7TWatchDog Setup Guide

V3.0

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Contents

About 7TWatchDog Reporting Tool

The 7TWatchDog application is a tool that can assist you in the monitoring of processes; in particular processes that are not updated on a regular basis. Any irregularities are submitted as reports according to the configuration you perform for the tool.

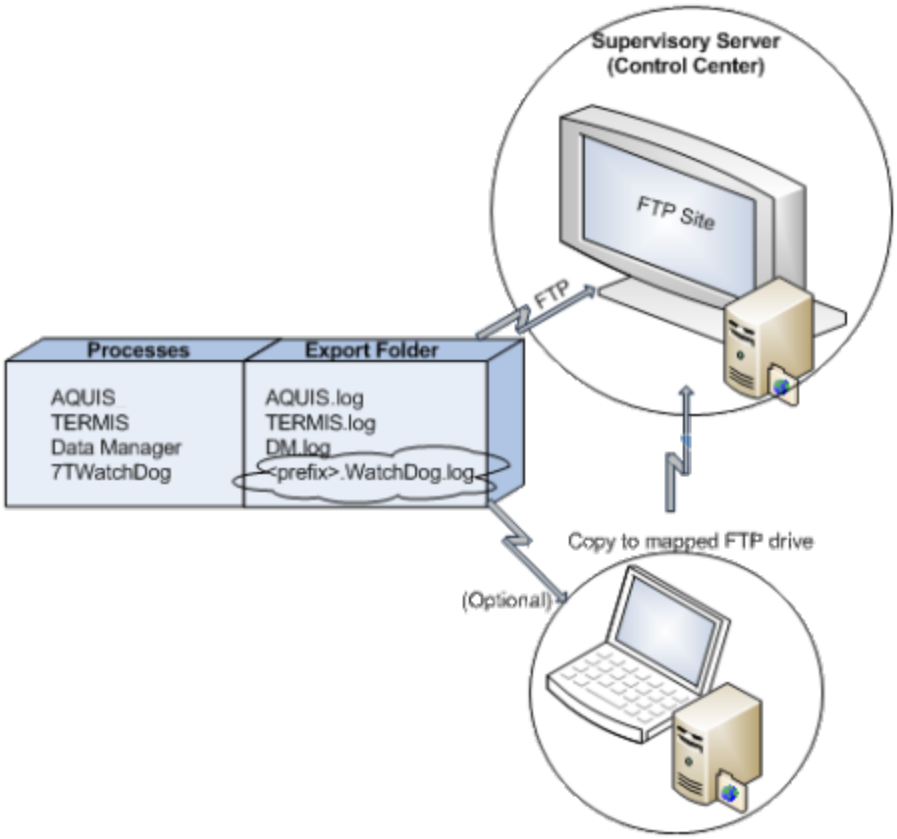
7TWatchDog can issue the following report forms:

A. Send a report via e-mail to notify whether a particular user defined process is active or exists.

B. Send a CSV file via ftp to any TCP_IP address. This method allows you to send status values of running tasks and Data Manager measurements to a supervisory center. The module automatically generates a CSV file with data supported by the IGSS SCADA system IGSS.

You must use the IGSS driver named 7TDHFILE, ID 66.

The ensuing figure illustrates the data flow from the 7TWatchDog to the FTP sites.



7TWatchDog checks the system's task list for CPU progresses at regular intervals. If a certain CPU process has not been active within a specific interval, an e-mail is forwarded to the e-mail recipients that you define and for these people to take action. For details see How To: Configure Line Tasks, page 7. It is moreover possible to activate an additional command that allows you to start a new process or a script.

To create and send a CSV file is a process in which different CSV files are merged into one file and subsequently sent to the defined IP and folder destination. For details see How To: Configure CPU Processes, page 5.

7TWatchDog creates a CSV file that includes one line for each supervised task. It moreover merges a file from each running Aquis and Termis task and, optionally, CSV files exported from Data Manager.

For Operations products compiled after 18 May 2010 the reporting made by 7TWatchDog is an automatic process, provided you have manually entered the following registry key REG_SZ

HKEY_CURRENT_USER\SOFTWARE\7T\7TWATCHDOG\LogFolder

There is no support for this feature for Aquis or Termis compiled earlier than 18 May 2010.

If the key points to the correct address, Aquis or Termis export a file that includes the status of the most recent simulation. For details of status and used values see Appendix A.

You can configure Data Manager to export a CSV file that includes updated measurements. If you want to send the contents of this file to the defined IP destination you must observe the following requirements

- The file must be named **DM.LOG**
- You must place the DM.LOG file in a folder that is equal to the folder defined by the LogFolder entry in the preceding.
- The Data Manager process is supervised by 7TWatchDog.

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How To: Configure CPU Processes

This topic explains how to configure CPU processes in the 7TWatchDog to determine the report method.

1. Open the 7TWatchDog application.
2. From the menu bar select **Configuration** and then **Setup**.
3. In the dialog **Configuration** configure the CPU processes following the guidelines in the ensuing table. .

Explain input data for CPU processes...

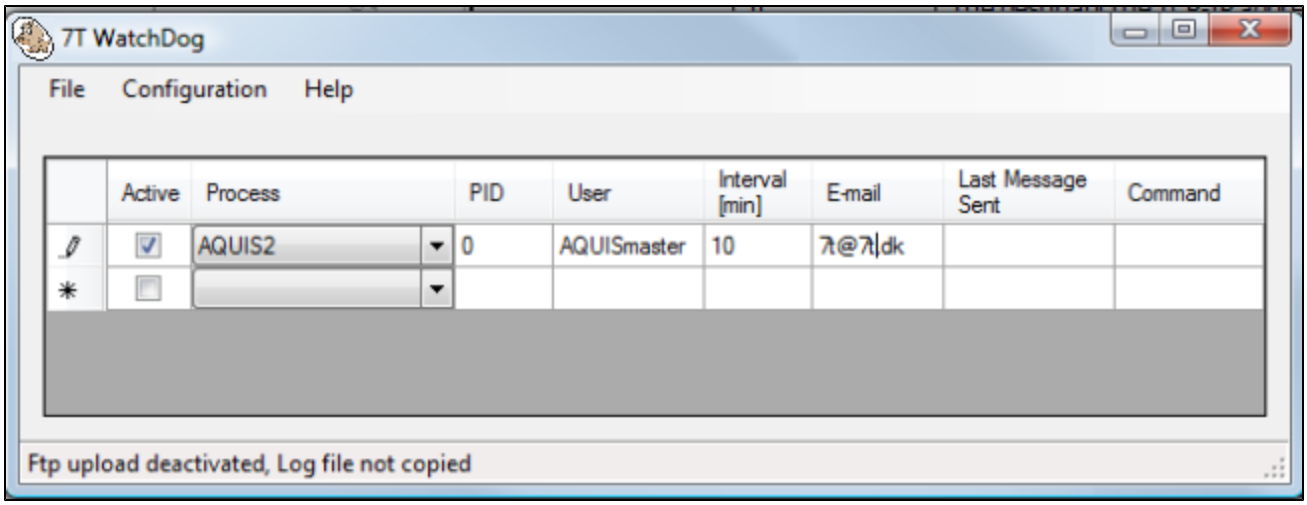
Report Method	Option	Description
E-mail	When you have defined an e-mail address as explained in the topic How To: Configure Line Tasks, page 7 you can return to the **Setup** dialog and press the **Test** button to validate the connection. To validate the connection you must as minimum configure one process, including one e-mail address, and select the check box for **Active**.	
	Sender	Valid e-mail address that identifies the system to be supervised. **If you later change the Sender information you must close the application and open it again.**
	SMTP	Host name of an available e-mail sender.
FTP	When you have properly configured the FTP connection as explained in the ensuing, you can press the **Test** button to validate that you can upload a (test) file.	
	IP	The destination of the TCP-IP address. You must • Define it for an ftp site. • Add **ftp:** in front of the IP address.
	Folder	Optional. Enter the sub-folder you want to upload to.
	User name	Enter the user name defined for the ftp site.
	Password	Enter the password defined for the ftp site.
	Tag Prefix	The string that defines the actual site that sends data to enable the supervisory system to distinguish among different sites, typically with same tag names.
Other	Log Path	The path to the data log that you defined during installation. The entry is read-only.

	Export Folder	Optional. If defined the path must be different from that of the Log Path. Define a path to the mapped drive to where you can copy the log file. The Export folder can for example be used as an alternative ftp drive. If you want to use it as an ftp folder you must select the check box for **FTP**. All log files will subsequently be transferred to this drive.

How To: Configure Line Tasks

This topic explains how to configure the processes in the 7TWatchDog for each task that you want to supervise.

1. Open the 7TWatchDog application.



2. In the dialog 7TWatchDog select the row marked with an asterisk and configure the line tasks following the guidelines in the ensuing table. .

Explain options for line tasks...

Options	Description
Active	Select the check box to enable the supervision of the task.
Process	Select the appropriate process from the list. The list includes all the open processes that you can also verify under the Processes tab page in your Task Manager; for example taskmgr.
PID	Optional. Possible process ID. This number is only used to distinguish between several occurrences of the same task name. The PID is read from the Task Manager. Notice that the system re-issues a new PID every time a process is started.
Interval	Specify the interval in minutes. Define the longest expected interval in number of minutes during which the specific task has not been active. The system will send an event if the task has not been active during the defined period. This is the interval between each process check. If during the defined interval the CPU process time has increased then there will be no status report. The process must be active in a new interval period before a new message can be sent.
E-mail	Define the e-mail address for the e-mail recipient if no activity is

Options	Description
	registered or the task disappears. You can define several e-mail addresses using a semi-colon (;) as the separator.
Last Message Sent	Date and time of last issued e-mail. Read-only.
Command	Optional. System command to be executed when sending an e-mail. The system command can start a supplemental information system.

If you change the information, such as clearing the check box for Active, you must close the application and open it again.

Appendix A: Status Values From 7TWatchDog

Tag ID	Value
<Site name><Process name>_PROC_PEAKMEM	Peak system memory usage in bytes.
<Site name><Process name>_PROC_FOUND	Value defining if process is found in task list. 0 means process is not found. 1 means process is found.
<Site name><Process name>_PROC_ACTIVE	Value defining if process is active, that is the CPU increases in test interval. 0 means no activity. 1 means process is active.

Appendix B: Status Values From Aquis and Termis

Tag	Type	Values	Comment
Version	string		Version numbers of assemblies.
CONSUMERNAME	string		Name of current consumer layer [2].
SCENARIONAME	string		Name of current scenario [2].
SIMULATION_STARTED	DataTime		Time of activation of simulation cycle.
SIMULATION_ENDED	DataTime		Time of deactivation of simulation cycle.
CYCLE_PERIOD	int	>0	Cycle period (s).
SIMULATION_PERIOD	int	>0	Duration of simulation period (s).
MAXTIMESTEPLENGHT	double	>0	Max. Time step (s).
<Submodel>_SIMULATIONTIME	DataTime		Start time of execution.
<Submodel>_LASTRESULTSTIME	DataTime		Time of last results.
<Submodel>_RESULTSTATUS	int	0-4	0: OK. 1: Simulation interrupted by user. 2: Simulation failed. 3: Alternative solution (variable time series) [3] 4: Alternative solution (quickly ramp up temperature to maximum temperature) [3]
MEASUREMENTSFAILED_CRIT	int	>0	States the number of critical measurements in your model.
MEASUREMENTSFAILED_MINOR	int	>0	States the number of minor issues with measurements in your model.
MEASUREMENTSFAILED_MAJOR	int	>0	States the number of major issues with measurements in your model.
<Submodel>_LOADFORECAST	string		Name of assigned load forecast [3].
<Submodel>_TO_ACTIVE	boolean	True/False	True if temperature optimization is active [3].
<Submodel>_PO_ACTIVE	boolean	True/False	True if pressure optimization is active.
<Submodel>_WO_ACTIVE	boolean	True/False	True if water quality simulation is active [4].
MEASUREMENTUPDATE	DataTime		A time mark is present if there is a connection to Data Manager. The tag is not present if update from Data Managerfailed.

Notes

1) Only generated if a cyclic simulation is requested.

2) At run time.

3) Termis only.

4) Aquis only.

Appendix C: Send Status and Measurement Files from Server to Recipient

You have the following options to send a measurement file from a server to a recipient.

- Send an ASCII measurement file via the 7TWatchDog log file. This option includes the sending of simulation status values or status values from the Load Forecaster.
- Use scripting to transfer a measurement file from 7TWatchDog to recipient. This option does not include the status from Termis or Aquis.

Send ASCII file from server to recipient via 7TWatchDog log fil

You are recommended to supervise a running installation for example by sending status values from the installation to a support office (recipient). The status file can be used as input for a supervision system such as the SCADA system, IGSS. IGSS allows the sending of SMS and e-mails to relevant supporting personnel in case of failed communication and simulations.

The supervision can for example be done using the 7TWatchDog application. The application is free of charge, however, your SCADA system may set certain boundaries in terms of number of objects. For details log on to our corporate Web site and download the application or contact Schneider Electric.

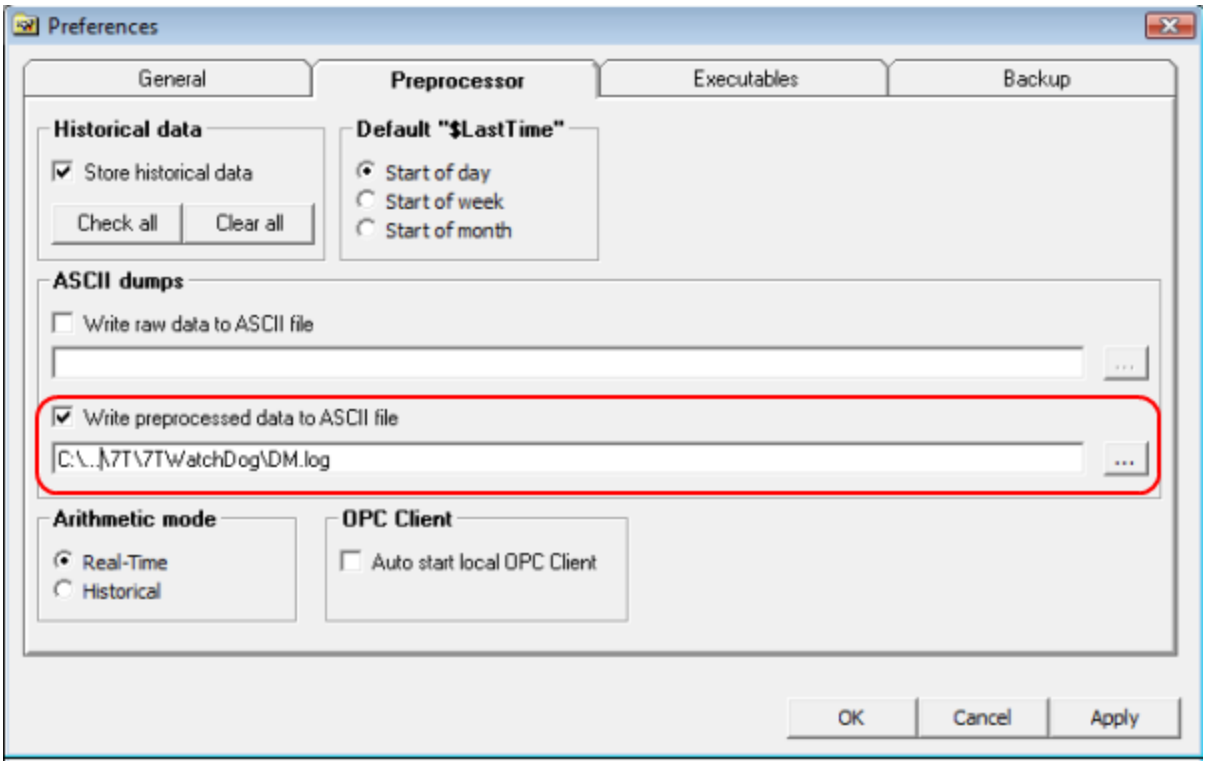
If you want to send a file from a server to a recipient via the 7TWatchDog ASCII file, you must observe the following requirements.

- The file must be named **DM.LOG**
- Place the DM.LOG file in a folder that is equal to the folder defined by the LogFolder entry for 7TWatchDog.
- The 7TWatchDog process is supervised by 7TWatchDog.

For in-depth setup description refer to the documentation provided with 7TWatchDog.

The setup for the 7TWatchDog log file is done from Data Manager as explained in the following (see also figure).

1. From the menu bar in Data Manager open the **Preferences** dialog and then the **Preprocessor** tab page.
2. Under **ASCII dumps** select the check box for **Write preprocessed data to ASCII file**.
3. Use the browse button to locate the position of the **DM.log** file.

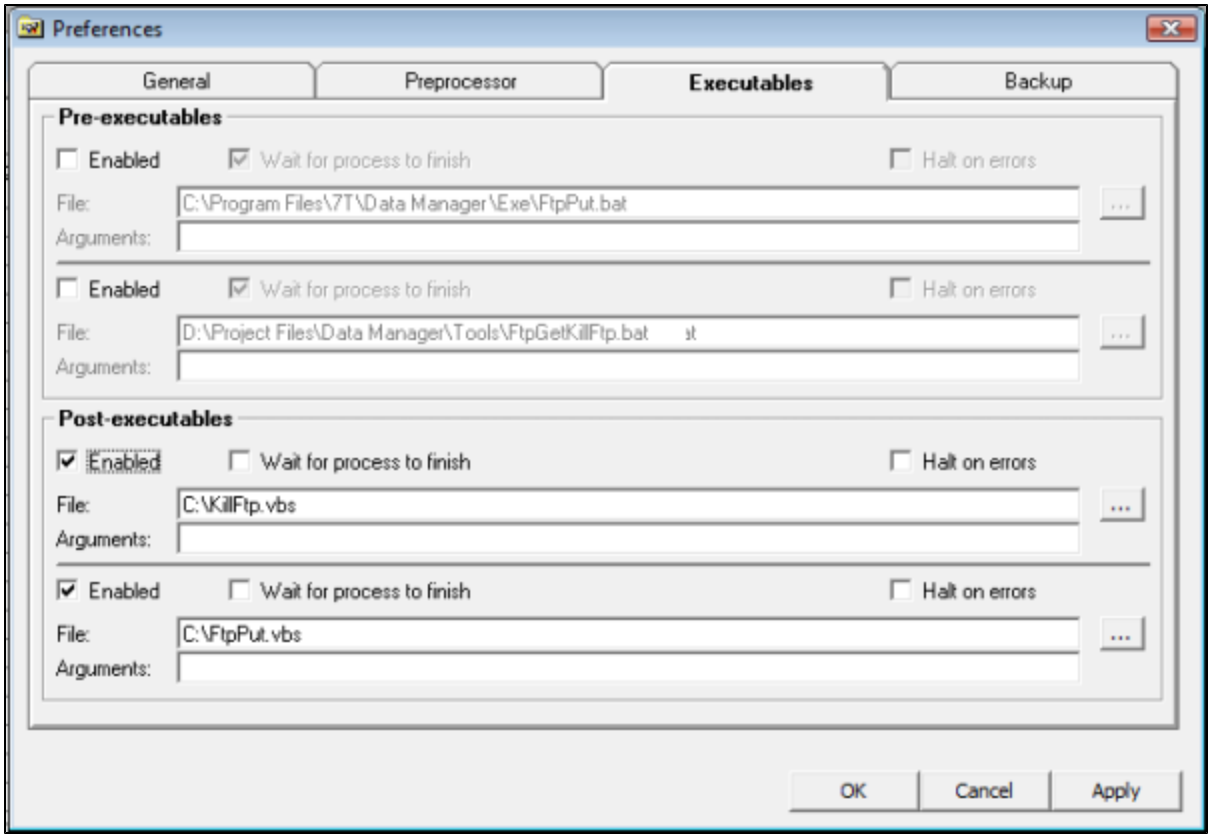


Use scripting to send a measurement file from Data Manager

When you are challenged with complex configuration scenarios, it is possible to combine local parallel installations of an end user system. The intention is for the local system to run on a different site receiving online measurements from the end user's Data Manager via FTP.

The end user's Data Manager installation is configured as described in the ensuing sections.

The FTP command is defined and requested under the setting in the **Preferences** dialog under Data Manager via a VBScript as illustrated in the following figure. The figure shows how to define commands to control FTP sending of files using Data Manager.



The setup in Data Manager references the following two ASCII files

- KillFtp.vbs

  KillFtp.vbs starts a task, which will turn off any FTP process that runs on the PC after 30 seconds. This script ensures that FTP will not hang in an endless loop. The time limit of 30 seconds is a parameter named pauseTime. The setting in pauseTime must be set long enough to carry out a normal FTP script.

- RunFtp.vbs

  The script RunFtp.vbs executes an FTP command using a file named ftpput.txt as command input. The FtpPut.txt file includes definition of FTP site, logon name, password and file to be transmitted.

The local site must subsequently be configured to read the exported data file as input.

Examples

File KillFtp.vbs:

```
Option Explicit

Const secPerDay = 86400
Const hideWindow = 0
Const pauseTime = 30
Const sleepTime = 500

Dim timeStart, timeStop
Dim objShell

On Error Resume Next

timeStart = Timer
Do
    Wscript.Sleep sleepTime
                timeStop = Timer
                If timeStop < timeStart Then
            timeStop = timeStop + secPerDay
                End If
Loop While timeStop - timeStart < pauseTime

Set objShell = CreateObject("WScript.Shell")
objShell.Run "%windir%\system32\Taskkill.exe /F /IM cmd.exe", hideWindow
Set objShell = Nothing
```

File: RunFtp.vbs:

```
Option Explicit
Const hideWindow = 0
Const sleepTime = 5000
Dim objShell
On Error Resume Next
Set objShell = CreateObject("WScript.Shell")
objShell.Run "%windir%\system32\Ftp.exe -s:C:\7T\FTP\ftpput.txt >C:\7T\FTP\ftpresult.txt",
hideWindow
```

File FtpPut.txt:

```
open 130.228.108.70

7TFTP

********
```