OPUS ERROR REPORTING

User Information

Version 1

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This manual is the original documentation for the OPUS spectroscopic software.

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1 Introduction

In many cases problems or errors witnessed with OPUS have just been accepted and it has been tried to somehow get on with them. However, this attitude does not help to improve the situation and solve the respective problems.

Therefore, report any single problem, error or OPUS system crash to the Bruker Optik software department. New ideas and suggestions for improvement are also welcome.

1.1 How to report errors?

- Send an informal e-mail to: *opusbugs@bruker.de*
- Use the official OPUS error form available in the intranet (only internally!):
  file://pia.optik.lan/Home/Groups/QM/Formblätter/IRENS/FBSOI008.doc

1.2 Mandatory items to be reported in any case:

- Exact OPUS version with date
- Operating system version
- Detailed description of the last steps which have been done or tried to do

1.3 Further items to be reported:

Depends on the complexity of the problem. Several different types of problems or errors are distinguished:

1 Complete operating system crash
2 OPUS crash
3 OPUS disappears
4 Error message in OPUS
5 OPUS interface freezes

The different types of problems or errors which may occur in connection with OPUS and their troubleshooting are described in chapter 2.

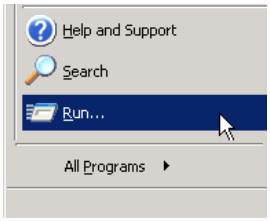
1.4 How to log errors?

Any type of crash occurred in OPUS is generally logged by Dr Watson.

In some cases, however, other Windows programs are used to log system crashes. Windows XP, e.g. can be configured such that the Windows Error Reporting (WER) program acts instead of Dr Watson. In this case, a typical Windows error message pops up.

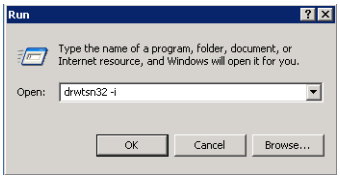
It is possible to define Dr Watson as standard to trace errors in the form of so-called log files. The steps required are described in the following.

1.5 Define Dr Watson as log file standard



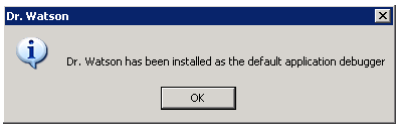
Step 1:

- Click on the Windows *Start* button.
- Select the *Run* command.



Step 2:

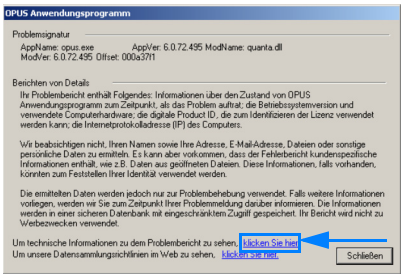
- Enter *drwtsn32 -i* into the command line.
- Confirm by clicking on the *OK* button.



Step 3:

A message pops up and confirms that Dr Watson has been installed as standard program for creating log files.

1.6 Error messages in Windows

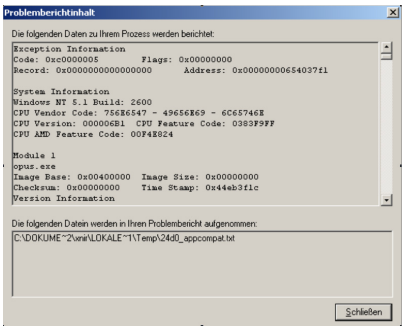


Step 1:

Click on the *Click here* option when the message pops up to get more technical information on the problem.

What happens afterwards?

In general, the error processing is sent to Dr Watson which generates the corresponding log files.



Step 2:

- Make a screen shot of the problem report contents.
- Send this screenshot to: *opusbugs@bruker.de*

Note: Do not send the **\accomp.txt* file to Bruker, as this file does not contain any usable data at all.

2 Types of errors

The following chapter describes the different types of problems or errors which may occur when working with OPUS.

2.1 Complete operating system crash

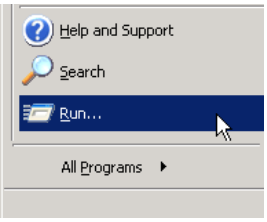
What happens?	You probably get a blue screen.
Possible cause:	• Severe problems with the operating system • Perhaps a non-conforming driver
What about OPUS?	OPUS probably does not cause this problem as it is a user-mode program.
Information on the error:	• Look at the first two lines on the screen (mainly figures). • Look at the DLL list, written right below *Name*. • Check drivers recently changed, or new hardware components. • Remove drivers or look for more updated ones with the vendor.

2.2 OPUS crash

What happens?	OPUS crashes. Error message pops up.
Possible cause:	Any severe OPUS system error, e.g. out of memory/resources
Information on the error:	Generally, Dr Watson pops up (with Windows NT/2000/XP)

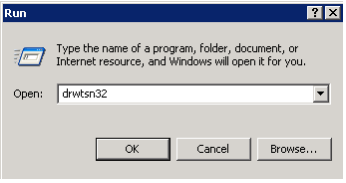
Standard logfile path:	• <\winnt\system32\drwtsn32.log • <\Documents and Settings\All Users\Application Data\Microsoft\Dr Watson (sometimes in case of recent systems) **Note: To find out which logfile protocol path applies for the OPUS system used, have a look at the *Dr Watson for Windows* dialog (see chapter 2.2.1).**

2.2.1 How to find out the logfile protocol path?



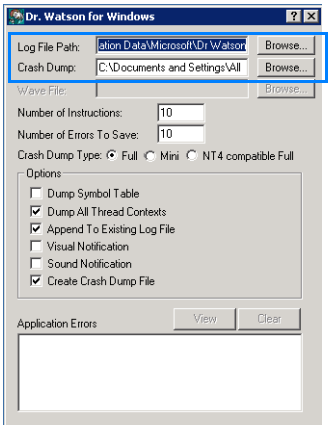
Step 1:

• Click on the Windows *Start* button.
• Select the *Run* command.



Step 2:

• Enter *drwtsn32* into the command line.
• Confirm by clicking on the *OK* button.



Step 3:

The logfile protocol path is displayed.

• Click on the *Browse* button to have the path structure displayed.
• Confirm by clicking on the OK button.

Step 4:

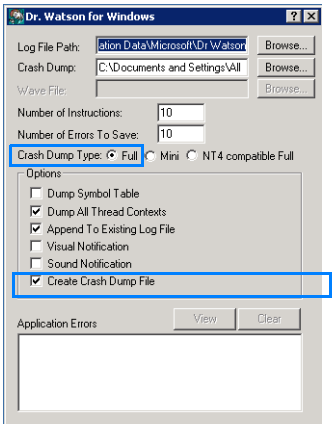
Send the logfile to:
opusbugs@bruker.de

2.2.2 Crash dump file

Usually, it is advisable to create a crash dump file (with *user.dmp* as file name). This type of file is very helpful in case of trouble-shooting. It requires, however, a lot of disk space.

Where can this file type option be set?

The crash dump file option has to be set on the *Dr Watson for Windows* dialog.

	Repeat steps 1 and 2 as described in chapter 2.2.1.
	**Step 3:** • Activate the *Full* option button to set the file display size. • Activate the *Create Crash Dump File* check box.
	Step 4: Send the crash dump file to: *opusbugs@bruker.de*

2.3 OPUS disappears

What happens?	• OPUS completely disappears from the screen. • Even the OPUS process disappears from the Windows Task Manager.
Possible cause:	• Any problem with the PC configuration • Interaction with other programs
Information on the error:	No information available at all.
What is to be done?	• Directly contact Bruker software department to clarify whether additional debug tools can be used. • Download the debugging tools for Windows from the following Microsoft Web site: *http://www.microsoft.com/whdc/devtools/debugging/installx86.mspx*
Background information	Very often the hang only occurs when the process is under load. The best approach is to attach a debugger to the process after it has hung (if you can reproduce the problem or remote debug), or create a process dump. A process dump is almost as good as a live debug in these cases, as the state does not change much over time; that is as good a definition of a hang as any other one.

2.4 Error message in OPUS

What happens?	OPUS still runs. Error message pops up.
Possible cause:	• Any temporary OPUS system error • Wrong procedure sequence • Missing files or methods
Information on the error:	Text written in error message
What is to be done?	Send a screenshot of the error message to: *opusbugs@bruker.de*

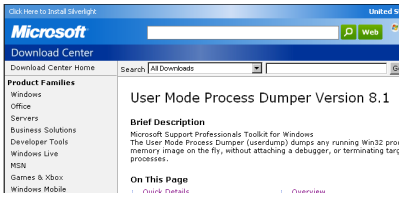
2.4.1 Error message in connection with ADIO/PROCESS

What is to be done?	Send the ADIO/PROCESS protocol log files to: *opusbugs@bruker.de*
ADIO/PROCESS log file path:	• ADIO: *<OPUS\ADIO\error.log* • PROCESS: *<OPUS\PROCESS\ProcessScenarioSequence.obs\error.log*

2.5 OPUS interface freezes

What happens?	OPUS does not react to any data input at all.
Possible cause:	Several actions running too fast in succession.
Information on the error:	No information available.
What is to be done?	• Wait at least 2 minutes to reverse this hang-up. Try to minimize the window. Maximize again to see whether the spectra display has been refreshed. • If hang-up still persists, open the Windows Task Manager to have a look at the programme status. End task, if required. • Send a short description of the situation to: *opusbugs@bruker.de*

Creating dump file for a hanging process



Step 1:

• Download the *Userdump.exe* tool, version 8.1 (including the related documentation) from the following Microsoft Web site: *http://www.microsoft.com/downloads/details.aspx?FamilyID=E089CA41-6A87-40C8-BF69-28AC08570B7E&displaylang=en*

	Step 2: • Run the *Setup.exe* program for your processor. By default, this *Setup.exe* program is included with the *Userdump.exe* tool in the *C:\kktools\user dump8.1* folder. This *Setup.exe* program installs a kernel-mode driver and the *Userdump.sys* file, and creates the *Process Dump* icon in the *Control Panel*. • If possible, disable the *Dump on process termination* feature when you run the *Setup.exe* program.
	Step 3: • If the program stops responding, go to the *Userdump.exe* tool and select the command prompt. • Type in the following command: *userdump <PID>* **Note: <PID> is a placeholder for the process ID (PID) of the program that has stopped responding.** • To obtain the PID of the program, open the Task Manager, and click on the *Process* tab.
	Step 4: When you run the *userdump <PID>* command, a **.dmp* file is generated. • Send the **.dmp* file to perform post-mortem debugging to: *opusbugs@bruker.de*

Additional features of the *Userdump.exe* tool are described in detail in the *Userdocs.doc* file which is part of the *Userdump.exe* tool.

3 Error during measurement

If OPUS shuts down or freezes during measurement, the following steps have to be performed:

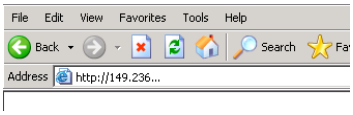
1 Save and send a full report.
2 Save the last, still available measuring files.

3.1 Save and send full report

There are two possibilities to send a full report:

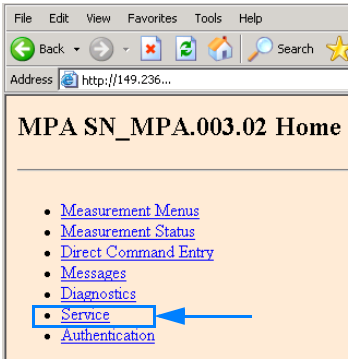
- by means of the spectrometer diagnostics pages
- by means of the OPUS *Instrument Status* dialog

3.1.1 Send full report by spectrometer diagnostics pages



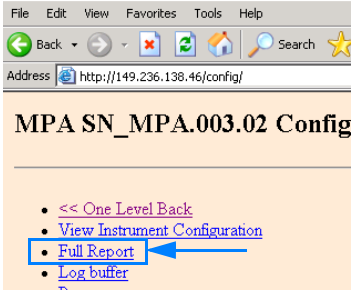
Step 1:

- Open the internet explorer or any other browser.
- Enter the spectrometer IP-address and try to access the spectrometer.



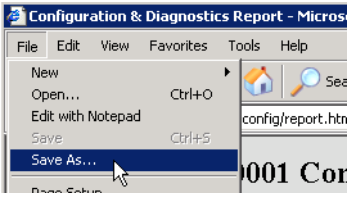
Step 2:

- The spectrometer diagnostics page opens.
- Click on the *Service* option.



Step 3:

- Click on the *Full Report* option to have the full report displayed.



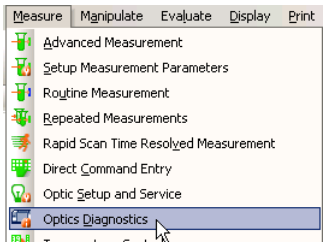
Step 4:

- Save the full report.
- Select the *Save as* command from the *File* menu in the browser.

Step 5:

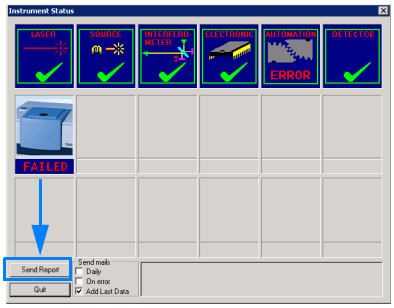
Send the full report to:
opusbugs@bruker.de

3.1.2 Send full report by OPUS



Step 1:

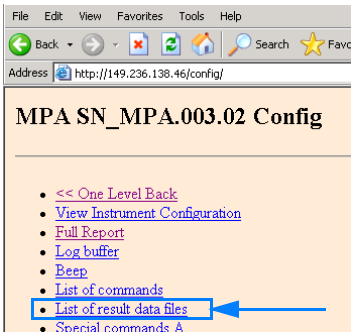
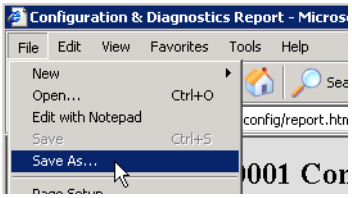
- Select the *Optics Diagnostics* command from the OPUS *Measure* menu.



Step 2:

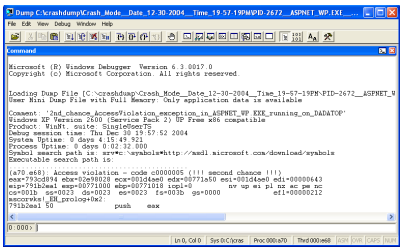
- Click on the *Send Report* button. The report will be send to: *opusreports@brukeroptics.de.*

3.2 Save recent measuring files

	Repeat the step 1 and 2 as described in chapter 3.1.
	**Step 3:** • Click on the *List of result data files* option to have the list displayed.
	**Step 4:** • Save the data files list. • Select the *Save as* command from the *File* menu in the browser.
	Step 5: Send the data files list to: *opusbugs@bruker.de*

4 Appendix

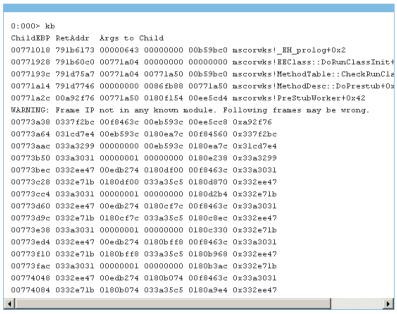
The appendix contains additional information for systems with the special WinDebug tool installed.



Step 1:

When WinDebug has been activated, enter the following commands into the command line:

- LM (Enter)
- KV (Enter)
- R (Enter)
- U (Enter)
- DB (Enter)



Step 2:

Select the *Write Window Text to File* command from the *Edit* menu. Some kind of logfile will be created.

Step 3:

Send the file to:
opusbugs@bruker.de

For further information refer to:

- *http://support.microsoft.com/kb/892277*