StartExcel

StartExcel utility - Automatic (periodical) report export

Automatic export allows to periodically (or when an event occurs) activate a workbook (report) saved on hard disk as an .xls file, to evaluate it and then to save active sheet as a new .xls file in defined directory.

The automatic export can be executed by means of the utility **StartExcel** (the file *startexcel.exe* placed in the subdirectory **Bin** of the installation directory) run with the following parameters:

Declaration	**startexcel** [/Q] [/I] [/D] fullXlsPath **[StartMakro [param1 .. paramN]]** specifically for automatic export: **startexcel** [/Q] [/I] [/D] fullXlsPath **StartParams EXP**

Parameters	/Q	Enables writing of possible errors into the log file (startexcel.log) and terminating the utility **StartExcel** if any errors occur.
	/I	Runs the MS Excel as visible. Optional parameter. This parameter is not recommended to use on the operating systems MS Server 2008, MS Vista and Windows 7 if the parameter is started as service (e.g. SELF.EVH started as service).
	/D	Enables writing the debug information including the list of parameters, which were entered when its starting, into log file.
	fullXlsPath	Full path to report (workbook).
	StartMacro	Optional name of the macro in the document, that is to be executed.
	param1 .. paramN	Optional parameters of the macro **StartMacro.**
	StartParams	Name of macro in the report, that will execute its data export.
	EXP	Parameter of the macro **StartParams**specifying that export of data is to be performed.

Description	The utility **StartExcel** runs the MS Excel. If the parameter */I* is defined, the MS Excel will be opened as visible. If the parameter */Q* is entered, any errors will be written into the file *startexcel.log* and the utility **StartExcel** will be terminated. Then a workbook specified by the parameter *fullXlsPath* will be opened and it will call the macro **StartParams** with the parameter **EXP**. The macro must be implemented in the workbook (if the workbook has been created from the template D2000_WorkBook.xlt, the macro is already included in it). The workbook is automatically logged on to the D2000 system according to logon parameters (**USER_NAME, PASSWORD, SERVER**), it evaluates itself and a saves a copy of the active sheet into a new file defined, whose name is defined in the cell **EXPORT_FILE_NAME**. By default, the cell is filled with an expression that adds the date and time to the workbook name. In the application, it is necessary to change the directory destined for exported reports. By default, it is set to **C:\Reports**. Report evaluation is executed by setting the times of the cells **D2000_BT** a **D2000_ET** to the current time.

Note:
Periodic (or using any start trigger) export can be performed using ESL script as follows:

- create an object of Event type, that is to be started when there is needed to create an export (e.g. periodically)
- source code of the event:

```
INT _ret
TEXT _txtMsg
TEXT _report = "c:\Reports\test1.xls"

; report export with 50 seconds timeout
_ret := RUN "startexcel.exe" SYNC " " + _report + " StartParams EXP" TIMEOUT 50
IF _ret\VLD THEN
IF _ret = _ERR_TIME_OUT THEN
 _txtMsg := "TIMEOUT for report export"
ELSE
_txtMsg := "Export ExitCode = " + %IToStr(_ret)
IF _ret = 0 THEN
 _txtMsg := _txtMsg + " OK"
ELSE
IF _ret = 1 THEN
 _txtMsg := _txtMsg + " Init Ole Error"
ELSE
IF _ret = 2 THEN
 _txtMsg := _txtMsg + " Start Excel Error"
ELSE
IF _ret = 3 THEN
 _txtMsg := _txtMsg + " Open Report Error"
ELSE
IF _ret = 4 THEN
 _txtMsg := _txtMsg + " Run Macro Error"
ELSE
 _txtMsg := _txtMsg + " Unknown Error"
ENDIF
ENDIF
ENDIF
ENDIF
ENDIF
ENDIF
ELSE
 _txtMsg := "Attempt to run startexcel.exe has failed"
ENDIF

LOG _txtMsg, SysTime
END
```

When attempting to export any data, the return value of the action **RUN** is handled, along with writing the export status to the log database.

Automatic export run can be set by using the system service **Scheduled Tasks** (Windows NT or 2000). The service allows to perform (run) periodically given program.

Starting Excel from the D2000 Event process running as a service

For correct functioning, it is necessary to create the following directories in Windows:

- 32-bit Excel on 32-bit Windows or 64-bit Excel on 64-bit Windows:
  mkdir C:\Windows\System32\config\systemprofile\Desktop
  mkdir C:\Windows\System32\config\systemprofile\Documents

- 64-bit Excel on 64-bit Windows:
  mkdir C:\Windows\SysWOW64\config\systemprofile\Desktop
  mkdir C:\Windows\SysWOW64\config\systemprofile\Documents

If these directories do not exist, StartExcel returns error 3 (ERR_OPEN_DOC) and reports a document opening error in the StartExcel.log log, e.g.:

[07-12-2023 08:14:47][INF][13428]   Start excel starting...
[07-12-2023 08:14:47][INF][13428]   Document name is 'd:\D2000\D2000_APP\Demo\Temp\Template.xls'
[07-12-2023 08:14:47][INF][13428]   CLSIDFromProgID SUCCESS
[07-12-2023 08:14:47][INF][13428]   CoCreateInstance SUCCESS
[07-12-2023 08:14:47][INF][13428]   StartExcel DONE
[07-12-2023 08:14:47][INF][13428]   Excel is running as hidden...
[07-12-2023 08:14:47][ERR][13428]   Error opening document d:\D2000\D2000_APP\Demo\Temp\Template.xls
[07-12-2023 08:14:47][INF][13428]   Uninit OLE...

In addition, it is recommended to run the D2000 Event process under a dedicated Windows user (e.g. *report*). In order for macros to work, it is necessary to log in as this user (*report*), start Excel and in *Options* go to the *Trust Center* item, click on *Trust Center Settings* and in the *Macro Settings* tab select *Enable all macros*.

Without macros enabled, StartExcel will return error 4 (ERR_RUN_MACRO) and in the StartExcel.log report a macro run error:

```
[07-12-2023 08:39:04][INF][8604]   Start excel starting...
[07-12-2023 08:39:04][INF][8604]   Document name is 'd:\D2000\D2000_APP\Demo\Temp\Template.xls'
[07-12-2023 08:39:04][INF][8604]   CLSIDFromProgID SUCCESS
[07-12-2023 08:39:05][INF][8604]   CoCreateInstance SUCCESS
[07-12-2023 08:39:05][INF][8604]   StartExcel DONE
[07-12-2023 08:39:05][INF][8604]   Excel is running as hidden...
[07-12-2023 08:39:05][INF][8604]   d:\D2000\D2000_APP\Demo\Temp\Template.xls is opening...!
[07-12-2023 08:39:05][INF][8604]   Starting macro...
[07-12-2023 08:39:05][ERR][8604]   Error run macro!
[07-12-2023 08:39:05][INF][8604]   Closing document...
[07-12-2023 08:39:10][INF][8604]   Uninit OLE...
```

Required setting of the parameters for automatic export:

	A	B	C	D	E
1	User name	name			
2	Password	password		Calculate	
3	Name of D2000 Server computer	srvName			
4	Description for log database	any description			
5	Report for HI process	FALSE			
6	D2000_BT	23/4/2004 14:06:15.000			
7	D2000_ET	23/4/2004 14:06:15.000			
8	D2000_TEXT				
9	D2000_NUM1				
10	D2000_NUM2				
11	Filename for export	C:\Reports\D2000_WorkBook1_2004_4_23_14_6_15.xls			
12					
13	Missing value when reading from archive				
14					

Important cells are the cells B1, B2 and B3. The value of the cell B5 must be FALSE, the cell B11 represents a filename, which the export will be saved into. If the files already exists, they will be overwritten.