Log monitor

Simple program to parse a log and close or kill 1-3 processes in the case where certain messages (events) are found inside the log.

For sake of understanding:

- Close a process, means close it in a normal clean way (i.e. allowing the program to close any open files and do its own graceful close operation.
- Kill a process, means force close or terminate it in a typically non-clean way.

Program needs to record its own activity for any of the found messages or actions to its own log file (including Process ID when closing / killing a process).

Program needs to send an email notice when any of the conditions are met and/or closing or killing a process.

Program Layout.

Title: Log monitor

Log path (where the log files are)   [Folder Selector]
(Program remembers last path specified if closing.)
Email To:
Email From:
Email Subject:
                        (Default
Server IP (SMTP):   127.0.0.1)
         (Program rememebrs settings)

Parse interval   seconds
         (Default is 15)
Process 1:   xyz.exe   Terminal
Process 2:   xyz.exe   Gateway
Process 3:   xyz.exe   Process watcher
         (Program remembers set process names)
Last parse time
Next parse time
Log:
Record date/time for when it finds one of the criteria /
action taken if found (eg. a process is killed).

(Note: Log is also written out to a file in the same folder as the program)
License Expiry Date:
(Send email 2 weeks before and 1 time per day)

         PAUSE   --> Pause operation for 10 minutes.
         (After press it shows CONTINUE to press to continue)

Log path (above) is the folder of where the log files are.

Inside this folder are log files with name as follows: YYYYMMDD.log (e.g. 20201103.log)

Entries follow this format (with fields separated by tab):

		ProgName Pair,Daily: API Error, id=-1, Code=1100-->Connectivity between AX
0	50:31.2	and Workstation has been lost.
		ProgName Pair,Daily: API Error, id=-1, Code=1102-->Connectivity between AX
0	50:52.9	and Workstation has been restored - data maintained.

etc.

The program needs to read the current date log file (based on filename) and sometimes the previous day log file to check for conditions.

If in the case of a need to close a process it should do it using the process ID number. If 30 seconds after issuing a close command then process ID is still resident in memory then kill the process ID.

Log content criteria

account was Timeout	--> If new entry of this <u>since last scanning</u> the log then close process 1
cannot be cancelled	--> If new entry of this <u>since last scanning</u> the log then close process 1
Workstation has been lost.	--> If total count of this >10 over the last 3 minutes AND 'has been restored' is not found in the log in the last 3 minutes then close process 2. (In the case where the log file just rolled over at midnight then need to look at the tail end of the previous day log file)
Couldn't connect to TWS.	--> If total count of this >4 over the last 10 minutes AND Process 2 exists in memory then <u>KILL</u> process 2.
License Expired	--> If new entry of this <u>since last scanning</u> the log then Email notice of License Expired
Failed to cancel PNL (not subscribed)	--> If new entry of this <u>since last scanning</u> the log then Close 1 and 2
Start connecting to IBGateway or Tws...	--> If total count of this >3 in total over the last 3 minutes AND Process 2 exists in memory THEN kill process 2.
cannot set millisecond timer	--> If new entry of this <u>since last scanning</u> the log then Kill 1 (Don't close)
Not Login to metatrader account yet.	--> If new entry of this <u>since last scanning</u> the log then Close 1
No activity in the log for 15 minutes	--> Kill 1 (Don't close)

If the Log Monitor program has tried to close OR kill a process more than 3 times (total of any closing) in 10 minutes then kill process 1, 2 and 3 together.
(Note: This is probably a result of something getting very stuck).

Time based criteria

1) Stop monitoring the log from Saturday 2am to Sunday 11pm. (Allow manual choosing of the time in the program settings).

2) Sunday 10pm (Allow manual choosing of the time in the program settings). Close process 1 and 2. This is to reset the programs.

Start / Re-start option

Option 1 – have a Start switch on the main window to start the processes if they are not running already. May also need to add the program path for each of the processes to support this.

Option 2 – have a Re-start switch on the main window to re-start a process if it's closed or killed. I.e. program monitors once the Process ID has gone from memory (when there is a close or kill condition met from monitoring the logs) and then it starts it again. May also need to add the program path for each of the processes to support this.

Other notes

Program remembers its last settings when closing and re-opening.

Interface to look clean.

Program needs to be <u>very reliable</u> (well written code that doesn't have memory leaks and had proper handling of files - closing them and variables)

Program needs to be able to run for more than 1 month without restarting.

For the log 'search strings' and actions use a simple file to list these OR include in program settings (can be a second tab) so these can be adjusted later if needed.

It may be necessary to add other settings to the program window layout (which is fine) to support the requirements.

Option Features (to be quoted on separately)

1) Monitor processes for High CPU (>25%) for 3 consecutive readings (based on normal parse interval). If condition met then close that process. As per earlier condition if close is not successful then it would be killed.