

Command line utility for automating dataset retrieval

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Introduction

DL4CmdLine.exe is a utility program for downloading and saving data from DL6 and GP1 loggers. DeltaLINK Setup installs it in the DeltaLINK installation folder.

It can be used directly from the Windows command prompt, or from batch files or with Windows Scheduled Tasks to automate data retrieval without starting the full DeltaLINK program.

Notation

Follow the rules below when constructing a command line:

- Enter items in **bold** exactly as shown.
- Replace items underlined by the value that you want to use – enclose the value in “double quotes” if it contains spaces.
- Items enclosed in [brackets] are optional.
- Enter non-optional items in the order shown. Optional items can be entered in any order.
- The command line is case-insensitive.

Usage

1. To start the Windows command prompt, select Command Prompt in the Accessories program group in the Windows Start menu.

If you are not already familiar with Command Prompt, you can find more information in Windows Help and Support: select Help and Support in Windows Start menu. You can also type HELP in the Command Prompt window.

2. At the Command Prompt (or in a batch file), enter:

```
"pathDL4CmdLine.exe" conn [/Ddir] [/Ffile] [/Llog] [/E] [/R] [/T] [/C] [/X] logger(s)
```

<u>path</u>	Path to the DeltaLINK installation folder, e.g. C:\Program Files\Delta-T\DeltaLINK 2.6\ Don't forget the quotes in front of <u>path</u> and after DeltaLINK.exe.
<u>conn</u>	Connection name. To use a COM port, <u>conn</u> should be COMx, where x is the port number from 1 to 256. To use a modem, in "double quotes" enter the modem name and the number to dial, separated by three tildes ~~~. For example: "USB v92 FaxModem~~~0123456789"
[/D <u>dir</u>]	<u>dir</u> is the folder to save dataset files and error logs.
[/F <u>file</u>]	<u>file</u> is the name of the dataset file. The filename or path may contain templates for automatically including date and time – see "File Name Templates". If <u>file</u> is a relative path name, DL4CmdLine constructs a fully qualified path name relative to the current directory.
[/L <u>log</u>]	<u>log</u> is the name of a log file, which is a text file where DL4CmdLine reports the results of its operations. If <u>log</u> is a relative path name, DL4CmdLine constructs a fully qualified path name relative to the current directory.
[/E]	Save logging errors to a text file. (see /D switch for the location that these are saved to)
[/R]	Clear (Remove) logging errors.
[/T]	Test connection to logger(s) only, no data is downloaded.
[/C]	Delete (Clear) full saved dataset segments from the logger. i.e. old read data is cleared but the segment currently written to is retained, so that it is not lost.
[/X]	Save data as tab-separated text file.
<u>logger(s)</u>	List of logger serial numbers, with which to connect and download the data from, separated by spaces. Serial numbers must include logger types i.e. DL6 or GP1. Examples GP1-2-3 or DL6-04-05

Examples

Scenario 1:

The following example demonstrates how to download data from a single logger on COM1, saving errors, and saving a log file.

```
DL4CmdLine COM1 /Fc:\data\datafile.dt6 /Lc:\data\logfile.log /E
```

- The dataset is saved to the file c:\data\datafile.dt6.
- Errors are saved in c:\data. The log file is saved to c:\data\logfile.log.

Scenario 2:

This example demonstrates the use of “double quotes” for data and log files

```
DL4CmdLine COM250 /F"\Data Folder\Data File.dt6" /L"\Data Folder\Log Folder\Log File.log" /E /K
```

- Logging errors are stored and retained i.e. not cleared from the logger

Scenario 3:

This example demonstrates how to download data via a modem, from four loggers, 2 GP1s and 2 DL6s.

Note that a folder to save the data to is provided with the /D option instead of a data file with /F.

```
DL4CmdLine "USB 56K Fax Modem~~~01234 567890" /D"\Data Folder" /L"\Data Folder\Log File.log" /E GP1-01-01 GP1-01-02 DL6-01-01 DL6-01-02
```

Scenario 4:

This example demonstrates the use of file name templates.

```
DL4CmdLine COM250 /F"\Data Folder\Data File %y-%m-%d %H%M%S.dt6" /L"\Data Folder\Log Folder\Log File %y-%m-%d %H%M%S.log" /E /K
```

- The log and error filenames are generated based on the file name templates
- Note the use double % symbols when using batch files. See “File Name Templates”

File Name Templates

DL4CmdLine command line program allows you to specify a file name template for the output files, rather than a fixed file name. DL4CmdLine then constructs a file name by replacing special sequences of characters in the template by information derived from the current date and time, according to the tables below:

%a	Abbreviated weekday name
%A	Full weekday name
%b	Abbreviated month name
%B	Full month name
%c	Date and time representation appropriate for locale
%d	Day of month as decimal number (01 – 31)
%H	Hour in 24-hour format (00 – 23)
%I	Hour in 12-hour format (01 – 12)
%j	Day of year as decimal number (001 – 366)
%m	Month as decimal number (01 – 12)
%M	Minute as decimal number (00 – 59)
%p	Current locale's A.M./P.M. indicator for 12-hour clock
%S	Second as decimal number (00 – 59)
%U	Week of year as decimal number, with Sunday as first day of week (00 – 53)
%w	Weekday as decimal number (0 – 6; Sunday is 0)
%W	Week of year as decimal number, with Monday as first day of week (00 – 53)
%x	Date representation for current locale
%X	Time representation for current locale
%y	Year without century, as decimal number (00 – 99)
%Y	Year with century, as decimal number
%z, %Z	Time-zone name or abbreviation; no characters if time zone is unknown
%%	Percent sign

Additionally, the # flag may prefix any formatting code. In that case, the meaning of the format code is changed as follows.

%#a, %#A, %#b, %#B, %#p, %#X, %#z,	# flag is ignored.
%#Z, %#%	
%#c	Long date and time representation, appropriate for current locale. For example: "Tuesday, March 14, 1995, 12:41:29".
%#x	Long date representation, appropriate to current locale. For example: "Tuesday, March 14, 1995".
%#d, %#H, %#I, %#j, %#m, %#M, %#S,	Remove leading zeros (if any).
%#U, %#w, %#W, %#y, %#Y	

Notes

When invoking DL4CmdLine from a batch file, note that the batch file processor interprets a pair of % symbols as enclosing the name of an environment variable. To pass a % symbol in the file name template, you must enter a double % symbol (ie %) in the batch file command line.

Several of the replaceable character sequences (eg %c, %x, %X) are not necessarily suitable for use in file name templates. They may generate file names containing illegal punctuation characters – the actual result depends on your Windows regional settings.

C programmers: the translation rules for the replaceable character sequences are identical to those of the standard C library function strftime().

Automating Data Retrieval Tasks

Windows Scheduled Tasks allows you to automatically run a program, such as DL4CmdLine.exe and thus retrieve datasets at a designated repeat rate and time(s) of day.

Planning

The scheduled task that you create can either start DL4CmdLine.exe directly, passing any command line options that you specify, or it can run a batch file, such as the example in the previous section, which starts DL4CmdLine.exe.

You may want to clear full data segments from the logger after downloading the data, to reduce and keep the time required to download data from the logger.

Creating a Scheduled Task

Test with /T on the command prompt

Before you start:

1. Program the logger(s) and start the logger(s) logging. It may be useful to confirm you can communicate with DeltaLINK to the logger(s) using the same method as when they will be used with DL4CmdLine.
2. Create a DL2 Control Panel that communicates with your logger, program it and start logging.
3. If you are going to schedule a batch file, write the batch file.
4. Confirm that the command or batch file that you are going to schedule does precisely what you want it to do:

Windows 2000, XP and Vista:

- a. From the Start Menu select (All) Programs, Accessories, Command prompt.
In the Command Prompt window, type the command line or the name of your batch file.

Or

Alternatively use the Run dialog from the Start Menu, for Windows XP, 2000 and Vista type cmd then click Ok, or for Windows 98 type command and click OK.

- b. Observe what happens and check whether it creates the dataset and log files that you expect.

Start the Scheduled Task Wizard:

5. From the Start Menu select (All) Programs, Accessories, System Tools, Scheduled Tasks.
6. In Scheduled Tasks, double-click Add Scheduled Task and follow the on-screen instructions in Scheduled Task Wizard.
7. When prompted to select the program that you want to Windows to run, click Browse, and select either DL4CmdLine.exe or of your batch file.
8. Enter a name for the task – the name that will identify the task in the Scheduled Tasks folder – and time of day and repeat rate information.
9. If you have selected DL4CmdLine.exe as the program, you need to enter the command line options for DL4CmdLine.exe:
 - a. In the last step of Scheduled Task Wizard, select Open advanced properties for this task before clicking Finish. Alternatively, highlight the task in Scheduled Tasks and select the Properties command (File menu) to pop up its property sheet.
 - b. In the Task tab, enter the complete command line in the Run box.

You can further fine-tune the operation of the task:

10. Highlight the task in Scheduled Tasks and select the Properties command (File menu) to pop up its property sheet.
11. Make any changes that you require in the Schedule and Settings tabs.
12. Finally, sit back, relax, and let Windows and DL4CmdLine do the work for you.