in a network drive or in the %files% folder, which is synchronized with a local folder every time PC-Check is started (see [Files-Directory](#)). Of course, you can also use your own command line commands or third-party command line commands. Any application that writes text to the standard output can be evaluated.

Reverse check

Reverse the result of a check. By default, PC-Check looks for a text in the output of the command during the universal check - if the text occurs, the result is "OK". By reversing the check, you can consider the case "Text found" as an error (red). The check is then considered passed (green) if the text is not found.

Own result texts

The default result text for the universal check is "OK" or "Error". However, you have the option of freely defining the result texts. Perhaps you do not want "OK" and "Error" as the result in a particular case, but "Present" and "Not present".

Show command line window

If the option is enabled, a small command line window with the output of the command is displayed during the PC Check execution. This allows you to observe the output. For commands with a long runtime, it is also more interesting for the user.

Please note: This window is not really a console window of the operating system, but a simulation. For very text-heavy output, displaying the command line window may slow down the execution of PC-Check.

Attention: Do NOT check this box if PC Check is run in hidden mode (-h).

AND- and OR-operation

Search for multiple strings using && and ||. For example, if you want to check whether the words 'Network' and 'Error' appear in the output of a command, use the expression **Network&&Error** for 'Expected text'. If you want to check whether the word 'Error' or 'Network' occurs (or both), use **Error||Network**.

Regular expressions

In addition to the AND and OR operation, you have the possibility to use regular expressions in the 'Expected text' field. To do this, prepend the word 'REGEX:'. Regular expressions give you the possibility to evaluate the output of the command very precisely, see for example Wikipedia --> [Regular Expression](#).

Here are a few examples:

- . any character
- .* any number of characters (even none)
- [ert] one of the characters "e", "r" or "t".
- [0-7] a digit from "0" to "7" (hyphens are indicator of a range)
- [A-Za-z0-9] any letter or number
- [^a] any character except "a"

For example, in the output of the ipconfig command, if you want to check whether a line like

```
IPv4 Address . . . . . : 192.168.0.143
```

occurs, you can use the following expression for 'Expected text':

```
REGEX: .*IPv4 Address .*192.168.*
```

(any number of characters followed by IPv4 Address followed by any number of characters followed by 192 followed by any number of characters followed by 168 followed by any number of characters)

This would check if the IP address starts with '192.168'. The query still works even if the number of spaces at the beginning or the number of dots should ever change.

Example Configuration

Example 1: Additional checks for specific AD group

Task: Five checks are to be made available to all users of your domain. We name the configuration "default". Two additional checks are to be made available only to the users of the "Purchase" AD group. The name of the configuration is "Purchase".

Solution: For the "default" configuration in the PC-Check Designer, set the "Always" value for Scope. In the "Purchase" configuration, set the value "AD groups" and "Domain\Purchase" for Scope. In both configurations, set "Mode" to "Add". For "default", set a smaller value for Order than for "Purchase", so that the 5 checks are always performed first.

Example 2: Other configuration for specific computer

Task: Eight checks are to be made available to all users of your domain. We give the configuration the name "default". However, a production computer is to be given a completely different configuration. The name of the computer is PC1000. The configuration has the name "Production".

Solution: For the "default" configuration in the PC-Check Designer, set the value "Always" for Scope. For the "Production" configuration, set the value "Computer" and "PC1000" for Scope. For "default", set "Mode" to "Add" and for "Production" set "Mode" to "Replace". For "default", set a smaller value for Order than for "Purchase". The "Production" configuration will then replace the "default" configuration on the PC1000.

Example 3: Additional checks when VPN software is installed

Task: Eight checks are to be made available to all users of your domain. We give the configuration the name "default". Two additional checks are to be executed only on computers on which a specific VPN software is installed. The name of the configuration is "VPN".

Solution: For the configuration "default" in the PC-Check Designer, set the value "Always" for the Scope. In the "VPN" configuration, set the value "File exists" for the Scope and then the path to the exe file of the VPN software, e.g. "C:\Program Files (x86)\vpn\vpn.exe". In both configurations, set "Mode" to "Add". Set a smaller value for "default" at Order than for "VPN", so that the 8 checks are always performed first.

Network speed test

The network speed test allows each user to measure the current internal network speed. To avoid unnecessary load on the network, a pause can be forced between 2 network speed tests of a user. The default value for this is 60 seconds. It can be set via the PC-Check.ini file, which in turn can be set during the installation of the client software via [MSI-Variables](#) and is changeable.

The files required for the speed test are located in the SpeedtestShare share. They are created during the share setup.

During the network speed test, a 1MB file is first copied from the speed test share to the local computer (to the %localappdata%\PC-Check directory). If the copy process takes longer than 2 seconds, the throughput is calculated in Mbit/s. and the download test is finished. If the copy process takes less than 2 seconds, a 5MB file is copied next, then a 32MB file and a 128MB file. Between the copy processes, the 2 seconds check is always performed. After that the same procedure for the upload is performed.

This procedure ensures that the network speed test always runs quickly and the network is spared.

Network speed test for single-user installation

With the single-user installation, all PC-Check components are installed on a single computer. This means that only a local copy process is performed during the network speed test. For this reason, the values determined are usually extremely high.

Disable network speed test

If no network speed test is desired, this can be set in the PC-Check Designer per configuration. To do this, simply check the "deactivate" box for the network speed test.

PC-Check.ini

In the PC-Check.ini file, PC-related, general settings are made. In the standard case, the values are set during installation (MSI variables) and do not need to be modified.

ConfigShare=\\MyServer\ConfigShare\$

The share where the configuration files (.cfg) created with PC-Check Designer are located.

ResultShare=\\MyServer\ResultShare\$

The share where the result files (.result) are located to be read by PC-Check Admin.

SpeedtestShare=\\MyServer\Speedtest\$

The share used for the speed test.

SpeedtestPause=60

The pause that is forced between two consecutive network speed tests. Specified in seconds.

ShowUploadOptions=yes

Specifies (yes/no) whether the option to change the upload behavior is shown in the status bar.

UploadOption=yes

Specifies the default upload behavior setting (yes/no/ask). Can be overwritten by the user and is then saved in the "%appdata%\PC-Check\Options.ini" file.

ShowSpeedtestRepeatButton=yes

Specifies (yes/no) whether the user sees the retry icon during the speed test. If no, the speed test can only be restarted by repeating all checks. This has the advantage that all speedtests are uploaded to ResultShare - this is not the case with speedtest retries. PC-Check administrators who have the file "PC-Check-Admin.exe" in the PC-Check directory will always see the retry icon.

Text translations

Using the TextReplacements.txt file, which must be located in the ConfigShare directory, you can customize dialog texts that are displayed to the user. This concerns the dialogs related to uploading the results.

Your TextReplacements.txt file might look like this:

UploadText=Specify if determined values are made available to internal IT support (ServiceDesk) automatically.

UploadAskText=Should the values determined be made available to internal IT support?\n\nNote: Only the data visible here is transferred. IT support is NOT informed that you have made the values available to them.

Command line

You can call PC-Check.exe from the command line, for example to include a specific configuration file (.cfg). Simply create the .cfg file with Designer and then copy it to the appropriate computer. The call is made with

```
PC-Check.exe „C:\Configs\MyConfig.cfg“
```

More command line parameters:

-t	Run PC check continuously.
-h	Hidden execution (hidden). No window is displayed. The execution will be terminated after the checks are done, except for -t.
-u	Force upload. The upload is always performed, even with continuous execution (-t).
-w:<time in sec.>	Waiting time after starting PC Check before the first check is executed.
-p:<time in sec.>	Waiting time between two passes for continuous execution (-t). Default: 3 seconds.
-q	End PC check. Terminates all PC check tasks, even the hidden ones (-h). Works only alone, cannot be combined with other parameters. Works only if the executing user has the appropriate permissions.

With the button "Test configuration" in the PC-Check Designer you can switch on the desired options with a click and generate a command line call from it, which can be used universally.

Examples:

Example 1

You do not want to run the centrally assigned default configuration, but a special one:

```
PC-Check.exe „C:\Configs\MyConfig.cfg“
```

Example 2

You want to run this particular configuration continuously:

```
PC-Check.exe -t „C:\Configs\MyConfig.cfg“
```

Example 3

You want to run PC-Check hidden (without a window). After one time execution PC-Check will be terminated, unless you use parameter -t.

```
PC-Check.exe -h
```

Example 4

You want to run PC-Check hidden (without window), continuously every 30 minutes. The result file is to be uploaded with each run:

```
PC-Check.exe -h -t -p:1800 -u
```

Example 5

You want to run PC-Check with 5 minutes delay. Useful if PC-Check is started via Autostart. The computer then has sufficient time to settle down.

```
PC-Check.exe -w:300
```

Security – Hardening the system

Finally, to operate PC-Check secure, you should take the following actions:

1. Make sure that no standard user has write access to the share **\\<Server>\ConfigShare\$**. Only administrators who edit configurations with PC-Check Designer need write permissions to this share. Standard users only need read rights here.
2. Standard users need write permissions to the **\\<Server>\ResultShare\$** share to create result files (.result). They do not need read permissions. Administrators who are to analyze results with PC-Check Admin need read permissions to this share - and the creator of the file. The creator needs the rights to be able to overwrite the file. This is the case with the subsequent speed test.

Procedure:

- For the **share permissions** on the **\\<Server>\ResultShare\$** directory, grant the **Everyone** group the **Modify** permission.
- At the file system level, revoke read permissions from the default user.
- At the file system level, grant write permissions to the default user.
- At the file system level, grant the NTFS principal "CREATOR-OWNER" read permissions.
- At the file system level, grant read permissions to the administrators who are to analyze results with PC Check Admin.

The ResultShare\$ share contains the "Launcher" directory. All users need read and write permissions to this directory.

3. On the share **\\<Server>\Speedtest\$** the standard user needs read and write permissions.

Rollout via software distribution

The **PC-Check software (client)** is an MSI package that can be easily installed with your software distribution (MSI variables see section [Silent Installation](#)).

The **PC-Check Admin software** is intended for manual installation. If you also want to install the software via software distribution, you can first install the software once manually, adjust the PC-Check-Admin.ini (buttons) and then distribute the files. No registry entries are made.

The **PC-Check Designer software** is also intended for manual installation. If you want to install the software via software distribution, you can first install the software once manually and then distribute the files. No registry entries are made.