HARTMANN ELECTRONIC
A Phoenix Mecano Company

Installation - Guide for SNMP- and Ethernet Control for HARTMANN ELECTRONIC Crates

Windows 10 64 & 32 - Bit

Fan control: up to 6 fans monitored, fan speed programmable (no PWM signal necessary) Fully controled, programmable trip thresholds (min/max voltage, temperature) Digital Signal Processor (DSP) for real-time processing of all measured data powered by 5V bus voltage or separate power supply Ethernet connection IEEE 802.3, 10BASE-T, and IEEE 802.3u 100BASE-TX www-Server integrated, full control via SNMP protocol.

Content

1 General

The document shows the installation of Simple Network Management Protocol and allows simple monitoring and controlling via a web browser, CMD or with Syscontrol.

2 Installation

The commissioning of the Shelfmanager under Windows 10 takes place in several steps.

2.1 Shelfmanger with SYScontrol

The „Syscontrol“ is a visualization program with which the possibilty is given to monitor current systemparameters and change them.
The information between shelf manager and syscontroll is exchanged via a net-snmp protocol.
Please note that this is installed first and is recognized under Windows10.

2.1.1 Download file:

index:

Windows 10 for 32-bit:
Net-SNMP can be Download on: „net-snmp-5.6.1.1-1.x86.exe“

http://file.wiener-d.com/software/net-snmp/

Windows 10 for 64-bit includes Net-SNMP
(http://file.wiener-d.com/software/SYScontrol/SYScontrol-2.0.5834-win64.exe not yet signified, coming)

http://net-snmp.sourceforge.net/ for more details

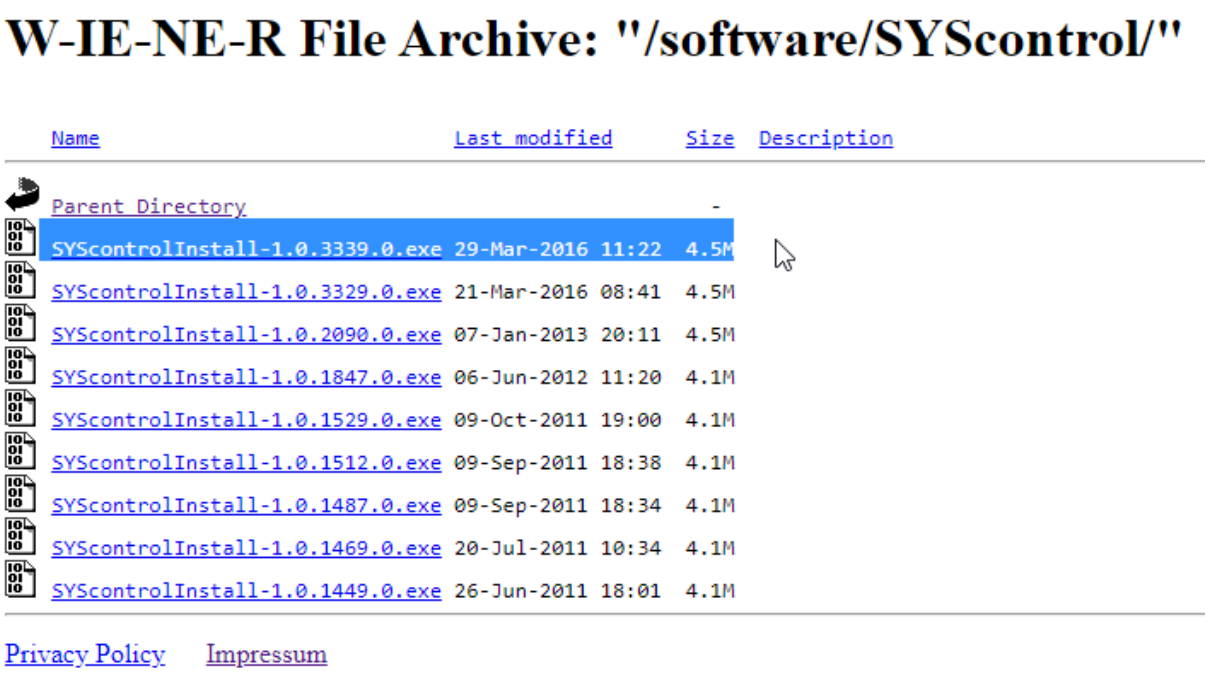
W-IE-NE-R File Archive: "/software/net-snmp/"

Name	Last modified	Size	Description
Parent Directory		-	
WIENER-CRATE-MIB-4883.zip	12-Apr-2019 18:16	23K	WIENER-CRATE-MIB File
net-snmp-CompileForExtendedPrecision-2015-03-06.txt	04-Jun-2018 10:59	5.1K	
WIENER-CRATE-MIB-4169.zip	11-Dec-2017 16:50	22K	WIENER-CRATE-MIB File
WIENER-CRATE-MIB-3807.zip	30-Jun-2017 08:52	21K	WIENER-CRATE-MIB File
WIENER-CRATE-MIB-3579.zip	23-Sep-2016 17:07	21K	WIENER-CRATE-MIB File
WIENER-CRATE-MIB-3181.zip	24-Oct-2015 10:41	21K	WIENER-CRATE-MIB File
WIENER-CRATE-MIB-2734.zip	23-Dec-2014 15:12	21K	WIENER-CRATE-MIB File
WIENER-CRATE-MIB-2358.zip	28-Feb-2014 10:07	21K	WIENER-CRATE-MIB File
WIENER-CRATE-MIB-2195.zip	28-Feb-2014 10:06	21K	WIENER-CRATE-MIB File
net-snmp-5.6.1.1-1.x86.exe	17-Oct-2012 20:23	4.0M	
WIENER-CRATE-MIB-1983.zip	15-Oct-2012 16:29	20K	WIENER-CRATE-MIB File
net-snmp-5.6.1.1-WIENER.zip	06-Jul-2012 08:37	1.1M	modified net-snmp binaries, usable for high precision floatingpoint. Windows x86
net-snmp-5.5.0-1.x86.exe	28-Jun-2012 20:08	4.1M	

Privacy Policy Impressum

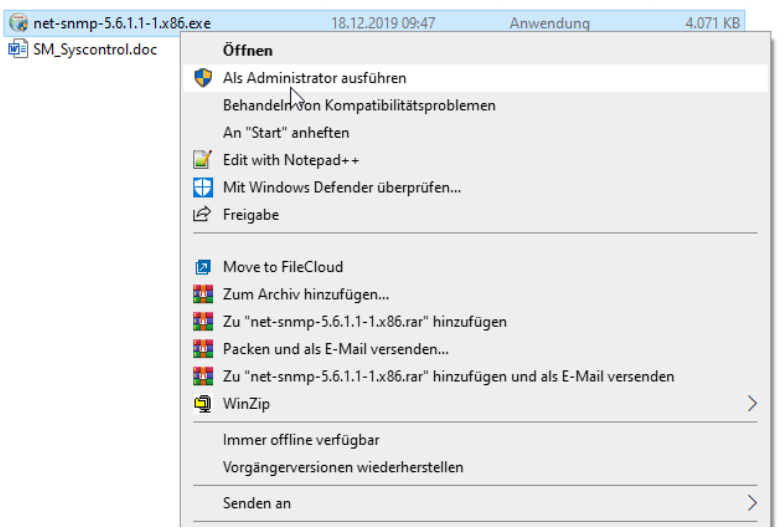
SYSControl: Download on „SYScontrolInstall-1.0.3339.0.exe“

http://file.wiener-d.com/software/SYScontrol/

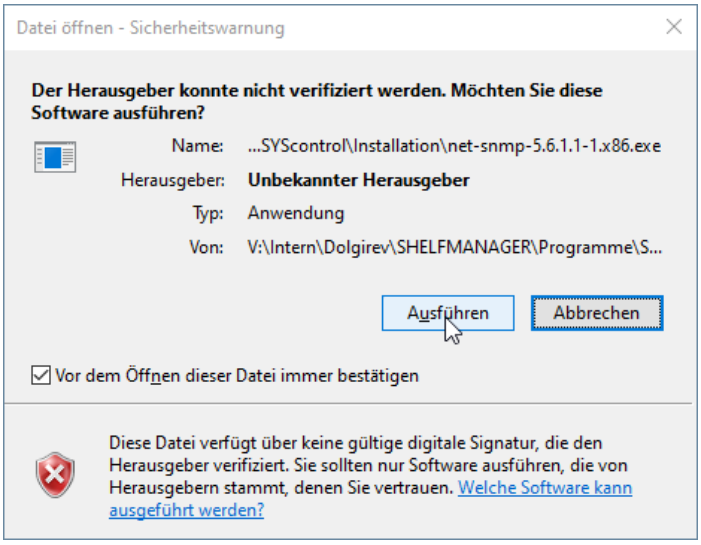


2.1.2 Net-SNMP Installation

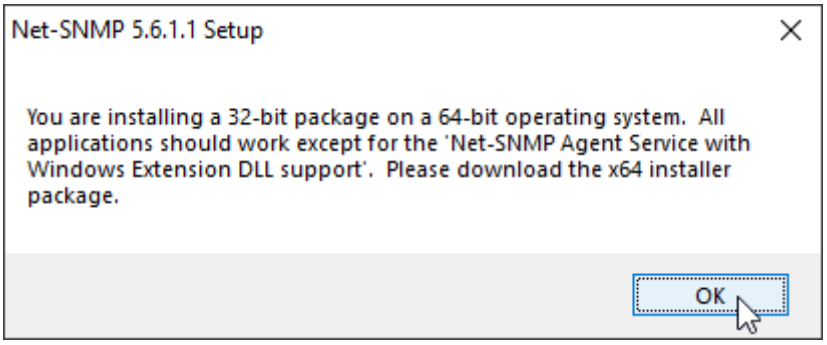
Step 1: → net-snmp-5.6.1.1-1.x86.exe run as **administrator**.



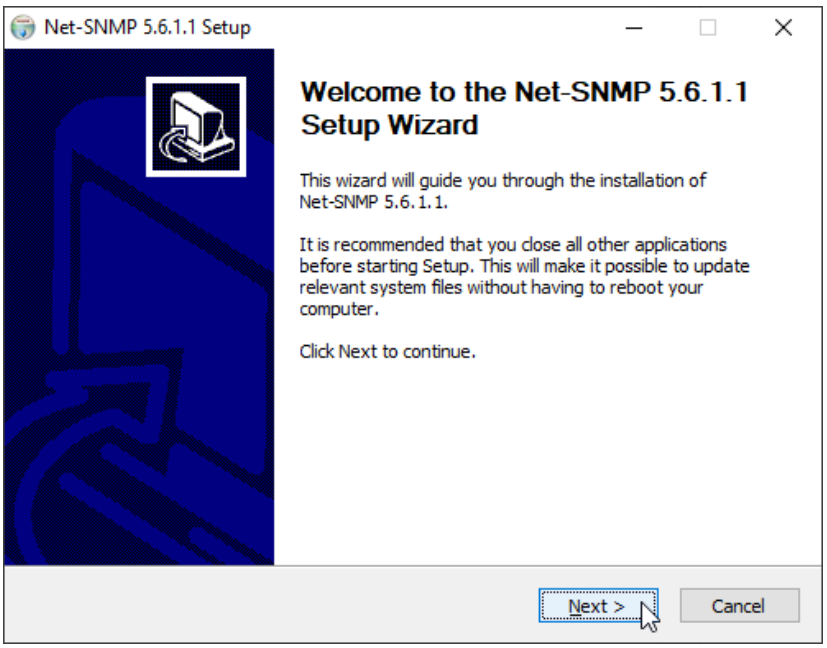
Step 2: → run



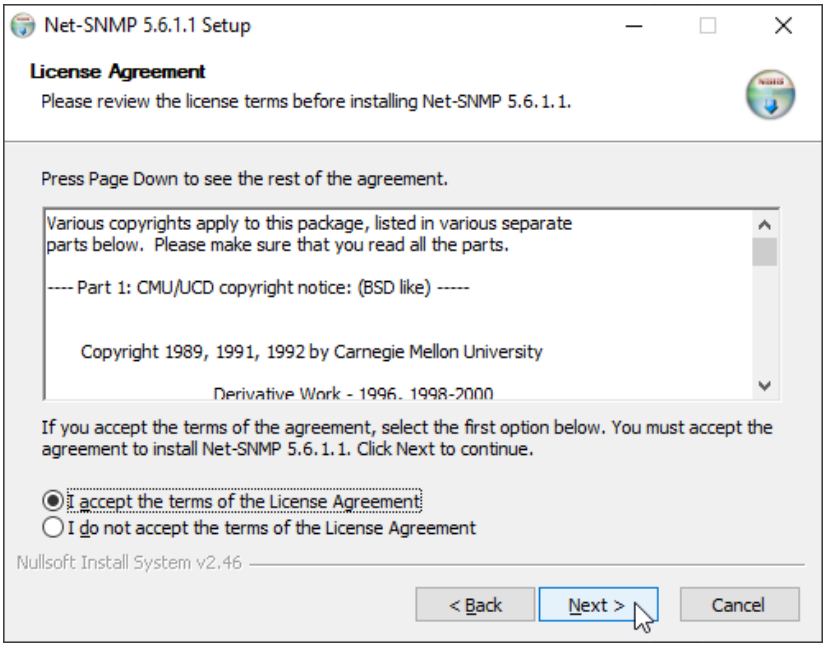
Step 3: → click OK



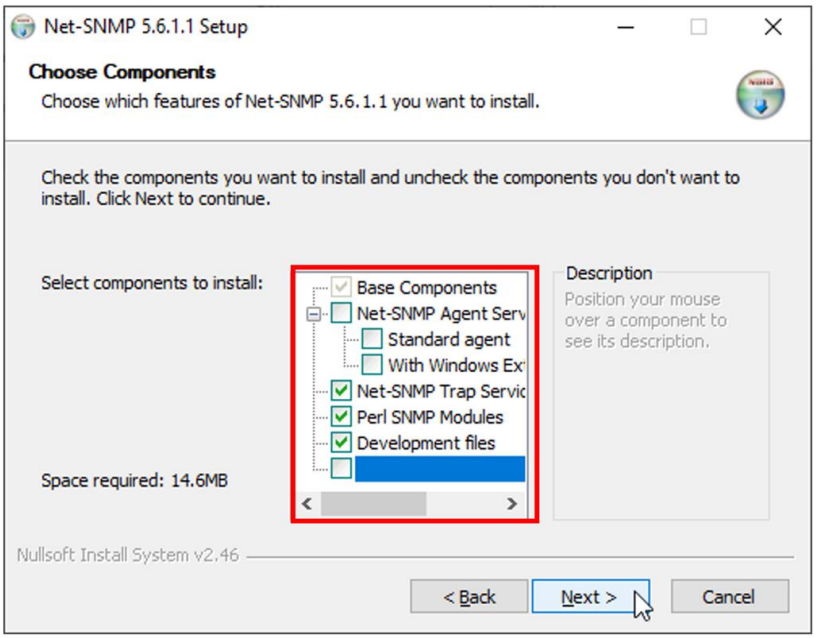
Step 4: → click Next >



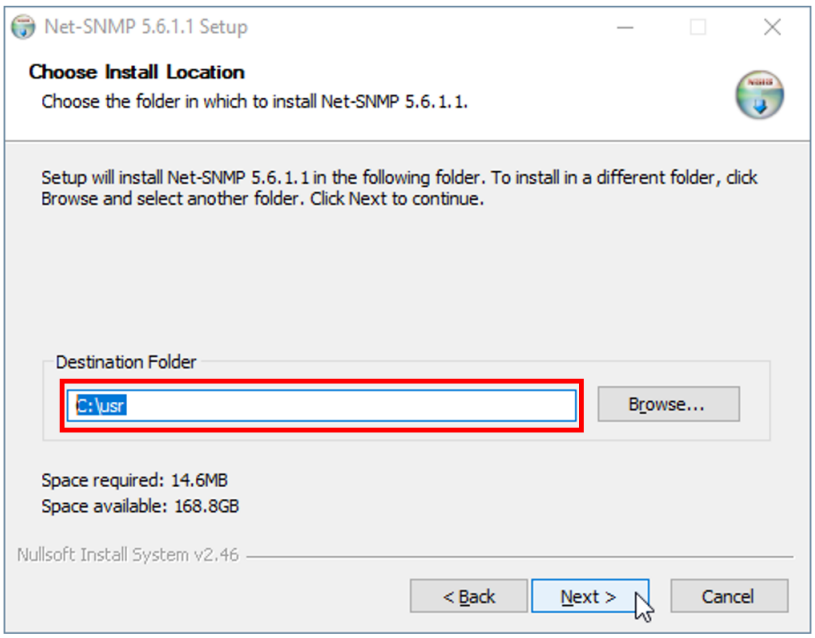
Step 5: → set check box „I Accept the terms of the License Agreement“ → click Next



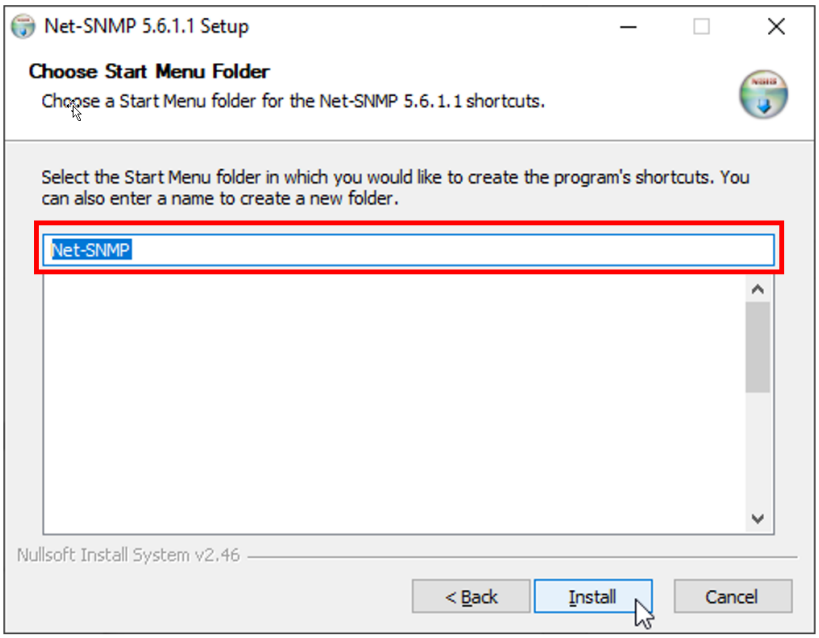
Step 6: → Set configuration as shown in the image → click Next



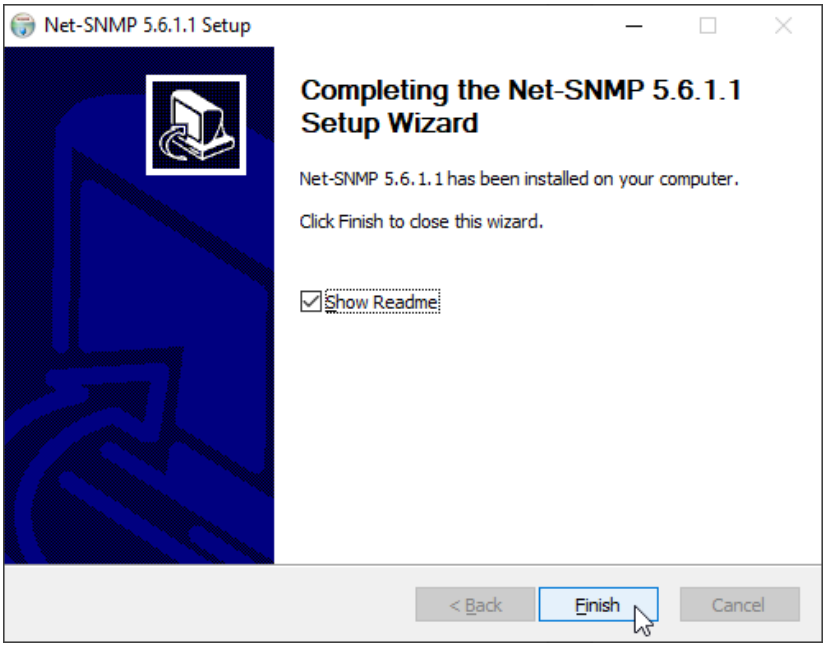
Step 7: → Set place of installation C:\usr → click Next



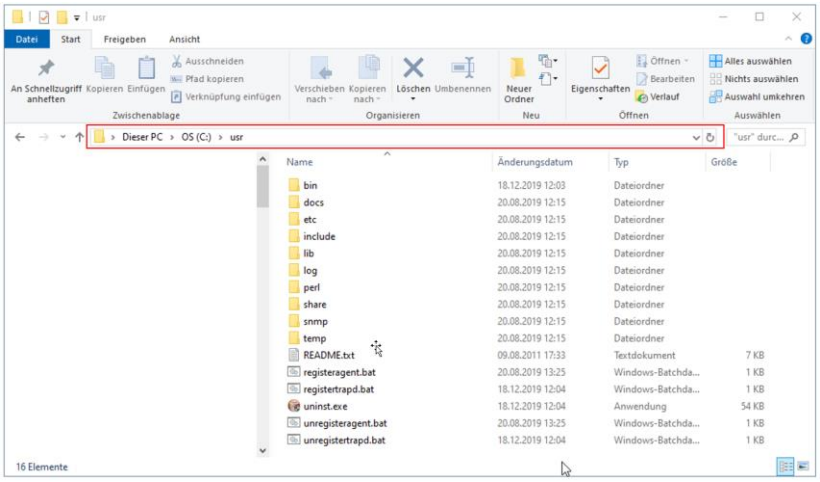
Step 8: → click Install



Step 9: → click Finish

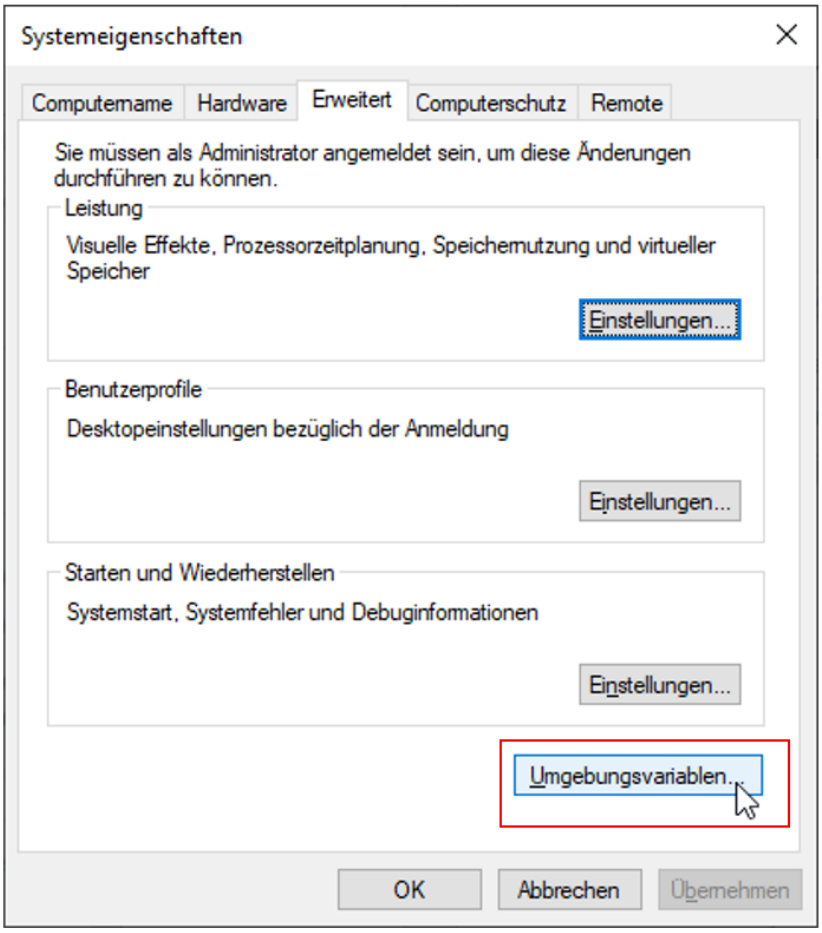


Step 10: → Open folder with file „C:\usr“
This files have to be on the directory after the installation.

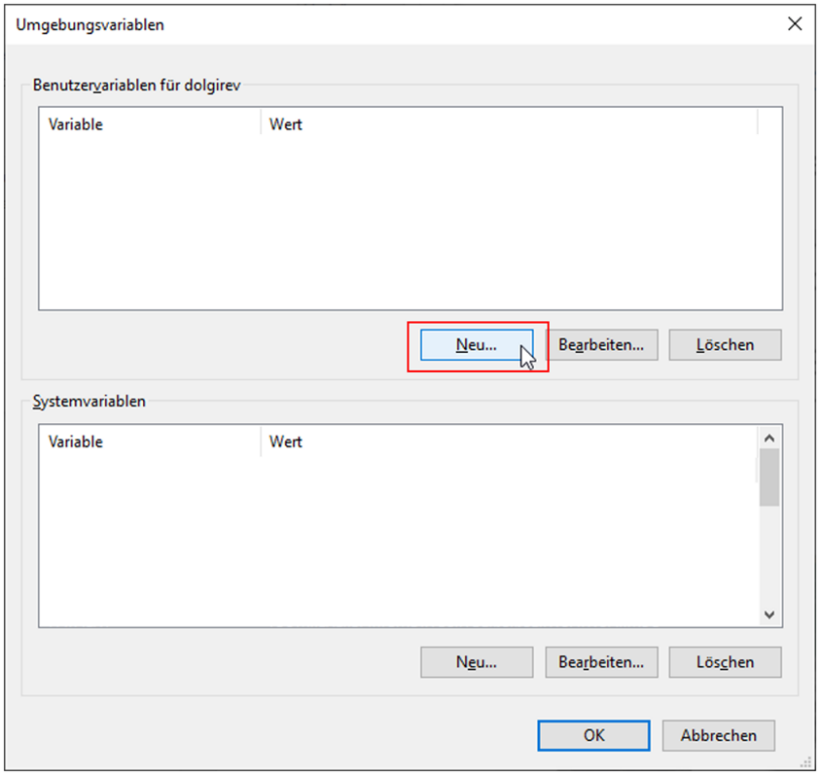


Step 11: set Ehternet settings → go to System → Advanced system settings and set your existing interface for LAN.

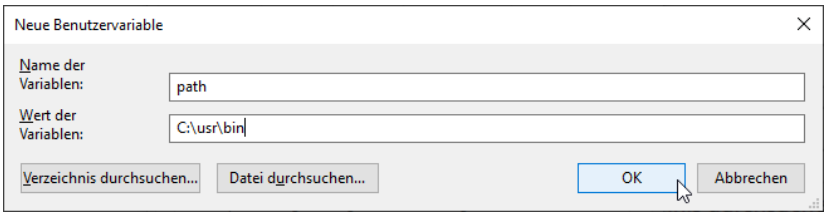
Step 12: → go to „expanded“ /Erweitert → go to „environment variable“ /Umgebungsvariablen



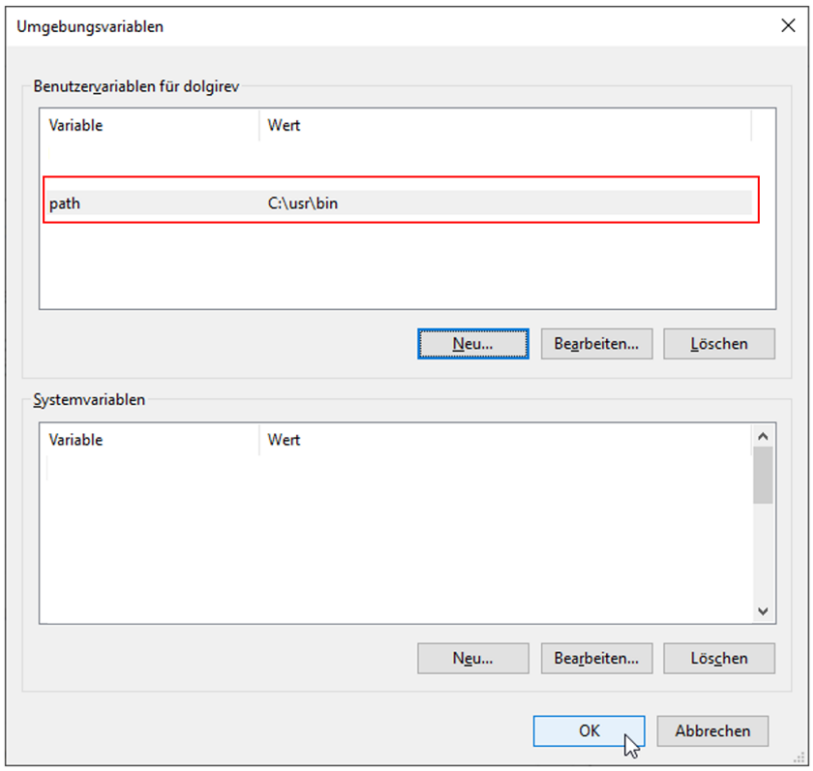
Step 13: → go to „expanded“ /Erweitert → go to environment



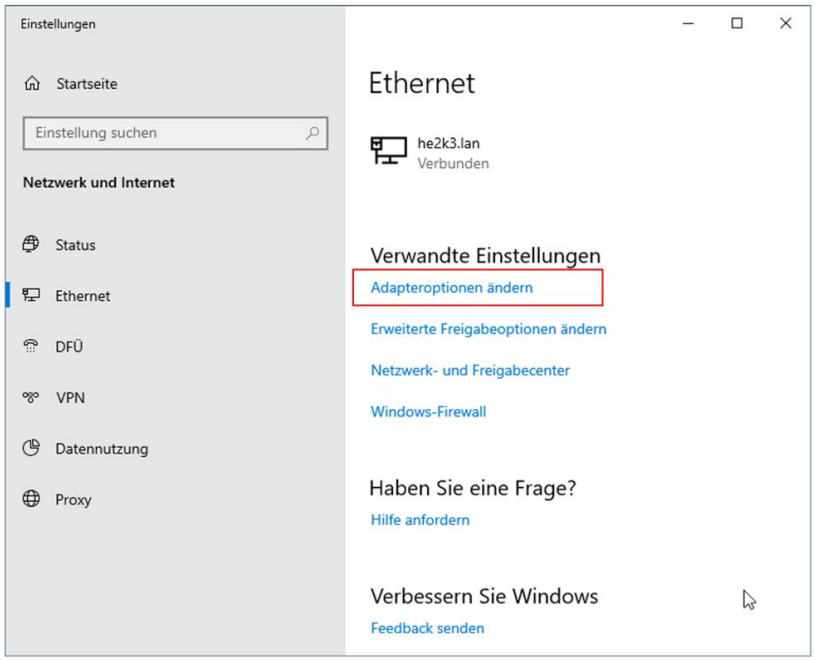
Step 14: → set „path“ and „C\:usr\bin“ than click OK



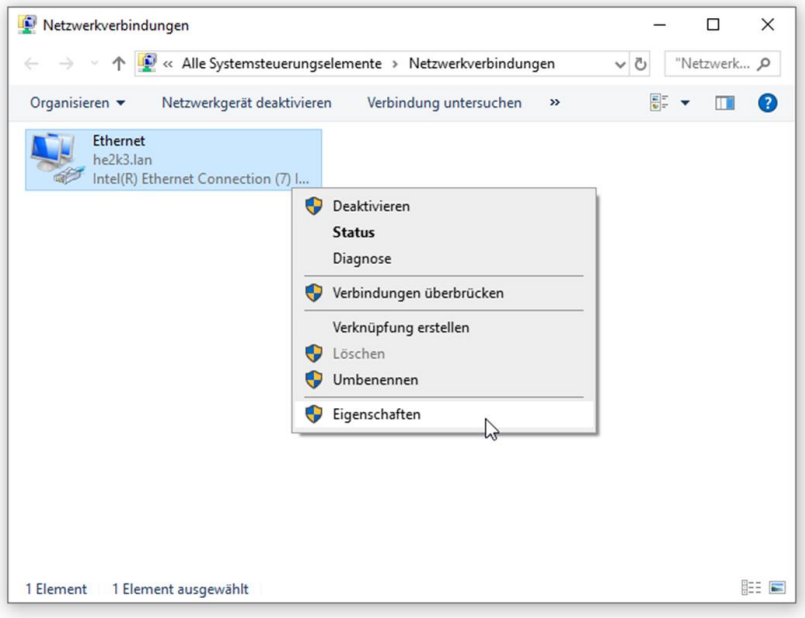
Step 15: → OK



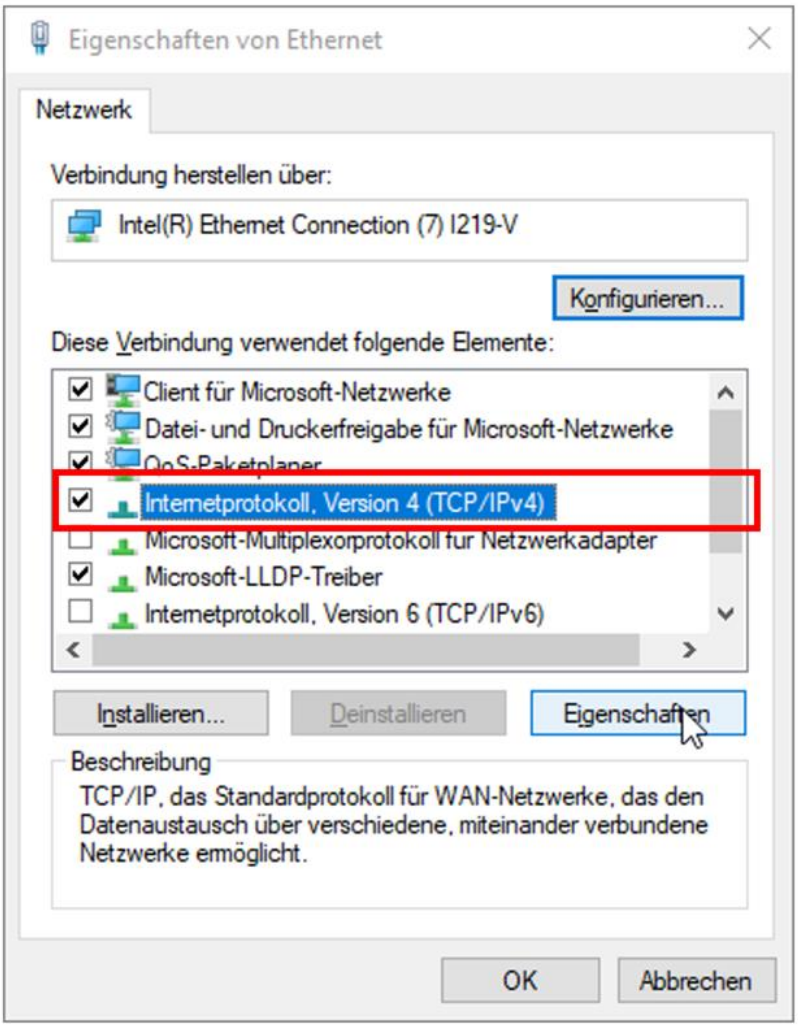
Step 16: → go to ethernet network → change adapter options



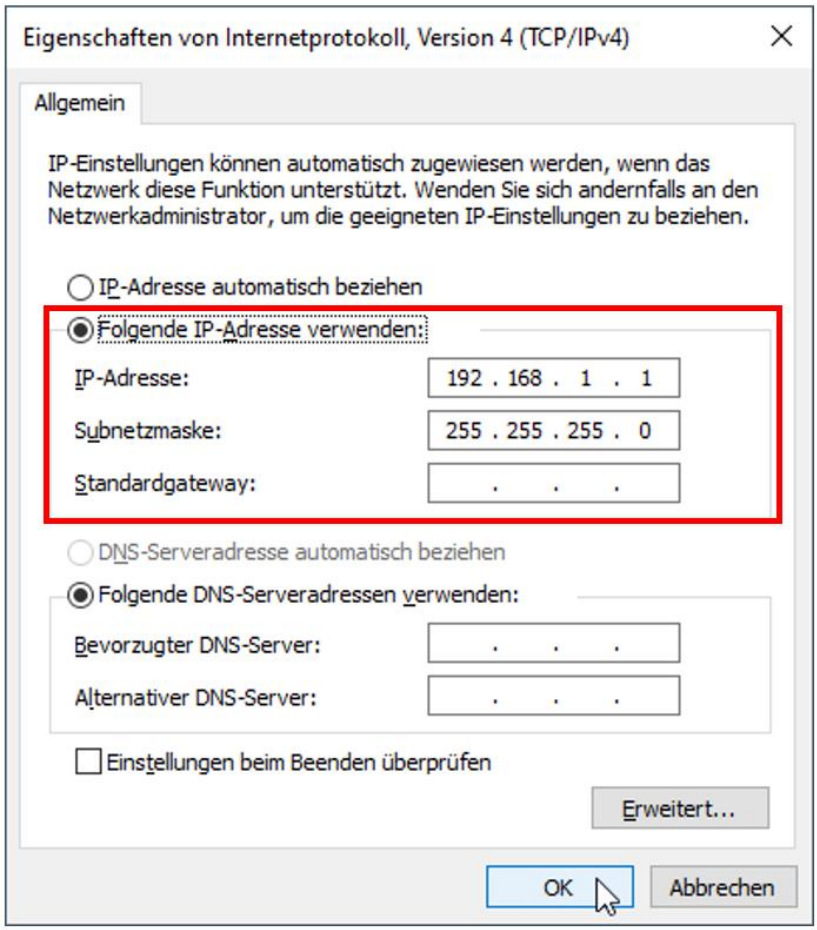
Step 17: → right click then ethernet „characteristics“



Set 18: → TCP/IPv4 → characteristics

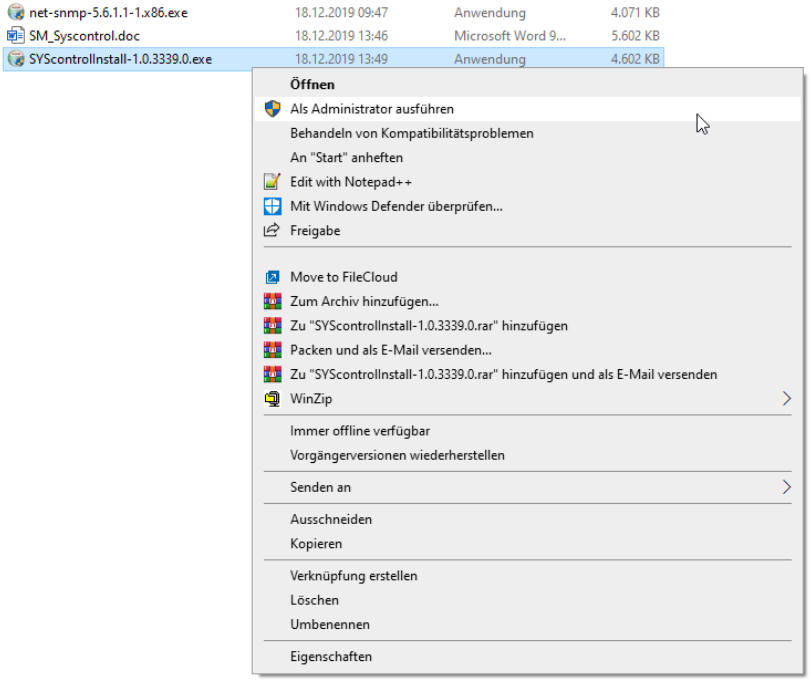


Step 19: → IP-Adresse 192.168.1.1 enter settings as shown in the image → OK

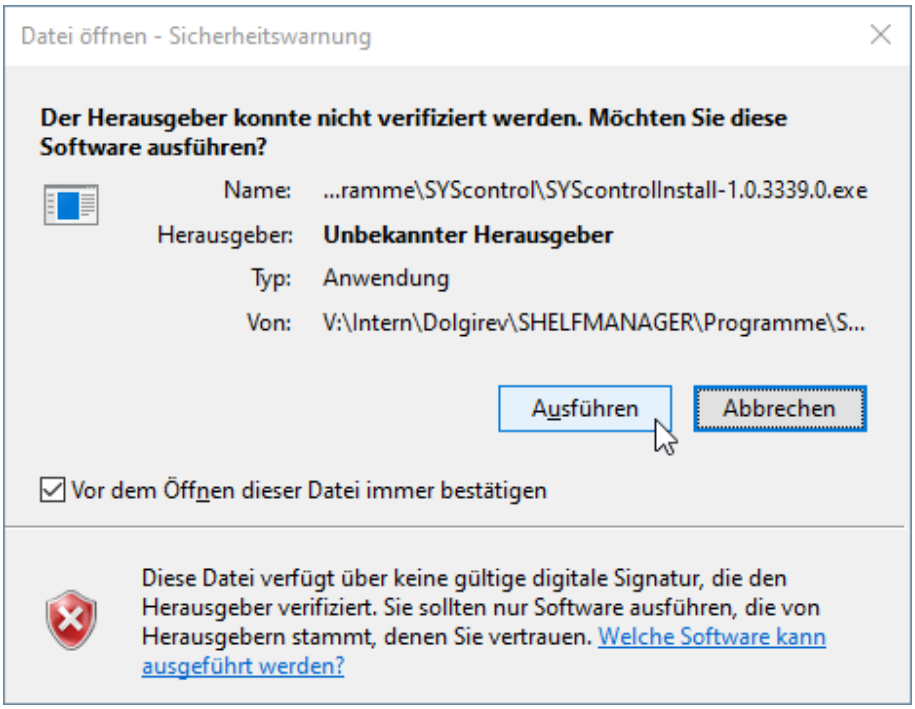


2.1.3 Syscontrol installation

Step 1: → run as administrator

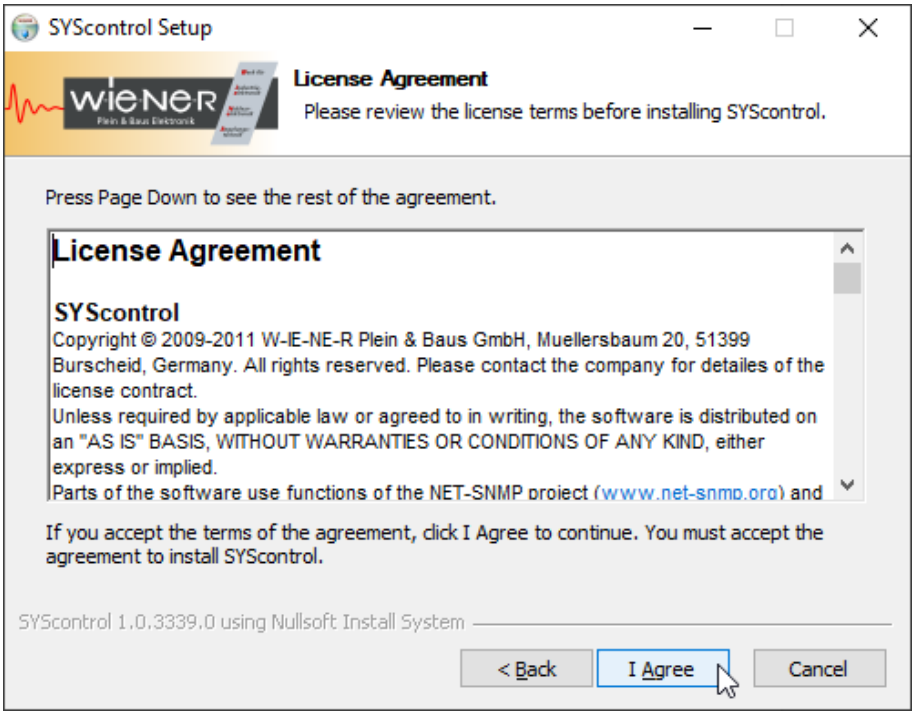


Step2: → run

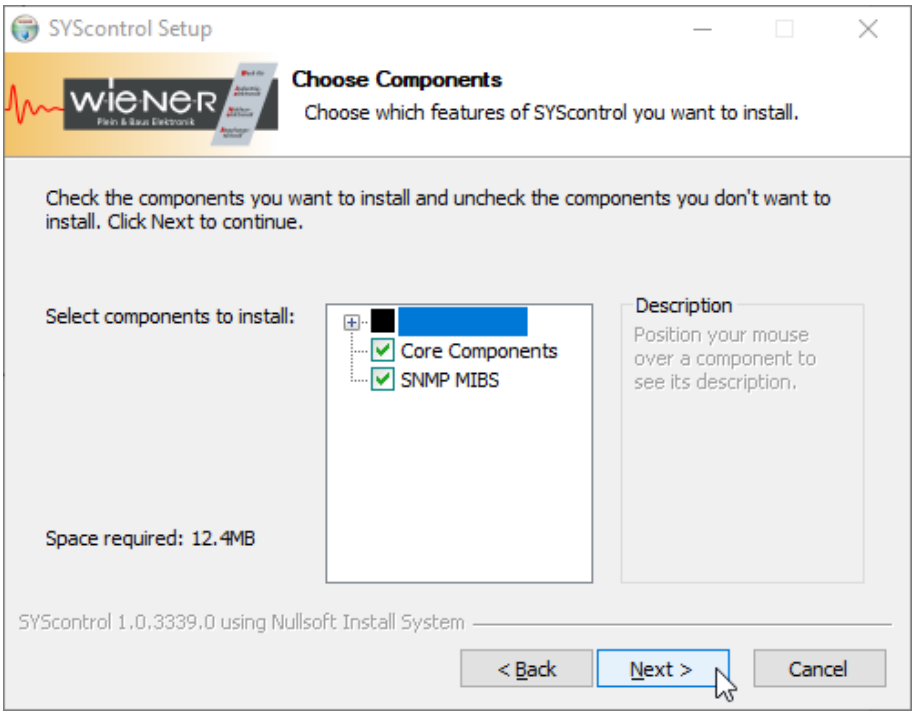


Step 3: → click Next

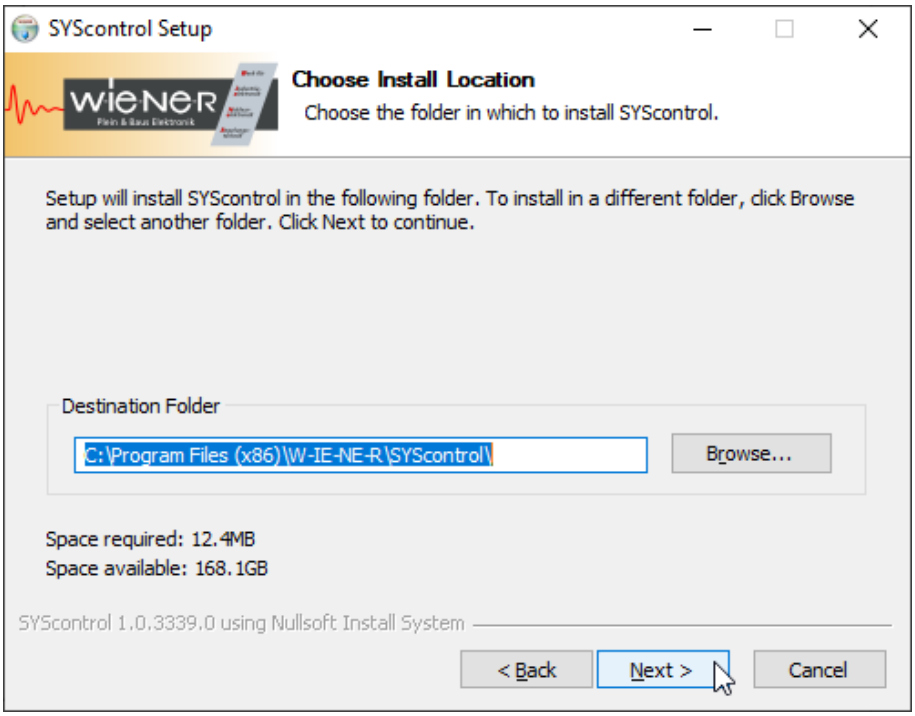
Step 4: → click I Agree



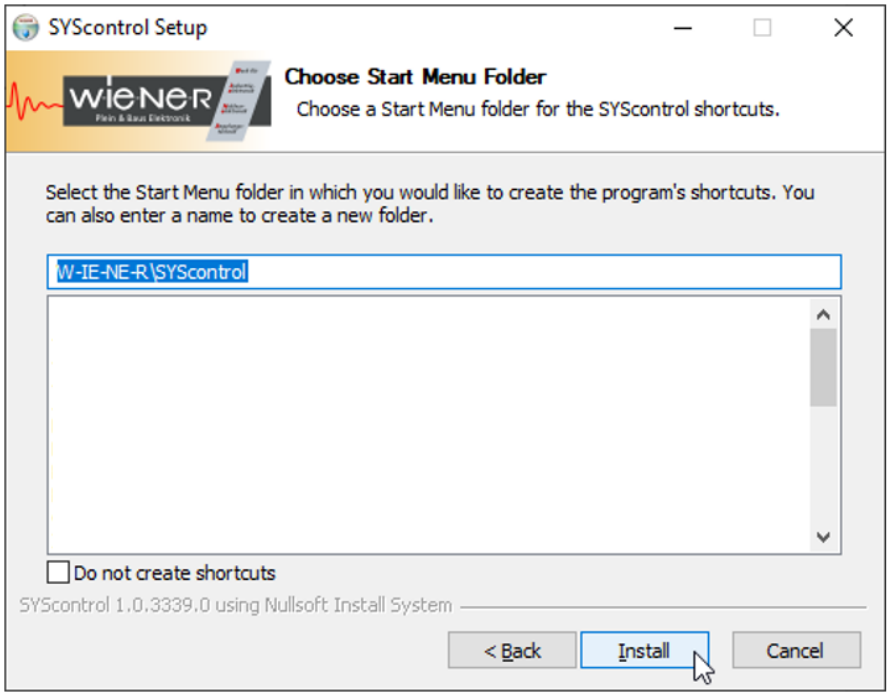
Step 5: →click Next



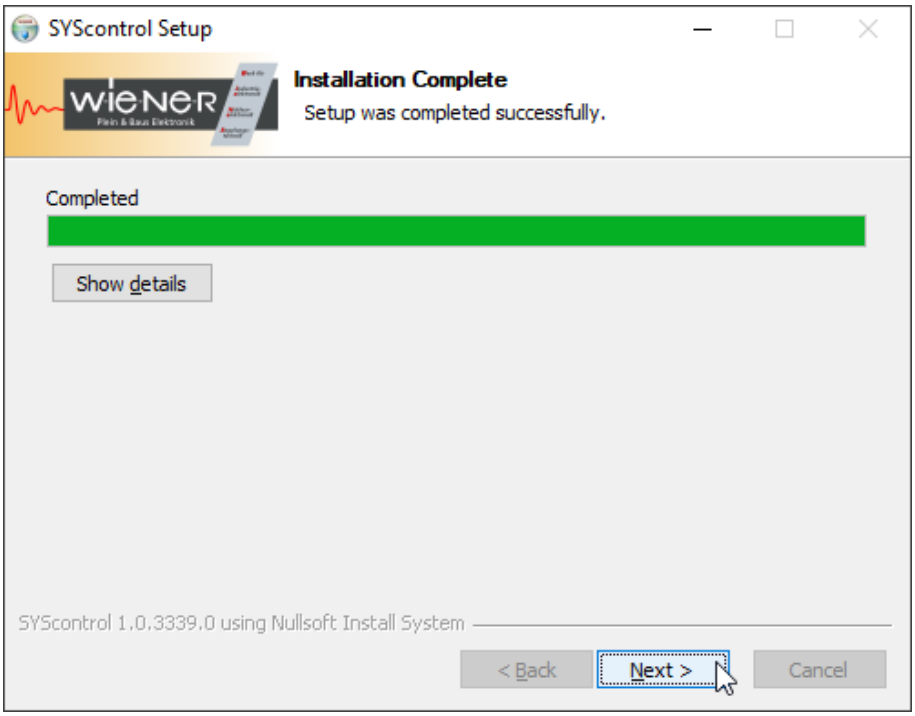
Step 6: →click Next



Step 7: → click Install

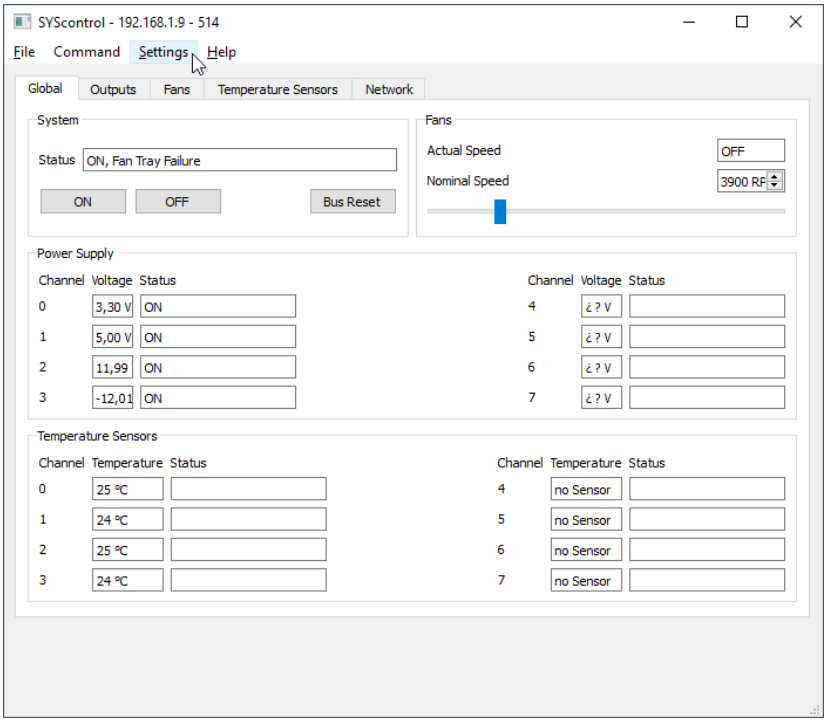


Step 8: → click Next

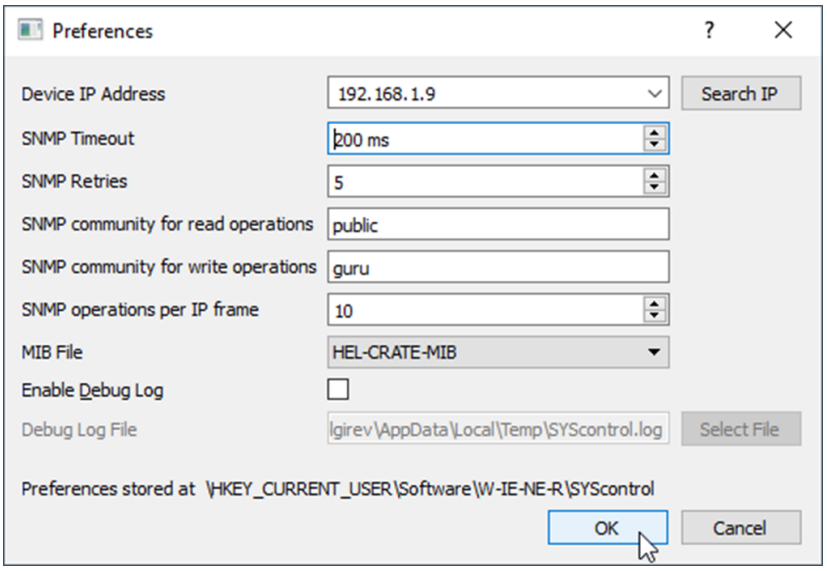


Step 9: →click Finish

Step 10: → Restart your computer and run Syscontrol



Step 12: → go to Settings/ Preferences

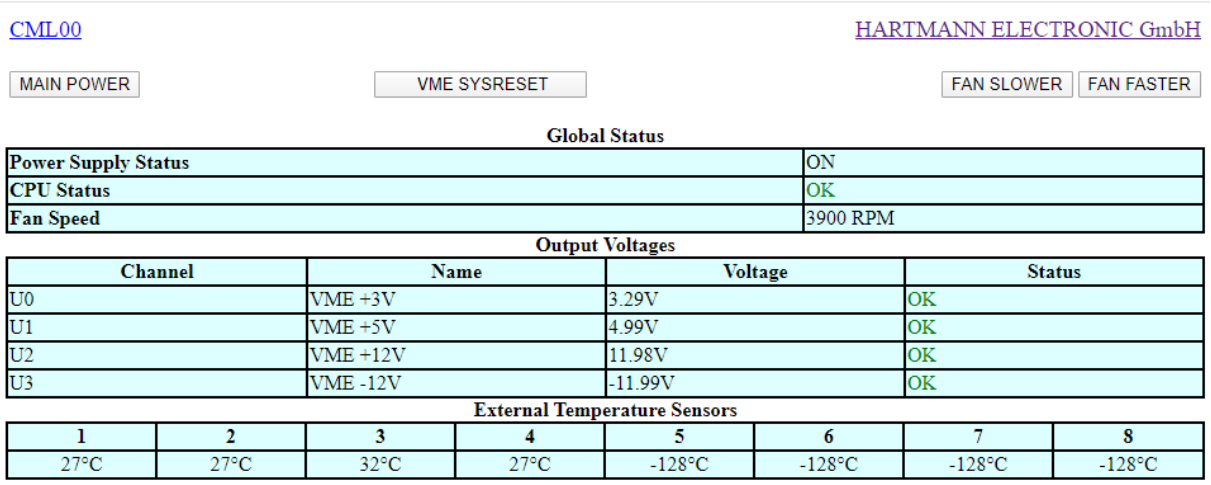


Set the properties as shown in the picture.

Preferences
IP Addresse: 192.168.1.9
Timeout: 200ms
Retries: 5
COMMY_R: public
COMMY_W: guru
IP frame: 10
MIB File: HEL-CRATE-MIB

3 Ethernet Control for HARTMANN ELECTRONIC Crates

All HARTMANN ELECTRONIC crates with Ethernet ports allow simple monitoring and control via a web browser which shows status as well as all supply voltages, fan speed and temperatures. It is possible to switch the crate on or off, send a system Reset and change the fan speed within the web browser window. All active controls as on/off and change fan speed will require a user name and password. The user name is “private” and default password also“private” (can be changed via SNMP). The network configuration as IP address (0.0.0.0 default = DHCP), net mask and ports can be changed via the front panel display and switches or in case the crate is outfitted with USB port with the WIENER MUSE control program.



CML00 HARTMANN ELECTRONIC GmbH

MAIN POWER | VME SYSRESET | FAN SLOWER | FAN FASTER

Global Status

Power Supply Status	ON
CPU Status	OK
Fan Speed	3900 RPM

Output Voltages

Channel	Name	Voltage	Status
U0	VME +3V	3.29V	OK
U1	VME +5V	4.99V	OK
U2	VME +12V	11.98V	OK
U3	VME -12V	-11.99V	OK

External Temperature Sensors

1	2	3	4	5	6	7	8
27°C	27°C	32°C	27°C	-128°C	-128°C	-128°C	-128°C

We suggest NetSNMP as an open source SNMP program which will be used in the further description.
Please visit http://net-snmp.sourceforge.net/ for more details.

Please download and install netSNMP (can be downloaded from WIENER support web site) on the control computer. In order to perform SNMP calls from any HARTMANN product the HEL-CRATE-MIB file must be stored somewhere on the PC doing the calls, by default that location should be /usr/share/snmp/mibs (Windows: C:\usr\share\snmp\mibs).

The most commonly used netsnmp calls are:
snmpwalk – returns groups of parameters / items
snmpget – returns a specific parameter (read)
snmpset – sets a specific parameter (write)

Please refer to the Net-snmp description and help files for detailed instructions and options. All parameters defined for the HARTMANN Crates Mpod system as well as crates are contained within the HEL-CRATE-MIB.txt file.

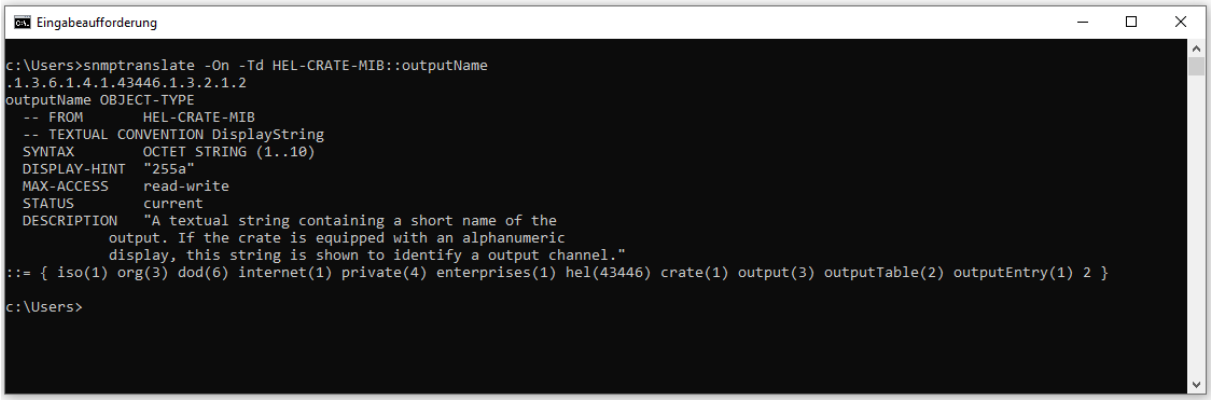
A fast and easy way to begin using SNMP is to use command line arguments. The command line arguments specified in this document are based on netSNMP. The command line syntax is the same for both windows and Linux (and MAC OSX).

For all HEL-CRATE-MIB library calls a quick help text can be shown by using

snmptranslate -On -Td HEL-CRATE-MIB::xxxx

Example:

snmptranslate -On -Td HEL-CRATE-MIB::outputName



c:\Users>**snmptranslate -On -Td HEL-CRATE-MIB::outputName**
.1.3.6.1.4.1.43446.1.3.2.1.2
outputName OBJECT-TYPE
  -- FROM HEL-CRATE-MIB
  -- TEXTUAL CONVENTION DisplayString
  SYNTAX OCTET STRING (1..10)
  DISPLAY-HINT "255a"
  MAX-ACCESS read-write
  STATUS current
  DESCRIPTION "A textual string containing a short name of the
output. If the crate is equipped with an alphanumeric
display, this string is shown to identify a output channel."
::= { iso(1) org(3) dod(6) internet(1) private(4) enterprises(1) hel(43446) crate(1) output(3) outputTable(2) outputEntry(1) 2 }

A first communication with a HARTMANN crate can be done using the snmpwalk to confirm the existence of the power supply at the given IP address.

snmpwalk

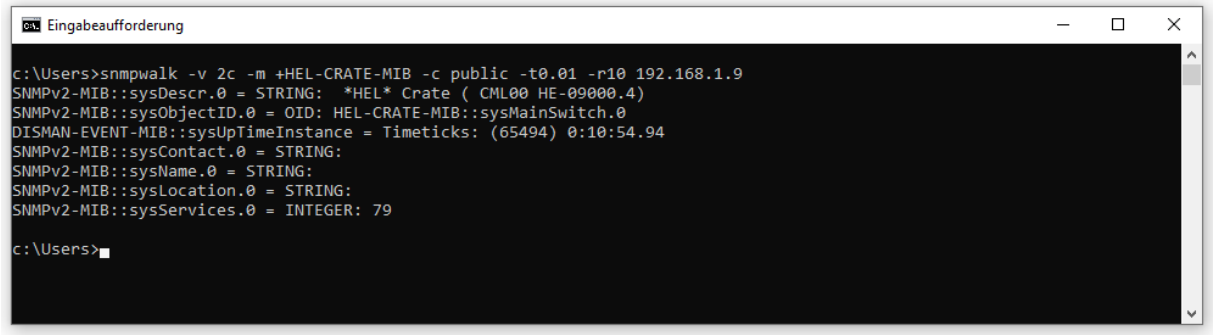
snmpwalk -Cp -Oqv -v 2c -M $path -m + HEL-CRATE-MIB -c public $ip

with:
snmpwalk: This command will retrieve a block of information.
-**v 2c:** This parameters specifies which version of the SNMP to use. WIENER devices use SNMP 2C.
-**M $path**: This parameter should be replaced with the path to the WIENER-CRATEMIB.txt file. It is not needed in case the default path is used.
-**m + HEL-CRATE-MIB**: This parameter tells the command to look at the **HEL-CRATE-MIB** to resolve the OID name.
-**c public**: This specifies which community of values can be accessed.
$ip: This should be replaced with the IP address of the MPOD crate.

Example for crate with IP address **192.168.1.9**:

snmpwalk -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9

*SNMPv2-MIB::sysDescr.0 = STRING: *HEL* Crate (CML00 HE-09000.4)*
SNMPv2-MIB::sysObjectID.0 = OID: HEL-CRATE-MIB::sysMainSwitch.0
DISMAN-EVENT-MIB::sysUpTimeInstance = Timeticks: (65494) 0:10:54.94
SNMPv2-MIB::sysContact.0 = STRING:
SNMPv2-MIB::sysName.0 = STRING:
SNMPv2-MIB::sysLocation.0 = STRING:
SNMPv2-MIB::sysServices.0 = INTEGER: 79



A list of all available parameters or sub-parameters as for instance channels can be obtained using the command snmpwalk with the parameter “crate”. To get all parameters use:

snmpwalk -Cp -Oqv -v 2c -M $path -m + HEL-CRATE-MIB -c public $ip crate

example:

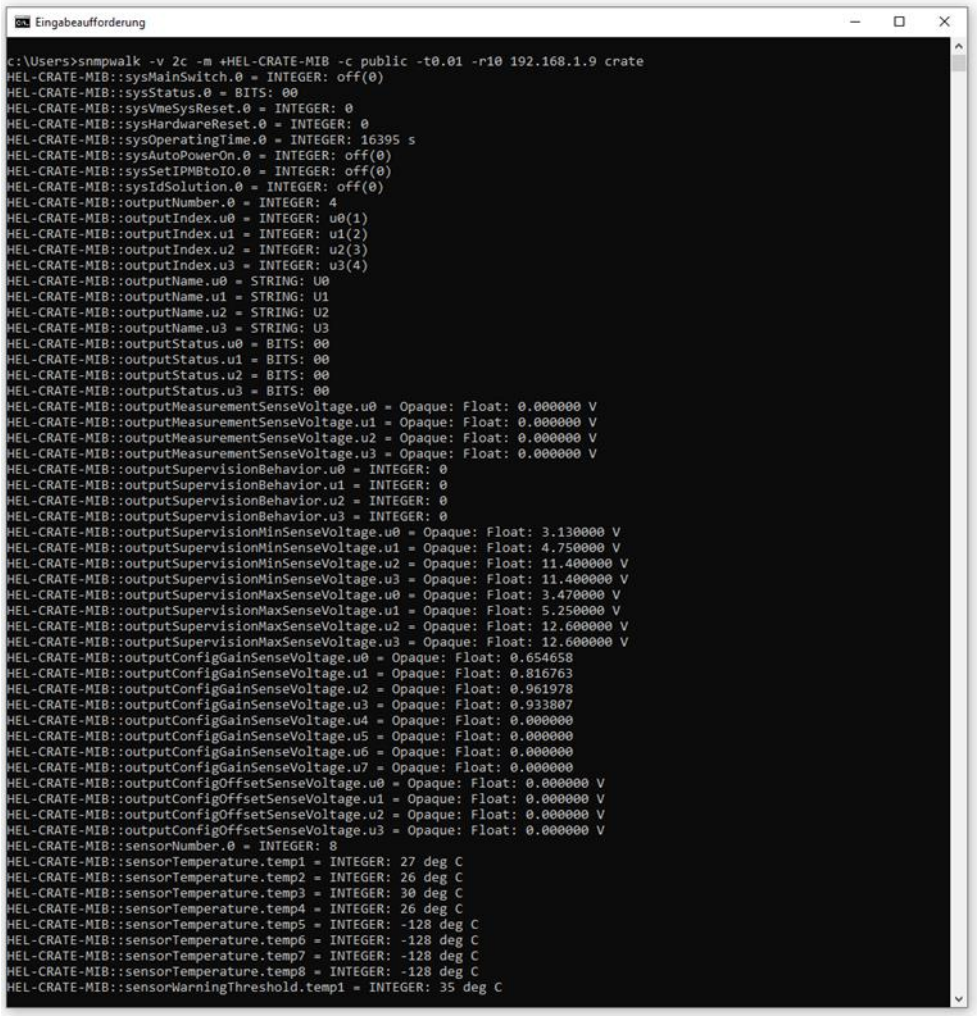
snmpwalk -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9 crate

Returns for a XXX crate:

c:\Users>snmpwalk -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9 crate
HEL-CRATE-MIB::sysMainSwitch.0 = INTEGER: off(0)
HEL-CRATE-MIB::sysStatus.0 = BITS: 00
HEL-CRATE-MIB::sysVmeSysReset.0 = INTEGER: 0
HEL-CRATE-MIB::sysHardwareReset.0 = INTEGER: 0
HEL-CRATE-MIB::sysOperatingTime.0 = INTEGER: 16395 s
HEL-CRATE-MIB::sysAutoPowerOn.0 = INTEGER: off(0)
HEL-CRATE-MIB::sysSetIPMBtoIO.0 = INTEGER: off(0)
HEL-CRATE-MIB::sysIdSolution.0 = INTEGER: off(0)
HEL-CRATE-MIB::outputNumber.0 = INTEGER: 4
HEL-CRATE-MIB::outputIndex.u0 = INTEGER: u0(1)
HEL-CRATE-MIB::outputIndex.u1 = INTEGER: u1(2)
HEL-CRATE-MIB::outputIndex.u2 = INTEGER: u2(3)
HEL-CRATE-MIB::outputIndex.u3 = INTEGER: u3(4)
HEL-CRATE-MIB::outputName.u0 = STRING: U0
HEL-CRATE-MIB::outputName.u1 = STRING: U1
HEL-CRATE-MIB::outputName.u2 = STRING: U2
HEL-CRATE-MIB::outputName.u3 = STRING: U3
HEL-CRATE-MIB::outputStatus.u0 = BITS: 00
HEL-CRATE-MIB::outputStatus.u1 = BITS: 00
HEL-CRATE-MIB::outputStatus.u2 = BITS: 00
HEL-CRATE-MIB::outputStatus.u3 = BITS: 00
HEL-CRATE-MIB::outputMeasurementSenseVoltage.u0 = Opaque: Float: 0.000000 V
HEL-CRATE-MIB::outputMeasurementSenseVoltage.u1 = Opaque: Float: 0.000000 V
HEL-CRATE-MIB::outputMeasurementSenseVoltage.u2 = Opaque: Float: 0.000000 V
HEL-CRATE-MIB::outputMeasurementSenseVoltage.u3 = Opaque: Float: 0.000000 V
HEL-CRATE-MIB::outputSupervisionBehavior.u0 = INTEGER: 0
HEL-CRATE-MIB::outputSupervisionBehavior.u1 = INTEGER: 0
HEL-CRATE-MIB::outputSupervisionBehavior.u2 = INTEGER: 0
HEL-CRATE-MIB::outputSupervisionBehavior.u3 = INTEGER: 0
HEL-CRATE-MIB::outputSupervisionMinSenseVoltage.u0 = Opaque: Float: 3.130000 V
HEL-CRATE-MIB::outputSupervisionMinSenseVoltage.u1 = Opaque: Float: 4.750000 V
HEL-CRATE-MIB::outputSupervisionMinSenseVoltage.u2 = Opaque: Float: 11.400000 V
HEL-CRATE-MIB::outputSupervisionMinSenseVoltage.u3 = Opaque: Float: 11.400000 V
HEL-CRATE-MIB::outputSupervisionMaxSenseVoltage.u0 = Opaque: Float: 3.470000 V
HEL-CRATE-MIB::outputSupervisionMaxSenseVoltage.u1 = Opaque: Float: 5.250000 V

HEL-CRATE-MIB::outputSupervisionMaxSenseVoltage.u2 = Opaque: Float: 12.600000 V
HEL-CRATE-MIB::outputSupervisionMaxSenseVoltage.u3 = Opaque: Float: 12.600000 V
HEL-CRATE-MIB::outputConfigGainSenseVoltage.u0 = Opaque: Float: 0.654658
HEL-CRATE-MIB::outputConfigGainSenseVoltage.u1 = Opaque: Float: 0.816763
HEL-CRATE-MIB::outputConfigGainSenseVoltage.u2 = Opaque: Float: 0.961978
HEL-CRATE-MIB::outputConfigGainSenseVoltage.u3 = Opaque: Float: 0.933807
HEL-CRATE-MIB::outputConfigGainSenseVoltage.u4 = Opaque: Float: 0.000000
HEL-CRATE-MIB::outputConfigGainSenseVoltage.u5 = Opaque: Float: 0.000000
HEL-CRATE-MIB::outputConfigGainSenseVoltage.u6 = Opaque: Float: 0.000000
HEL-CRATE-MIB::outputConfigGainSenseVoltage.u7 = Opaque: Float: 0.000000
HEL-CRATE-MIB::outputConfigOffsetSenseVoltage.u0 = Opaque: Float: 0.000000 V
HEL-CRATE-MIB::outputConfigOffsetSenseVoltage.u1 = Opaque: Float: 0.000000 V
HEL-CRATE-MIB::outputConfigOffsetSenseVoltage.u2 = Opaque: Float: 0.000000 V
HEL-CRATE-MIB::outputConfigOffsetSenseVoltage.u3 = Opaque: Float: 0.000000 V
HEL-CRATE-MIB::sensorNumber.0 = INTEGER: 8
HEL-CRATE-MIB::sensorTemperature.temp1 = INTEGER: 27 deg C
HEL-CRATE-MIB::sensorTemperature.temp2 = INTEGER: 26 deg C
HEL-CRATE-MIB::sensorTemperature.temp3 = INTEGER: 30 deg C
HEL-CRATE-MIB::sensorTemperature.temp4 = INTEGER: 26 deg C
HEL-CRATE-MIB::sensorTemperature.temp5 = INTEGER: -128 deg C
HEL-CRATE-MIB::sensorTemperature.temp6 = INTEGER: -128 deg C
HEL-CRATE-MIB::sensorTemperature.temp7 = INTEGER: -128 deg C
HEL-CRATE-MIB::sensorTemperature.temp8 = INTEGER: -128 deg C
HEL-CRATE-MIB::sensorWarningThreshold.temp1 = INTEGER: 35 deg C
HEL-CRATE-MIB::sensorWarningThreshold.temp2 = INTEGER: 35 deg C
HEL-CRATE-MIB::sensorWarningThreshold.temp3 = INTEGER: 35 deg C
HEL-CRATE-MIB::sensorWarningThreshold.temp4 = INTEGER: 35 deg C
HEL-CRATE-MIB::sensorWarningThreshold.temp5 = INTEGER: 35 deg C
HEL-CRATE-MIB::sensorWarningThreshold.temp6 = INTEGER: 35 deg C
HEL-CRATE-MIB::sensorWarningThreshold.temp7 = INTEGER: 35 deg C
HEL-CRATE-MIB::sensorWarningThreshold.temp8 = INTEGER: 35 deg C
HEL-CRATE-MIB::sensorFailureThreshold.temp1 = INTEGER: 55 deg C
HEL-CRATE-MIB::sensorFailureThreshold.temp2 = INTEGER: 55 deg C
HEL-CRATE-MIB::sensorFailureThreshold.temp3 = INTEGER: 55 deg C
HEL-CRATE-MIB::sensorFailureThreshold.temp4 = INTEGER: 55 deg C
HEL-CRATE-MIB::sensorFailureThreshold.temp5 = INTEGER: 55 deg C
HEL-CRATE-MIB::sensorFailureThreshold.temp6 = INTEGER: 55 deg C
HEL-CRATE-MIB::sensorFailureThreshold.temp7 = INTEGER: 55 deg C
HEL-CRATE-MIB::sensorFailureThreshold.temp8 = INTEGER: 55 deg C
HEL-CRATE-MIB::sensorAlarmThreshold.temp1 = INTEGER: 45 deg C
HEL-CRATE-MIB::sensorAlarmThreshold.temp2 = INTEGER: 45 deg C
HEL-CRATE-MIB::sensorAlarmThreshold.temp3 = INTEGER: 45 deg C
HEL-CRATE-MIB::sensorAlarmThreshold.temp4 = INTEGER: 45 deg C
HEL-CRATE-MIB::sensorAlarmThreshold.temp5 = INTEGER: 45 deg C
HEL-CRATE-MIB::sensorAlarmThreshold.temp6 = INTEGER: 45 deg C
HEL-CRATE-MIB::sensorAlarmThreshold.temp7 = INTEGER: 45 deg C
HEL-CRATE-MIB::sensorAlarmThreshold.temp8 = INTEGER: 45 deg C
HEL-CRATE-MIB::sensorName.temp1 = STRING: Sensor1
HEL-CRATE-MIB::sensorName.temp2 = STRING: Sensor2

HEL-CRATE-MIB::sensorName.temp3 = STRING: Sensor3
HEL-CRATE-MIB::sensorName.temp4 = STRING: Sensor4
HEL-CRATE-MIB::sensorName.temp5 = STRING: Sensor5
HEL-CRATE-MIB::sensorName.temp6 = STRING: Sensor6
HEL-CRATE-MIB::sensorName.temp7 = STRING: Sensor7
HEL-CRATE-MIB::sensorName.temp8 = STRING: Sensor8
HEL-CRATE-MIB::sensorID.temp1 = Hex-STRING: D2 00 00 00 22 85 E0 22
HEL-CRATE-MIB::sensorID.temp2 = Hex-STRING: 65 00 00 00 22 7C 2C 22
HEL-CRATE-MIB::sensorID.temp3 = Hex-STRING: B9 00 00 00 22 82 0E 22
HEL-CRATE-MIB::sensorID.temp4 = Hex-STRING: 27 00 00 00 22 8F FE 22
HEL-CRATE-MIB::sensorID.temp5 = Hex-STRING: 00 00 00 00 00 00 00 00
HEL-CRATE-MIB::sensorID.temp6 = Hex-STRING: 00 00 00 00 00 00 00 00
HEL-CRATE-MIB::sensorID.temp7 = Hex-STRING: 00 00 00 00 00 00 00 00
HEL-CRATE-MIB::sensorID.temp8 = Hex-STRING: 00 00 00 00 00 00 00 00
HEL-CRATE-MIB::sensorStatus.0 = INTEGER: 0
HEL-CRATE-MIB::snmpCommunityName.public = STRING: "public"
HEL-CRATE-MIB::snmpPort.0 = INTEGER: 161
HEL-CRATE-MIB::firmwareUpdate.0 = ""
HEL-CRATE-MIB::ipDynamicAddress.0 = IpAddress: 192.168.1.9
HEL-CRATE-MIB::ipStaticAddress.0 = IpAddress: 192.168.1.9
HEL-CRATE-MIB::macAddress.0 = Hex-STRING: 30 32 94 80 03 86
HEL-CRATE-MIB::psOperatingTime.0 = INTEGER: 6040 s
HEL-CRATE-MIB::fanOperatingTime.0 = INTEGER: 1771 s
HEL-CRATE-MIB::fanNominalSpeed.0 = INTEGER: 3900 RPM
HEL-CRATE-MIB::fanNumberOfFans.0 = INTEGER: 3 Fans
HEL-CRATE-MIB::fanSpeed.1 = INTEGER: 0 RPM
HEL-CRATE-MIB::fanSpeed.2 = INTEGER: 0 RPM
HEL-CRATE-MIB::fanSpeed.3 = INTEGER: 0 RPM
HEL-CRATE-MIB::fanMaxSpeed.0 = INTEGER: 5500 RPM
HEL-CRATE-MIB::fanMinSpeed.0 = INTEGER: 2700 RPM
HEL-CRATE-MIB::fanConfigMaxSpeed.0 = INTEGER: 5500 RPM
HEL-CRATE-MIB::fanConfigMinSpeed.0 = INTEGER: 1800 RPM
HEL-CRATE-MIB::digitalInput.0 = BITS: FF d0(0) d1(1) d2(2) d3(3) d4(4) d5(5) d6(6) d7(7)
HEL-CRATE-MIB::digitalOutput.0 = BITS: 00
HEL-CRATE-MIB::digitalOutput.0 = No more variables left in this MIB View (It is behind the end of the MIB tree)

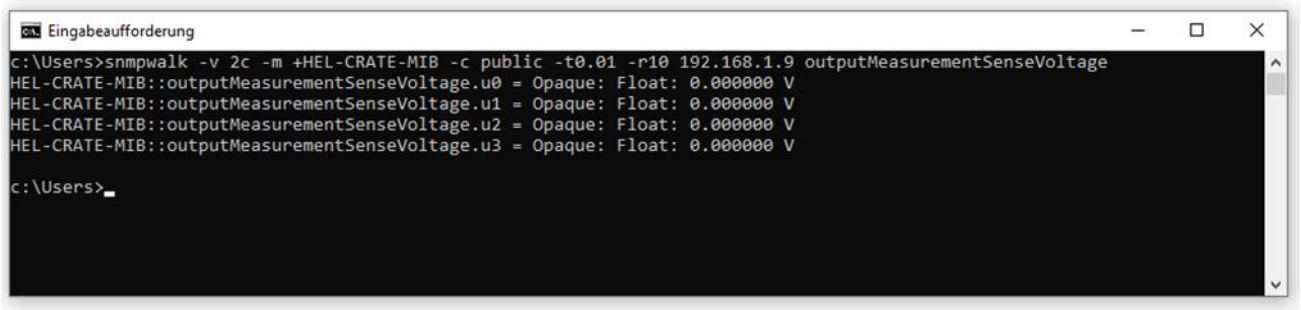


snmpwalk -Cp -Oqv -v 2c -M $path -m + HEL-CRATE-MIB -c public $ip outputMeasurementSenseVoltage

Example to read output set voltages:
snmpwalk -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9 outputMeasurementSenseVoltage

return to crate:

c:\Users>snmpwalk -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9 outputMeasurementSenseVoltage
HEL-CRATE-MIB::outputMeasurementSenseVoltage.u0 = Opaque: Float: 0.000000 V
HEL-CRATE-MIB::outputMeasurementSenseVoltage.u1 = Opaque: Float: 0.000000 V
HEL-CRATE-MIB::outputMeasurementSenseVoltage.u2 = Opaque: Float: 0.000000 V
HEL-CRATE-MIB::outputMeasurementSenseVoltage.u3 = Opaque: Float: 0.000000 V



After obtaining information about the crate / power supplies or a list of channels and parameters, it is useful to be able to write or read particular data. This can be done using the

snmpget and **snmpset** commands.

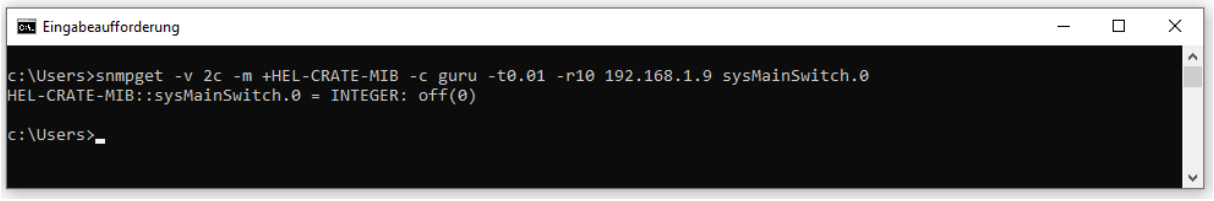
snmpget -Oqv -v 2c -M $path -m + HEL-CRATE-MIB -c guru $ip name.index

snmpset -v 2c -M $path -m + HEL-CRATE-MIB -c guru $ip name.index format value

Via SNMP the status of the crate can be read and the crate can be switched on or off 1:

snmpget -v 2c -m +HEL-CRATE-MIB -c guru -t0.01 -r10 192.168.1.9 sysMainSwitch.0

Example:
c:\Users>snmpget -v 2c -m +HEL-CRATE-MIB -c guru -t0.01 -r10 192.168.1.9 sysMainSwitch.0
HEL-CRATE-MIB::sysMainSwitch.0 = INTEGER: off(0)



This indicates that the crate or power supply is currently off. To better understand the call above we will break it down by parameter:

snmpget: This command will retrieve a value about the crate or one of the channels it contains.
-**v 2c**: These parameters specify which version of the SNMP to use. WIENER devices use SNMP 2C.
-M $path: This parameter should be replaced with the path to the WIENER-CRATEMIB.txt file.
-m + HEL-CRATE-MIB: This parameter tells the command to look at the WIENER-CRATE-MIB to resolve the OID name.
-c public: This specifies which community of values can be accessed.
$ip: This should be replaced with the IP address of the crate.

sysMainSwitch.0: This is the register you wish to retrieve.

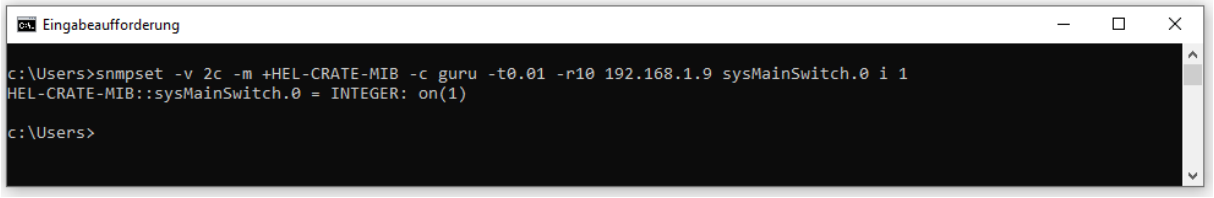
Since we know from the call above that the crate is off, we may want to turn it on.

snmpset -v 2c - path -m + HEL-CRATE-MIB -c COMMUNITY $ip sysMainSwitch.0 i 1

Most of the parameters for snmpset are the same as snmpget, the new parameters are highlighted below.
i: Since sysMainSwitch.0 is an integer value, we specify the value to be an integer with 1: This is the value we wish to write. In this case we write 'one' to set the main switch to on.

snmpset -v 2c -m +HEL-CRATE-MIB -c guru -t0.01 -r10 192.168.1.9 sysMainSwitch.0 i 1

Example for VME 6023 crates:
c:\Users>snmpset -v 2c -m +HEL-CRATE-MIB -c guru -t0.01 -r10 192.168.1.9 sysMainSwitch.0 i 1
HEL-CRATE-MIB::sysMainSwitch.0 = INTEGER: on(1)



For most of the write commands (snmpset) the access type has to be changed from public to private. A complete list of value names that can be written or read via SNMP can be found in the HEL-CRATE-MIB but frequently needed values are:

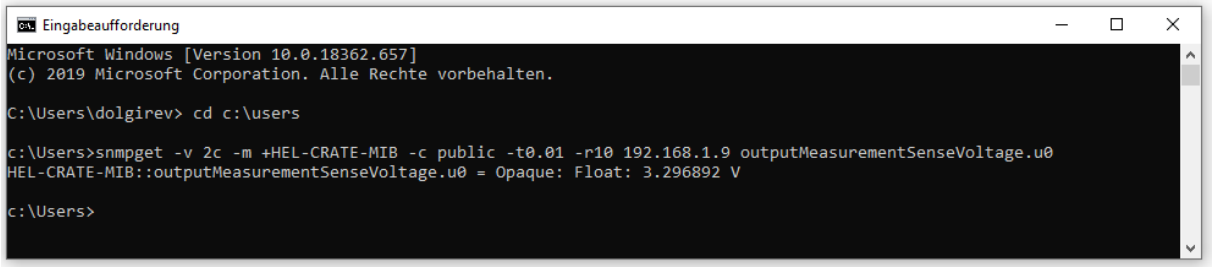
Value Name	Type	Access	Comments
sysMainSwitch.0	Integer	R/W	ON/OFF
outputVoltage.u0 … u7	Float	R/W	Channel set voltage
outputMeasurementSenseVoltage.u0 … u7	Float	R	Measured channel Voltage
sensorTemperature.temp1 … temp8	Integer	R	Measured temperature for optional sensors 1 to 8
fanAirTemperature.0	Integer	R	Air inlet temperature
sensorWarningThreshold.temp1 …temp8	Integer	R/W	Warning temperature limit (switch fans to full speed)
sensorFailureThreshold.temp1 … temp8	Integer	R/W	Over temperature limit (switch power supply off)
fanNominalSpeed.0	Integer	R/W	Set fan speed
fanSpeed.1… number of fans	Integer	R	Measured speed of fan

WARNING:
Do not change the factory default settings for voltage parameters in chassis!!!
Wrong settings can damage plugged in modules or other connected electronic circuits!!!
Changing fan speed to lower values may cause insufficient cooling and can damage
plugged in modules!

Read measured voltage:

snmpget -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9 outputMeasurementSenseVoltage.u0

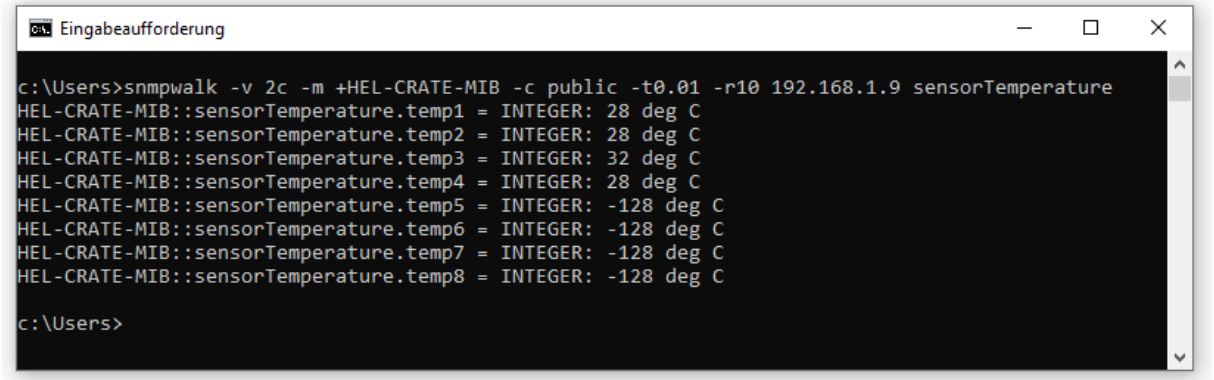
c:\Users>snmpget -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9 outputMeasurementSenseVoltage.u0
HEL-CRATE-MIB::outputMeasurementSenseVoltage.u0 = Opaque: Float: 3.296892 V



Read temperatures:

c:\Users>snmpwalk -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9 sensorTemperature

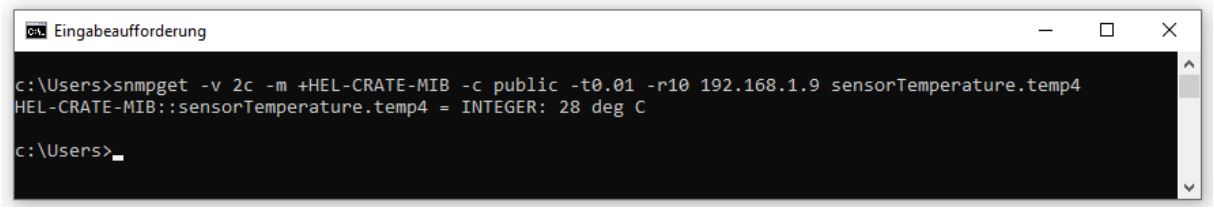
c:\Users>snmpwalk -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9 sensorTemperature
HEL-CRATE-MIB::sensorTemperature.temp1 = INTEGER: 28 deg C
HEL-CRATE-MIB::sensorTemperature.temp2 = INTEGER: 28 deg C
HEL-CRATE-MIB::sensorTemperature.temp3 = INTEGER: 32 deg C
HEL-CRATE-MIB::sensorTemperature.temp4 = INTEGER: 28 deg C
HEL-CRATE-MIB::sensorTemperature.temp5 = INTEGER: -128 deg C
HEL-CRATE-MIB::sensorTemperature.temp6 = INTEGER: -128 deg C
HEL-CRATE-MIB::sensorTemperature.temp7 = INTEGER: -128 deg C
HEL-CRATE-MIB::sensorTemperature.temp8 = INTEGER: -128 deg C


Eingabeaufforderung
c:\Users>snmpwalk -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9 sensorTemperature
HEL-CRATE-MIB::sensorTemperature.temp1 = INTEGER: 28 deg C
HEL-CRATE-MIB::sensorTemperature.temp2 = INTEGER: 28 deg C
HEL-CRATE-MIB::sensorTemperature.temp3 = INTEGER: 32 deg C
HEL-CRATE-MIB::sensorTemperature.temp4 = INTEGER: 28 deg C
HEL-CRATE-MIB::sensorTemperature.temp5 = INTEGER: -128 deg C
HEL-CRATE-MIB::sensorTemperature.temp6 = INTEGER: -128 deg C
HEL-CRATE-MIB::sensorTemperature.temp7 = INTEGER: -128 deg C
HEL-CRATE-MIB::sensorTemperature.temp8 = INTEGER: -128 deg C
c:\Users>

Read specific temperature probe:

snmpget -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9 sensorTemperature.temp4

c:\Users>snmpget -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9 sensorTemperature.temp4
HEL-CRATE-MIB::sensorTemperature.temp4 = INTEGER: 28 deg C



Set temperature warning level for probe 4

snmpset -v 2c -m +HEL-CRATE-MIB -c guru -t0.01 -r10 192.168.1.9 sensorWarningThreshold.temp4 i 25

c:\Users>snmpset -v 2c -m +HEL-CRATE-MIB -c guru -t0.01 -r10 192.168.1.9 sensorWarningThreshold.temp4 i 25
HEL-CRATE-MIB::sensorWarningThreshold.temp4 = INTEGER: 25 deg C

Set fan speed to 3500 RPM

snmpset -v 2c -m +HEL-CRATE-MIB -c guru -t0.01 -r10 192.168.1.9 fanNominalSpeed.0 i 2700

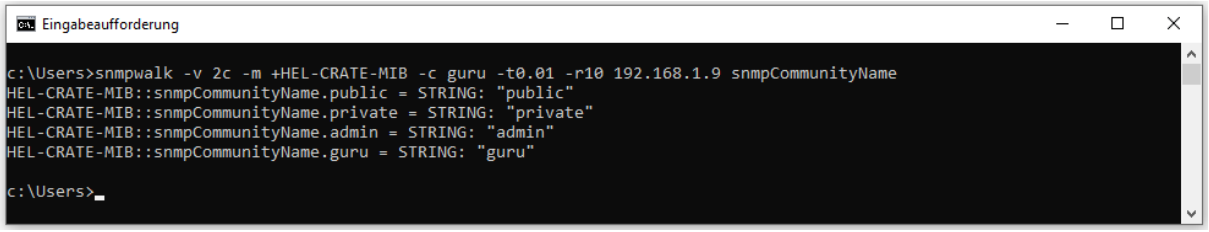
c:\Users>snmpset -v 2c -m +HEL-CRATE-MIB -c guru -t0.01 -r10 192.168.1.9 fanNominalSpeed.0 i 2700
HEL-CRATE-MIB::fanNominalSpeed.0 = INTEGER: 2700 RPM

Change of community names / setting of passwords

For the communication with MPOD modules 4 types of SNMP communities are used, “**public**", "**private**", "**admin**"and "**guru**". By default the community names are equal to the community types.

snmpwalk -v 2c -m +HEL-CRATE-MIB -c public -t0.01 -r10 192.168.1.9 snmpCommunityName
HEL-CRATE-MIB::snmpCommunityName.public = STRING: "public"

c:\Users>snmpwalk -v 2c -m +HEL-CRATE-MIB -c guru -t0.01 -r10 192.168.1.9 snmpCommunityName
HEL-CRATE-MIB::snmpCommunityName.public = STRING: "public"
HEL-CRATE-MIB::snmpCommunityName.private = STRING: "private"
HEL-CRATE-MIB::snmpCommunityName.admin = STRING: "admin"
HEL-CRATE-MIB::snmpCommunityName.guru = STRING: "guru"

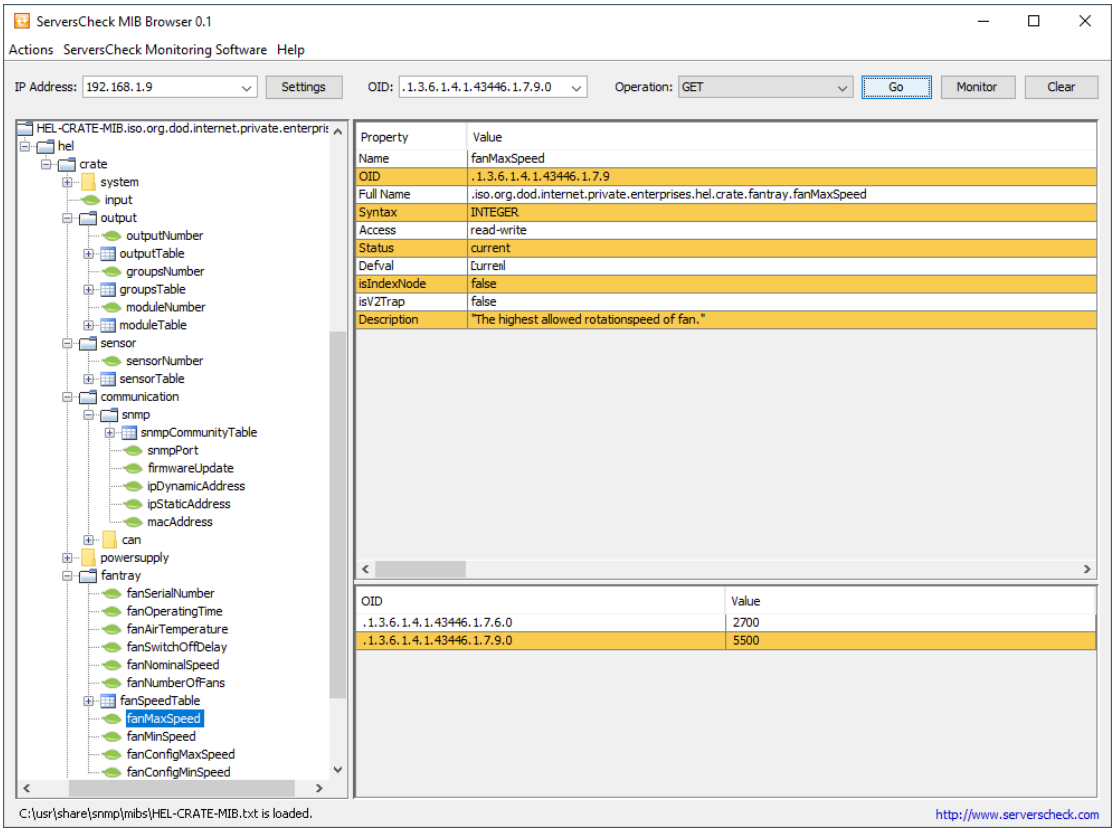


In order to save the MPOD system communication the community names can be used as passwords and be changed accordingly. The following example shows how to change and test the community names. Using a wrong community name will result in a time out error. Please note, that especially the communities with write access (private, admin, guru) should be protected.

MIB Browser
There are several commercial or open source MIB-Browser programs available which can be used for SNMP communication. These provide often a simple GUI and allow SNMP calls.

Below is a list of some free or open source MIB – browsers:

http://www.ireasoning.com/mibbrowser.shtml
http://www.serverscheck.com/mib_browser/
https://www.mibble.org/
http://www.ks-soft.net/hostmon.eng/mibbrowser/index.htm
https://www.tembria.com/products/snmpbrowser/index.html



1.) Loading C:\usr\share\snmp\mibs :

HEL-CRATE-MIB.txt

2.) Set IP Address 192.168.1.9

3.) Choose OID

4.) Set Operation

5.) GO