
Section 6 Reports

General Description of Reports

Reports are used to acquire and store data in user defined Microsoft Excel templates. A report is configured in DigiVis 500 Graphics Builder to acquire one or more samples of a set of variables. The reports functionality of DigiVis 500 supports storing acquired values in .xls/.xlsx format. Both configuration and display of such Excel based reports is possible. Excel reports are configured and edited in the Project Tree under the operator station resource or in the Common display pool (P-CD).



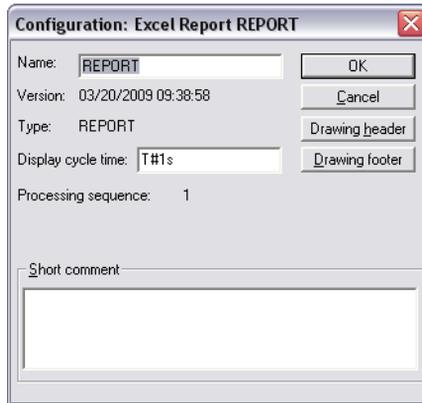
> Select an operator station resource or P-CD in the project tree

> **Edit > Insert next level > Excel Reports**



Excel report configured in the Common display pool (P-CD) are available to all operator stations.

Reports are downloaded to DigiVis after they are configured in Graphics Builder. The execution of the reports in DigiVis takes place depending on the configuration of reports in Graphics Builder.



Configuring the excel report.bmp

- Name* Max. 12 characters
- Version* Date and time of object creation
- Type* Type of the object being configured.
- Display cycle time*
Time for repeated update of the values of a report.
- Processing sequence*
Indicates the node position of this project object relevant to the operator station.
- Short comment* Max. 159 characters.

Excel Reports Configuration



Double click on the Excel Report in the Project Tree > *Parameters:Report RPT* or select the Excel Report > right click > **Edit**.

Report_node_parameter.bmp

General Data

Name The **name** of the Excel Report. The name is specified when the **Report** node is inserted in the project tree and **cannot** be changed here.

Short text A **Short text** can be assigned to the Excel Reports. Up to 12 characters can be entered.

Long text A **Long text** can be assigned to the Excel Reports. Up to 30 characters can be entered.

Short and long text are output with the documentation of the project. In addition these texts can be configured for the header and footer of the printed report.

Start/Stop

Automatic Generation of the Excel Reports is done automatically on start of the DigiVis 500 Operator Station.

Manual Generation of the Excel Reports is to be done manually on start of the DigiVis 500 Operator Station.

Define Template

Defines the template to be used for generation of the Excel Reports.

Filing

in .. files The number of Excel Report files which are generated on DigiVis 500 Operations PC are fixed. The value must be between 1 and 400.

For example, if the Restart after is specified as 1 day and In .. files is defined as 10 in Excel Reports of Graphics Builder, then 10 files are generated in 10 days.

named The name of the Excel Report file, which is stored on DigiVis 500 Operations PC hard disk. A preset name is assigned to the report. A new name can also be specified.

For example, if the name of the report is “report 1”, then in order to get 10 files each file will be appended with 001,002....010.

Start Time

The Start Time is the time at which the Excel Report generation must be started.

For example, Start Time is configured as DT#2008-10-01-06:00:00.000 in Excel Reports of Graphics Builder. The Excel Report will be generated in manual or auto mode in DigiVis only when the configured start time is attained or reached.

Cycles

No of cycles for the Excel Report generation.

For example, if Cycles = 2, and cycle time = 8 hours: first reading will be taken at 00:00 hours and the second reading will be taken at 8:00 hours.

Cycle time

The time of each cycle. For Excel Report generation, the time after which the next reading will be acquired in the report.

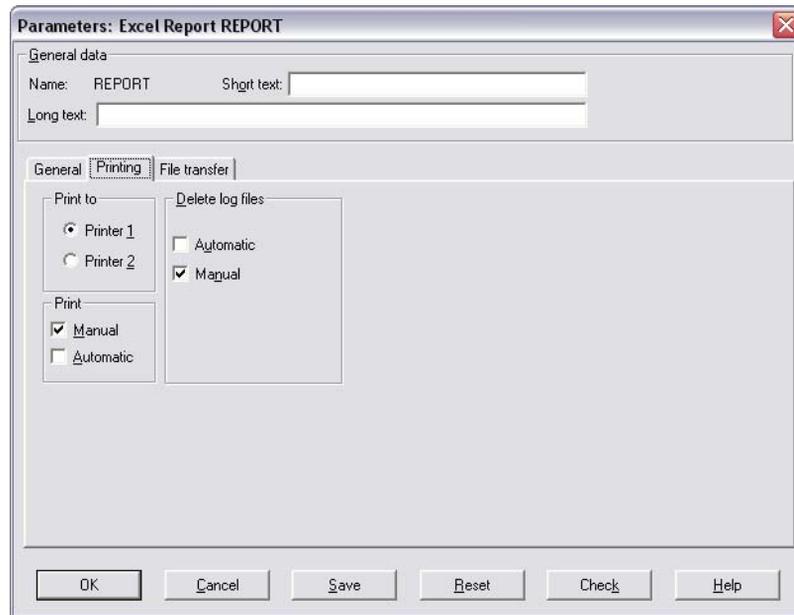
Restart after

Restarts the generation of Excel Reports after a specified amount of time.

Restart after = Cycles * Cycle time.

For example, Restart after is configured as T#1h0m0s, the number of Cycles defined is 60, and Cycle time is T#0h1m0s in Excel Reports of Graphics Builder. The Excel Report with 60 Entries will be generated in DigiVis. The generation of new Excel Report file will be started after one hour.

Printing Tab - Excel Reports



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Print to

Printer 1 / 2 Two printer channels are available for report output on to printers. Select the printer by activating the corresponding radio button in front of it.

Print

Manual The printing of reports can be activated **manually** by the operator at the operator station.

Automatic Printing takes place automatically after completion of logging of values in the report

Delete Log files

Automatic When the **automatic delete** option is selected and the configured number of files is exceeded, the oldest report file is overwritten by the current file, just before the Restart after time is about to start. In this case it will delete it after one day before the next cycle starts. If the **automatic delete** option is not selected then **Excel Report generation is stopped** as soon as the max. number of files has been reached, and it gives a system message indicating that the amount of files is exceeded.

Manual By checking this option the operator can select individual report files and delete them from DigiVis 500 Operations.

File Transfer Tab – Excel Reports

This tab is used to define parameters for copying the stored Excel Reports to other data carriers, primarily external devices, for data protection and archiving purposes.

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If a copy of the report file is to be transferred from the DigiVis 500 PC to another PC and how it is to be done is specified here. The PC selected to receive the archives must have a network communication link to the DigiVis 500 PC and an FTP Server (for example, Windows XP/Windows 7 “Internet Information Server (IIS)”) must be installed. For information on FTP, refer to [DigiVis 500 Getting Started Manual](#).

Archives are normally sent to a target station which is not identical with the DigiVis 500 PC. A further possibility is to export the archive files to a Windows drive on the DigiVis 500 PC. This drive can be mapped on to another PC in the Windows network. In this case the station address is its own TCP-IP address.

Automatic file transfer (FT) after file completion

The mode of file transfer is specified here.

Enable/disable

Enable FT on DigiVis start



File transfer starts automatically on start of DigiVis 500 Operations.

- File transfer has to be started manually after DigiVis 500 Operations is started.

Manual controlled

- The operator at the operator station can enable or disable file transfer.
- File transfer cannot be enable or disabled by the operator.

Manual FT

Access

- The operator at the operator station can start the file transfer at any time by pressing the *File trans* button.
- The operator is not given the option of spontaneously starting the File transfer.

Target

The target station to which the data is to be transferred should be specified here.

Station IP address of the target computer.
If the DigiVis 500 PC is to be used as export target then its own IP address must be entered here.

Path If the archive files are to be copied to a specific directory, the complete directory name must be specified here. If IIS is used on the target station then path preselection is possible. For example, the path C:\ARCHIV\STATION\SFP for the target computer can mean that it diverts all archives that are received to the preset path C:\ARCHIV, and the incoming archive contributes the path information \STATION1\SFP.



The files that are transferred are temporary and are overwritten the next time the corresponding archive is exported. The target path to the archive storage must exist and should not be write-protected.

File The export files are stored with this file name under the Target Path. For example, STATION1\SFP\SFP_MANUFACTURE. This file is overwritten in every export.



Path and file name together can have a max. length of 100 characters.

Directory [8.3] The export files are transferred in DOS format – for example, to a PC with WfW Operating System and active FTP Server. The file name corresponds to the export date in the format ‘YMMDDHHm.mss’ (for example, 70528162.320).



The file name contains no information about the archive type. Choose a suitable path name to ensure that it is recognizable afterwards.

Directory The export files are stored in the directory shown under Target Path with their original name (defined in *General* Tab). The export date in the format ‘.YYMMDDHHmmss’ is also appended to the name (separated by a period). For example, SFP MANUFACTURE.970528162320. Path and file name together may have a total length of 100 characters.

FTP timeout In order to prevent the system from becoming congested a maximum time should be entered here within which a transfer must be completed. If timeout is exceeded, it causes a system alarm in DigiVis 500.

User name Enter a user name which is known to the FTP Server of the target station.

Password The password corresponds to the user password for the target station.

Defining Excel Report Template



General > Click on *Define Template*

Clicking on the *Define Template* button launches the Excel application. The functions that are used for data acquisition can be defined. A cell may contain a function or normal XLS/XLSX content. Only one function is allowed per cell.

Functions are defined using the syntax <GetValue(variable, next position)>

variable name of a variable in the variable list

next position NEXT_RIGHT, NEXT_LEFT, NEXT_DOWN or NEXT_UP

For example, <GetValue(amount, NEXT_RIGHT)>

The following is the screen shot of a report that uses a function for data acquisition.

	A	B	C	D	E	F
1	LAB-RIL Shift A	ABC INDUSTRIES LTD.				
2						
3	LAB-RIL SHIFT REPORT		Shift A			
4	Report Time	11:46 AM	Time	06:00:00 hr	14:00:00 hr	
5	Shift	A				
6	Report Date	24.09.2008				
	Tag no	Description	Unit	Shift Start Value	Shift End Value	Difference
7	PRODUCTION					
8						
9	FRQI7041	EXTRACT COLUMN	MT	<GetValue(column, NEXT_RIGHT)>	#WERT!	
10	FRQI7033	RAFFINATE TO STG	MT	<GetValue(amount, NEXT_RIGHT)>	#WERT!	
11	FRCQI4002	STR O/H STG	MT	<GetValue(O_H_Stage, NEXT_RIGHT)>	#WERT!	
12	FRCQI4005	RR BTM X CLR EA-406	MT	<GetValue(EA406, NEXT_RIGHT)>	#WERT!	
13	FRCQI6014	LESTR FEED	MT	<GetValue(amount, NEXT_RIGHT)>	#WERT!	



The first Excel file that is launched is empty.

After generation, the template should be saved before closing the Excel application.

Check

Checks the Excel Report with respect to the following

	-All variables used are correct (for example, allocated to a valid OPC Server and have a valid OPC Address).
	-All functions contain a correct <i>next position</i> parameter
OK	Checks the data in the report, saves the data to the database, commits the transaction and closes the dialog.
Cancel	Aborts the transaction, closes the dialog.
Save	Checks the data, saves the data to database, commits the transaction and opens a new transaction.
Reset	Resets all the parameters defined in the dialog.
Help	Opens the Help file for Excel Report.

Execute Reports in DigiVis 500 Operations

Reports are downloaded to DigiVis 500 Operations after they are configured in DigiVis 500 Graphics Builder. The execution of the reports in DigiVis 500 Operations takes place depending on the configuration (for example, *Manual* or *Automatic*) of the reports in Graphics Builder.

When the execution time of a report is reached (for example, Cycle Time), a new copy of the template is stored in “<DigiVis 500_Installation_Folder>\reports” and the list of variables is acquired once. When all values are received (or a timeout is reached), the next execution time is calculated. If the next execution time is still before the stop time (for example, Start Time + (Cycle Time*Cycles)) of the report, the functions in the XLS/XLSX file are moved to the next position as per the *next position* parameter that is defined. The previous position is filled with the actual value for the variable.



Configuration example:

If the user specifies a Start Time that is in the past

Start time = DT#2009-01-01-08:00:00.000; Cycle time = T#1h0m0s; Cycles = 8;
Restart after = T#24h0m0s

Case 1:

When the report is configured and started at 0930 hours then

One set of values for the variable are acquired once at 0930 hours and the next set of values is taken at 1000 hours (which is the third cycle). The remaining five cycles follow original configuration until 1600 hours.

The next report is taken at 0800 hours the following day (which is the first cycle). The remaining cycles follow original configuration of the report.

Case 2:

When the report is configured and started at 1800 hours then

The report acquisition starts at 0800 hours the following day (since all acquisition cycles of last restart are completed). The remaining cycles follow original configuration of the report.

	A	B	C	D	E	F
1	LAB-RIL Shift A	ABC INDUSTRIES LTD.				
2	LAB-RIL SHIFT REPORT					
3	Report Time	11:46 AM	Shift A	Time	06:00:00 hr	14:00:00 hr
4	Shift	A				
5	Report Date	24.09.2008				
6	Tag no	Description	Unit	Shift Start Value	Shift End Value	Difference
7		PRODUCTION				
8	FRQI7041	EXTRACT COLUMN	MT	<GetValue(column, NEXT_RIGHT)>		#WERT!
9	FRQI7033	RAFFINATE TO STG	MT	<GetValue(amount, NEXT_RIGHT)>		#WERT!
10	FRCQI4002	STR O/H STG	MT	setValue(O_H_Stage, NEXT_RIGHT)>		#WERT!
11	FRCQI4005	RR BTM X CLR EA-406	MT	<GetValue(EA406, NEXT_RIGHT)>		#WERT!
12	FRCQI6014	LESTR FEED	MT	<GetValue(amount, NEXT_RIGHT)>		#WERT!

Excel_file_after_first_sample.bmp

If the calculated next execution time is beyond the stop time then no more samples will be taken and the functions will not be copied to the *next position*.

	A	B	C	D	E	F
1	LAB-RIL Shift A	ABC INDUSTRIES LTD.				
2						
3	LAB-RIL SHIFT REPORT			Shift A		
4	Report Time	11:54 AM		Time	06:00:00 hr	14:00:00 hr
5	Shift	A				
6	Report Date	24.09.2008				
7	Tag no	Description	Unit	Shift Start Value	Shift End Value	Difference
8	PRODUCTION					
9	FRQI7041	EXTRACT COLUMN	MT	123,78	200,70	76,92
10	FRQI7033	RAFFINATE TO STG	MT	444,00	250,30	-193,70
11	FRCQI4002	STR O/H STG	MT	2003,50	3045,30	1041,80
12	FRCQI4005	RR BTM X CLR EA-406	MT	80,23	80,30	0,07
13	FRCQI6014	LESTR FEED	MT	99,96	95,00	-4,96

There are no functions in the XLS/XLSX file after the last sample. DigiVis 500 Operations shows all the configured reports in a single list.

For information on viewing reports, refer to [DigiVis 500 Operations Operators Manual, Section K, Reports](#).