



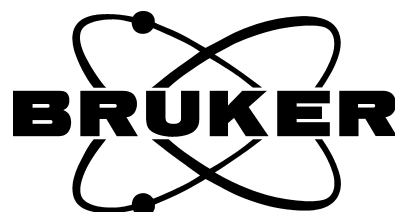
OPUS

Spectroscopy Software

Version 6

User Manual

SERVER



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

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About OPUS SERVER

OPUS SERVER provides the typical client/server architecture, with a client or clients getting access to a service operating on a remote system (server) by some kind of network.

The client(s) involved in the network (intranet) run the OPUS software which is either set to client or server mode by means of command line parameters. Different kinds of data, e.g. experiment files, evaluation methods or workspaces can be retrieved from the server. Client and server communicate via TCP/IP.



1 Introduction

There are many advantages of the client/server architecture including that sub-systems can be optimized for a particular set of applications. More powerful sub-systems can be installed without wasting resources on other applications.

With most of the crucial applications and data residing on centralized machines (servers), or clusters of machines, systems can be engineered to high standards of reliability and availability.

The client/server architecture has become the dominant structure for corporate computing in both small and large organizations. It combines the best concepts of centralized robust infrastructure with decentralized capability and control. If implemented properly, the client/server architecture achieves the best balance between complexity, cost and ease of use, with excellent scalability and reliability.

1.1 Structure

The OPUS SERVER package comprises a client interacting with a server located at a remote computer via the TCP/IP protocol. This protocol supports an accurate transfer of data between the requests made by the client and the responses sent by the server. Apart from network rights the administrator defines clients access rights to the relevant files on the OPUS server, and creates a sub-directory for each client on the server.



Figure 1: OPUS Server structure

Usually, all files, e.g. user databases, workspaces, experiment files or evaluation methods are located on the server. If a client needs e.g. a spectrum file, the client sends a request to the server together with his IP address, and the server will return the desired data. Thus, the client does not have direct access to the file on the server, but can further edit the file.

1.2 Directory Hierarchy

The server has to integrate a certain directory hierarchy to provide a home directory for each client, containing its workspace(s), parameter files, methods etc. On top of the hierarchy is the *USERDATABASE* directory which contains one sub-directory for each client, identified by the client's name. This allows each user to log in on each client PC and to use the workspaces assigned to him on the server user database.

If there is, e.g., one server identified as *WS_SERVER* and two clients identified as *WS_CLIENT1* and *WS_CLIENT2*, and the OPUS server is installed in *C:\OPUS*, there must be two directories *C:\OPUS\USERDATABASE\WS_CLIENT1* and *C:\OPUS\USERDATABASE\WS_CLIENT2*. A client asks the server for the path of its home directory before taking any further action.

Additionally, the following files have to be stored on the server and copied to the *...\OPUS\USERDATABASE\<Client Name>* directory:

- default.ows
- opus.bg
- opus.par
- parmtxt.bin

Never delete these files to ensure that all users keep their own OPUS parameter settings even when working on different clients.

1.3 Setting Client or Server Mode

To set a server into server mode in OPUS, the administrator adds */HTTPSERVER=ON* to the command line (see figure 2) using the *OPUS Properties* dialog. Right click on the *OPUS* icon of the *Windows Start* menu and select the *Properties* command. For client mode, add */SERVER=<NAME>* with *<NAME>* being the server name. Make sure that you add a blank between each parameter.

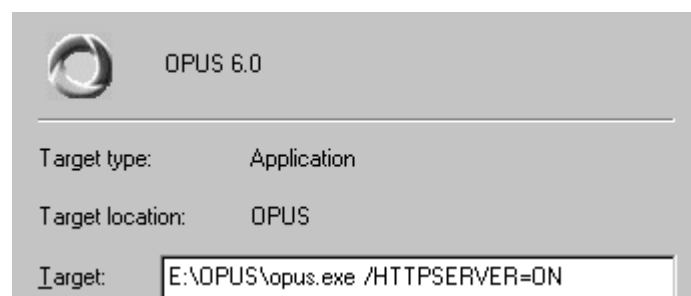


Figure 2: OPUS Property dialog - Command line

An OPUS server works exactly like a normal OPUS program as long as no clients are active. An OPUS client has the same interface as a normal OPUS interface.

1.4 Software Packages Required

When using OPUS SERVER you need the following software packages:

1.4.1 Client (Operator)

- OPUS IR

1.4.2 Server

- OPUS IR
- SERVER

2 System Features

All the spectrum manipulation and measurement functions available in OPUS can also be used with OPUS SERVER. The measurement parameters, e.g. experiment files will be retrieved from the server. If the measurement or manipulation has been finished, the spectra will be stored on the server. The following figure outlines the properties of the system components.

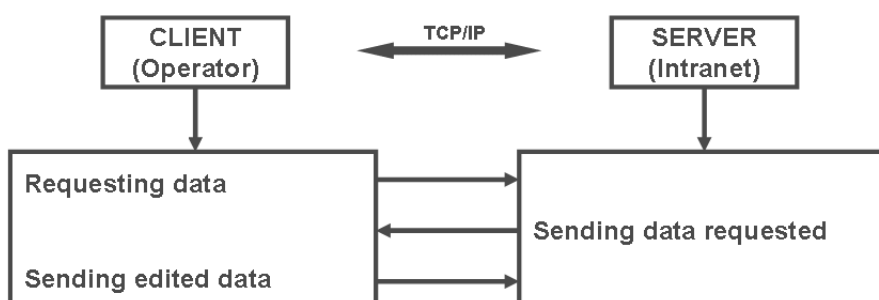


Figure 3: Properties of system components

2.1 Client

The OPUS log-in is performed by the clients' user-specific passwords. The client user rights set up by the administrator are based on the user settings and workspaces stored on the server. If two clients want to use the same spectrum simultaneously, the server controls the data request.

2.2 Server

The server controls the data requests and stores the files edited. If a client requests a particular file, the server locates this file and passes it to the client. When requesting data the client IP address will automatically be sent to the server.

Furthermore, the server controls the access of the clients to the user data base, workspaces, experiment files, product definitions, client-specific standardising functions and evaluation methods stored on the server.

2.3 Administrator

The administrator defines user and network rights, and creates a sub-directory for each client on the server *USERDATABASE* directory. See also chapter 1.2.

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