Descripton „brwatch.exe"   page 1

1. Description

brwatch ist a small B&R PVI- based debugging tool for Microsoft Windows to watch process variables („PV") on B&R PLCs. Futhermore it enables to log their values into CSV-Files.
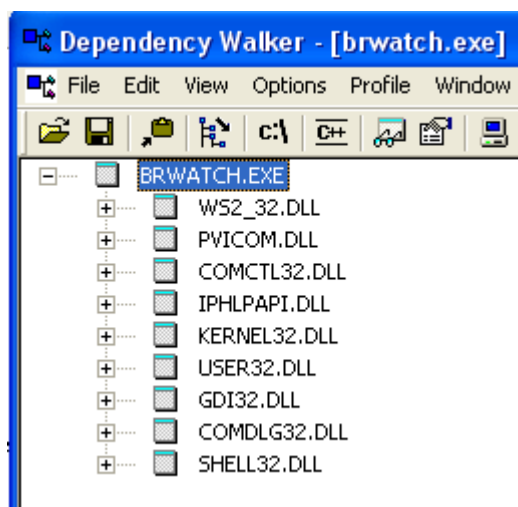
2. Disclaimer

brwatch comes „as is", e.g. without support and warranty.
You can freely copy it but use it at your own risk.

3. Installation

After installation of PVI from www.br-automation.com just copy brwatch.exe to any folder. If you plan to start it twice or more with different settings you must copy it into seperate folders.
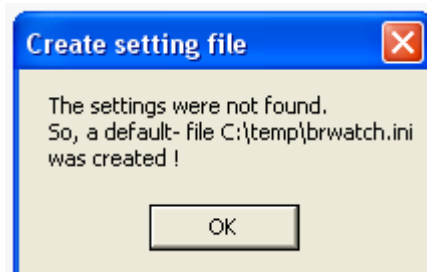If you don't run PVI on a B&R- PC or on a PC without a PVI Dongle installed, PVI runs at maximum duration of 2 hours.
Brwatch.exe only depends on Windows system libraries and B&R PVI

4. Settings

After its first start brwatch creates an „brwatch.ini" file. To edit these settings use an external editor or the built-in one in menu Options/Settings.
Refer to the comments in this file and additional the PVI- Dokumentation.

Create setting file

The settings were not found.
So, a default- file C:\temp\brwatch.ini was created !
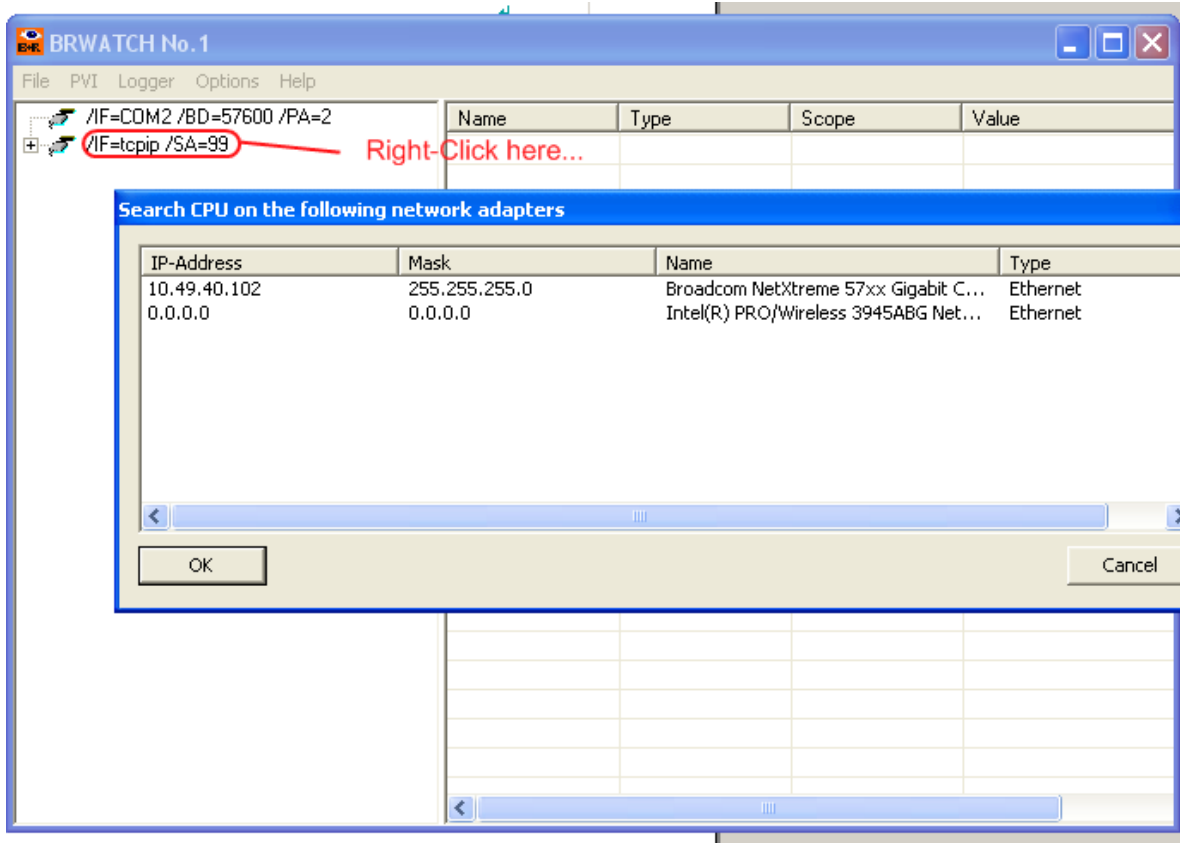
OK

```
  brwatch.ini
   16    ; sometimes CPUs cannot be found automatically, so input the
   17    ; connection settings here
   18    ; [CPU1]
   19    ; descriptor = /DAIP=192.168.150.1
   20    ; device = /IF=tcpip /SA=98  ; Device must exist in section [DEVICE...
   21    ; =============================================================
   22    ;
   23    ;
   24    ;
   25    ;
   26
   27   [DEVICE1]
   28    descriptor= /IF=COM2 /BD=57600 /PA=2
   29
   30   [DEVICE2]
   31    descriptor = /IF=tcpip /SA=99
   32    ;
   33    ; enter next device here...
   34    ;[DEVICE3]
   35    ; descriptor =
   36    ;
   37
   38    ; AR000
   39   [CPU1]
   40    descriptor = /DAIP=127.0.0.1 /REPO=11160
   41    device =  /IF=tcpip /SA=99
```
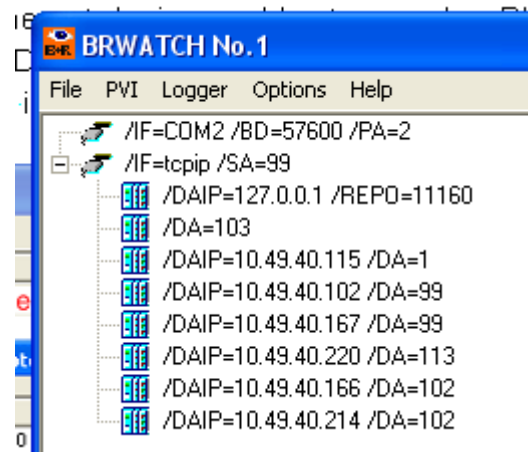
5. Scan for PLCs on a TCP/IP network

Right-clicking with your mous on an ethernet device enables to search a PLC on a con-
nected network. As this service uses UDP some network settings disable this feature. In
this case you have to enter the settings in the brwatch.ini file manually :-(.
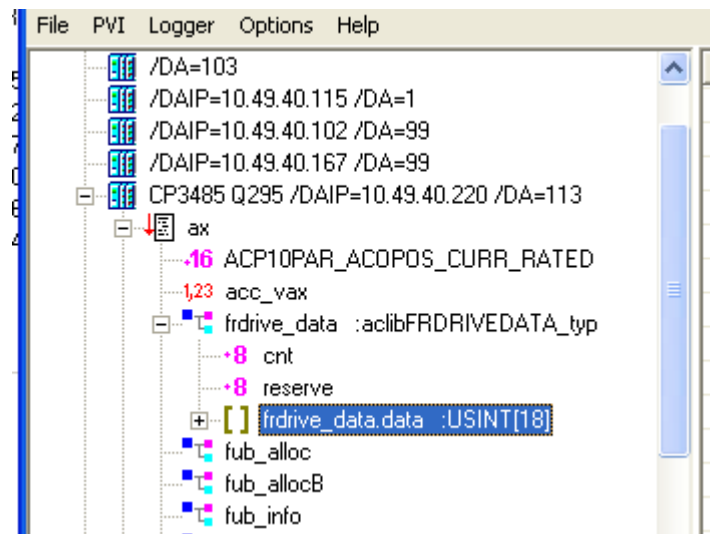

If you mark an ethernet adapter in this list an press „OK" brwatch will list the found
CPUs after a short while.
(This service will also find „normal" PCs running PVI, but unfortunately these cannot be
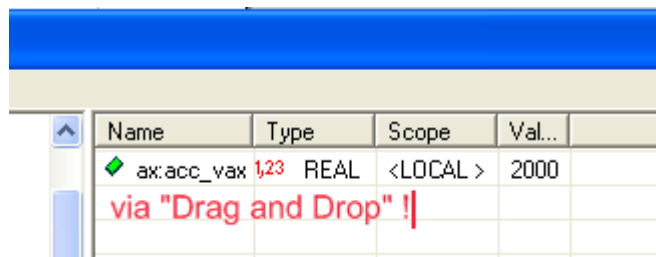scanned for PVs)

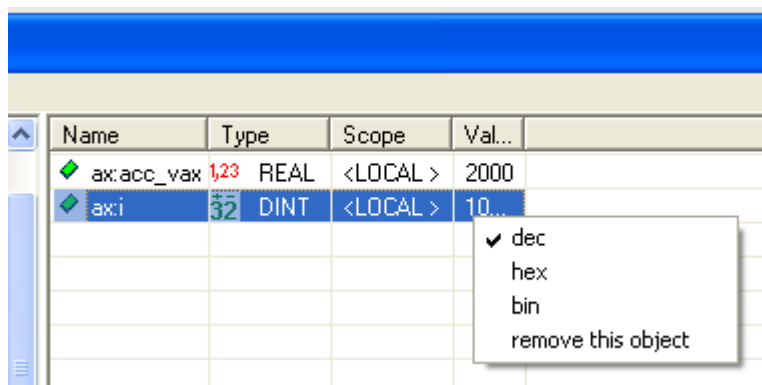## 6. Scanning for process variables and Watch them (PVs)

To scan variables yous left-click on each node-entry of the treeview control left.

To watch a selected variable just drag it to the listview control at the right. The entries can be arrange freely with again drag and drop operations. If you drag an entry outside brwatch it will be removed from the listview.
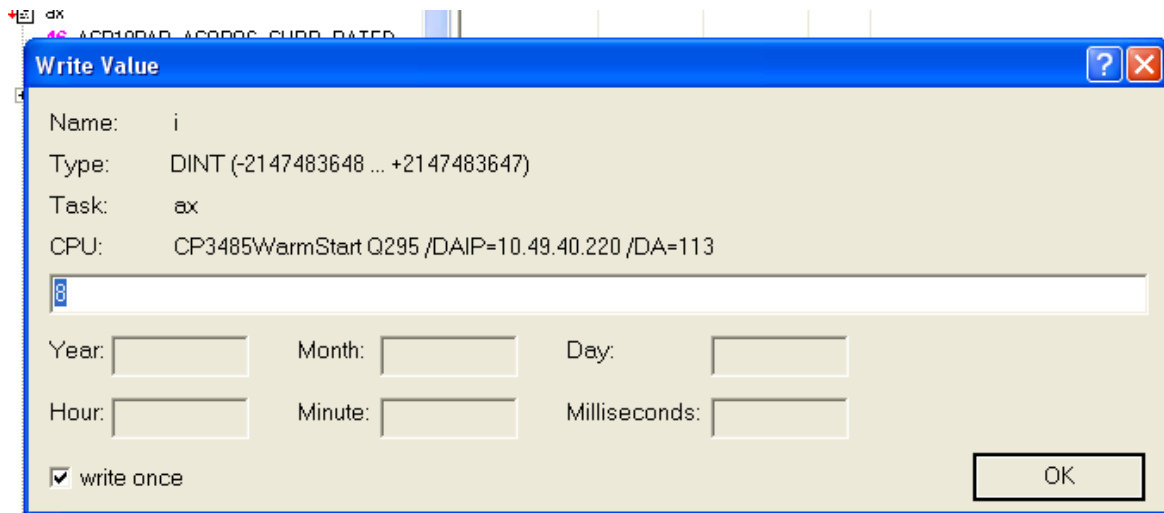

Right-Click on an entry in the listview opens an context menu for further settings (e.g. representation of integer variables an strings).

To change a value double click the entry in the listview. The following dialog window enables to enter a new value.
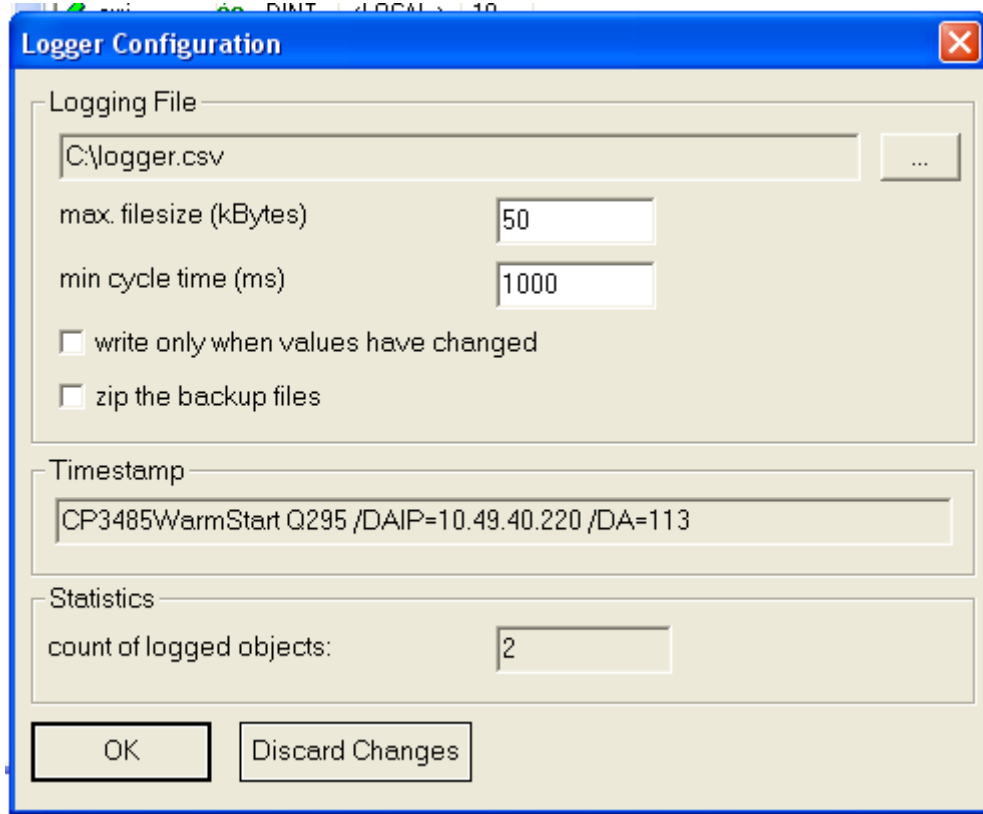If option „write once" is enabled this dialog will close after pressing „OK". If not, this dialog remains open.

You can save the watch configuration (or load an existing configuration) in menu „File".

7. Logging PVs to a CSV- File

If the listview contains one ore more PVs you can write the values into a CSV- File. This file type can be opened by Microsoft Excel or Open Office Calc for example.

The CSV- file size can be limited. If the entries exceed this size the earlier file will be renamed (extended with date and time settings) and a new file will be opend.

If „write only when values have changed" is enabled an row will only be written if at least one variable in the list view has changed its value (minimize size). Otherwize the entered cycle time is used for each row no matter if values have changed in a new cycle.
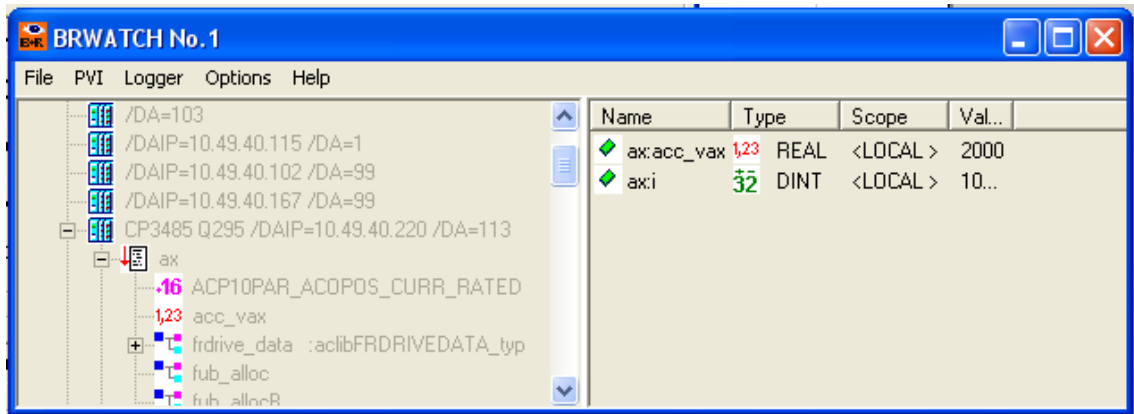
Each row in the CSV- file will contain an timestamp. This will come from the first CPU listed in the listview.

Furthermore the CSV- files can compressed via ZIP- algorithm. Uncompresse these files later by brwatch (Menu File) or with a seperate tool (WinZIP, 7zip e.g.)

Pressing „OK" will save these settings in the brwatch.ini file.

8. Starting and Stopping the Logger

Menu Logger enables to start the logger or to stop a started logging. If logging has started the brwatch main window is greyed to signal this state.

You can save space on your Window desktop by minimizing the window. Brwatch will then be visible only as an icon in the taskbar. Moving the mouse over this icon gives the option to maximize the main window again.

If you close brwatch in this state (e.g. power down your PC) the logger will start in this state again after power up (for long term logging capabilities).

Beware, also the minimized window state will be saved. So if you don't see the main window after starting the .exe just have a look at the taskbar ;-).