LOGVIEWPLUS™

LogViewPlus: User Guide

Using LogViewPlus to view and analyze your log files.

December 01, 2024

Table of contents

Introduction

Welcome to the LogViewPlus user guide. This guide aims to give you a head start in learning how to use LogViewPlus v3.1.16 and was last updated on December 01, 2024. This guide is also available for download as a PDF file.

Our tutorial videos are a great place to start learning. If you are having a specific problem, please see our F.A.Q.

If you're unable to find the information you're looking for, or if you find that some sections are not clear, please don't hesitate to contact us.

Getting Started

LogViewPlus is built specifically for viewing application log files. LogViewPlus works by parsing your log files and transforming the data into information. Because of this transformation, LogViewPlus can give you advanced filtering, analysis and reporting options.

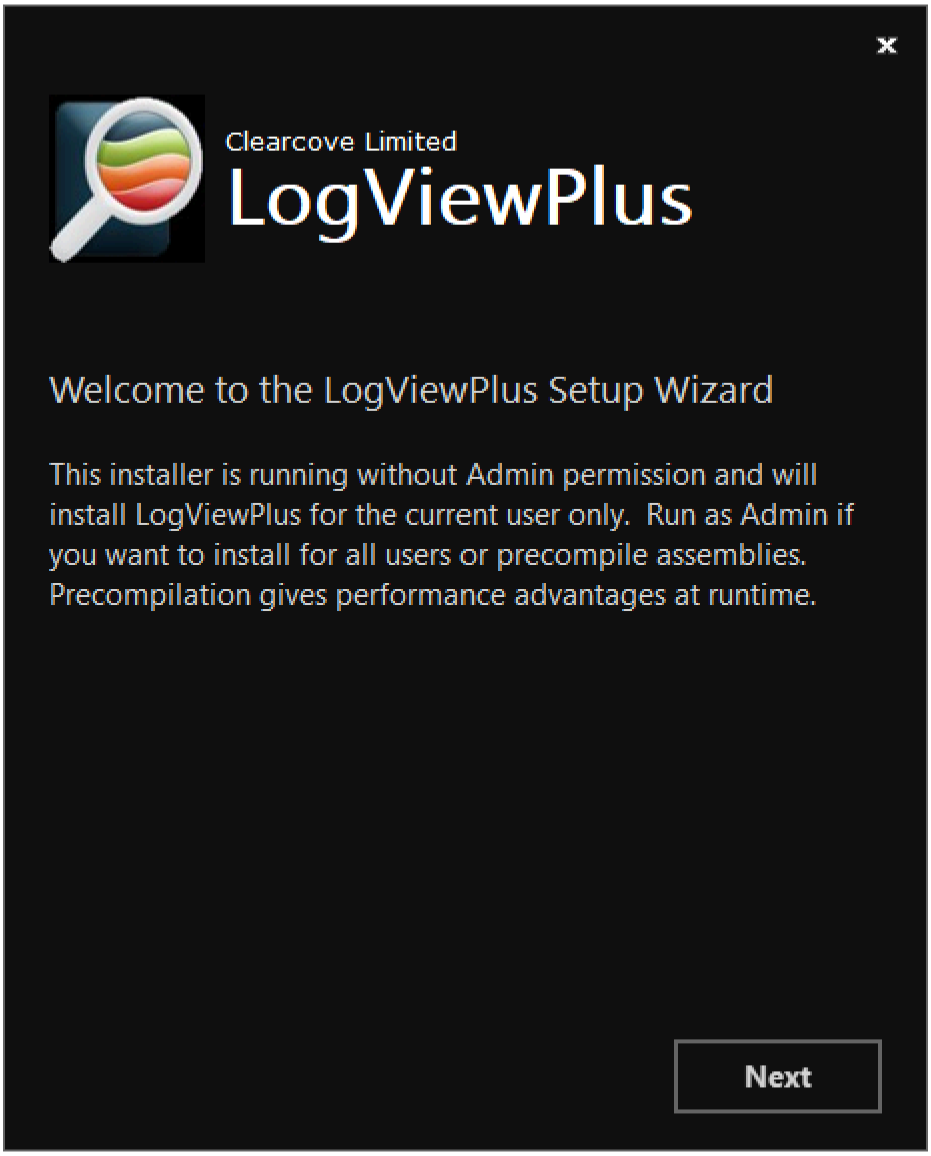
For a quick walk through of LogViewPlus check out our videos which cover basic functionality and configuration. We have also created a series of short tutorials which show you how to access and use specific features.

Installing LogViewPlus

Installing LogViewPlus is easy. You can get started by downloading the LogViewPlus installation package and verifying the target machine meets the following requirements:

Minimum Requirements
Windows 8.1 .Net Framework 4.8 RAM: 2 GB Processor: 1 GHz Disk Space: 5 GB

Once you have downloaded LogViewPlus and verified the target machine, you can begin the installation process by locating the installer and executing it. You should then see the Welcome page which describes the LogViewPlus installation:



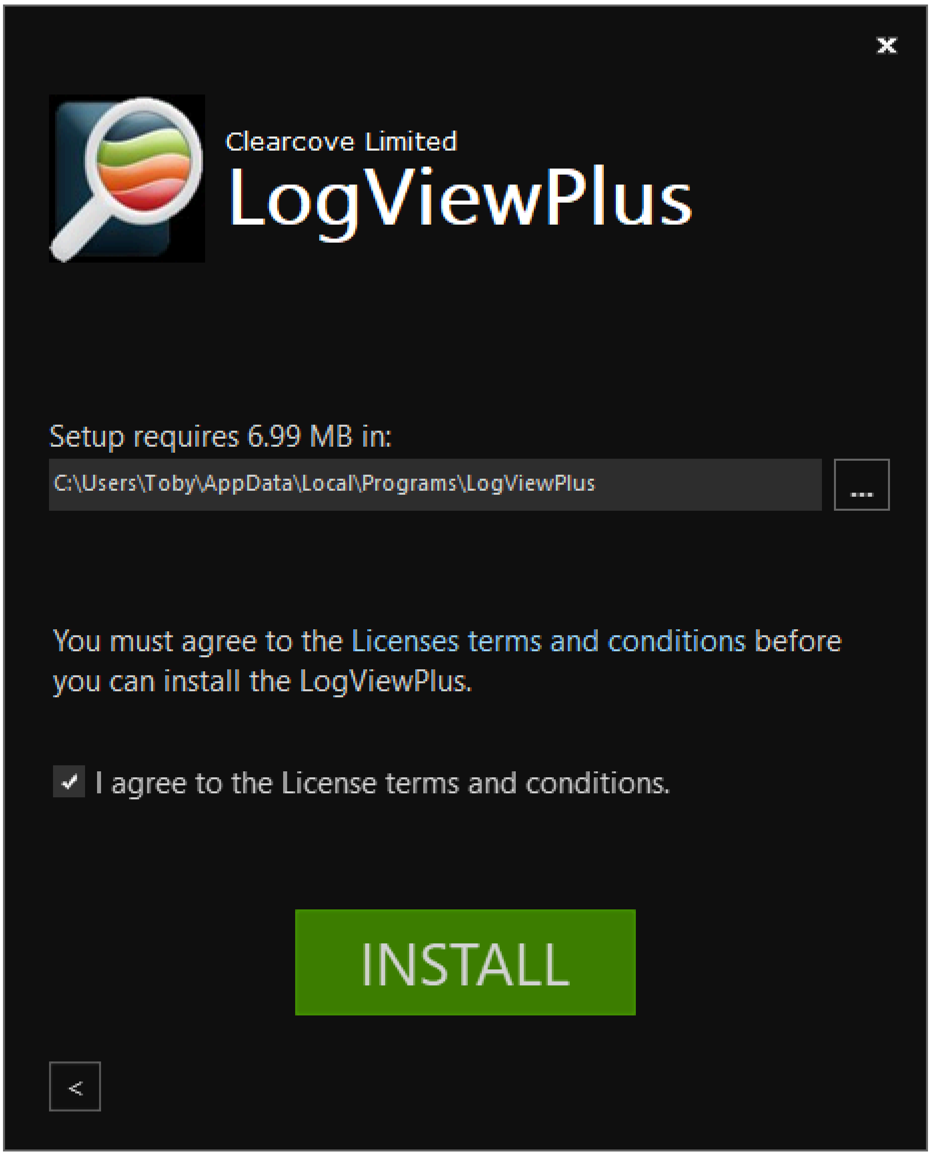
Welcome to the LogViewPlus Setup Wizard

This installer is running without Admin permission and will install LogViewPlus for the current user only. Run as Admin if you want to install for all users or precompile assemblies. Precompilation gives performance advantages at runtime.

The LogViewPlus installer can be run in one of two ways - either with or without Admin permission. Running as Administrator will allow you to install LogViewPlus for all users and register the LogViewPlus dependencies into the Global Assembly Cache (GAC). GAC assemblies are precompiled and this can significantly improve LogViewPlus performance. Administrators will also be given an option to install LogViewPlus for all users on the machine.

If you are not running as an Administrator the installer will assume a 'Per User' installation. This means the install will only impact the current user account. 'Per User' is the default installation type discussed here.

Continuing the LogViewPlus installation with the 'Next' button, you will see the main LogViewPlus installation page which allows you to set the target directory and agree to the terms and conditions:



Setup requires 6.99 MB in:

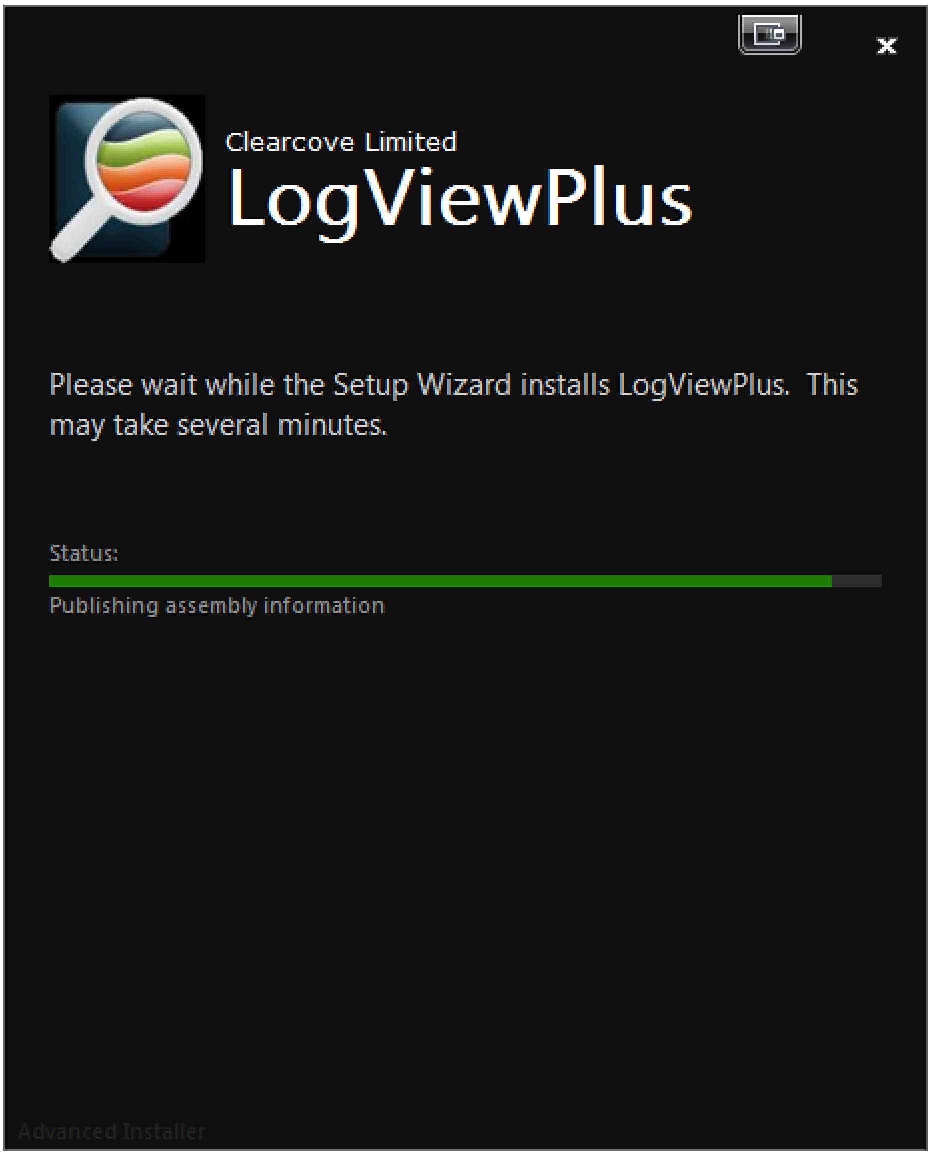
C:\Users\Toby\AppData\Local\Programs\LogViewPlus

You must agree to the Licenses terms and conditions before you can install the LogViewPlus.

☑ I agree to the License terms and conditions.

The default LogViewPlus per user installation directory is *%LocalAppData%\LogViewPlus*. If the target directory is set to 'Program Files', LogViewPlus will always install into the *%ProgramFiles(x86)%* directory if available. The x86 directory is required by the installer on 64-bit machines and has no impact on application execution. LogViewPlus will run as either a 32-bit or 64-bit program depending on the operating system.

Once you have selected the target directory and agreed to the licensing terms, you can click 'Install' to begin the installation process. You will then see a progress notification screen similar to:

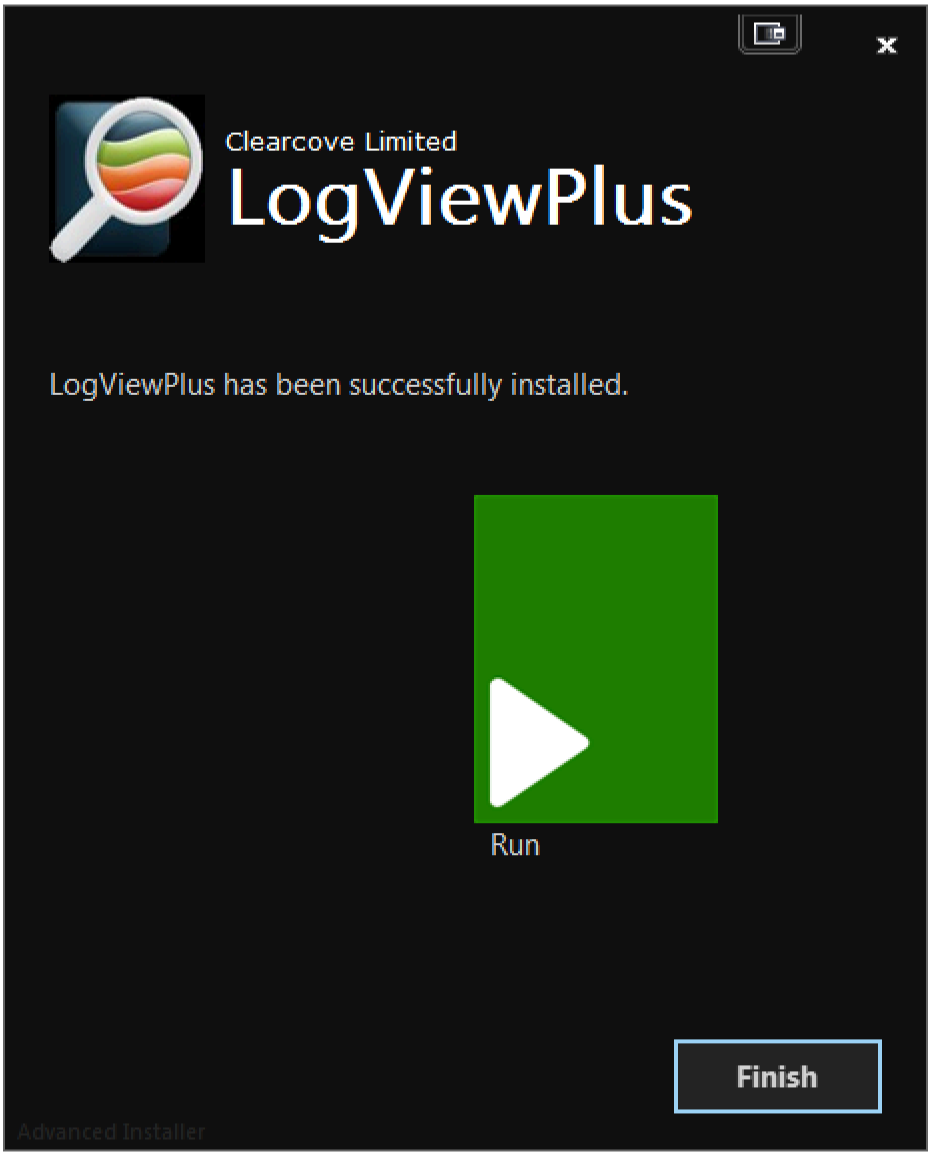


Please wait while the Setup Wizard installs LogViewPlus. This may take several minutes.

Status:

Publishing assembly information

Finally, you will see a screen informing you that installation is complete.



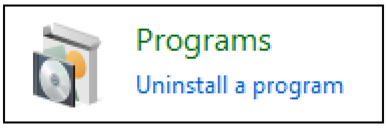
LogViewPlus has been successfully installed.

You are now ready to run LogViewPlus. It is important to note that starting LogViewPlus from the installation complete page will run LogViewPlus under the same user account as the installer. This may be problematic if you have installed LogViewPlus under a special account as the application will be unable to find the correct user settings.

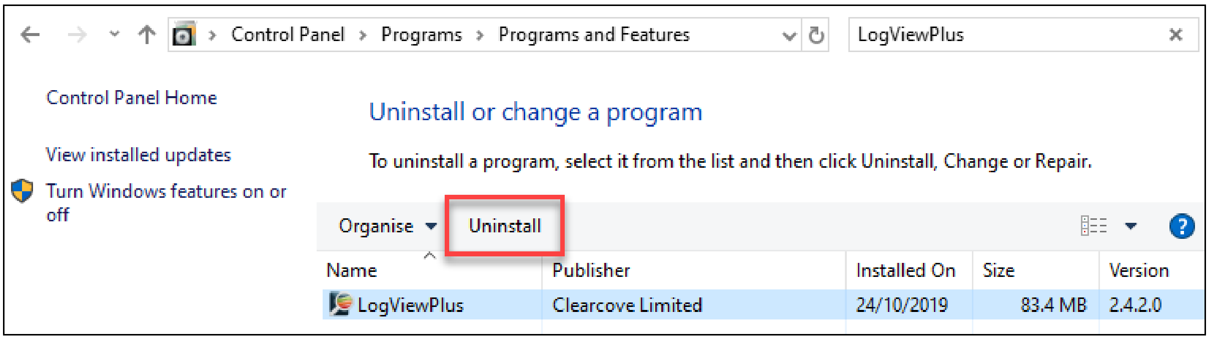
If you have any problems with installing LogViewPlus, please have a look at our FAQ, or contact us for assistance.

Uninstalling LogViewPlus

Uninstalling LogViewPlus is easy. Simply open Control Panel by clicking on the start menu and typing "Control Panel". Then select the "Uninstall Programs" option:



Next, find and select LogViewPlus in your list of installed programs and click Uninstall:

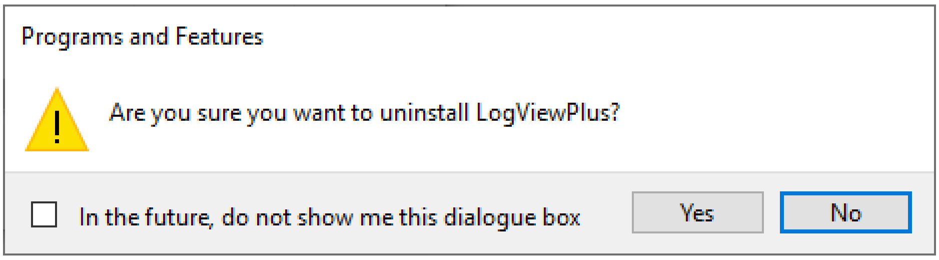

Control Panel > Programs > Programs and Features
LogViewPlus
Control Panel Home
View installed updates
Turn Windows features on or off
Organise
Uninstall

Uninstall or change a program

To uninstall a program, select it from the list and then click Uninstall, Change or Repair.

Name	Publisher	Installed On	Size	Version
LogViewPlus	Clearcove Limited	24/10/2019	83.4 MB	2.4.2.0

A message will be displayed to confirm you want to uninstall:

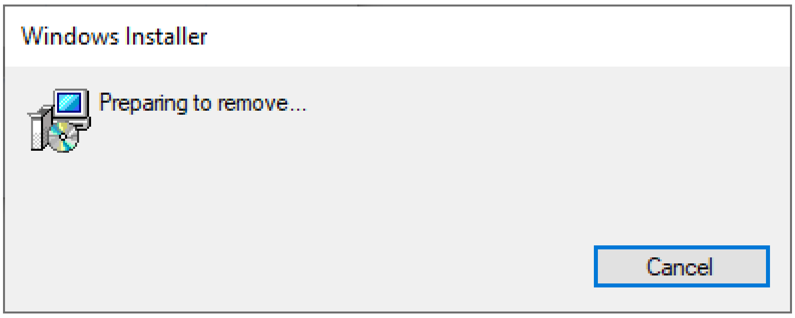


Programs and Features

Are you sure you want to uninstall LogViewPlus?

☐ In the future, do not show me this dialogue box

Once confirmed, a window will be shown which allows you to monitor the uninstall progress:



Windows Installer

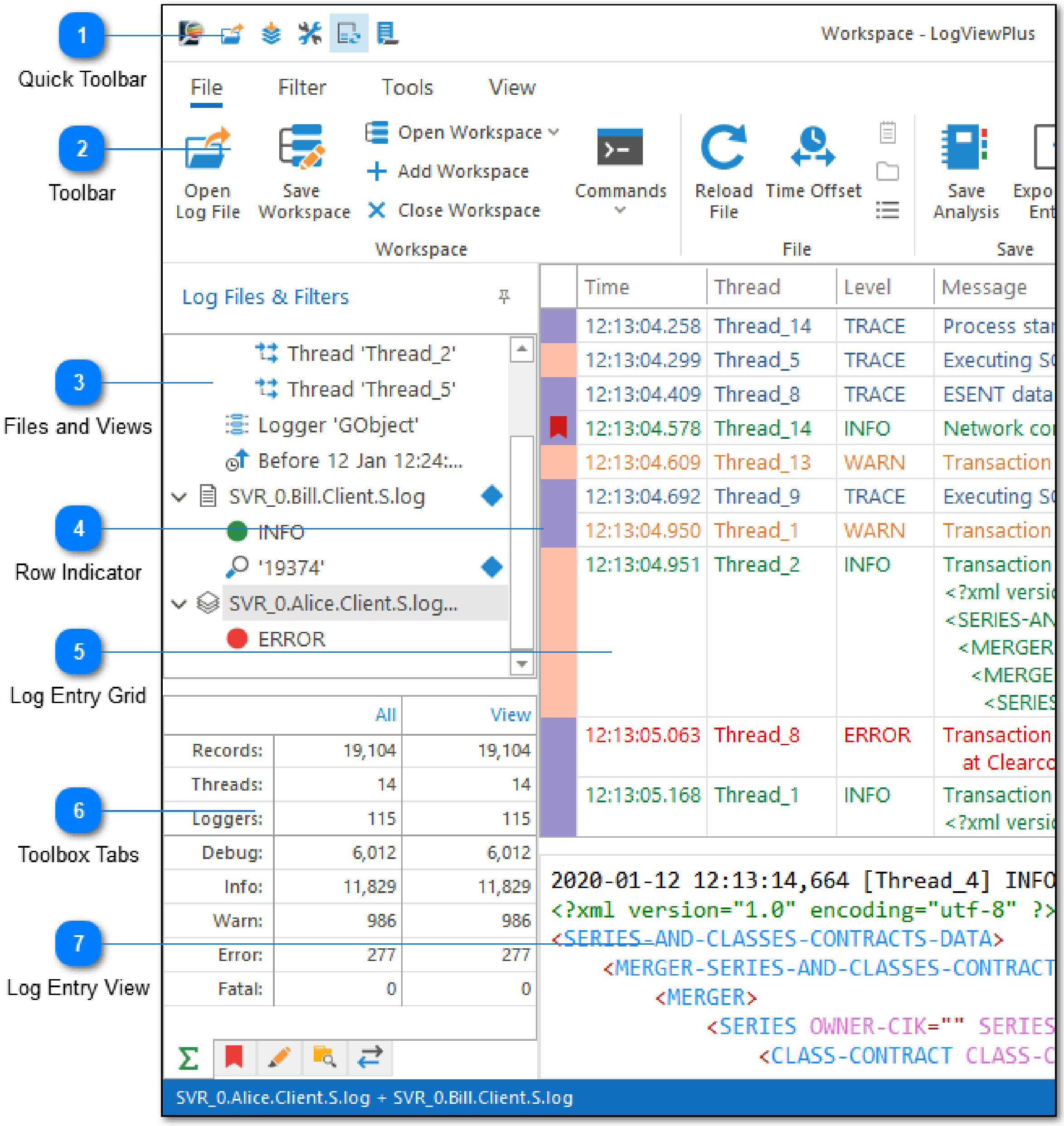
Preparing to remove...

At this point, you may be prompted by the User Access Control informing you that you are making changes to your computer. You will need to agree these changes for the uninstall process to continue.

LogViewPlus will then be removed automatically without the need for further user input.

If you have any problems uninstalling LogViewPlus, please have a look at our FAQ, or contact us for assistance.

First Look



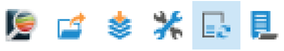
	All	View
Records:	19,104	19,104
Threads:	14	14
Loggers:	115	115
Debug:	6,012	6,012
Info:	11,829	11,829
Warn:	986	986
Error:	277	277
Fatal:	0	0

Time	Thread	Level	Message
12:13:04.258	Thread_14	TRACE	Process star
12:13:04.299	Thread_5	TRACE	Executing S
12:13:04.409	Thread_8	TRACE	ESENT data
12:13:04.578	Thread_14	INFO	Network co
12:13:04.609	Thread_13	WARN	Transaction
12:13:04.692	Thread_9	TRACE	Executing S
12:13:04.950	Thread_1	WARN	Transaction
12:13:04.951	Thread_2	INFO	Transaction <?xml versi <SERIES-AN <MERGER <MERGE <SERIES
12:13:05.063	Thread_8	ERROR	Transaction at Clearco
12:13:05.168	Thread_1	INFO	Transaction <?xml versi

```
2020-01-12 12:13:14,664 [Thread_4] INFO
<?xml version="1.0" encoding="utf-8" ?>
<SERIES-AND-CLASSES-CONTRACTS-DATA>
    <MERGER-SERIES-AND-CLASSES-CONTRACT
        <MERGER>
            <SERIES OWNER-CIK="" SERIES
                <CLASS-CONTRACT CLASS-C
```

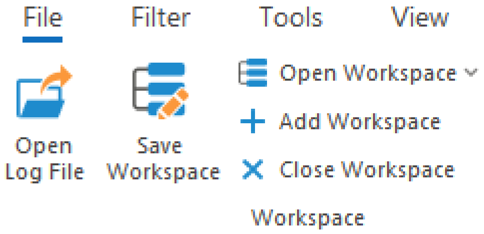
Once you open a log file in LogViewPlus the application should look similar to the above screenshot. LogViewPlus can be thought of as seven distinct areas.

1 Quick Toolbar



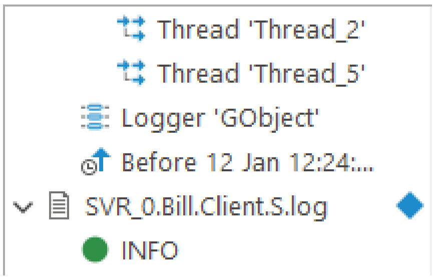
The quick toolbar allows easy access to common functions like a opening file, merging files and managing auto-scroll.

2 Toolbar



The application toolbar contains commands and actions you can use to work with your log files.

3 Files and Views

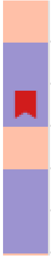


On the far left of the screen is a tree list which shows all of the files and views you currently have open. You can use this list to navigate between log files and filter results.

This list represents a hierarchy of views on your log file. The element at the root of the hierarchy represents all entries in the log file. As you move away from the root element each generation will have an increasingly focused view of the current log file. Every new generation contains a subset of the log entries available in the previous generation. These filters can be thought of as combined search results. Double-clicking on a filter result will find the original log entry in the root log file.

Also, note that as you navigate between views LogViewPlus attempts to keep your current record in focus. This allows you to easily view records which were written before and after the current entry when moving between views.

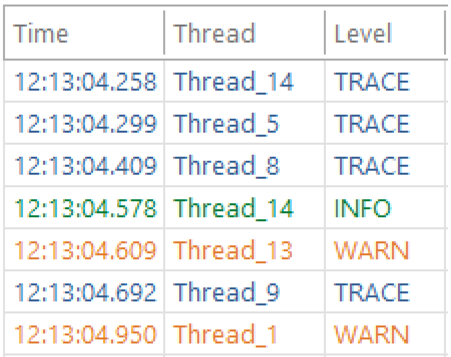
4 Row Indicator



The row indicator is used to display additional details about the given log entry. For example, colors in the row indicator bar will appear by default when viewing a merged file. Each distinct color represents a different file. This makes it easy to see at a glance which log entries were written by the same log file. Hovering in the row indicator will display a tooltip with the full path to the source log file. There is also a Log File Name column where you can see the name of the file responsible for the log entry. This column is hidden by default.

The row indicator is also used to show bookmarked log entries where applicable.

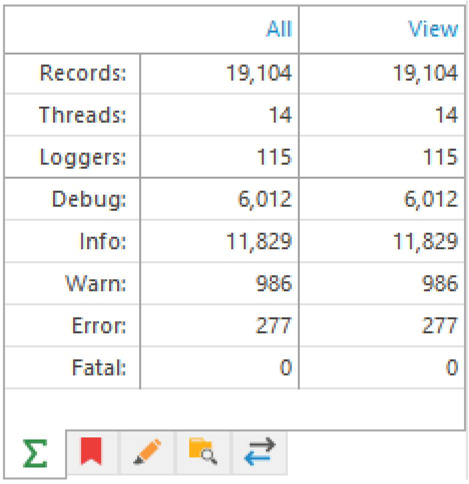
5 Log Entry Grid



Time	Thread	Level
12:13:04.258	Thread_14	TRACE
12:13:04.299	Thread_5	TRACE
12:13:04.409	Thread_8	TRACE
12:13:04.578	Thread_14	INFO
12:13:04.609	Thread_13	WARN
12:13:04.692	Thread_9	TRACE
12:13:04.950	Thread_1	WARN

The log entry grid is the heart of LogViewPlus. You can use this grid to easily view the log entries in your log file. This grid is color-coded based on the log level. LogViewPlus supports five different primary log levels: Debug, Info, Warn, Error and Fatal. Primary log levels are immutable, but secondary log levels can be configured.

6 Toolbox Tabs

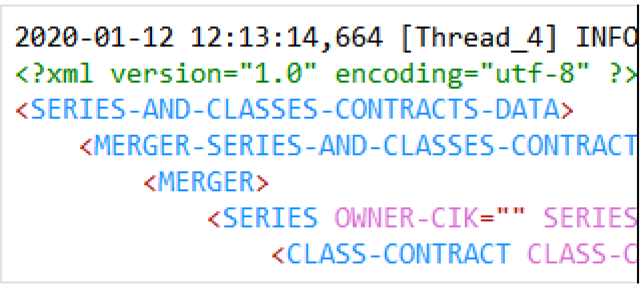


	All	View
Records:	19,104	19,104
Threads:	14	14
Loggers:	115	115
Debug:	6,012	6,012
Info:	11,829	11,829
Warn:	986	986
Error:	277	277
Fatal:	0	0

The toolbox tab allows easy navigation between different LogViewPlus functional areas. These areas include statistics, bookmarks, highlights, directory monitors, file transfers, and notes.

The tab shown is the statistics grid which can be used to give you an idea of how many elements are in your log file. It's designed to give you a quick idea of how data is distributed in your log file as well as an overview of the available information.

7 Log Entry View

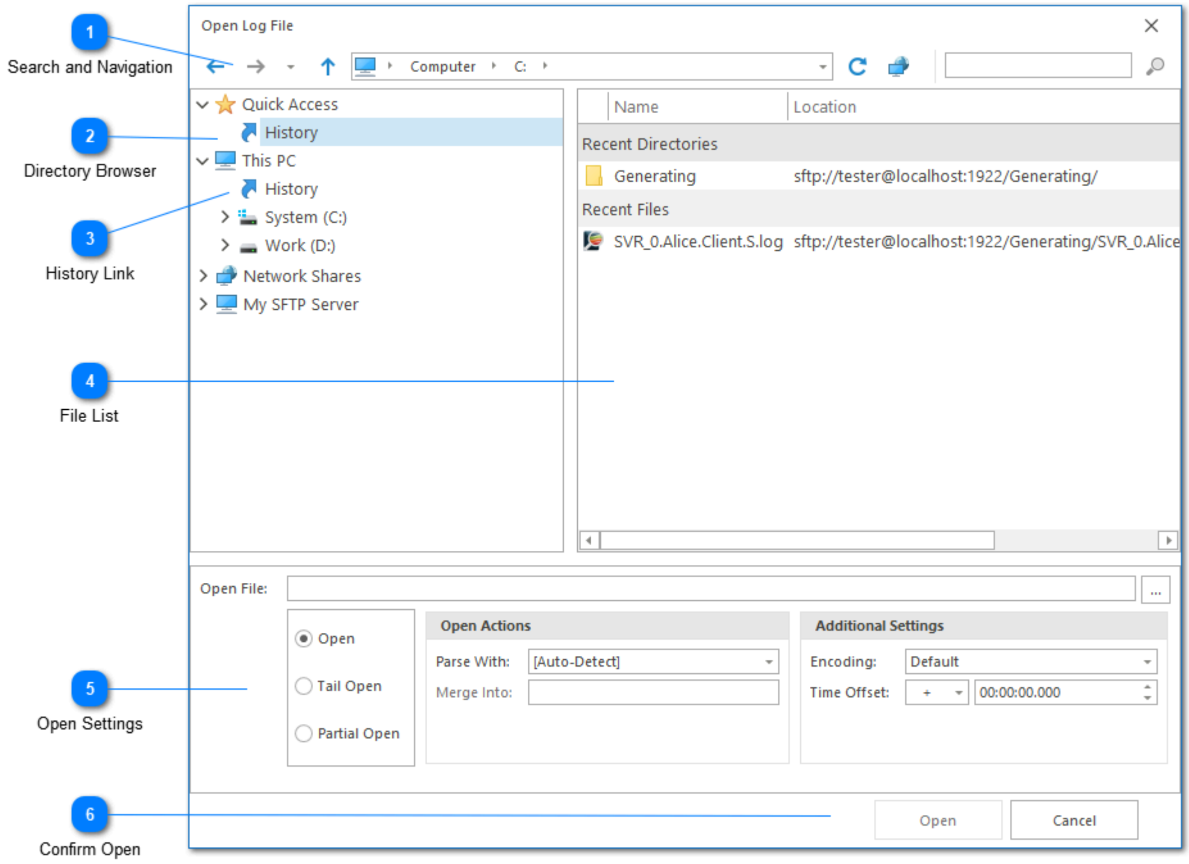


```
2020-01-12 12:13:14,664 [Thread_4] INFO
<?xml version="1.0" encoding="utf-8" ?>
<SERIES-AND-CLASSES-CONTRACTS-DATA>
    <MERGER-SERIES-AND-CLASSES-CONTRACT
        <MERGER>
            <SERIES OWNER-CIK="" SERIES
                <CLASS-CONTRACT CLASS-C
```

At the bottom of the application you'll find a text box which contains the original log entry as it would appear in the text file. This log entry will change based on your selection in the log entry grid. Selecting multiple log entries in the grid will display multiple entries in the Log Entry Panel.

The log entry can be color coded based on predefined syntax highlight settings. Right-clicking the original entry will bring up the Log Entry Menu which allows you to change the syntax highlighting style.

Log Explorer



Name	Location
Recent Directories	
Generating	sftp://tester@localhost:1922/Generating/
Recent Files	
SVR_0.Alice.Client.S.log	sftp://tester@localhost:1922/Generating/SVR_0.Alice

Open File:

● Open
○ Tail Open
○ Partial Open

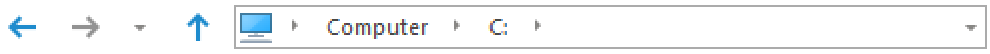
Open Actions
Parse With: [Auto-Detect]
Merge Into:

Additional Settings
Encoding: Default
Time Offset: + 00:00:00.000

The LogViewPlus file browser (Log Explorer) allows you to quickly and easily browse your local file system. You can also configure Log Explorer to provide access to remote servers through a number of different protocols including SFTP, FTP/S and UDP. The Log Explorer also supports direct database access.

Using the Log Explorer is discussed in detail in Browse File Systems. If you want to configure Log Explorer, please see File System Settings.

1 Search and Navigation

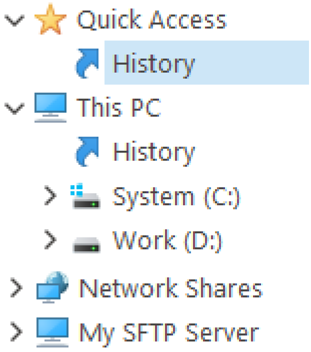


The search navigation bar can be used to navigate forward, backward, and up into a parent folder. There is also a small drop-down after the forward command which can be used to quickly navigate your browsing history.

The navigation bar switches mode depending on if the current file system is local or remote. In a local file system mode the path is tokenized (as shown) allowing quick drop-down navigation into parent folders. When the file system is remote, a free-form text box will be used instead. This will require the full path to the target directory.

Finally, note that the navigation bar can also support commands and shortcuts - much like Windows Explorer. For example, the shortcut *%temp%* can be used to navigate to your local temp directory. The command **cmd** can be used to open a shell command window in the current target directory. The availability of commands and shortcuts will be dependent on how your Windows shell is configured.

2 Directory Browser



The directory browser is used to navigate between folders. If you have configured LogViewPlus with the connection details of a remote server it will appear below the local file system nodes.

Network Shares will always be unpopulated when you first install LogViewPlus. This is because some networks may contain a large number of machines and quickly scanning the network to find the machine you want to access may not be possible. Instead, LogViewPlus uses an approach that requires you to know the name of the machine you want to connect to an advance. You can either explicitly add this machine name in the file system settings, or you can paste the full path to the file you want to open into the open file text box. Once a local network file has been opened by LogViewPlus, the network node will be available for future access.

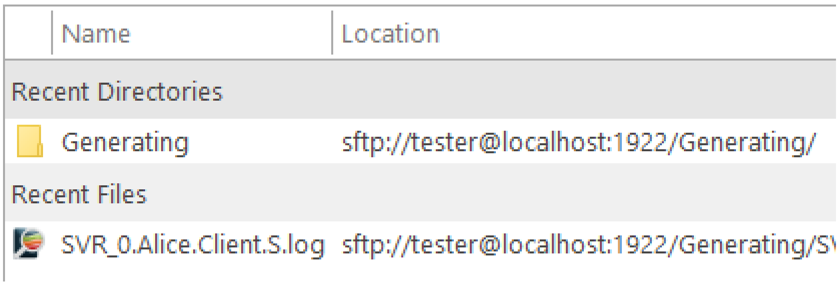
3 History Link

History

History links are special nodes within the directory browser. They contain a list of your file access history. History links work at two levels. Quick access history contains the last 20 items you opened regardless of where those items point two. Alternatively, computer history links contain the last 20 items you have opened on that particular computer or drive.

Please see the history node documentation for more information.

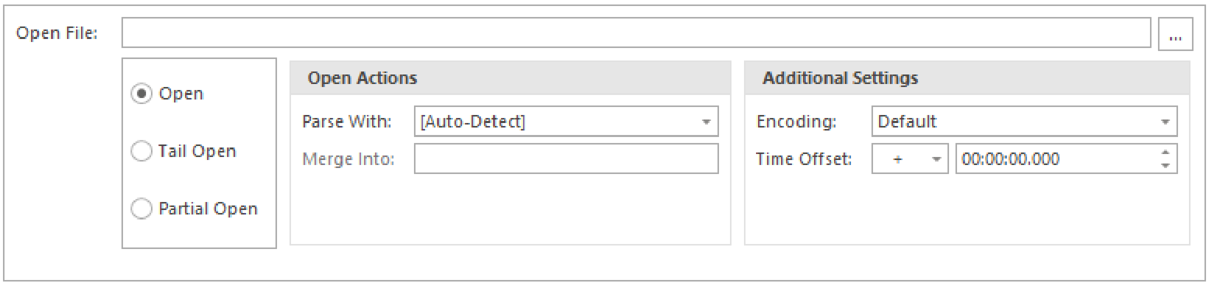
4 File List



Name	Location
Recent Directories	
Generating	sftp://tester@localhost:1922/Generating/
Recent Files	
SVR_0.Alice.Client.S.log	sftp://tester@localhost:1922/Generating/S\

The File List contains a list of all the files in the current directory. In the example above, the History List is shown. This list shows recently accessed files.

5 Open Settings



Open File: [ ] ...

● Open
○ Tail Open
○ Partial Open

Open Actions
Parse With: [Auto-Detect]
Merge Into:

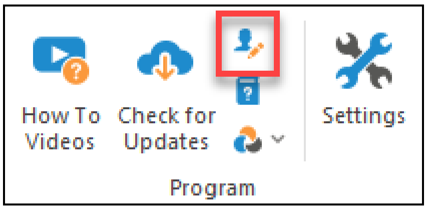
Additional Settings
Encoding: Default
Time Offset: + 00:00:00.000

The Open Settings configuration at the bottom of the screen is used to configure how LogViewPlus s log file or directory. The Open Settings configuration will be discussed in detail later in this documen

6 Confirm Open

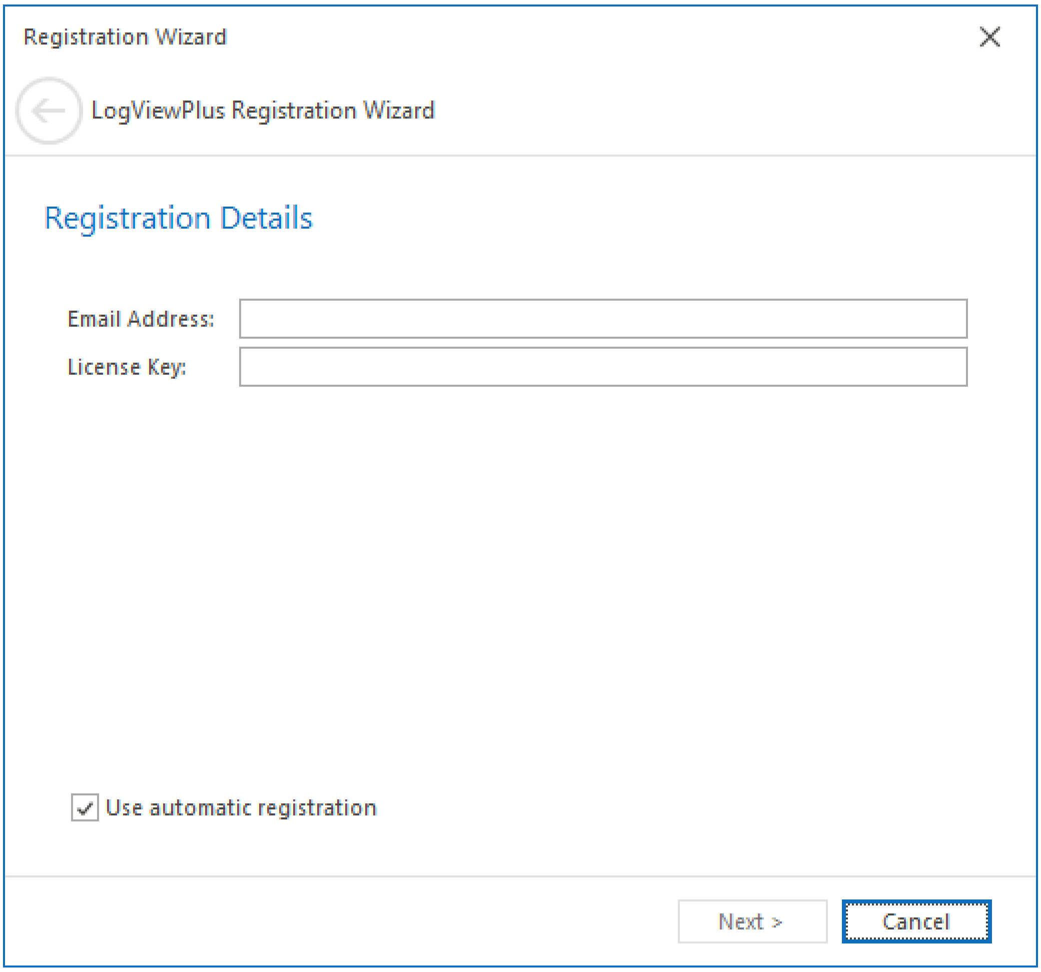
Finally, at the bottom of the Open File dialog is a command to open the currently selected log file as configured. Alternatively, you can close the Open File dialog by selecting the cancel command.

Registration



The registration process is a one-off event that you can use to register LogViewPlus. If LogViewPlus remains unregistered the software will automatically be deactivated in 30 days. An extension may be given on request.

Registration Details



Registration Wizard

LogViewPlus Registration Wizard

Registration Details

Email Address:

License Key:

☑ Use automatic registration

The first step in the registration process is to enter the e-mail address and license key you received after your payment was processed. This information is sent to you from LogViewPlus support. If you experience a delay in receiving your license key, it may be worth checking your junk email folder before contacting LogViewPlus support.

If you purchased an Individual License, your license key will be permanently associated with the given e-mail address. You must use this e-mail address with your license key when registering.

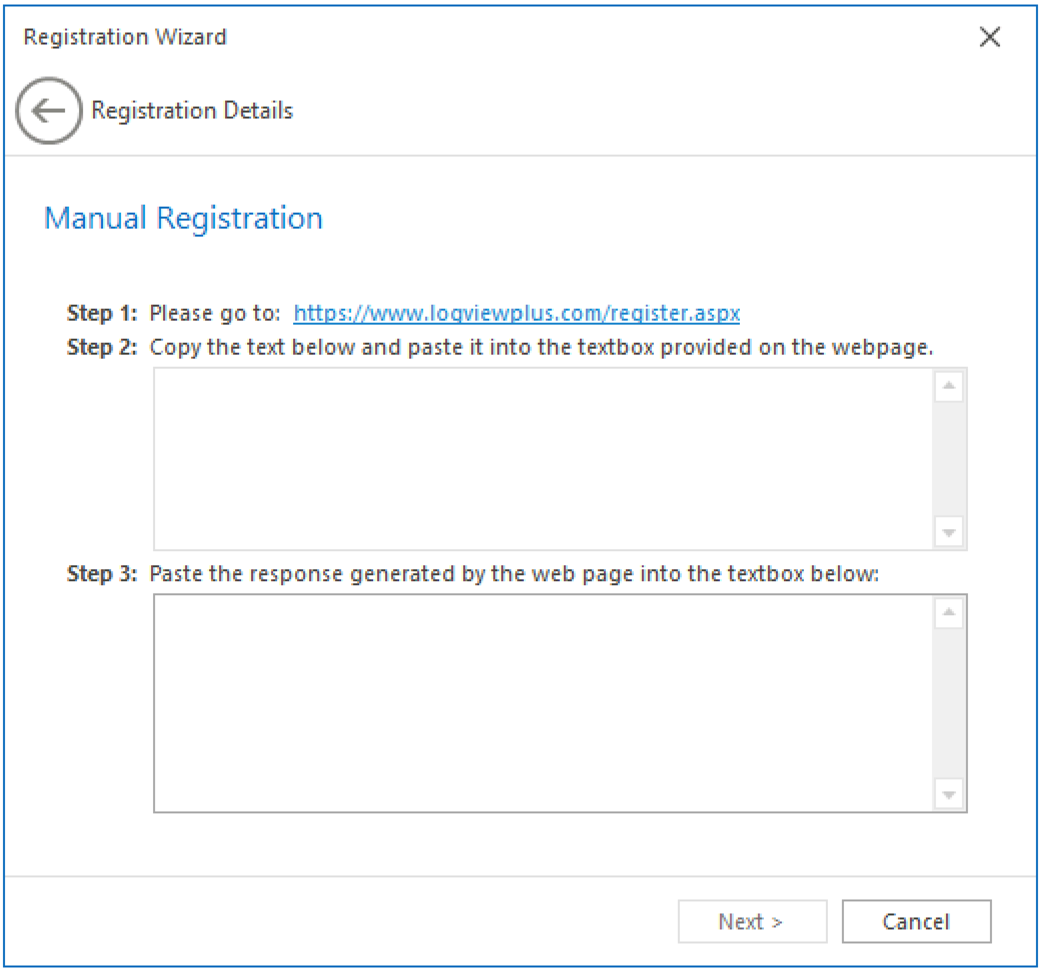
If you purchased a Corporate License, your license key will be associated with an email domain. If you would like to change the email domain, you must do so before the first key registration. When registering, you should use your corporate domain email address.

LogViewPlus is registered per user and therefore can be installed on multiple machines without the need to purchase multiple licenses provided the user of the application is the same person.

Once you have entered your registration details you can click the next button to proceed. The registration Wizard will then attempt automatic registration. Automatic registration should be successful assuming you're not attempting to register the application from behind a firewall or proxy server. If automatic registration fails the application will proceed to manual registration. Manual registration is discussed in the next section.

Having trouble with your license key? You can verify your license key is still valid.

Manual Registration



Step 1: Please go to: https://www.logviewplus.com/register.aspx

Step 2: Copy the text below and paste it into the textbox provided on the webpage.

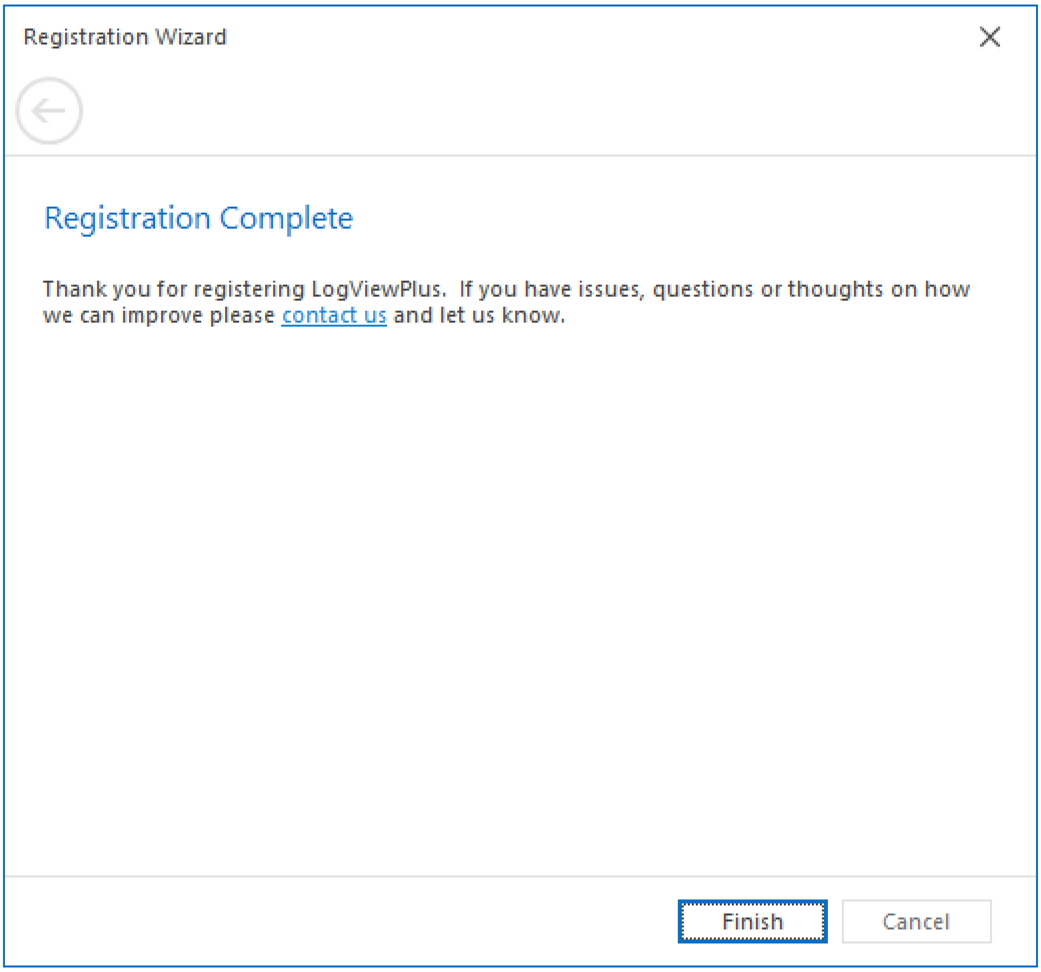
Step 3: Paste the response generated by the web page into the textbox below:

Manual registration is the process where you register LogViewPlus on a given machine by feeding data into the online registration form. This is a three-step process:

First you need to go to the LogViewPlus registration page and provide your license key. Your license key is not contained in the e-mail you received from LogViewPlus support. Instead a license key is generated dynamically from within LogViewPlus based on the information you received from LogViewPlus support. Your license key is shown in the Step 2 text box on the manual registration page (note that the license key has been removed from the screenshot above). Copy your license key and paste it into the text box provided on the registration web page and press submit.

The web page will generate the confirmation code needed by LogViewPlus to complete the registration process. Copy the confirmation code provided by the web page and paste it into the text box provided in Step 3. Then click the next button to complete the registration process.

Registration Complete



Registration Complete

Thank you for registering LogViewPlus. If you have issues, questions or thoughts on how we can improve please contact us and let us know.

Once you've completed the LogViewPlus registration process you should see the page shown above. If you have any difficulty registering LogViewPlus please don't hesitate to contact us.

Performance Profile

In order analyze your log files as quickly as possible, LogViewPlus loads a parsed version of the log file into memory. This makes LogViewPlus a memory intensive application.

To understand why this is the case, consider a 1 GB English language log file stored as UTF-8. The information is therefore stored as 1 byte per character. Windows is a UTF-16 operating system which will use 2 bytes per character. So, to load these characters into memory as a string, the application will need a minimum of 2 GB of memory. This can be seen by loading a 1 GB log file into Notepad.

LogViewPlus uses two copies of every log entry. The first version is the original log entry without modification. The second version is the parsed log entry. Two versions help enable advanced features while also maintaining the same behavior and search performance as tools like Notepad. Keeping a copy of the original log entry also ensures that log entry display and export match the original log file exactly.

However, it also means that LogViewPlus will need twice the memory, so our 1 GB log file will now need 4 GB of memory. In LogViewPlus 3.0 and greater, the ratio is more like 1:5 due to the number of parsed objects being managed by LogViewPlus (in .Net a string object is a minimum of 32 bytes on a x64 system). This compares with Notepad's ratio of 1:2 to give a 150% increase in predicted memory usage.

Occasionally, you may notice that Windows reports LogViewPlus memory usage outside of these bounds. This is due to how Windows and .Net manage memory. If you open and close a file in LogViewPlus, memory will have been released but Windows many not bother to actually collect this memory. Memory collection causes a performance hit and if your system has plenty of memory available, it may not be triggered.

We have considered a number of approaches to decrease the required memory footprint. However, all approaches require some form of trade-off between memory and CPU. These approaches also tend to generate a lot of temporary memory during some operations. This memory will be reclaimed, but the thrashing combined with increased CPU usage can lead to poor performance.

If you are having trouble opening a log file due to memory constraints, one solution would be to only open part of the log file. Alternatively, you could try shutting down some applications or upgrading your computer.

In summary, **LogViewPlus will need about 150% more memory than Notepad to open a given log file**. We believe the increased memory footprint is justified by the depth of analysis provided by the application. Log files contain a lot of data which is difficult to analyze just by searching. The larger the log file, the more benefit can be gained by using LogViewPlus.

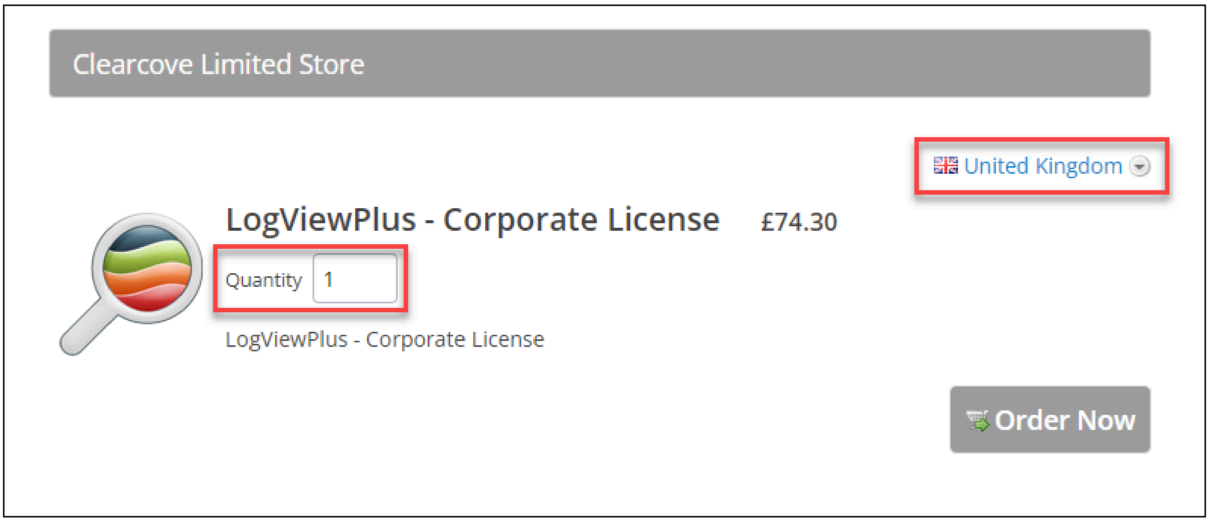
Generating a Quote

To generate a quote, please complete the order process while selecting *Wire Transfer* or *Purchase Order* as the payment type. There is no obligation to pay an order placed in this way. The payment method can be changed at a later date. Further information can be found below.

LogViewPlus made by Clearcove and sold by FastSpring who are the merchant of record and responsible for the collection and payment of all sales taxes. If you are considering purchasing LogViewPlus, you can use their automated system to generate an invoice or quote if needed.

To generate a quote go to the LogViewPlus purchase page and select the type of license you are considering. Note that Personal Licenses must be purchased by the end-user.

Next, enter the number of licenses needed. Not that changing the purchase locale will also change the purchase currency.



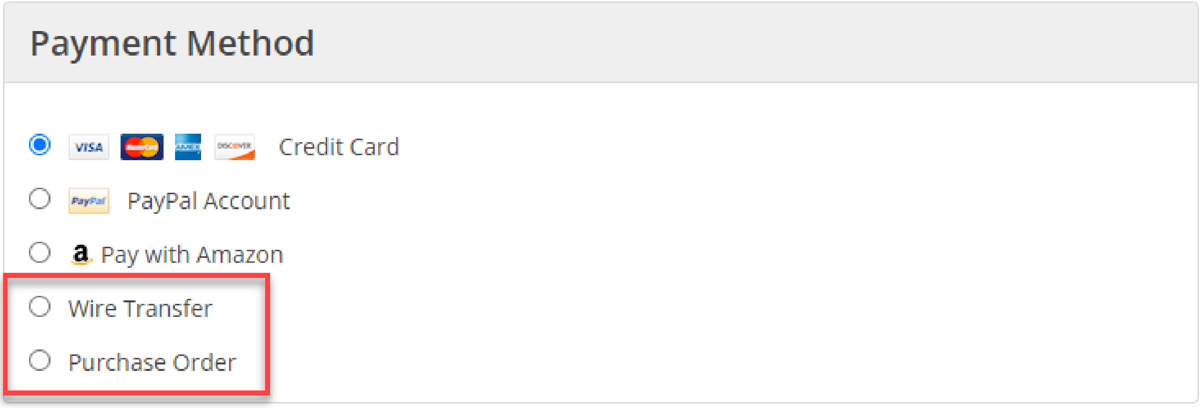
LogViewPlus - Corporate License £74.30

Quantity 1

LogViewPlus - Corporate License

Next, enter your company details such as address and contact email address. License keys and post sale communications (such as renewals) will all be sent to the email address provided. If you are purchasing on behalf of someone else, you will be able to reissue the license key after purchase.

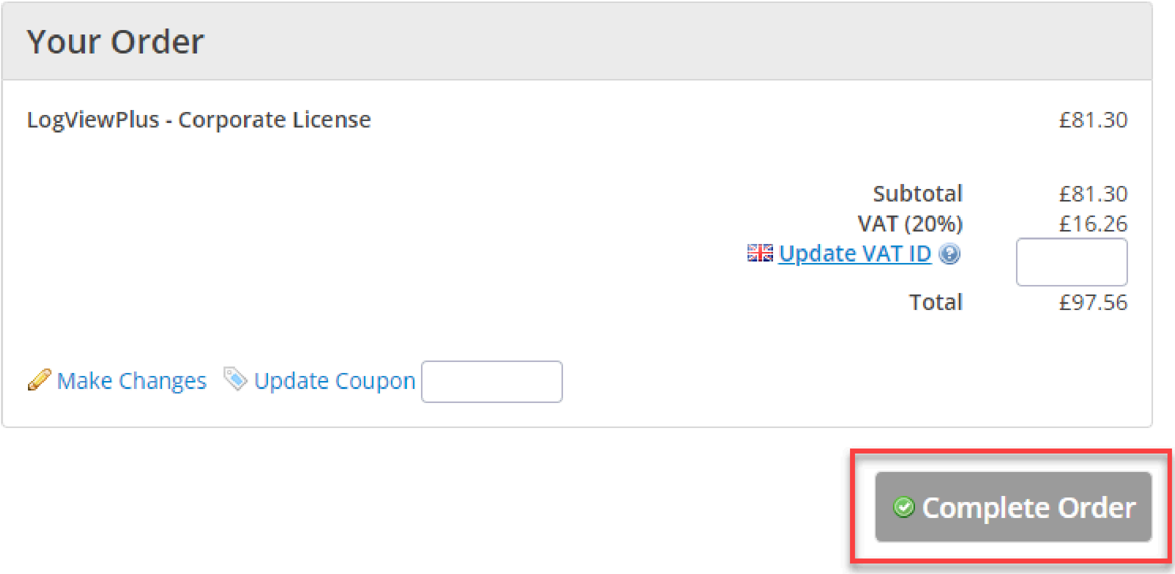
If you need to generate a formal quote, it's important to select the Wire Transfer or Purchase Order option from the payment method menu as shown below. The primary difference between these two options is that a purchase order will allow you to enter your purchase order number which will then be referenced in the final receipt.



Payment Method

● Credit Card
○ PayPal Account
○ Pay with Amazon
○ Wire Transfer
○ Purchase Order

Next, you will be given the option of supplying a VAT ID or coupon if applicable.



Your Order

LogViewPlus - Corporate License	£81.30
Subtotal	£81.30
VAT (20%)	£16.26
Update VAT ID	
Total	£97.56

Finally, click the *Complete Order* button. If you are creating a wire transfer or purchase order, this will generate a quote and provide you with instructions on how to make a bank transfer. More importantly, you will receive an email which contains a link to an HTML version of the quote. This link will be in a format similar to: *https://sites.fastspring.com/clearcove/order/invoice/CLE000000-0000-00000*

If you would prefer a PDF quote, simply add '/pdf' to the end of the URI. For example: *https://sites.fastspring.com/clearcove/order/invoice/CLE000000-0000-00000/pdf*

Quotes generated through this process represent a non-binding intent to purchase and are valid for 45 days. Quotes do not need to be paid by wire transfer. Instead, you will find a *Pay Now* link in both the email and online invoice which allows you to pay at your convenience. This link will let you pay the invoice using a range of payment options including credit card or PayPal.

License keys will only be sent once FastSpring has received payment. If you decide to pay the invoice via wire transfer, please note that this may cause delays in receiving your license key. If you have paid by wire transfer and have not yet received your license key, we recommend waiting 3 - 5 days. If you would like us to follow-up with FastSpring please don't hesitate to contact us.

Finally, please note that you are purchasing LogViewPlus from FastSpring and not Clearcove Limited. Additional information about FastSpring including VAT number, DUNS, and W-9 can be found here.

Trust and Networking

LogViewPlus is virus and spyware free. We do not store any of your data beyond the basic use cases described in our privacy policy - such as replying to emails and managing license keys.

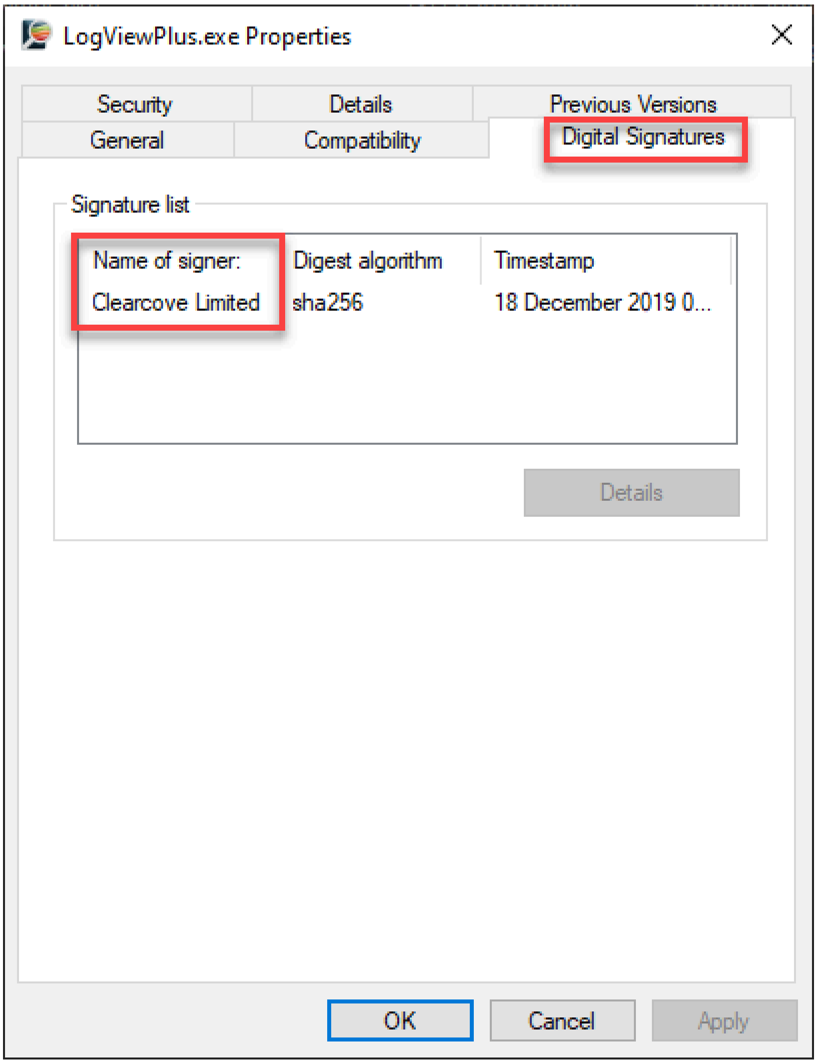
In addition to standard tools like antivirus, here are four additional heuristics you can use to determine if LogViewPlus can be trusted.

1. We are accountable. Clearcove Limited is registered in England and has been doing business online since 2006. Our company number is 6030104 which you can verify with the UK government. Clearcove is governed by English and European law - including GDPR.

LogViewPlus also uses code licensed from professional third party companies including Microsoft, DevExpress, RedGate and Rebex.

Accountability is a very important security guarantee that is not generally provided by open source software. LogViewPlus does not use open source software with the exception of the tar libraries from SharpZipLib and portions of Json.NET. Both of these code bases were manually reviewed before a one-time import.

2. All of our code is signed. You can verify this by opening the file properties on any of our executables. The file properties will include a Digital Signatures tab. All of our executables, including our installer, are signed with the name Clearcove Limited.



Signature list

Name of signer:	Digest algorithm	Timestamp
Clearcove Limited	sha256	18 December 2019 0...

[Code signed assemblies](#) have automatic hash code verification built-in which Windows will check before every execution. This means our code cannot be executed without passing the embedded integrity checks. Code signing is a cryptographically secure way of guaranteeing the executable was produced by Clearcove Limited.

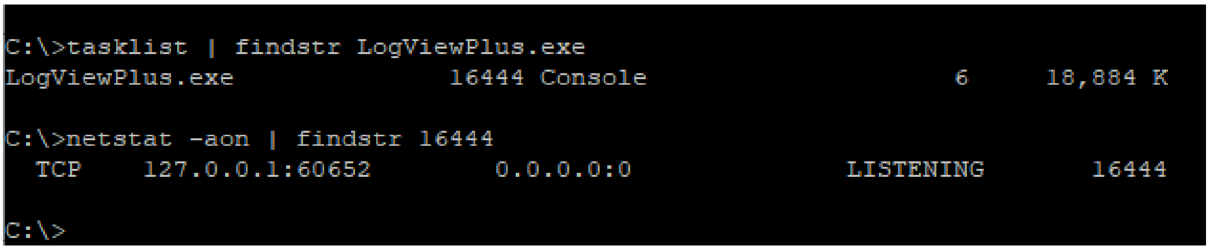
LogViewPlus should only be downloaded from [LogViewPlus.com](#). If you do not see the "Clearcove Limited" signature on your executable, please [let us know](#) and DO NOT execute the software. Cracked software will be missing this signature.

3. LogViewPlus does not require admin privileges. This is the default installation type. Installing software without admin privileges limits the behaviour of the application and helps ensure a smooth uninstall if required.

4. LogViewPlus runs offline. LogViewPlus is a tool used by security professionals and is designed to run without a network connection. You can verify LogViewPlus is running offline by checking the ports with a command such as *netstat*. This is done by executing two commands:

tasklist | *findstr LogViewPlus.exe* - This command finds the process ID (PID) for the application. This command is case sensitive.
netstat -aon | *findstr [PID]* - This command finds all ports currently used by the application.

Executing these two commands from the command line will show that LogViewPlus has only one port open by default:



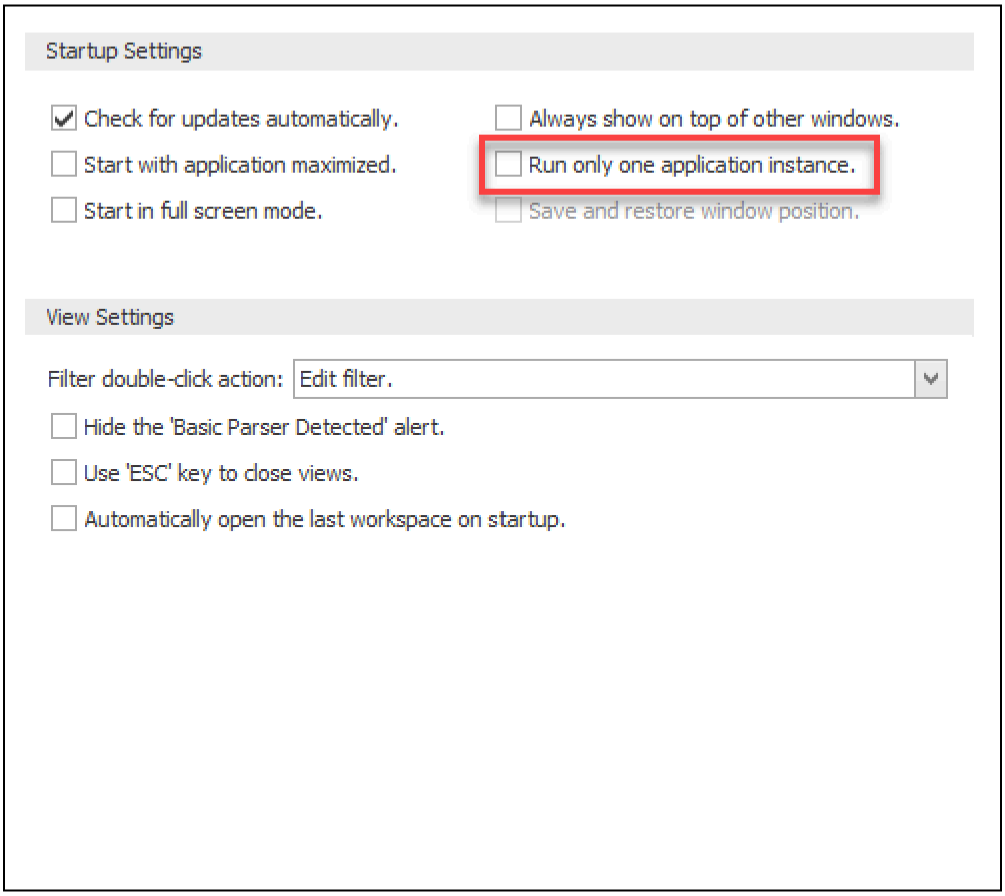
```
C:\>tasklist | findstr LogViewPlus.exe
LogViewPlus.exe              16444 Console                    6     18,884 K

C:\>netstat -aon | findstr 16444
  TCP    127.0.0.1:60652        0.0.0.0:0              LISTENING       16444

C:\>
```

The port is listening on the loopback address which can only be accessed by processes running on the same machine. The port number is random and will likely change with each application restart.

This loopback port is used to run LogViewPlus in single instance mode. You can disable this listening port by allowing multiple application instances. This is done by deselecting the "Run only one application instance" checkbox in Application Settings:



Startup Settings

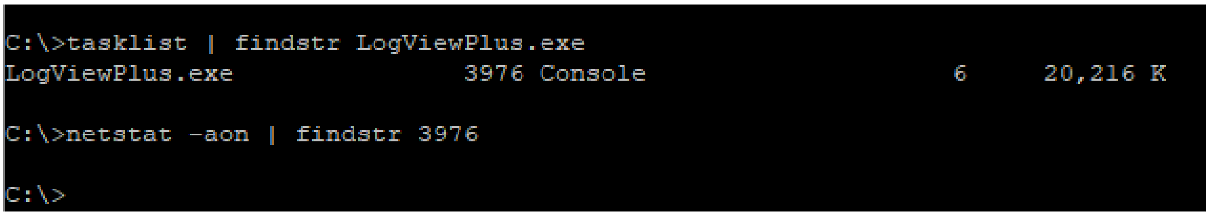
☑ Check for updates automatically.
□ Start with application maximized.
□ Start in full screen mode.
□ Always show on top of other windows.
□ Run only one application instance.
□ Save and restore window position.

View Settings

Filter double-click action: Edit filter.

□ Hide the 'Basic Parser Detected' alert.
□ Use 'ESC' key to close views.
□ Automatically open the last workspace on startup.

After making this change, you can save your settings and restart LogViewPlus. There will now be no ports in use:



```
C:\>tasklist | findstr LogViewPlus.exe
LogViewPlus.exe               3976 Console                    6      20,216 K

C:\>netstat -aon | findstr 3976

C:\>
```

The only other time that you will see ports listed for LogViewPlus is if you have taken a user action which is obviously network related. For example, monitoring a remote data source, registering, or checking for application updates. In these scenarios the address, ports, and data transferred should be easy to verify if required.

Antivirus Analysis

LogViewPlus currently has no outstanding issues with any antivirus provider. However, LogViewPlus is frequently updated. New updates may lead to suspicion from your antivirus software until the update is fully trusted and the trust has been propagated. In some cases, propagation may take several days and during this time your antivirus may take longer to analyze LogViewPlus. This is expected behaviour as the antivirus has no prior knowledge of the executable. False positives may occur during this time, but in our experience these are rare.

Finally, when evaluating antivirus false positives as reported by VirusTotal it is worth noting that some antivirus vendors are more reliable than others. LogViewPlus false positives reported by major antivirus vendors such as Norton, Microsoft, Google, Avast, MalwareBytes, BitDefender, Kaspersky, Sophos or Acronis are exceedingly rare.

If you notice an antivirus provider flagging LogViewPlus as potentially malicious, please let us know and we will investigate.

Parsing Log Files

LogViewPlus is an unusual application because it does not write log files and therefore has no preexisting knowledge of the file format it needs to process. LogViewPlus may be able to automatically determine the format of your log file, but for improved performance and data flexibility you should consider manually configuring your log parsers.

Log parsers and parser configurations are the subject of this section. If you are new to configuring log parsers we recommend using the Parser Wizard.

If you are already familiar with log parsing, consider jumping ahead to Analyzing Log Files.

What is a log file?

LogViewPlus defines log files as any data store which contains a series of log entries. Log entries represent time series data, so all log entries must have a timestamp. Files which do not conform to this broad definition cannot be processed by LogViewPlus. If you are having trouble reading data from a log file you should consider if the timestamps are being parsed correctly.

We think of log entries as containing two parts: an *envelope* and a *message*.

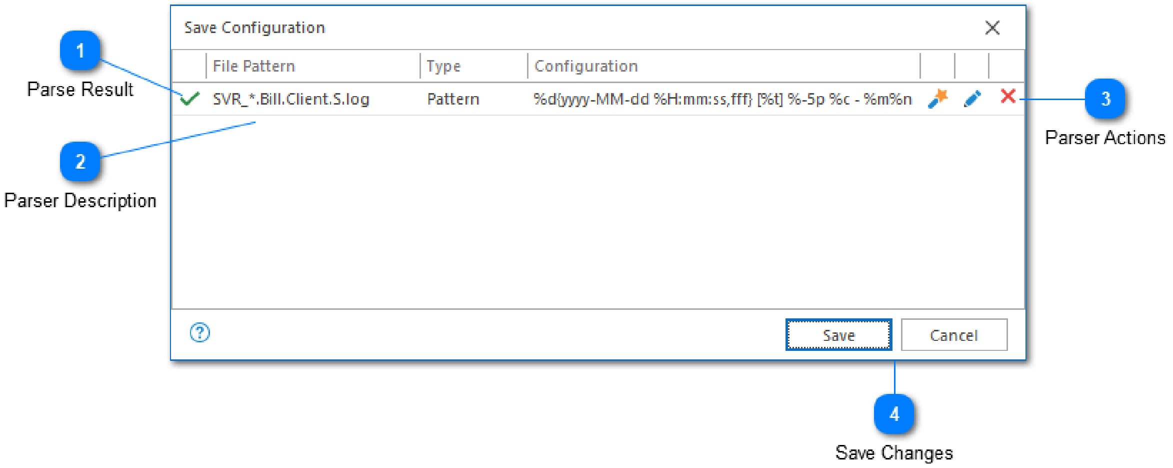
The envelope contains metadata describing the log entry. For example, the timestamp, thread, or log level. Metadata information should be consistently provided in all log entries in the log file.

A log entry message is optional. If provided LogViewPlus will consider the message as the core information that the application was trying to convey to the reader at that moment in time. Often this information is in a human readable format such as a sentence containing information. Related messages may use the same structure, but there can be wide variability from one message to the next.

The goal when parsing log files is to isolate the metadata from the message. Log file parsing is successful when all log entries are displayed as separate rows in the Log Entry Grid. If needed, log messages can then be parsed separately to extract additional information. This is a distinct step which is not connected to the main log file parse.

Finally, please note that a log "file" as defined in this documentation may not be file based. For example, LogViewPlus will consider a database or network stream as types of log files even though these data sources are not strictly file based. We use the terms 'log' and 'log file' interchangeably. Both refer to a log data source, or a collection of log entries.

Automatic Configuration



Save Configuration

	File Pattern	Type	Configuration
✓	SVR_*.Bill.Client.S.log	Pattern	%d{yyyy-MM-dd %H:mm:ss,fff} [%t] %-5p %c - %m%n

Automatic parser configuration is designed to give you a head start in creating a valid parser for your log file by dramatically lowering the learning curve. However, it still useful to understand how parser configurations work. In particular, it's important to understand how LogViewPlus assigns data to columns.

If LogViewPlus is able to automatically generate a parser configuration it will display the dialog show above which will give you an opportunity to modify and save the generated configuration. Multiple configurations can be managed at the same time. Saved configurations can be removed in the Parser Mappings application settings.

There are a couple of things you should double check in the automatically generated configuration before saving. If you are familiar with configuring parsers, then you can easily review these settings in the Parser Configuration Dialog by clicking on the pencil icon.

First, does the filename pattern makes sense? The generated filename pattern will automatically wildcard numbers and symbols which may be detected in the log file name. Often, this pattern can be made more generic to match a wider variety of filenames. For example, in the screenshot above the name SVR_*.log would likely be sufficient and match a wider variety of files. File name patterns should match only the log files which are written in the same log entry format.

Second, do the column names suggested by the generated configuration make sense? For example, if the generated configuration suggests String Columns, then default column names will be used such as Column1 and Column2. These names should be modified to better identify your data.

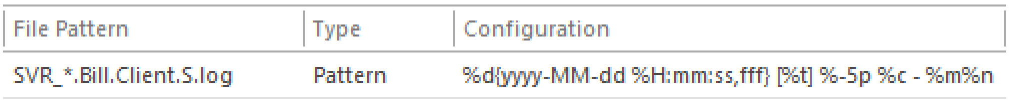
Finally, the automatically generated configuration will attempt to identify the thread and logger columns based on inbuilt heuristics. This best effort approach can be problematic and you should review the decisions made by LogViewPlus to ensure they are correct.

1 Parse Result

✓

The parse result is indicated by an icon located in the far left of the dialog. Hovering over this icon will provide a tooltip with a detailed description of the parse result. This message can also be seen by clicking on the icon.

2 Parser Description



File Pattern	Type	Configuration
SVR_*.Bill.Client.S.log	Pattern	%d{yyyy-MM-dd %H:mm:ss,fff} [%t] %-5p %c - %m%n

A brief description of the pattern is shown including the file name pattern suggested, the type of parser used, and the configuration used for the parser. Double clicking on this description will allow you to edit the parser configuration settings in the Parser Wizard.

3 Parser Actions

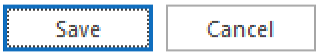
Three actions are available in the far right of the dialog. These actions allow you to:

1. Edit the parser configuration using the Parser Wizard.

2. Edit the parser configuration using the standard Parser Configuration Dialog.

3. Remove the configuration. If the configuration is removed, it cannot be saved.

4 Save Changes



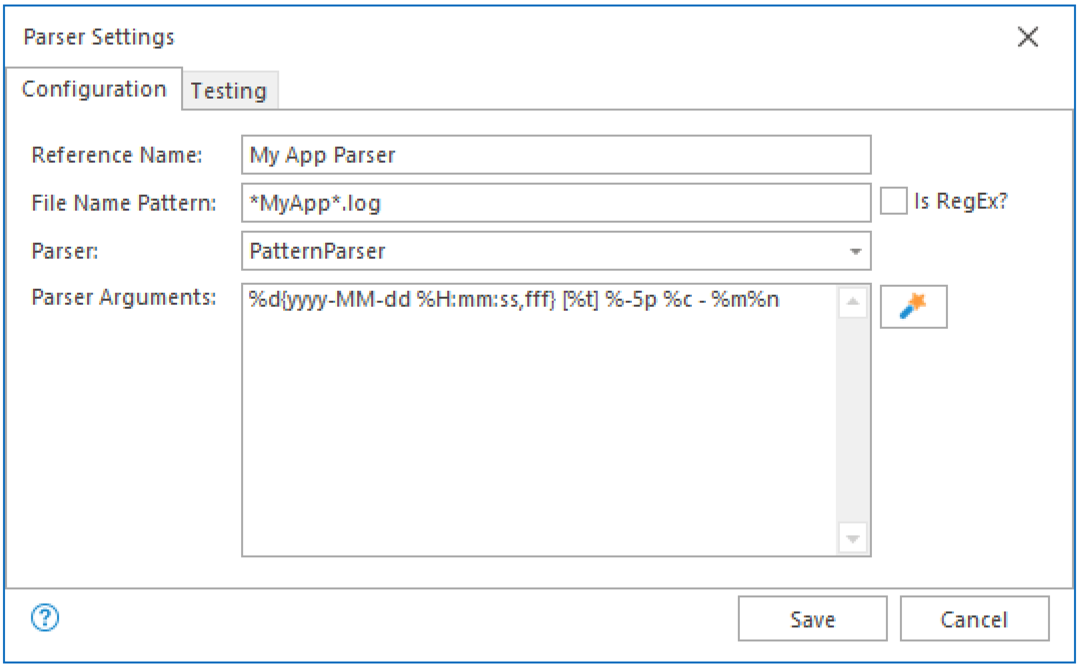
If you are happy with the parser configurations, you can save them to your application settings. Saving the parser configurations will prevent this dialog from appearing the next time you open a file matching one of the file name patterns provided.

You can also cancel the changes if you do not want to save the parser configurations.

Log Parsers

LogViewPlus gathers information about your log files by parsing the log entries. It does this by identifying a log file by name and pairing it with a parser. You can associate a parser with a log file in the Parser Mapping settings.

For example, say your application writes log entries to a file named 15.6.2014_MyApp_1.log. You can associate a parser to all your application log files with the pattern *MyApp*.log. In this example, the wildcard '*' is being used to match multiple unspecified characters. For more advanced patterns consider using a regular expression by checking the 'Is Regex' checkbox which will allow the filename pattern text box to contain a full regular expression. If you want to use the same parser with multiple log files, you can use the pipe character - | - to separate file names. For example, **MyApp1*|*MyOtherApp**.



Reference Name: My App Parser

File Name Pattern: *MyApp*.log ☐ Is RegEx?

Parser: PatternParser

Parser Arguments: %d{yyyy-MM-dd %H:mm:ss,fff} [%t] %-5p %c - %m%n

Parsers can be configured using the Parser Settings dialog (show above), or the Parser Wizard.

Once you have determined the file name pattern you want to use to identify your log files, you need to determine the appropriate parser to process your log files. By default LogViewPlus has six different parsers:

Basic Parser - This is the default parser for LogViewPlus. No configuration is necessary. It is useful when viewing log files that generally conform to the Apache Log4 standard. This parser is not appropriate for more complex log files or when speed is a concern.

Pattern Parser - For most log files, this is the parser you want to use. It is fast and provides you with the maximum amount of information. To learn more, start with the Pattern Parser section and then read more about the Conversion Specifiers including Specifier Basics and the Date Specifier.

JSON Parser - Are your log files in a custom JSON format? If so, this is the parser for you.

XML Parser - Are your log files in a custom XML format? If so, this is the parser for you.

Log4Xml Parser - If you write log files with one of the Apache Log4 XML Appenders then this is the parser to use. No configuration is necessary.

DSV Parser - The Delimiter Separated Value Parser is for log files in a delimited format, such as comma, tab or pipe separated values. For example, if your log file is also a CSV file.

Regex Parser - The Regular Expression Parser is only recommended for users who are already familiar with Regular Expression. For most users, the Pattern Parser will be easier to configure.

Of course, if none of the provided parsers suit your needs, you can consider writing your own log parser.

Basic Parser

The Basic Parser does a simple scan on every entry in your log file and analyses it on a best effort basis. The Basic Parser works best on log entries that generally conform to the Apache Log4 standard (with fields like date, level, and message).

The advantage of the Basic Parser is that it requires no configuration. The disadvantage is that it is forced to make assumptions. These assumptions make the parser slower and more error prone. For these reasons, we always recommend using the Pattern Parser where possible.

The basic parser looks at each entry and tries to identify three things:

1. The date and time the log entry was written. This field is required. If LogViewPlus cannot identify this field, the file will not be parsed successfully (see below).

2. The level for this log entry. For example, Debug, Info, Warn, Error, and Fatal. This field is optional.

3. The log entry message. This is a distinct field which occurs after the date and log level fields.

The Basic Parser uses a number of different techniques to identify the timestamp. However, in the event that the timestamp cannot be identified, a warning will be displayed stating that the log file was not parsed correctly. When a timestamp is ambiguous, the Basic Parser will assume an international date format instead of a US date format (such as, dd/MM/yyyy instead of MM/dd/yyyy).

The basic parser requires no configuration and will be used by default if no file mapping is found.

Pattern Parser

The Pattern Parser uses a conversion pattern to read a log file. If you are familiar with the Apache Log4 libraries, you are probably already familiar with Pattern Layouts. It is basically the same in LogViewPlus. In fact, *if you use a pattern layout for writing your log file, you can probably use this same pattern for parsing your log file.*

To find out more about conversion patterns, let's look at a simple log entry:

2014-09-13 10:50:14,125 [Thread 1] INFO MyApp - My message...

This log entry is made up of five parts: date, thread, log level, logger, and the message. We need a way to tell LogViewPlus about each part of our log entry as well as how to tell when one part ends and the next begins. To do this, we are going to use patterns.

Now, back to our log entry. Let's break it down piece by piece:

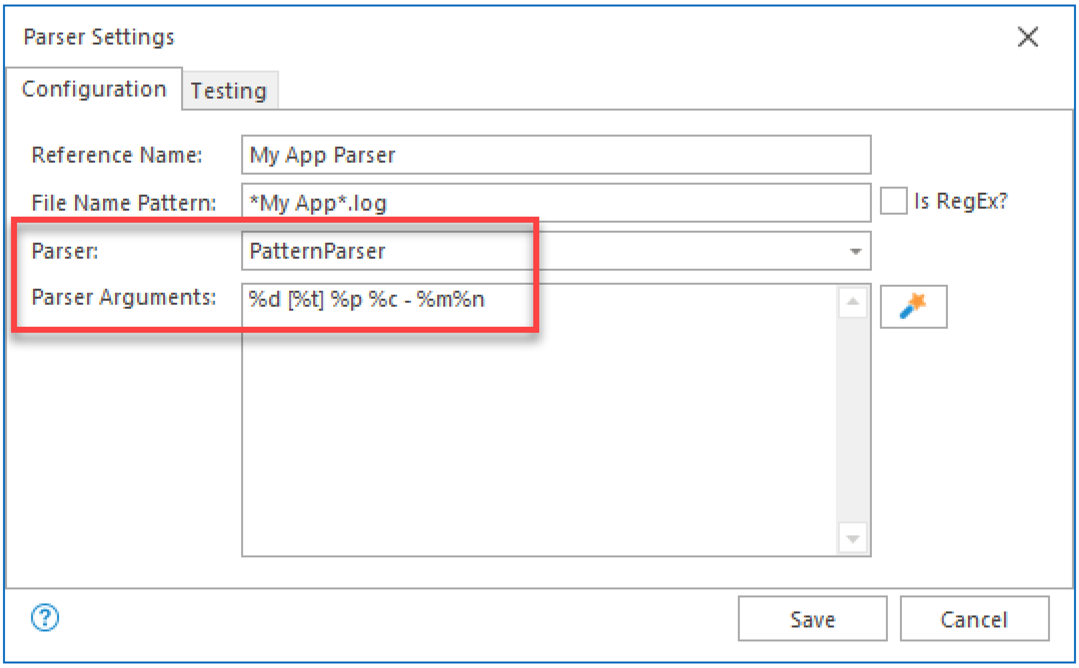
Field	**Example**	**Conversion Specifier**
Date	2014-09-13 10:50:14,125	**%d**
Literal	" ["	**" ["**
Thread	Thread 1	**%t**
Literal	"] "	**"] "**
Priority	INFO	**%p**
Literal	" "	**" "**
Logger	MyApp	**%c**
Literal	" - "	**" - "**
Message	My Message...	**%m**
Literal	New Line.	**%n**

If we put all of the conversion specifiers together we have:

%d [%t] %p %c - %m%n

If the sample log entry above matched your log entries, you could use the pattern we created to parse your log files. Unfortunately, this is probably not the case as every log file is different. You will need to figure out the conversion pattern that works for your log files and this may require a bit of trial and error. The Parser Wizard can help you create and test an appropriate conversion pattern.

Once you have decided on the appropriate conversion pattern, you will need to provide that as an argument to the Pattern Parser.



Reference Name: My App Parser
File Name Pattern: *My App*.log □ Is RegEx?
Parser: PatternParser
Parser Arguments: %d [%t] %p %c - %m%n

Conversion patterns can be a bit tricky at first, so here is a cheat sheet. For getting the most out of LogViewPlus, you only really need to know 7 different types of conversion specifiers.

Field	Specifier	Notes
Date	%d	Dates can be tricky because there are so many ways they can be represented. See Date Patterns for more.
Thread	%t	Thread names can contain spaces, so you need a non-spaced literal separating the thread from other fields. For example, brackets in "[my thread]".
Priority	%p	DEBUG, INFO, WARN, ERROR, etc...
Logger	%c	The logger responsible for writing the log entry. Very helpful when filtering.
Message	%m%n	When using the Pattern Parser, these two conversion specifiers almost always go together.
Any Word	%s	**Cheat #1** - match any string without spaces.

Multiple Words	**%S**	**Cheat #2** - match any array of strings spaces included. Note this field is upper-case.

Check out Advanced Specifiers for the full list of supported conversion specifiers.

Why are %s and %S cheats? Two reasons: First, they are specific to LogViewPlus and not supported by standard logging frameworks like Apache Log4. Second, the %s specifiers can optionally take a parameter which specifies the name of the column which should display the field. To do this, you just need to enclose the column name in curly brackets. For example: *%s{My Column Name}*. This ability to take any field and convert it into a LogViewPlus column makes these specifiers extremely powerful. The %s specifiers are the only conversion specifiers which do not have a predefined column name.

If the optional column name is not specified, then LogViewPlus will not know how to display the field. You will still be able to use LogViewPlus to search for this text, but it will not be shown in a dedicated column in the log entry grid.

To find out more, we have created an example walk-through using %s specifiers to parse an IIS log file.

Finally, there are two additional special characters which can be used to process white space.

White Space Field	Representation	Notes
Newline	**\n**	Represents a hard return which should be processed before processing continues.
Tab	**\t**	Represents a tab separator. Using this character sequence is optional, but it make help to make your pattern easier to read.

Now let's go through a few quick examples using just the specifiers listed above. For simplicity, these examples will only use timestamps that can be automatically detected. Dates are discussed in detail in the Date Specifier section. The string columns will also be declared without column names.

	Sample Log Entries and Matching Patterns
Log Entry:	07:36|My message...
Pattern:	**%d|%m%n**
Notes:	The pipe character '|' is used to separate date and message.

Log Entry:	10:50 [Thread 1] INFO property1 - My message...
Pattern:	**%d [%t] %p %s - %m%n**
Notes:	The 'any word' specifier '%s' is used to skip over the unknown field 'property1'.
Log Entry:	10:50 [Thread 1] INFO ndc1 ndc2 ndc3 - My message...
Pattern:	**%d [%t] %p %S - %m%n**
Notes:	Skipping over multiple fields with the %S specifier.
Log Entry:	10:50 Thread 1 - My message...
Pattern:	**%d %t - %m%n**
Notes:	The multi-word thread name can be parsed thanks to unique literal ' - '.
Log Entry:	10:50|240 1 I 2 LEVEL: Info 3
Pattern:	**%d|%S LEVEL: %p %m%n**
Notes:	Advanced literal ' LEVEL: ' used to specify a field. Everything prior to the literal is skipped with the multi-word specifier '%S'.
Log Entry:	[10:50] [notice] Apache/1.3.29 (Unix) server configured -- resuming operations
Pattern:	**[%d] [%p] %s (%s) %S -- %m%n**
Notes:	Good use of literals to separate strings. Ignoring non-pertinent information.
Log Entry:	[10:50] [notice] Apache/1.3.29 (Unix) server configured. Resuming operations.
Pattern:	**[%d] [%p] %s (%s) %S\n%m%n**
Notes:	Same as above, but with a hard return expected before the message processing starts.

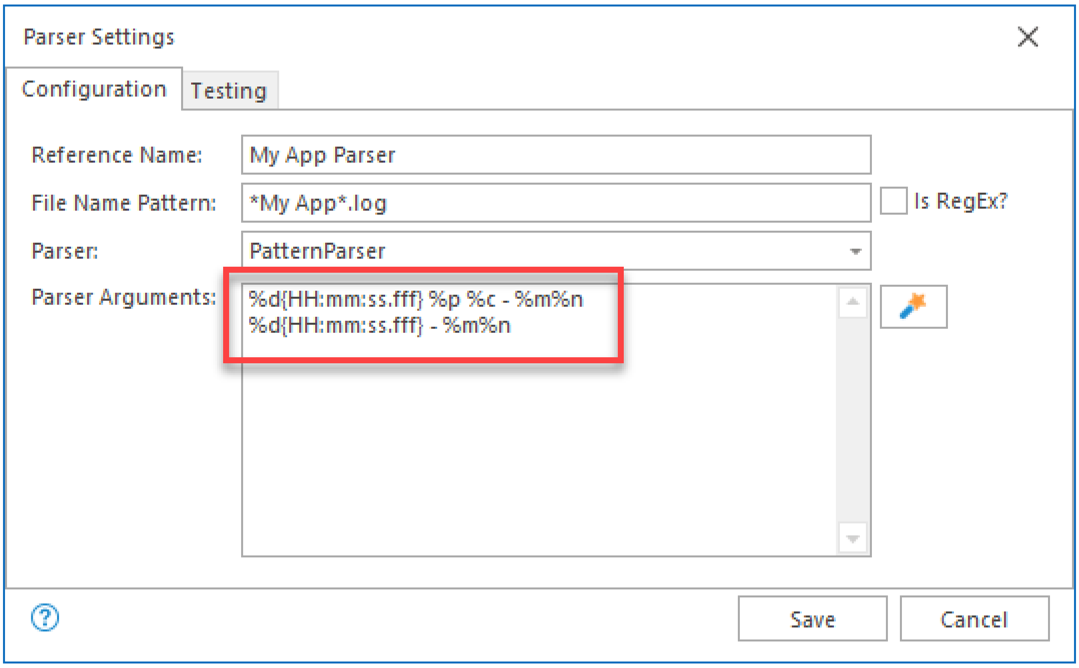
To find out more about conversion patters, please see Conversion Specifiers.

Finally, please note that it is possible for a log file to have multiple patterns. To find out more about parsing log files with multiple patterns, please see Multi Patterns.

Multi-Patterns

It is very common to have one logging format per log file. However, this is not a hard requirement and it is possible to have multiple logging formats in a single log file.

The Pattern Parser and Regex Parser allow the possibility of multiple conversion patterns, one per line, as can be seen in the screenshot below:



Reference Name: My App Parser

File Name Pattern: *My App*.log

□ Is RegEx?

Parser: PatternParser

Parser Arguments:

```
%d{HH:mm:ss.fff} %p %c - %m%n
%d{HH:mm:ss.fff} - %m%n
```

Multi-patterns cannot be configured using the Parser Wizard. You must use manual parser configuration instead.

When using multiple conversion patterns, it's important to keep a few things in mind. First, using multiple patterns will always be slower than using a single pattern. This is because the parser will expect a degree of error when parsing the log file and a single log line will often be parsed multiple times.

When using multi-patterns the first pattern which successfully parses the log line will be used. Therefore, it is best to put more generic patterns which match log fields more broadly at the bottom of the pattern list. For example, '%d %m%n' would match most log entries and therefore should be placed near the bottom.

If your patterns differ only in the date format used consider using the date specifier without any arguments. In this configuration, LogViewPlus will attempt figure out the timestamp format dynamically. Alternatively, if the date formats differ only in the number of milliseconds used to represent the timestamp, consider using **f***.

Patterns which span multiple lines, such as those which declare '\n' as part of the static text, are not supported in multi-patterns.

Finally, when using multi-patterns, it is important that the individual patterns are distinct. For example, if you were using two patterns and every log entry could be parsed by either pattern successfully then LogViewPlus will not know which pattern to use. 'Successful' in this case means that the log entry is parsed without error and does not necessarily mean that data is placed in the correct column.

JSON Parser

New to LogViewPlus? Find out more about how you can use LogViewPlus to help you analyze JSON log files.

LogViewPlus has a built in JSON parser which is capable of analyzing your JSON log files. It does this by parsing your JSON file according to a template. A template is a sample JSON log entry that has certain fields identified with Conversion Specifiers.

LogViewPlus will not parse an entire log file as JSON. Rather, it will parse the log file line by line while checking the input structure. Only when the structure represents a complete JSON object will a parse be attempted. This approach allows for monitoring JSON log files in tail mode, but may cause issues if your JSON log is a single block of text without new lines.

Because each log entry is parsed separately, our template will only need to match a single log entry. For example, let's look at a simple JSON log enry:

```
{
  "firstName":"John",
  "lastName":"Doe",
  "employeeId":"12345",
  "other":"ignore me",
  "dateJoined":"2014-05-16 10:50:14,125"
}
```

This is a JSON log entry with five fields: firstName, lastName, employeedId, other, and dateJoined. What we need to do is replace the field data with a Conversion Specifier that identifies the field data type. This might give us the following mapping.

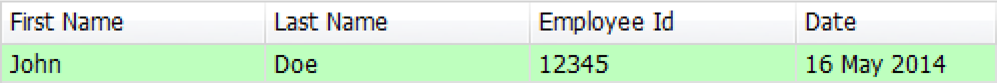
JSON Field	Conversion Specifier	LogViewPlus Column
firstName	**%S{First Name}**	First Name
lastName	**%S{Last Name}**	Last Name
employeeId	**%s{Employee Id}**	Employee Id
other		We want to ignore this field.
dateJoined	**%d**	Date and Time

Therefore, we could parse this JSON log entry with the template:

```
{
  "firstName":"%S{First Name}",
  "lastName":"%S{Last Name}",
  "employeeId":"%s{Employee Id}",
  "dateJoined":"%d"
}
```

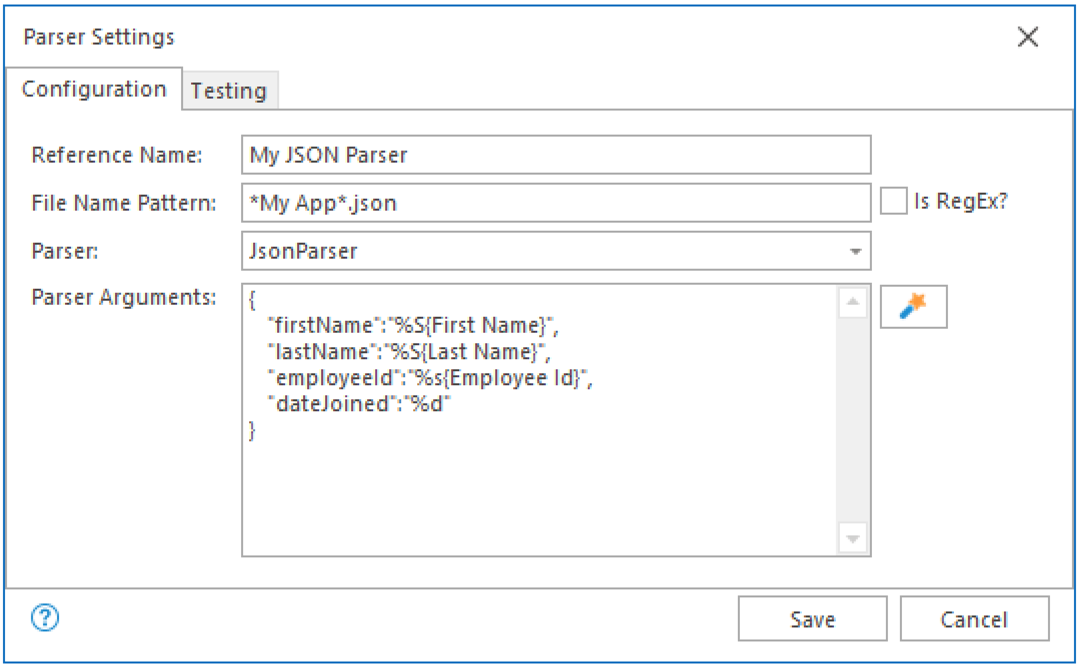
Notice that in the above template the "other" field has been ignored. To ignore a field we simply do not include it in our template. If one of the elements we were interested in had been a child of a parent node, we would have needed to include the parent node in our template. The important thing is that the template has the full path to the target node.

Once we load this template into LogViewPlus it will appear as:



First Name	Last Name	Employee Id	Date
John	Doe	12345	16 May 2014

To do this, we just need to give LogViewPlus our parsing template as an argument for the JSON parser. We can do this in Parser Mappings:



Parser Settings

Reference Name: My JSON Parser

File Name Pattern: *My App*.json □ Is RegEx?

Parser: JsonParser

Parser Arguments:

```
{
  "firstName":"%S{First Name}",
  "lastName":"%S{Last Name}",
  "employeeId":"%s{Employee Id}",
  "dateJoined":"%d"
}
```

White space will be ignored, so we are free to format the JSON as needed.

If our log file contained multiple log entries, LogViewPlus would expect them all to have the same format. New log entries should also be separated by a new line as discussed above.

Log files parsed with the JSON parser support automatic pretty-printing by default.

Finally, notice the similarities between the JSON Parser and the XML Parser discussed in the next section. Both use the concept of templates, so once you have learned one you have basically learned the other.

Parsing Embedded JSON

LogViewPlus v2.5.56 and greater can parse JSON log entries are embedded within a parent object. For example, consider the JSON log file:

```
{
  logid: "App Log 1",
  entries: [
    {
      "firstName":"John",
      "lastName":"Doe",
      "employeeId":"12345",
      "other":"ignore me",
      "dateJoined":"2014-05-16 10:50:14,125"
    },
    { ... }
  ]
}
```

Our conversion pattern for this log file will largely look the same as before with one crucial difference. We must specify the outer element which will act to identify the resulting log entries. The outer element must be an object.

In the example above, the outer element is "entries". Using this, we can define our conversion pattern as:

```
{
  entries: [
    {
      "firstName":"%S{First Name}",
      "lastName":"%S{Last Name}",
      "employeeId":"%S{Employee Id}",
      "dateJoined":"%d"
    }
  ]
}
```

If the outer object containing our log entries was a child of another object, it would not be necessary define the additional outer object. LogViewPlus will always traverse an object hierarchy automatically. Log entry identifiers only need to exist at the log entry root.

Compact Log Event Format (CLEF)

LogViewPlus is a great tool for viewing CLEF log entries, for example messages created by Serilog.   CLEF stands for Compact Log Event Format and it is a method of producing log entries where the log message data is extracted and stored as separate fields withing the log entry. This helps ensure the log entries are machine readable.

You can view CLEF log messages in LogViewPlus by adding a parser hint when processing the JSON message. For example, consider the following CLEF log entry:

```
{
  "@t": "2020-04-25T04:03:29.3546056Z",
  "@mt": "Connection id '{Id}' accepted.",
  "Properties":
  {
    "Id": "0HMA0H"
  }
}
```

This log entry can be parsed using the JSON parser and the pattern:

```
{ "@t": "%d", "@mt": "%m{-parserhint:CLEF}" }
```

Notice that the pattern configuration contains a parser hint which is including using the special parameter **-parserhint:CLEF**. This instruction tells the parser that the log entry message may be formatted to include data from within the JSON message. The included data may be found either at the root level or (more commonly) within a 'Properties' child element.

Parsing our sample log entry using the CLEF parser hint will produce a log entry message that is easier to read. In our example, this message would be:

Connection id '0HMA0H' accepted.

Notice how the connection ID has been extracted from the property data and inserted into the log entry message.

XML Parser

LogViewPlus has a built in XML parser which is capable of analyzing your custom XML log files. It does this by parsing your XML file according to a template. A template is a sample XML log entry that has certain fields identified with Conversion Specifiers.

LogViewPlus will not parse an entire log file as XML. Rather, it will parse the log file line by line while checking the input structure. Only when the structure represents a complete XML object will a parse be attempted. This approach allows for monitoring XML log files in tail mode, but may cause issues if your JSON log is a single block of text without new lines.

Because each log entry is parsed separately, our template will only need to match a single log entry. For example, let's look at a simple XML log enry:

```
<xml>
  <name firstName="John" lastName="Doe" />
  <employeeId>12345</employeeId>
  <other>ignore</other>
  <dateJoined>2014-05-16 10:50:14,125</dateJoined>
</xml>
```

This is a XML log entry with five fields: firstName, lastName, employeedId, other, and dateJoined. What we need to do is replace the field data with a Conversion Specifier that identifies the field data type. This might give us the following mapping.

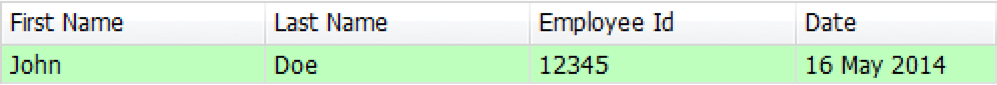
XML Field	Conversion Specifier	LogViewPlus Column
firstName	**%S{First Name}**	First Name
lastName	**%S{Last Name}**	Last Name
employeeId	**%s{Employee Id}**	Employee Id
other		We want to ignore this field.
dateJoined	**%d**	Date and Time

Therefore, we could parse this XML log entry with the template:

```
<xml>
  <name firstName="%S{First Name}" lastName="%S{Last Name}" />
  <employeeId>%s{Employee Id}</employeeId>
  <dateJoined>%d</dateJoined>
</xml>
```

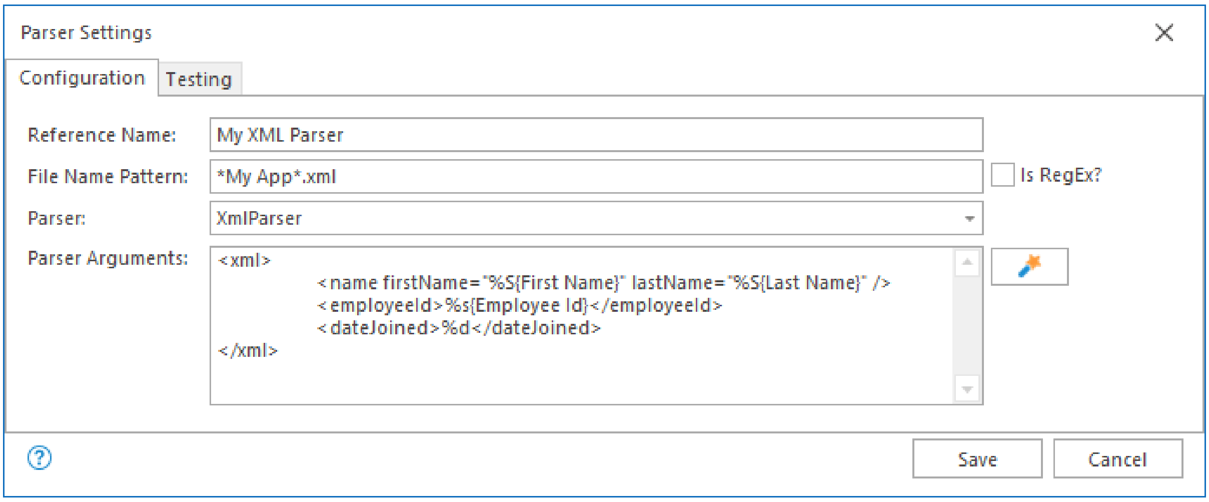
Notice that in the above template the "other" field has been ignored. To ignore a field we simply do not include it in our template. If one of the elements we were interested in had been a child of a parent node, we would have needed to include the parent node in our template. The important thing is that the template has the full path to the target node.

Once we load this template into LogViewPlus it will appear as:



First Name	Last Name	Employee Id	Date
John	Doe	12345	16 May 2014

To do this, we just need to give LogViewPlus our parsing template as an argument for the XML parser. We can do this in Parser Mappings:



Parser Settings

Reference Name: My XML Parser

File Name Pattern: *My App*.xml □ Is RegEx?

Parser: XmlParser

Parser Arguments:

```
<xml>
            <name firstName="%S{First Name}" lastName="%S{Last Name}" />
            <employeeId>%s{Employee Id}</employeeId>
            <dateJoined>%d</dateJoined>
</xml>
```

Whitespace will be ignored, so we are free to format the XML as needed.

If our log file contained multiple log entries, LogViewPlus would expect them all to have the same format. New log entries should also be separated by a new line as discussed above.

Log files parsed with the XML parser support automatic pretty-printing by default.

Finally, notice the similarities between the XML Parser and the JSON Parser. Both use the concept of templates, so once you have learned one you have basically learned the other.

Parsing Embedded XML

LogViewPlus can parse XML log entries embedded within a parent node. This process works by recursively scanning through the XML node hierarchy until the root element declared in your conversion pattern is found. Because XML nodes always contain a root element, no further changes need to be made to your conversion pattern.

In other words, if your log entries are contained in a parent node, you can define your conversion pattern as though the parent node does not exist. Undefined XML elements are simply ignored.

Log4Xml Parser

Use the Log4Xml parser if you are using the Apache Log4 Libraries (Log4Net, Log4J, Log4Php, etc...) with one of the prebuilt XML appenders. The Log4 libraries have more or less standardized in the output XML format which means that the LogViewPlus Log4Xml parser requires no configuration.

You can think of the Log4Xml parser as being exactly the same as the XML Parser, but with a prebuilt configuration that makes it easy to work with Log4 XML files.

Starting with LogViewPlus v2.5.50, XML log file formats can now be automatically detected. This has made the Log4Xml parser less useful as most of the time LogViewPlus should be able to parse this format automatically using the standard XML Parser.

DSV Parser

DSV stands for delimiter separated values. We created the DSV Parser primarily because we needed a "CSV" parser - a log parser that was capable of reading comma separated value (CSV) files. However, as soon as our "CSV" parser was completed, we realized that we needed another parser for tab separated files. Also, what if the customer wants to use the pipe character to separate values? Or a tilde?

The DSV parser solves these problems by reading the separating character from the parser arguments. When reading the parser arguments LogViewPlus will assume the first non-space character which is not part of a conversion specifier is the character which should be used to separate values.

For example, consider the following conversion pattern:

%d, %t, %p, %c, %m

Here, the first non-space character which is not part of a conversion specifier is a comma. So, a comma will be used as the separating character. Similarly, if we consider the pattern:

%d\t%t\t%p\t%c\t%m

We can see that the tab character '\t' is the first non-space character which is not part of a conversion specifier.

Why not just use the Pattern Parser? Why do we need a separate parser for delimiter separated values? This is a good question because certainly the Pattern Parser would be able to read and interpret the conversion patterns outlined above. However, a delimiter separated value file may have values which are surrounded by quotes and some fields may even contain the delimiter. Also, note that the above conversion patterns do not define a new line %n conversion specifier. In the case of a delimiter separated value file, the log entry is complete only when all expected fields have been read successfully. This means that fields can be multi-line.

Fields that run multiple lines, and fields that contain the delimiter as part of their values must be enclosed in quotes. Quotes can be either single or double. This will be determined inline. If the field starts with a quote character, then the same character will be the expected to close the field. To escape a quote character within a field value, you must use two quote characters back to back. For example, '' (two singles) or "" (two doubles).

The above rules conform to how some programs, like Microsoft Excel, write DSV files.

For example, the following is a valid CSV entry:

**"2014-05-16 10:50:14,125", Thread 1, INFO, MyLogger, "This is
my ""LogMessage"", my app is running."**

This log message could be parsed using the first conversion pattern given **- %d, %t, %p, %c, %m**. LogViewPlus will automatically remove all surrounding quotes, but whitespace will be preserved. In the above example, the Message field would contain:

**This is
my "LogMessage", my app is running.**

What about headers? Delimiter separated value files frequently use a header row to define the columns. For example, column headers for the log entry above might be: Date, Thread, Priority, Logger and Message. LogViewPlus will intelligently ignore column headers. They are not expected and not required. If found, they will be ignored. Delimiter separated files are always parsed according to the provided conversion pattern.

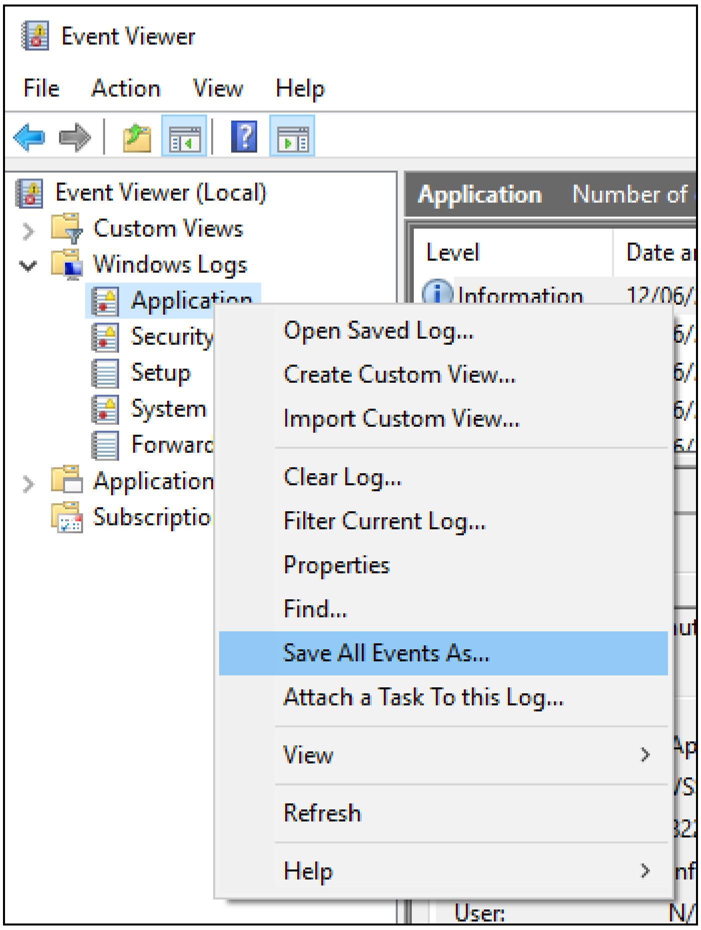
Event Log Parser

The event log parser can be used to parse *.evtx files. EVTX files are a proprietary binary file format provided by Microsoft. As a binary format they are not human readable and sometimes a CSV format is preferred instead.

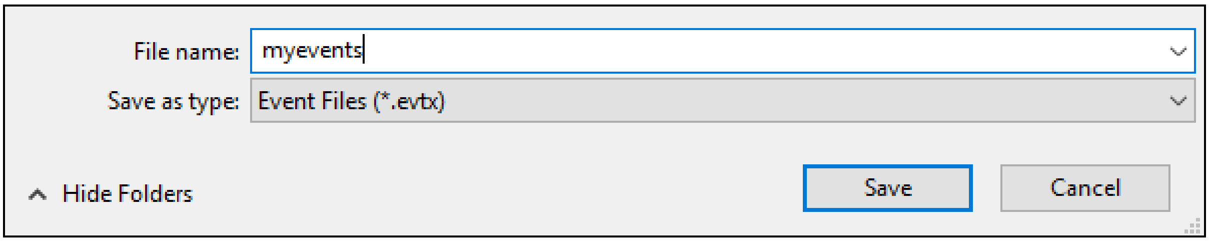
This documentation will cover both the Event Log Parser as well as a CSV file export. Reading log entries directly from the Windows Event Log is also supported. This is covered in the Windows Events documentation.

EVTX File Export

To export your event log entries as an EVTX file the first thing you need to do is open event viewer and select the log category that you want to export. Next, right click on the target category and select "Save All Events As...".



When prompted enter a name for your new EVTX file and select "Event Files" as the saved type.



File name: myevents

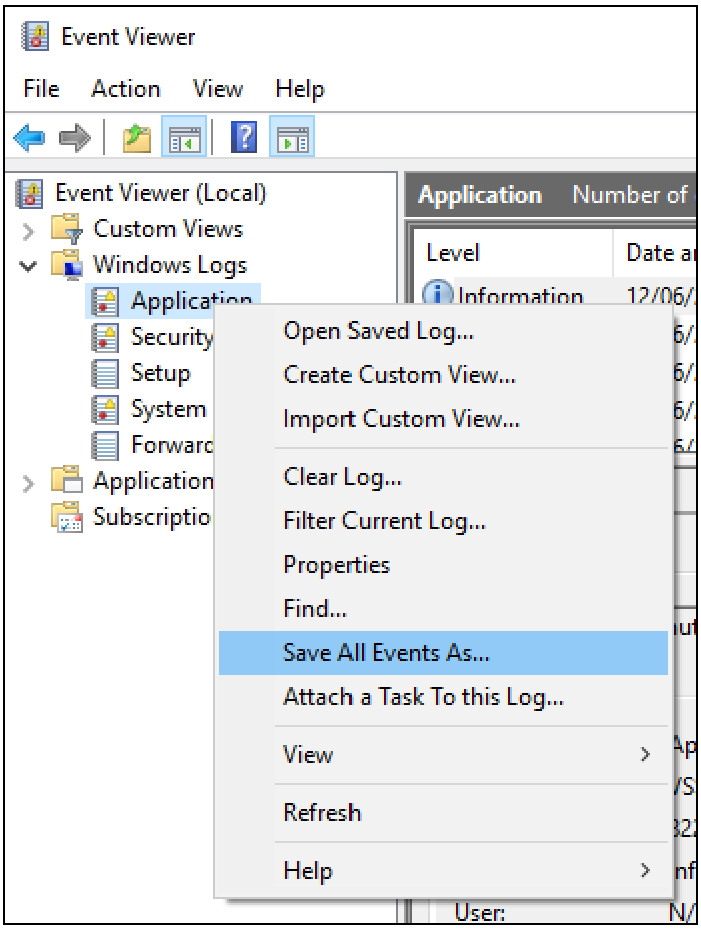
Save as type: Event Files (*.evtx)

Finally click "Save" to export the event log entries. The exported EVTX file can be opened in LogViewPlus immediately without any further configuration.

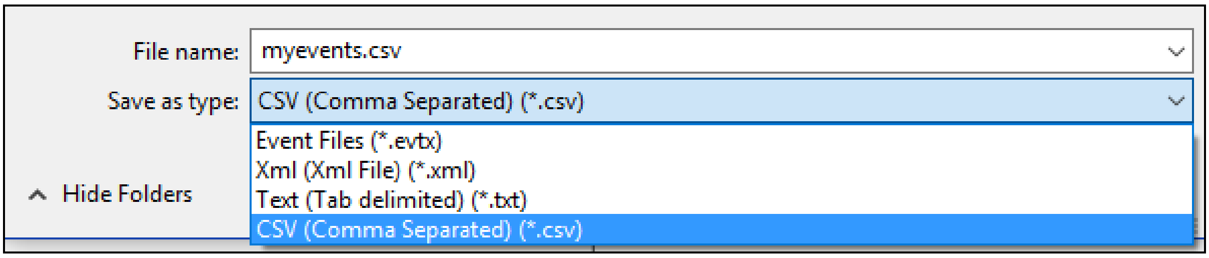
CSV File Export

To export your event log entries as a CSV file the first thing you need to do is open event viewer and select the log category that you want to export. Log entries will be exported as they appear in the log viewer grid. Changes made to column sorting will be preserved.

With your event viewer open right click on the target log category and select "Save All Events As...".



When prompted enter a name for your new CSV file and select "CSV (Comma Separated)" as the saved type.

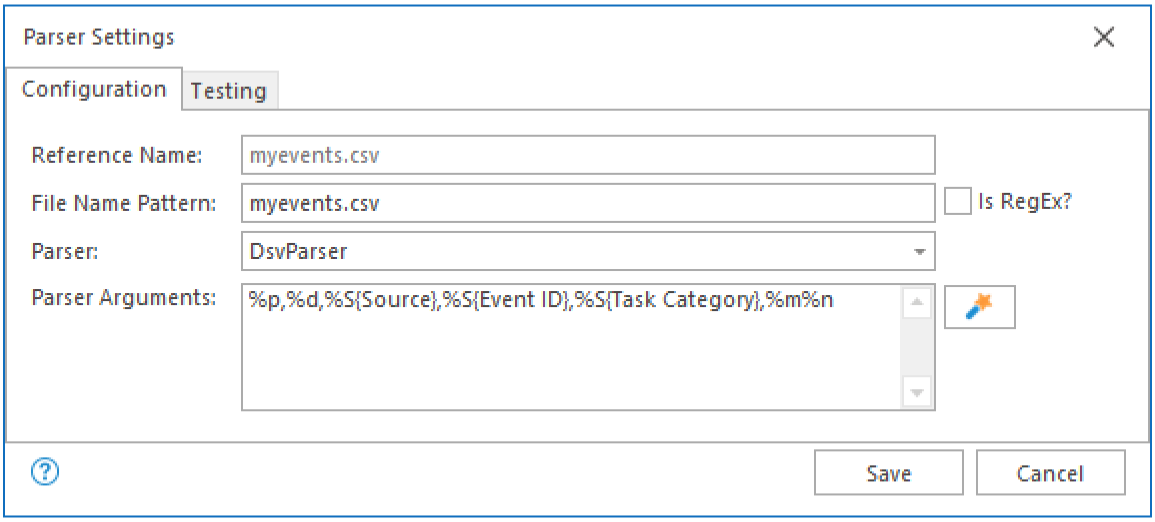

File name: myevents.csv

Save as type: CSV (Comma Separated) (*.csv)

Finally click "Save" to export the event log entries.

Before we open our new CSV log file in LogViewPlus, we need to configure the application so it can parse the CSV file. To do this go to Settings -> Parser Mappings and click 'Add'. In the parser configuration dialog enter a filename pattern which will match the file name given to your CSV file. Next, set the parser type to DSV Parser and parser arguments to:

%p,%d,%S{Source},%S{Event ID},%S{Task Category},%m%n



Reference Name: myevents.csv

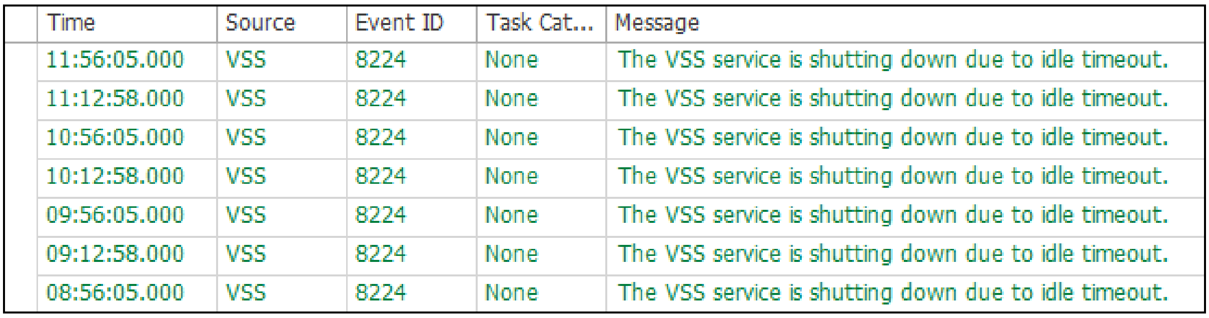
File Name Pattern: myevents.csv □ Is RegEx?

Parser: DsvParser

Parser Arguments: %p,%d,%S{Source},%S{Event ID},%S{Task Category},%m%n

Click Save followed by OK to save the parser settings.

We are now ready to open the CSV export file we created earlier. Opening this file in LogViewPlus will show all of the exported events in the log entry grid. Any future CSV event log exports will need separate configuration if the filename patterns do not match.



Time	Source	Event ID	Task Cat...	Message
11:56:05.000	VSS	8224	None	The VSS service is shutting down due to idle timeout.
11:12:58.000	VSS	8224	None	The VSS service is shutting down due to idle timeout.
10:56:05.000	VSS	8224	None	The VSS service is shutting down due to idle timeout.
10:12:58.000	VSS	8224	None	The VSS service is shutting down due to idle timeout.
09:56:05.000	VSS	8224	None	The VSS service is shutting down due to idle timeout.
09:12:58.000	VSS	8224	None	The VSS service is shutting down due to idle timeout.
08:56:05.000	VSS	8224	None	The VSS service is shutting down due to idle timeout.

Regex Parser

Our Regex Parser was introduced in in LogViewPlus 2.3.5 to allow users who are already familiar with regular expressions a quick and easy way to configure parsers. However, the Regex Parser is not performant when compared to the Pattern Parser. For this reason, we always recommend using the Pattern Parser - especially for large log files.

The idea behind the Regex Parser is to use a standard regular expression to parse the log file. In this case, the field names in the regular expression should be valid Conversion Specifiers. If an unknown field is found, it will be assumed to be the name of a column and the string conversion specifier (%s) will be used.

When using conversion specifiers in the Regex Parser, you can use either the full name of the specifier or the abbreviation. For example, the following regular expressions would be considered equivalent:

(?<date>.*?) - (?<priority>.*?) \[(?<thread>.*?)\] (?<logger>.*?) - (?<message>.*)

Is equivalent to...

(?<d>.*?) - (?<p>.*?) \[(?<t>.*?)\] (?<c>.*?) - (?<m>.*)

Either of the regular expressions above could be used to parse a log entry in a matching pattern such as:

09 MAY 2019 10:50:14,125 - INFO [Thread_10] MyServer - My Server initializing...

The provided regular expression must provide a capturing group name. These names will be extracted and used to appropriate column names. Regular expression group matches which do not contain a custom group name will be ignored by LogViewPlus.

All fields defined in the regular expression must be found on the same line of the log entry. If the log entry contains a multi-line message, this will be processed automatically by the parser after the regular expression parse fails. In other words, if a line cannot be parsed, it will be assumed to be a continuation of the previous log entry's message.

The Regex Parser currently does not allow for custom date formats. Therefore, the date must be in a format which can be auto-detected by LogViewPlus. If you are able to open and parse the file using the Basic Parser, then this should not be an issue. However, if you do have problems, please contact support.

FIX Parser

The FIX Parser is new in LogViewPlus v3.1.9.

FIX is a communication language used by financial institutions to exchange information related to securities transactions and markets. As such, the use case for this parser is niche. If you are not working with market data on a regular basis, you will probably not be interested in this feature.

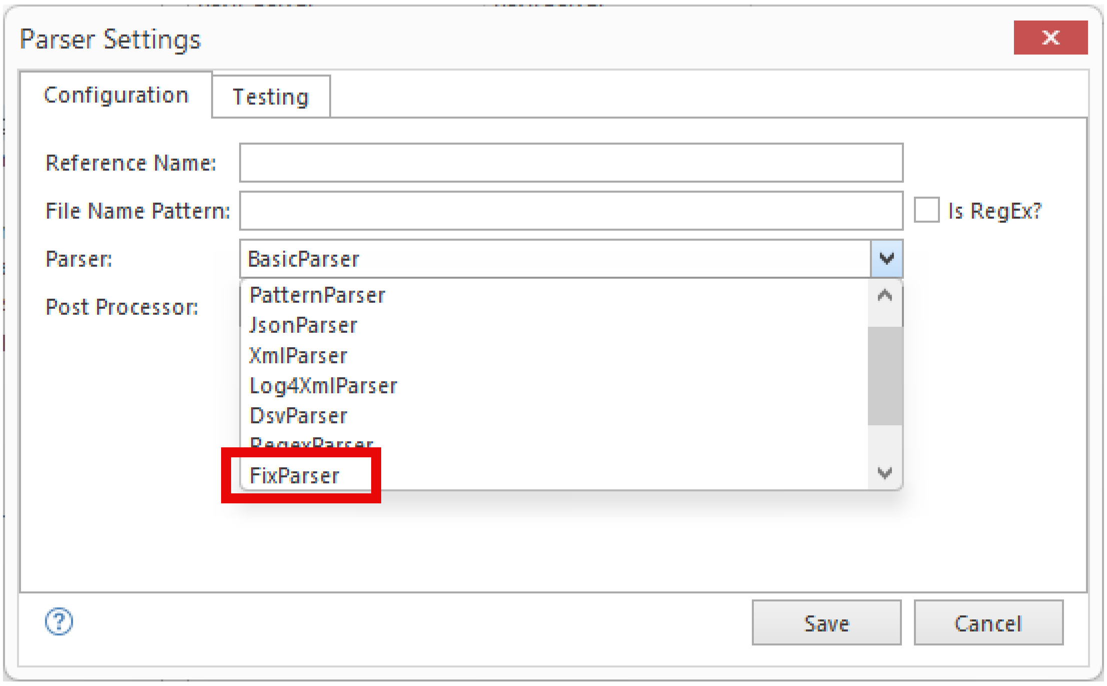
In order to prevent this feature from distracting users, we have disabled it by default. There are two ways to enable the FIX parser:

Option 1: Attempt to open a FIX audit log which contains raw FIX messages separated by a new line. LogViewPlus will attempt to parse these messages using the default FIX parser which does not require configuration. If you do not have an audit log, you can create a temporary file containing a FIX message and open the file in LogViewPlus. As long as at least one FIX message configuration is found in your list of Parser Configurations, the FIX parser will be available for all new parser configurations.

Option 2: Edit %LocalAppData%\LogViewPlus\LogViewPlus.exe.config to add the following configuration:

```
<configuration>
    <appSettings>
      <add key="AllowFixParser" value="true" />
    </appSettings>
</configuration>
```

If one of the above criteria have been met, you will see the FixParser available as a valid parser type. Note that this parser type must be modified manually. The FIX Parser is not supported by the Parser Wizard.



The FIX Parser is unusual because configuration is optional. In the default case, LogViewPlus will expect one raw FIX message per line. The timestamp for the FIX message will either be tag 52 (SendingTime) or tag 60 (TransactTime). If neither of these timestamps are found, a parsing exception will occur.

Alternatively, the FIX Parser can be configured to specify a string parse pattern very similar to the Pattern Parser. In this case, two conditions must be met:
1. The pattern must include a message specifier (%m). The value in the message field will be parsed as the raw FIX message.
2. No string specifier fields can be declared.

Additionally, the FIX Parser supports an option to change the field separator character. By default, this is the Start of Heading (SOH - 0x01) character. This can be changed by setting the **splitChar** flag before any further configuration.

For example, consider the following log entry:

11:49:23.562: 1128=9|9=418|35=d|49=CME|34=5334|52=20130714160302|15=USD

This log entry contains a timestamp followed by a FIX message which uses the pipe character to separate fields instead of the SOH character. We can parse this log entry with the configuration:

-splitChar:| %d{HH:mm:ss.fff}: %m%n

Let's break it down piece by piece:

Argument	Specifier	Notes
Parser Argument	-splitChar:|	Sets the field separator character to pipe '|' instead of SOH. Only a single character can be specified. When the splitChar flag is used it must be the first parameter of the configuration.
Date	%d{HH:mm:ss.fff}	Our target date pattern. See Date Patterns in this documentation for more information.
Message	%m	The message field is used as a place holder for the raw FIX message.
End of entry	%n	A new line is used to indicate the end of the log entry.

Alternatively, if our FIX message used the default SOH character for field separation, we could use the pattern:

%d{HH:mm:ss.fff}: %m%n

To find out more about conversion patters, please see Conversion Specifiers.

Conversion Specifiers

A conversion specifier is used to represent a single field within a conversion pattern. They are a special character sequence that is used by LogViewPlus to assign meaning to a given part of log entry. Conversion specifiers always begin with a percent character '%'. For example, consider the following conversion pattern:

%d, %t, %p, %c, %m

This conversion pattern contains five conversion specifiers. Conversion specifiers and their meanings will be covered in this section.

Conversion specifiers are used by five of the eight default log parsers that ship with LogViewPlus: Pattern Parser, JSON Parser, XML Parser, DSV Parser, and Regex Parser. A good understanding of conversion specifiers is important for almost all log parser configuration.

Specifier Basics

The conversion specifiers defined by LogViewPlus give you maximum flexibility when parsing your log files. At first glance, the full list of conversion specifiers can seem a little bit daunting. However, you can get the most out of LogViewPlus and parse any log file using just the seven specifiers defined below. This is your cheat sheet and learning these seven specifiers is time well spent.

Field	Specifier	Notes
Date	**%d**	Dates can be tricky because there are so many ways they can be represented. See Date Patterns for more.
Thread	**%t**	Thread names can contain spaces, so you need a non-spaced literal separating the thread from other fields. For example, brackets in "[my thread]".
Priority	**%p**	DEBUG, INFO, WARN, ERROR, etc...
Logger	**%c**	The logger responsible for writing the log entry. Very helpful when filtering.
Message	**%m**	The log message. When using the Pattern Parser, this specifier is almost always followed by the **%n** specifier.
Any Word	**%s**	**Cheat #1** - match any string without spaces.
Multiple Words	**%S**	**Cheat #2** - match any array of strings (spaces included). Note this field is upper-case.

Why are %s and %S cheats? Two reasons: First, they are specific to LogViewPlus and not supported by standard logging frameworks like Apache Log4.   Second, the %s specifiers can optionally take a parameter which specifies the name of the column which should display the field. To do this, you just need to enclose the column name in curly brackets. For example: *%s{My Column Name}*. This ability to take any field and convert it into a LogViewPlus column makes these specifiers extremely powerful.

The %s specifiers are the only conversion specifiers which do not have a predefined column name. If the optional column name is not specified, then LogViewPlus will not know how to display the field. You will still be able to use LogViewPlus to search for this text, but it will not be shown in a dedicated column in the log entry grid.

You can find out more about %s specifiers by seeing them used to parse an IIS log file.

All conversion specifiers use the curly bracket syntax to define arguments - like *{Arguments}*. However the arguments supported by a given conversion specifier may be unique - as is the case with the %s specifier defined above. Arguments are discussed in more detail in the sections that follow.

Finally, there are two additional special characters which can be used to process whitespace.

Whitespace Field	Representation	Notes
Newline	**\n**	Represents a hard return which should be processed before processing continues.
Tab	**\t**	Represents a tab separator. Using this character sequence is optional, but it make help to make your pattern easier to read.

Before moving onto the next section, it's worth reviewing the sample patterns discussed in Pattern Parser. For simplicity, these examples will use timestamps only. Date Specifiers are discussed in detail in the next section.

	Sample Log Entries and Matching Patterns
Log Entry:	07:36|My message...
Pattern:	**%d|%m%n**
Notes:	The pipe character '|' is used to separate date and message.
Log Entry:	10:50 [Thread 1] INFO property1 - My message...
Pattern:	**%d [%t] %p %s - %m%n**
Notes:	The 'any word' specifier '%s' is used to skip over the unknown field 'property1'.
Log Entry:	10:50 [Thread 1] INFO ndc1 ndc2 ndc3 - My message...
Pattern:	**%d [%t] %p %S - %m%n**
Notes:	Skipping over multiple fields with the %S specifier.
Log Entry:	10:50 Thread 1 - My message...
Pattern:	**%d %t - %m%n**
Notes:	The multi-word thread name can be parsed thanks to unique literal ' - '.
Log Entry:	10:50|240 1 I 2 LEVEL: Info 3
Pattern:	**%d|%S LEVEL: %p %m%n**

Notes:	Advanced literal ' LEVEL: ' used to specify a field. Everything prior to the literal is skipped with the multi-word specifier '%S'.
Log Entry:	[10:50] [notice] Apache/1.3.29 (Unix) server configured -- resuming operations
Pattern:	**[%d] [%p] %s (%s) %S -- %m%n**
Notes:	Good use of literals to separate strings. Ignoring non-pertinent information.
Log Entry:	[10:50] [notice] Apache/1.3.29 (Unix) server configured. Resuming operations.
Pattern:	**[%d] [%p] %s (%s) %S\n%m%n**
Notes:	Same as above, but with a hard return expected before the message processing starts.

Check out Advanced Patterns for the full list of supported conversion patterns.

Date Specifier

By far, the hardest and most advanced conversion specifier is the date specifier - **%d**. It is the most complicated because it is doing the most difficult job. Date parsing is hard and it requires a keen eye for detail. For example, consider the date:

2014-03-23 13:46:45,566 +01:00 PM

LogViewPlus uses a standard date parsing technology developed by Microsoft called Date Format Strings. You can find out everything there is to know about date format strings by looking at Microsoft's documentation.

Let's jump right in and break our example date down into its parts:

Field	**Example**	**Pattern**	**Notes**
Year	2014	**yyyy**	The pattern for parsing a year is 'y', and in this case we use it four times. The number of times it is used is relevant. See below for more details.
Literal	-	**-**	
Month	03	**MM**	Patterns are case sensitive. See "minute" below.
Literal	-	**-**	
Day	23	**dd**	
Literal	" "	**" "**	
Hour	13	**HH**	We are using a 24 hour clock. For a 12 hour clock, we would use the lower case "hh". See below for more details.
Literal	:	**:**	
Minute	46	**mm**	
Literal	:	**:**	
Second	45	**ss**	
Litreal	,	**,**	
Millisecond	566	**fff**	
Literal	" "	**" "**	
Time zone	+01:00	**zzz**	
Literal	" "	**" "**	
Period	PM	**tt**	

Putting all of the pattern elements together gives us:

yyyy-MM-dd HH:mm:ss,fff zzz tt

We can use this pattern to parse our date. The final step is to pass our date conversion pattern into our conversion specifier. We do this using a special syntax of surrounding the argument in curly brackets - "{}". Our final conversion specifier is:

%d{yyyy-MM-dd HH:mm:ss,fff zzz tt}

Seems easy enough - right? The tricky thing about date format strings is that you really need to pay attention to the number of times you are using a pattern as repeating a pattern can have a very unusual effect. The tables below show the effect of using multiple patterns:

Year

Pattern	Matches	Notes
%y	9	%y would actually match '14' as well. The percent sign in this case is an indicator that a 'year number' may or may not be found in that position.
yy	09	
yyy	2009	
yyyy	2009	

Month

Pattern	Matches
%M	9
MM	09
MMM	Sep
MMMM	September

Day

Pattern	Matches
%d	9
dd	09
ddd	Tue
dddd	Tuesday

Hour

Pattern	Matches	Notes

%h	9	'9 AM or PM' on a twelve hour clock. If your timestamp includes a period (for example, AM / PM) then you should always use a lower case 'h'.
hh	09	
hhh	09	
hhhh	09	
%H	21	'9 PM' on a 24 hour click.
HH	21	
HHH	21	
HHHH	21	

Minute

Pattern	Matches
%m	9
mm	09
mmm	09
mmmm	09

Seconds

Pattern	Matches
%s	9
ss	09
sss	09
ssss	09

Fractional Seconds

Pattern	Matches	Notes
%f	9	
ff	09	
fff	009	
ffff	0009	
f*	Matches 1 to 7 digits.	See below.

We always recommend matching the number of fractional seconds exactly when parsing as this reduces the likelihood of incorrect data. However, sometimes log files may use a variable number of digits. In this case, you could use the custom specifier f*. f* is used to match a variable number of fractional seconds up to 7 digits (or 100 nanoseconds). Also, if your log file always has at least 3 digits, you could use fff*. When matching digits in this way, it is always assumed that the first digit represents tenths of a second.

LogViewPlus can only represent time in memory to the 100 nanosecond level, or 7 decimal digits. For timestamps more accurate than this, you can include more fractional digits with 'f' as a parser description, but the extra accuracy will be ignored.

Time zone

Pattern	Matches	Notes
%z	+9	
zz	+09	
zzz	+09:00	
zzzz	+09:00	
ZZZ	GMT	LogViewPlus supports over 100 different three-letter-acronym time zones. This is indicated by an uppercase ZZZ.

Period

Pattern	Matches
%t	P
tt	PM
ttt	PM
tttt	PM

That is everything you need to know about parsing dates with LogViewPlus. Now, you just need to put the parts together in a way that matches the date format you use in your log files.

Here are a few examples to get you started:

Date String	Conversion Specifier
07:36:18:660761	%d{HH:mm:ss:ffffff}
2014-05-18-14.20.46.973000	%d{yyyy-MM-dd-HH.mm.ss.ffffff}
Dec 13 05:28:27	%d{MMM dd HH:mm:ss}
Sun Mar 7 16:02:00 2014	%d{ddd MMM d HH:mm:ss yyyy}
07/Mar/2004:16:06:51 -0800	%d{dd/MMM/yyyy:HH:mm:ss zzzz}

Sunday, 14 September 2014 10:50	%d{dddd, dd MMMM yyyy HH:mm}
2014-09-14T14:02:45.0174665+01:00	%d{yyyy-MM-ddTHH:mm:ss.fffffffzzzz}

Finally, if your timestamp does not include a date and your parser has not been configured to provide a date, then LogViewPlus will assume today's date. All log entries in LogViewPlus must have a date.

Using %d Without Arguments

The date specifier has a default form which does not take any arguments. You'll notice that the documentation frequently uses the date specifier without any arguments in order to simplify the discussion. When you use the date specifier without any arguments you are asking LogViewPlus to make a best effort attempt at parsing the date. To do this, it will use the same date parsing technology which is used by the basic parser. This is functionally correct and can work in many different situations. However, it has two distinct disadvantages:

1. The date and time will be parsed on a best effort basis. This means that the parsing is not guaranteed to work, and when it does work the date time value may appear incorrectly.

2. In attempting to dynamically determine the date format, LogViewPlus has to do significantly more work which may have a performance impact.

Because of these disadvantages, we recommend you specify the date format explicitly whenever possible.

Elapsed Date Times

Dates and times are occasionally represented numerically. For example, the number of milliseconds since the UNIX epoch (Jan 1, 1970). LogViewPlus supports the following built in conversion specifiers for working with numeric dates.

Conversion Specifier	**Description**
%d{ElapsedDateTime}	Used to parse any date time object that can be represented as a integer. LogViewPlus will resolve the timestamp using a protocol determined by the range of the timestamp. Possible formats include epoch ticks, epoch milliseconds and epoch seconds.
%d{ElapsedDateTimeDecimal}	Used when the timestamp is represented as a decimal value. LogViewPlus will resolve the timestamp using a protocol

	determined by the range of the timestamp. Possible formats include epoch ticks, epoch milliseconds and Julian dates.
%d{ElapsedTimeMilliseconds}	Used to when the log entry time is written is a decimal representing the number of milliseconds since the application started.
%d{ElapsedTimeSeconds}	Used to when the log entry time is written is a decimal representing the number of seconds since the application started.
%d{TAI}	Used to process longs which represent International Atomic Time.

When representing times numerically, LogViewPlus will attempt to convert the number into the correct time based on the size of the number. For example, Microsoft .Net ticks are counted as the number of 100-nanosecond intervals that have elapsed since January 1, 000. This number will be larger than the current time in milliseconds measured from Jan 1, 1970.

Metadata Date Patterns

Some log entries may be written in a format which has a timestamp but not a date. In these scenarios, the date is often extracted from the log file metadata.

Metadata Date	**Date Used**
datetoday	The current date. This setting does not use log file metadata.
filedate-created	The date the log file was created. This information may appear incorrect if the file has been copied or moved. This setting is not currently supported for remote log files.
filedate-modified	The date the log file was modified. This information may appear incorrect if the file has been copied or moved. This setting is not currently supported for remote log files.
filedate-namescan	LogViewPlus will try to parse the file name in order to extract the date. This process will use the same date parsing technology which is built into LogViewPlus. Unfortunately, a successful date parse cannot be guaranteed and there is currently no way to instruct LogViewPlus on the date format. Therefore, the date can only be extracted on a best-effort basis.

For example, if you wanted LogViewPlus to use the log file creation date as the date for every log entry in the log file, you could use the conversion specifier:

%d{filedate-created %H:mm:ss}

In the above example, we have simply used the metadata date pattern 'filedate-created' as the first part of our date time pattern.

%S and %s Specifiers

To demonstrate the flexibility of the %s specifiers, we are going to look at a pattern parser which can parse an IIS log file. Parsing an IIS log file is not difficult. We are using it as a simple example of a text file with structured data which is written in a way that differs from most application log files. Also, the columns used in an IIS log file differ from those typically used in an application log file - giving us a great opportunity to show off the power of the %s specifier.

One of the nice things about parsing IIS log files is that the log files often contain a comment which details the format of the log file. A sample IIS log file format is shown below. The IIS log file format separates all fields with a single space:

#Fields: date time s-ip cs-method cs-uri-stem cs-uri-query s-port cs-username c-ip cs(User-Agent) cs(Referer) sc-status sc-substatus sc-win32-status time-taken

This format might translate into a log entry like:

2014-05-16 13:28:28 192.168.1.1 GET /dir/file.html - 80 - 192.168.1.1 Mozilla - 200 0 0 39244

Now, how do we convert the format given into a pattern that pattern parser can understand. For starters, let's note 2 things. First, the log entry starts with the date - just like most of our application log files. Second, the log entry can be considered complete when we reach a new line. Therefore, we can use two common specifiers at the start and end of our log format - %d and %n. Knowing this, we could be a bit lazy and parse this file with a simple pattern:

%d %m%n

But that's not very helpful. We know the structure of the data, how can we extract more useful information? The key to parsing unusual patterns is the %s specifier first discussed in specifier basics. Using the %s specifier we can define columns like:

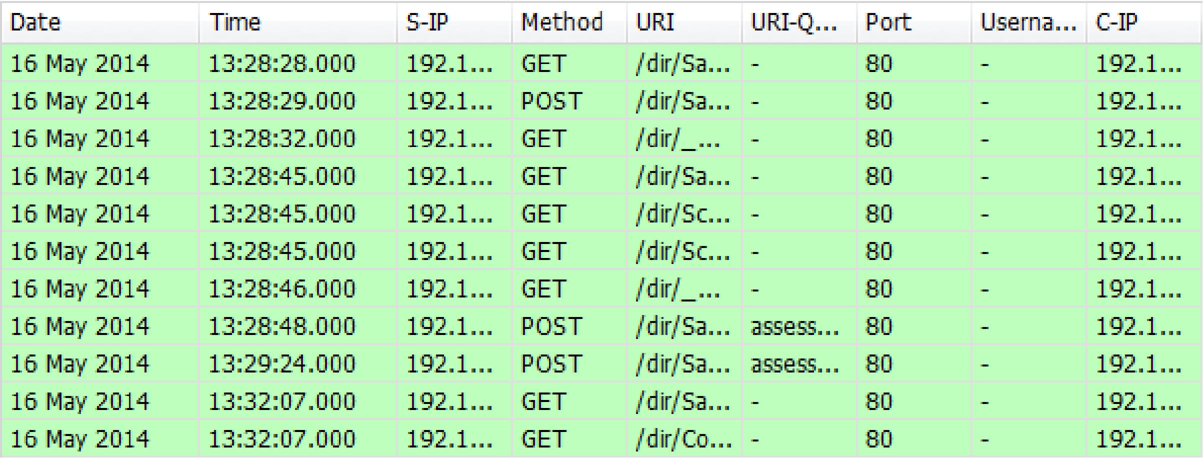
%s{S-IP}

The above specifier will retrieve the data from the "s-ip" field. Knowing this, parsing the rest of the log entry becomes trivial. The above IIS log entry can be parsed with the pattern:

%d %s{S-IP} %s{Method} %s{URI} %s{URI-Query} %s{Port} %s{Username} %s{C-IP} %s{User-Agent} %s{Referrer} %s{Status} %s{Substatus} %s{Win32-Status} %s{Time-Taken}%n

This pattern may look a bit confusing at first but notice that we are only using three conversion specifiers: %d, %s and %n. The %s specifier is doing most of the work, we simply need to give LogViewPlus column names for the data.

Using this pattern we can load the IIS log file into LogViewPlus:



Date	Time	S-IP	Method	URI	URI-Q...	Port	Userna...	C-IP
16 May 2014	13:28:28.000	192.1...	GET	/dir/Sa...	-	80	-	192.1...
16 May 2014	13:28:29.000	192.1...	POST	/dir/Sa...	-	80	-	192.1...
16 May 2014	13:28:32.000	192.1...	GET	/dir/_...	-	80	-	192.1...
16 May 2014	13:28:45.000	192.1...	GET	/dir/Sa...	-	80	-	192.1...
16 May 2014	13:28:45.000	192.1...	GET	/dir/Sc...	-	80	-	192.1...
16 May 2014	13:28:45.000	192.1...	GET	/dir/Sc...	-	80	-	192.1...
16 May 2014	13:28:46.000	192.1...	GET	/dir/_...	-	80	-	192.1...
16 May 2014	13:28:48.000	192.1...	POST	/dir/Sa...	assess...	80	-	192.1...
16 May 2014	13:29:24.000	192.1...	POST	/dir/Sa...	assess...	80	-	192.1...
16 May 2014	13:32:07.000	192.1...	GET	/dir/Sa...	-	80	-	192.1...
16 May 2014	13:32:07.000	192.1...	GET	/dir/Co...	-	80	-	192.1...

Once the log file is loaded into LogViewPlus all of the normal functionality such as text searching and data filtering will work as expected.

Advanced Specifiers

All log files can be parsed using the 7 conversion specifiers described in Specifier Basics. However, LogViewPlus supports over thirty different conversion specifiers. That is because we wanted to give you the maximum amount of control over how your log file is parsed.

There are two advantages of using the advanced conversion specifiers:

1. Anything parsed and understood by LogViewPlus will have its own dedicated column in the Log Entry Grid.

2. If you are creating your own custom filters, you will have all parsed fields available to you in a field with a dedicated name. This will make your code easier to read and support. Unparsed or generic fields (like %s) are still available, but may be harder to access and interpret.

The full list of conversion specifiers and their corresponding grid column names are shown below. Some specifiers may have an alias.

All of the conversion specifiers listed below are considered "Reserved" when using the Regex Parser. When used by the Regex Parser, conversion specifiers should not be prefixed with a percent sign.

Specifier	Grid Column	Notes
%a **%appdomain**	AppDomain	
%aspnet-cache	Web Cache	
%aspnet-context	Web Context	
%aspnet-request	Web Request	
%aspnet-session	Web Session	
%C **%class** **%type**	Class	
%d **%date**	Date + Time	This field is split across two grid columns. This make easy to remove the date column if it is not adding valu
%ex **%exception** **%throwable** **%rex** **%rexception**	Exception	

%rthrowable **%xex** **%xexception** **%xthrowable** **%stacktrace** **%stacktracedetail**		
%F **%file**	File Name	
%highlight	N/A	This field does not affect the way a log entry is parse It has been included for compatibility with Apache Lo conversion patterns.
%l **%location**	Location	
%L **%line**	Line Number	
%c **%logger**	Logger	
%m **%msg** **%message**	Message	
%M **%method**	Method Name	
%x **%ndc**	NDC	
%n **%newline**	N/A	Marker for the end of a log entry.
%%	N/A	
%p **%level**	Priority	
%t **%thread**	Thread	
%r **%timestamp** **%relative**	See 'Date'.	
%w **%username**	Username	
%utcdate	See 'Date'.	

%marker	N/A	
%replace	N/A	This field does not affect the way a log entry is read. has been included for compatibility with Apache Log4 conversion patterns.
%sn **%sequencenumber**	Sequence Number	
%style	N/A	This field does not affect the way a log entry is read. has been included for compatibility with Apache Log4 conversion patterns.
%u **%identity**	Identity	
%uuid	UUID	
%s	N/A	For parsing a single word. Items added as strings wi not be available in the LogViewPlus grid by default. T add them to the grid, specify a column name with an argument like %s{Column_Name}. If you were to bui custom filter, you would find string data available und LogEntry.Strings property.
%S	N/A	For parsing multiple words. See above.
%P **%K** **%X** **%key** **%map** **%mdc** **%property** **%properties**	N/A	These properties will not be available in the LogViewl grid, but will be available in the log entry. If you were build a custom filter, you would find property data ava under the LogEntry.Properties property.
	Log File	The log file where the log entry was parsed. Useful v working with merged views. This grid column is available on all log files. To view it, simply select the column from the 'Add Columns' command.
	Log Line Number	The line number in the log file where this entry was fo Useful if you need to refer to the underlying text file.

		This grid column is available on all log files. To view it, simply select the column from the 'Add Columns' command.

Important: Because LogViewPlus does not write a log file, it has no way to confirm that the field displayed actually matches the relevant data. For example, the %appdomain specifier simply specifies a string which will be available through the AppDomain column in the grid. LogViewPlus has no way of knowing whether this field is actually a .Net Application domain. This relationship is assumed.

Format Modifiers

Format modifiers allow you to specify the exact number of characters used to represent a field. Format modifiers come after the percent sign and before the conversion specifier.

The following table lists format modifiers and their affects:

Format Modifier	Justified	Min Width	Max Width	Comments
%20	Right	20	None	Field is left padded with spaces of 20 characters long.
%-10	Left	10	None	Field is right padded with space minimum of 10 characters long.
%.15	NA	None	15	Field is truncated if it is longer th characters.
%-20.30	Left	20	30	Combines both justification and this case, right padding up to 20 truncating if necessary after 30.
%5.5	Right	5	5	In this example, we are specifyi fixed width of 5. Fixed width fiel useful with continuous string da

As an example, consider the following log entry.

2012-05-09 10:50:14 A   Test14Start - Initializing...

There are two things to note about this log entry. First, there are 5 spaces after the 'A' that follows the date. Second, the string 'Test14Start' actually contains three pieces of information an ID, a Position, and an Action.

The above log entry can be parsed with the conversion pattern:

%d %-5c %4.4s{ID}%2.2s{POS}%5.5s{ACTION} - %m%n

Using this conversion pattern, the log entry will be parsed as:

Format Modifier	Value	Comments
%d	2012-05-09 10:50:14	The date.
%-5c	A	The extra 4 spaces are ignored. If our conversion contained two spaces between this specifier and th would read into the next field and parsing would fa

%4.4s{ID}	Test	The next field is a fixed 11 characters. The first fou ID.
%2.2s{POS}	14	...the next two will be the Position.
%5.5s{ACTION}	Start	...and the final 5 will be the Action. Taken together three fields must always be exactly 11 characters l
%m	Initializing...	The message. This could be any length and may s multiple lines.

You can find out more about format modifiers online. The Apache documentation is a particularly good place to start.

Specifier Arguments

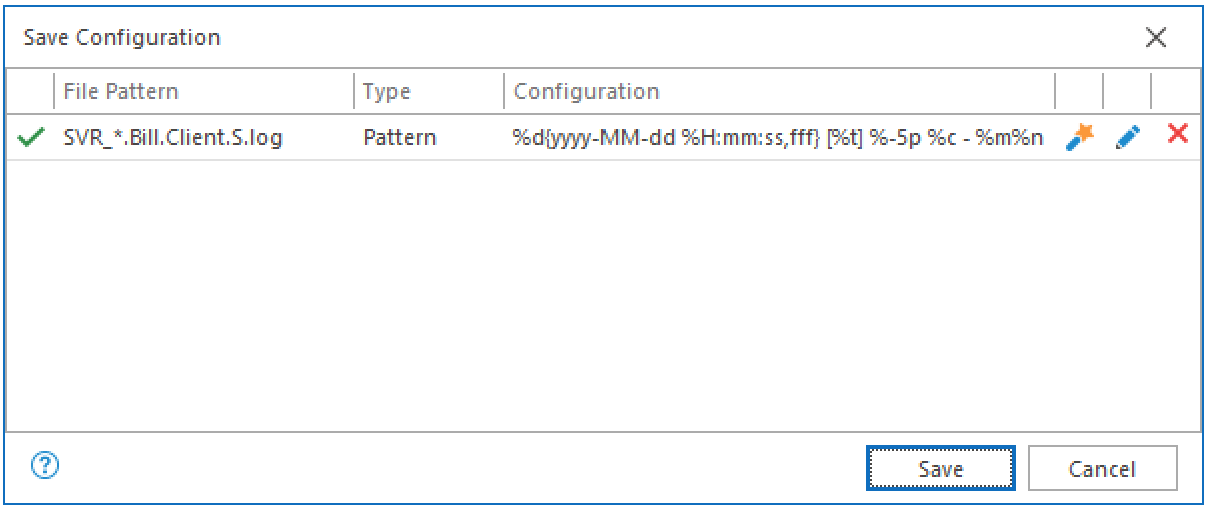
The topics covered previously in this chapter address most parsing needs. However, over the years we have come across a few edge cases where additional logic is needed to modify the default parsing behaviour. LogViewPlus address these edge cases by supporting specifier arguments which are like command line arguments for conversion specifiers.

Specifier arguments should always begin with a hyphen. Where other arguments are used in the conversion specifier they should appear before the specifier argument.

The following specifier arguments are currently supported.

Argument	Example	Notes
parserHint	%m{-parserhint:CLEF}	The configured message is in the CLEF log format u by loggers such as Serilog. LogViewPlus will parse t message and substitute any JSON parameters foun provide the message in a human readable format.
expectedValues	%p{-expectedValues:info,error}	Configures the priority field to require a known value Values are comma separated and case sensitive. If parser cannot match a known value, the parse will fa
name	%m{"-name:My Message"}	Renames a given column. However, we recommenc using the default column names where possible. Th preferred way to rename a column is to use the %s specifier.
offset	%d{-offset:100}	Once parsed, the given date time should be offset by given number of milliseconds. The supplied value ca positive or negative. This allows dates to be modifie the parser level rather than the file level.

Parser Wizard



	File Pattern	Type	Configuration
✓	SVR_*.Bill.Client.S.log	Pattern	%d{yyyy-MM-dd %H:mm:ss,fff} [%t] %-5p %c - %m%n

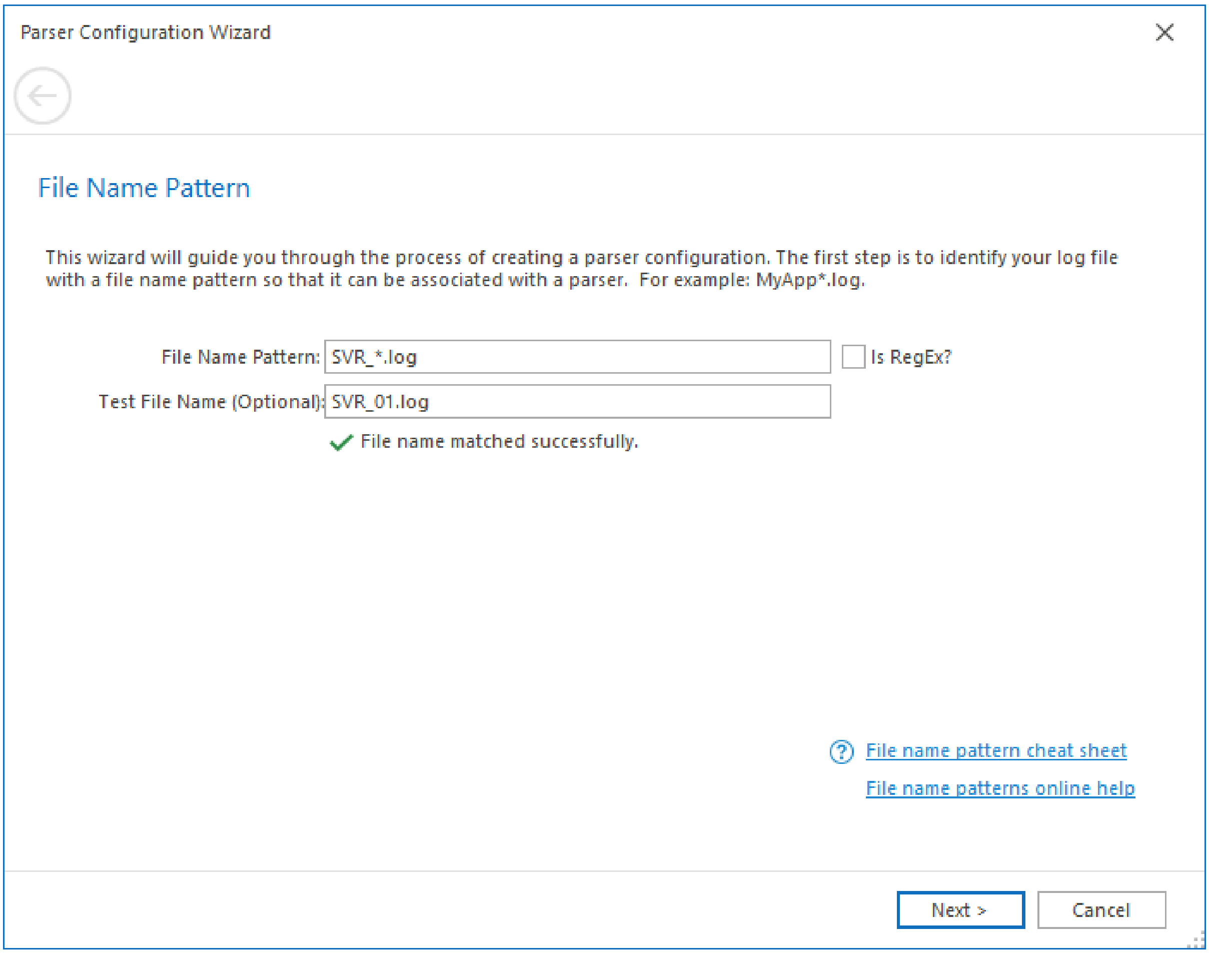
The first time you open a log file in LogViewPlus you may be presented with the dialog above explaining how the file was parsed. Automatically generated parser configurations are designed to be functional and may provide you with all the features you need for your current task - with zero configuration.

However, you may get a better experience if you setup a parser configuration manually. This is especially true for log files you open frequently.

The syntax used to configure Log Parsers manually was covered in a previous section. For users who are new to LogViewPlus, we recommend using the Parser Wizard. The Parser Wizard can be opened by double clicking one of the provided parser descriptions. Executing the Parser Wizard in this way has the advantage of populating fields in advance which can provide a head start for new users.

The Parser Wizard can also be opened from the Application Settings.

Log File Identification



Parser Configuration Wizard

File Name Pattern

This wizard will guide you through the process of creating a parser configuration. The first step is to identify your log file with a file name pattern so that it can be associated with a parser. For example: MyApp*.log.

File Name Pattern: SVR_*.log □ Is RegEx?

Test File Name (Optional): SVR_01.log

✓ File name matched successfully.

File name pattern cheat sheet
File name patterns online help
Next >
Cancel

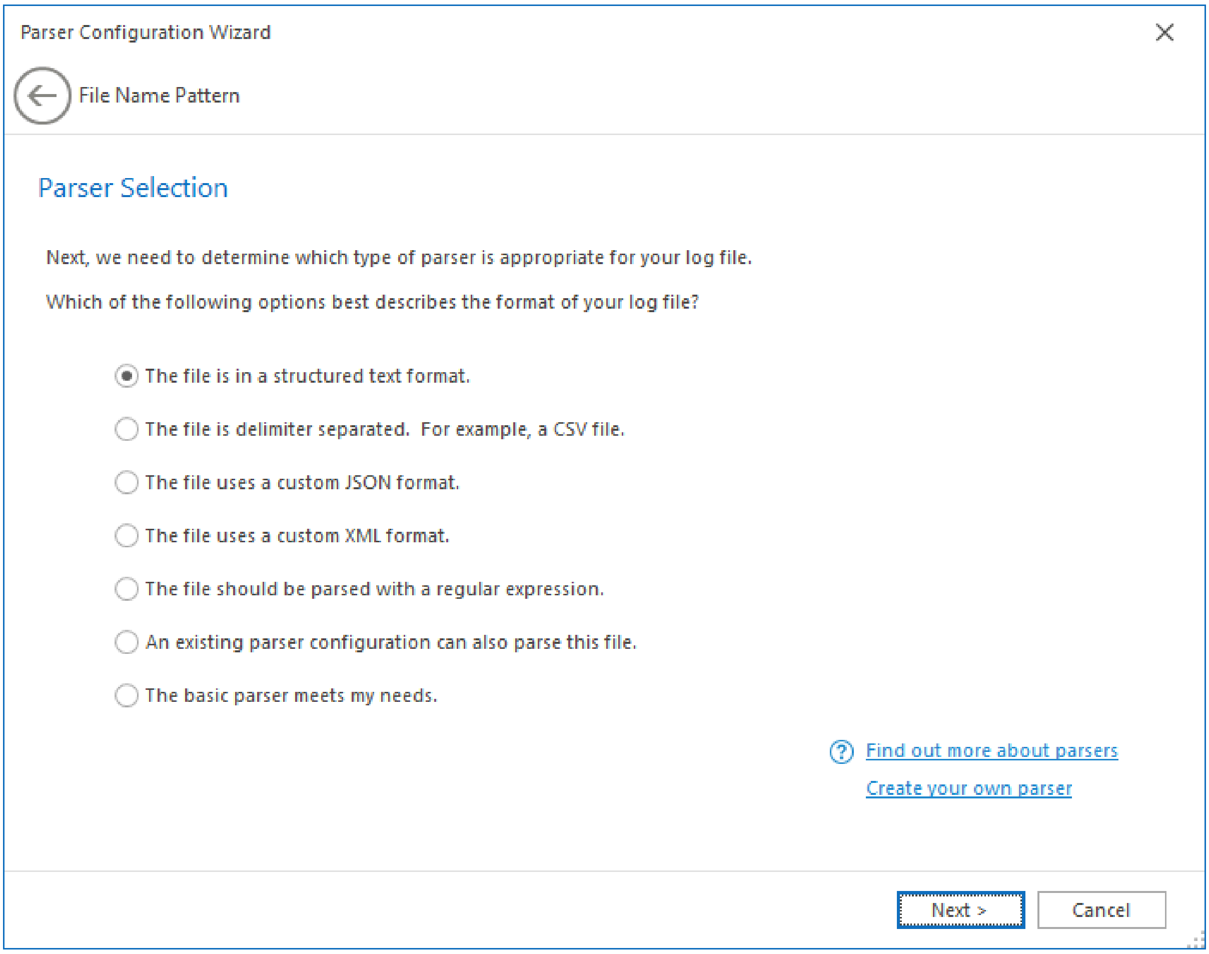
When configuring a log parser via the Parser Configuration Wizard, the first thing we need to do is set our filename pattern. The filename pattern will be used to identify a log file by name and pairing it with the parser we are about to configure.

For example, say your application writes log entries to a file named SVR_15.6.2014_1.log. You can associate a parser to all your application log files with the pattern SVR_*.log. In this example, the wildcard '*' is being used to match multiple unspecified characters. For more advanced patterns consider using a regular expression by checking the 'Is Regex' checkbox. This will allow the filename pattern text box to contain a full regular expression.

If you want to use the same parser with multiple log files, you can use the pipe character - | - to separate file names. For example, **SVR_*.log|*MyOtherApp***.

You can optionally test the filename pattern you have provided by entering a sample file name into the 'Test File Name' text box. If you choose to test your filename pattern, a message will appear stating whether or not the test file name is matched by the provided filename pattern.

Parser Selection



Parser Configuration Wizard

File Name Pattern

Parser Selection

Next, we need to determine which type of parser is appropriate for your log file.

Which of the following options best describes the format of your log file?

● The file is in a structured text format.

○ The file is delimiter separated. For example, a CSV file.

○ The file uses a custom JSON format.

○ The file uses a custom XML format.

○ The file should be parsed with a regular expression.

○ An existing parser configuration can also parse this file.

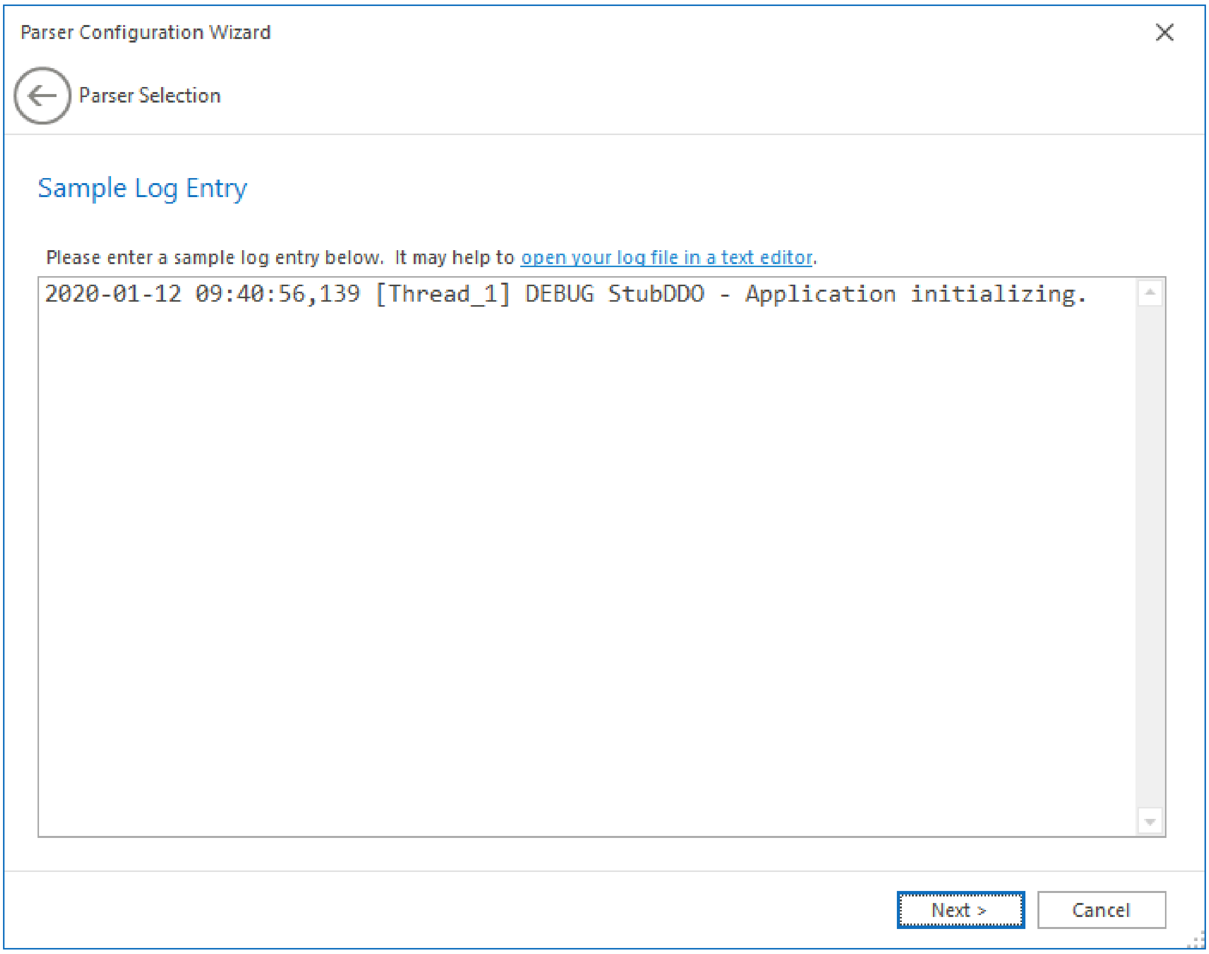
○ The basic parser meets my needs.

The next step in the Parser Configuration Wizard, is to determine which parser best matches your log file data. All that you need to do here is answer the given question to the best of your ability. The Parser Wizard currently supports seven different parser types and each of the options provided correspondence to one of the seven types: Pattern Parser, DSV Parser, Apache XML (a zero configuration variant of the XML parser), Xml Parser, JSON Parser, Regular Expression and the Basic Parser.

Select 'An existing parser configuration can also parse this file' when the format of the target file matches the format of an already configured parser. LogViewPlus will then allow you to select the existing parser to combine filename patterns. Please see Combine File Patterns for more information.

The final option, "The basic parser meets my needs", is a special case available only when launching the Parser Wizard from the Automatic Configuration dialog. The purpose of this option is to allow you to explicitly use the Basic Parser and suppress the Automatic Configuration dialog in the future.

Sample Log Entry



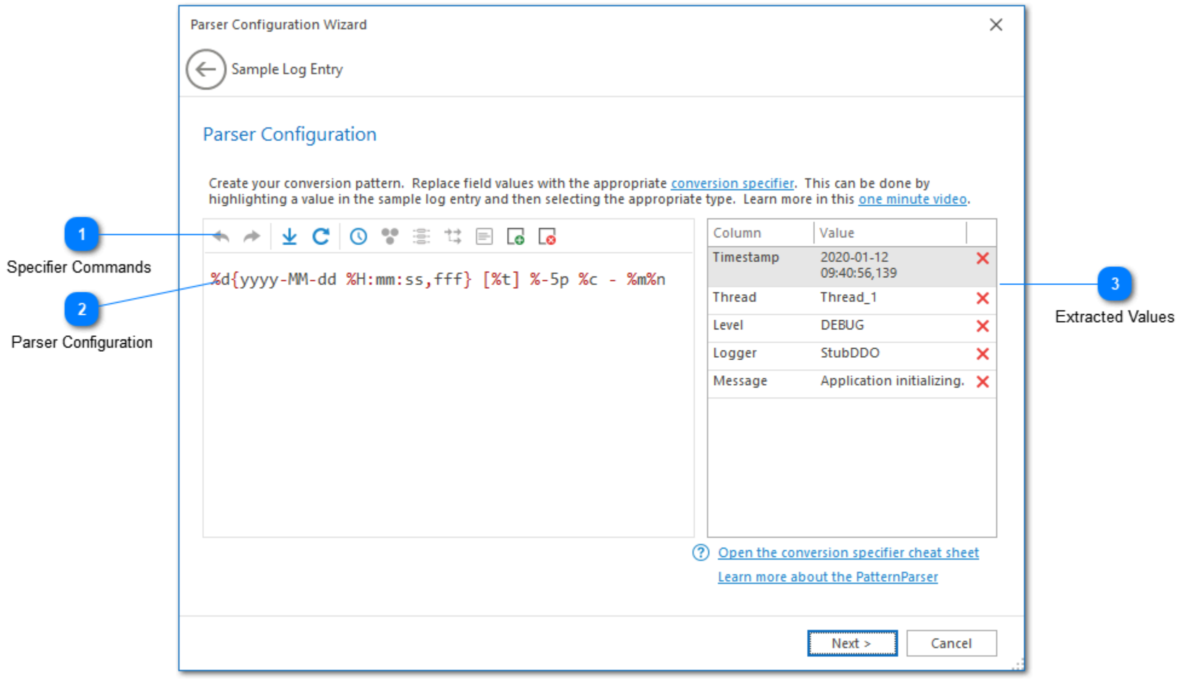
Sample Log Entry

Please enter a sample log entry below. It may help to open your log file in a text editor.

```
2020-01-12 09:40:56,139 [Thread_1] DEBUG StubDDO - Application initializing.
```

Depending on the type of parser needed, we will probably need to provide a sample log entry. The parser wizard can help you configure a parser, but it will need a sample log entry to display extracted values and verify your parser configuration is correct.

Parser Configuration



Parser Configuration

Create your conversion pattern. Replace field values with the appropriate conversion specifier. This can be done by highlighting a value in the sample log entry and then selecting the appropriate type. Learn more in this one minute video.

```
%d{yyyy-MM-dd %H:mm:ss,fff} [%t] %-5p %c - %m%n
```

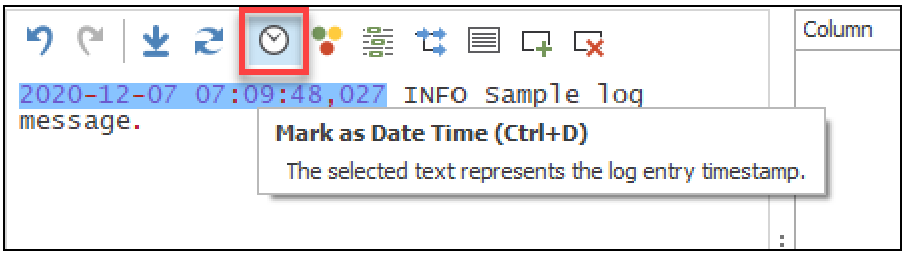
Column	Value
Timestamp	2020-01-12 09:40:56,139
Thread	Thread_1
Level	DEBUG
Logger	StubDDO
Message	Application initializing.

Open the conversion specifier cheat sheet

Learn more about the PatternParser

The parser configuration screen is designed to help you quickly create a pattern capable of parsing your log files.

To create a parser configuration, simply highlight a field value and then select the appropriate specifier command. For best results, we recommend moving from left to right across your sample log entry.



```
2020-12-07 07:09:48,027 INFO Sample log
message.
```

Mark as Date Time (Ctrl+D)

The selected text represents the log entry timestamp.

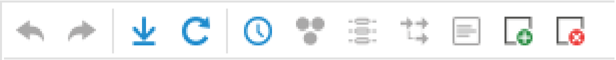
Once a value has been extracted, it will be replaced with the appropriate conversion specifier. The extracted value will be displayed in the Extracted Values grid along with the column name.

If a conversion specifier has already been used it may be disabled on the toolbar. Some conversion specifiers can only be used once. In the above example you can see that the priority column has already been added and therefore this command is disabled in the context menu.

When adding a custom column through the text selection method, you will need to provide a column name. The custom column command is simply a wrapper around the %S conversion specifier.

Finally, when configuring XML or JSON parsers, it is important to note that unused nodes can be removed. These parsers are only concerned with nodes that contain conversion specifiers or have children which contain conversion specifiers.

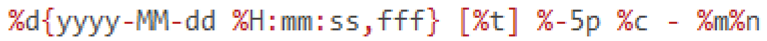
1 Specifier Commands



The specifier commands toolbar allows you to extract values from a log entry and replace them with a Conversion Specifier. All toolbar commands can also be accessed on the Parser Configuration Context Menu.

These commands are described in detail in the next section. You can also hover over a command to see a tool tip with a full description.

2 Parser Configuration

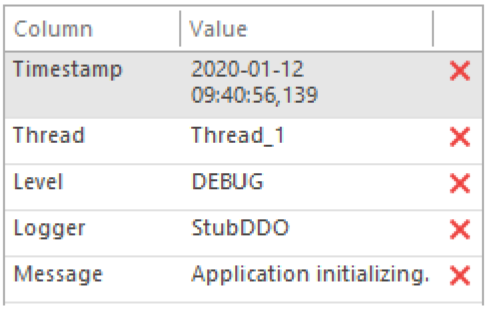


```
%d{yyyy-MM-dd %H:mm:ss,fff} [%t] %-5p %c - %m%n
```

The parser configuration view shows a work in progress version of your parser configuration. If you are familiar with Conversion Specifiers, you can type your parser configuration directly. However, we recommend selecting text and marking it with the specifier command toolbar. For best results, this should be done while progressing from left to right.

3

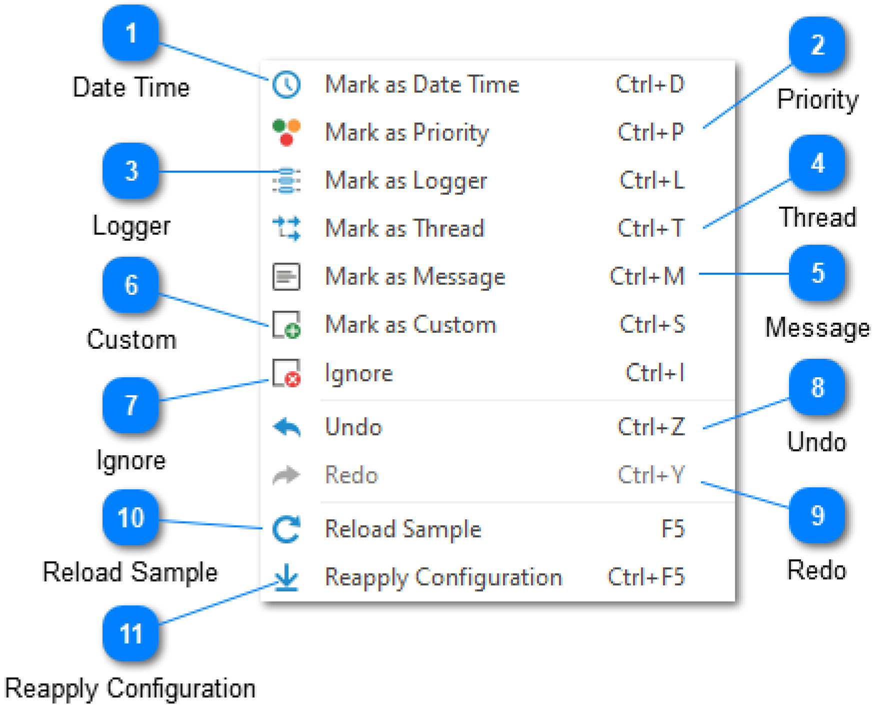
Extracted Values



Column	Value	
Timestamp	2020-01-12 09:40:56,139	✕
Thread	Thread_1	✕
Level	DEBUG	✕
Logger	StubDDO	✕
Message	Application initializing.	✕

The extracted values grid displays the values that would be extracted from your sample log entry given the parser configuration provided. The column names for the values will also be displayed. Removing a value from the extracted values list will add it back to the parser configuration.

Parser Configuration Menu



The parser configuration context menu is available by right-clicking in the Parser Configuration area. It allows you to extract selected text and replace it with a Conversion Specifier.

Most of the commands in the configuration menu are available only when text is selected. Some commands can only be used once per configuration.

1 Date Time

Extracts the selected text and replaces it with the date time specifier (%d). LogViewPlus will also analyze the text contained in the selection and attempt to resolve the date pattern. Having a defined date pattern will result in a faster, more accurate parse.

2 Priority

Mark as Priority Ctrl+P

Extracts the selected text and replaces it with the priority specifier (%p). If an excess space is detected, LogViewPlus may decide to use a fixed with priority. For example, if the priority is always 5 characters, LogViewPlus may use the specifier %-5p.

3 Logger

Mark as Logger Ctrl+L

Extracts the selected text and replaces it with the logger specifier (%c).

4 Thread

Mark as Thread Ctrl+T

Extracts the selected text and replaces it with the thread specifier (%t).

5 Message

Mark as Message Ctrl+M

Extracts the selected text and replaces it with the message specifier (%m).

6 Custom

Mark as Custom Ctrl+S

Extracts the selected text and replaces it with the string specifier. Either %s or %S may be used depending on if the selected text contains spaces or otherwise has a well-defined start and end marker.

When marking the selected text as a string, you will be prompted to enter a column name. If you do not enter a column name, the field will still be parsed as a string, but the string will not be visible in the Log Entry Grid.

7 Ignore

Extracts the selected text and replaces it with the string specifier. Either %s or %S may be used depending on if the selected text contains spaces or otherwise has a well-defined start and end marker. You will not be prompted to provide a column name and therefore the value will be ignored by the Log Entry Grid.

8 Undo

Reverts the previously added or removed conversion specifier.

9 Redo

Re-applies the previously added or removed conversion specifier.

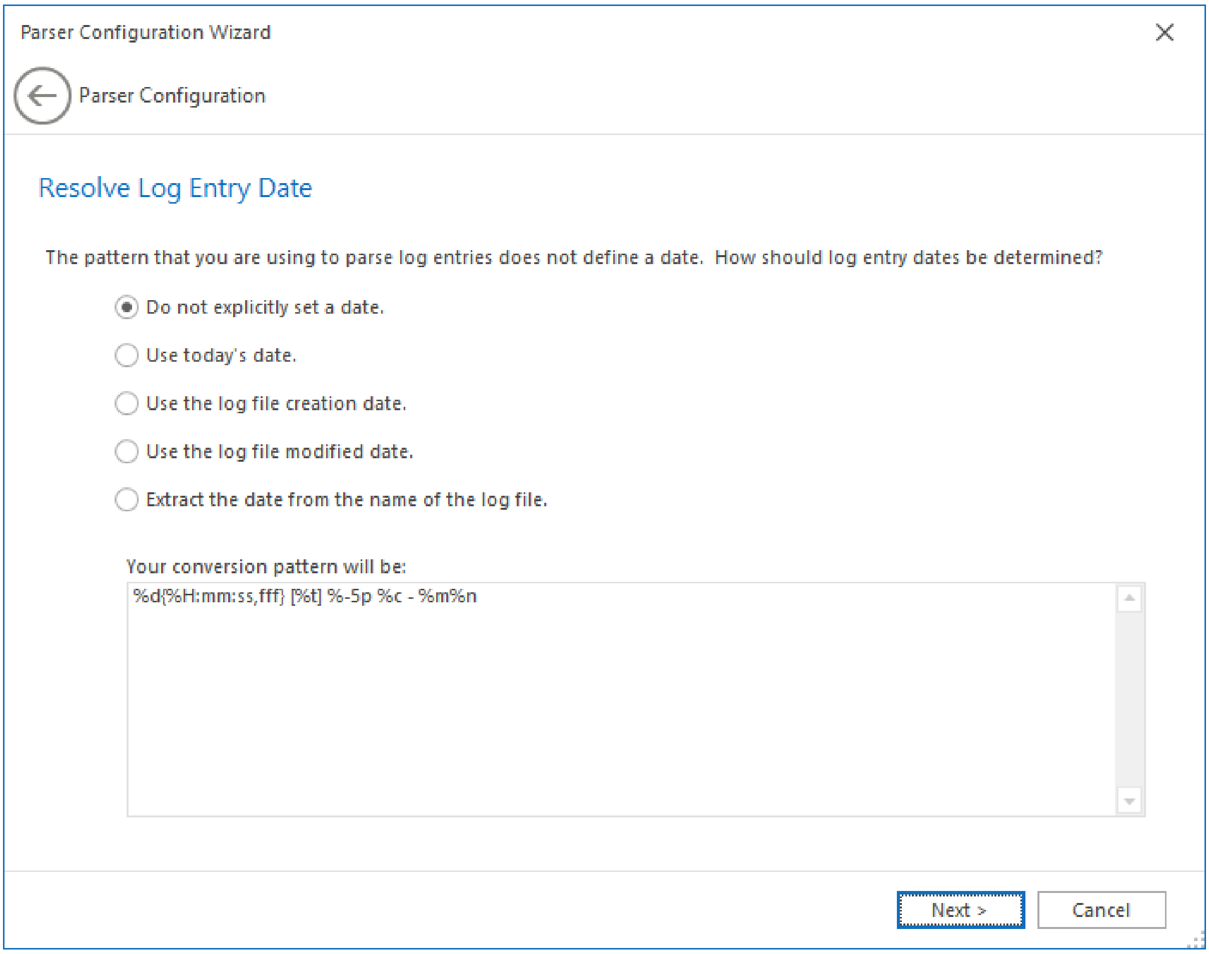
10 Reload Sample

Removes all parser configuration and reloads the sample log entry. This is useful when you want to start over with a new parser configuration.

11 Reapply Configuration

Replies the known parser configuration. This is useful when you want to start over with the existing parser configuration.

Resolve Log Entry Date



Resolve Log Entry Date

The pattern that you are using to parse log entries does not define a date. How should log entry dates be determined?

- ● Do not explicitly set a date.
- ○ Use today's date.
- ○ Use the log file creation date.
- ○ Use the log file modified date.
- ○ Extract the date from the name of the log file.

Your conversion pattern will be:

```
%d{%H:mm:ss,fff} [%t] %-5p %c - %m%n
```

Some log entries may be written in a format which has a timestamp but not a date. In these scenarios, the date is often extracted from the log file metadata. The Resolve Log Entry Date configuration page provides you with a series of options that allow you to extract a date from the log file metadata. Note that this configuration page will only be shown in the event that your date specifier does not already define a date pattern.

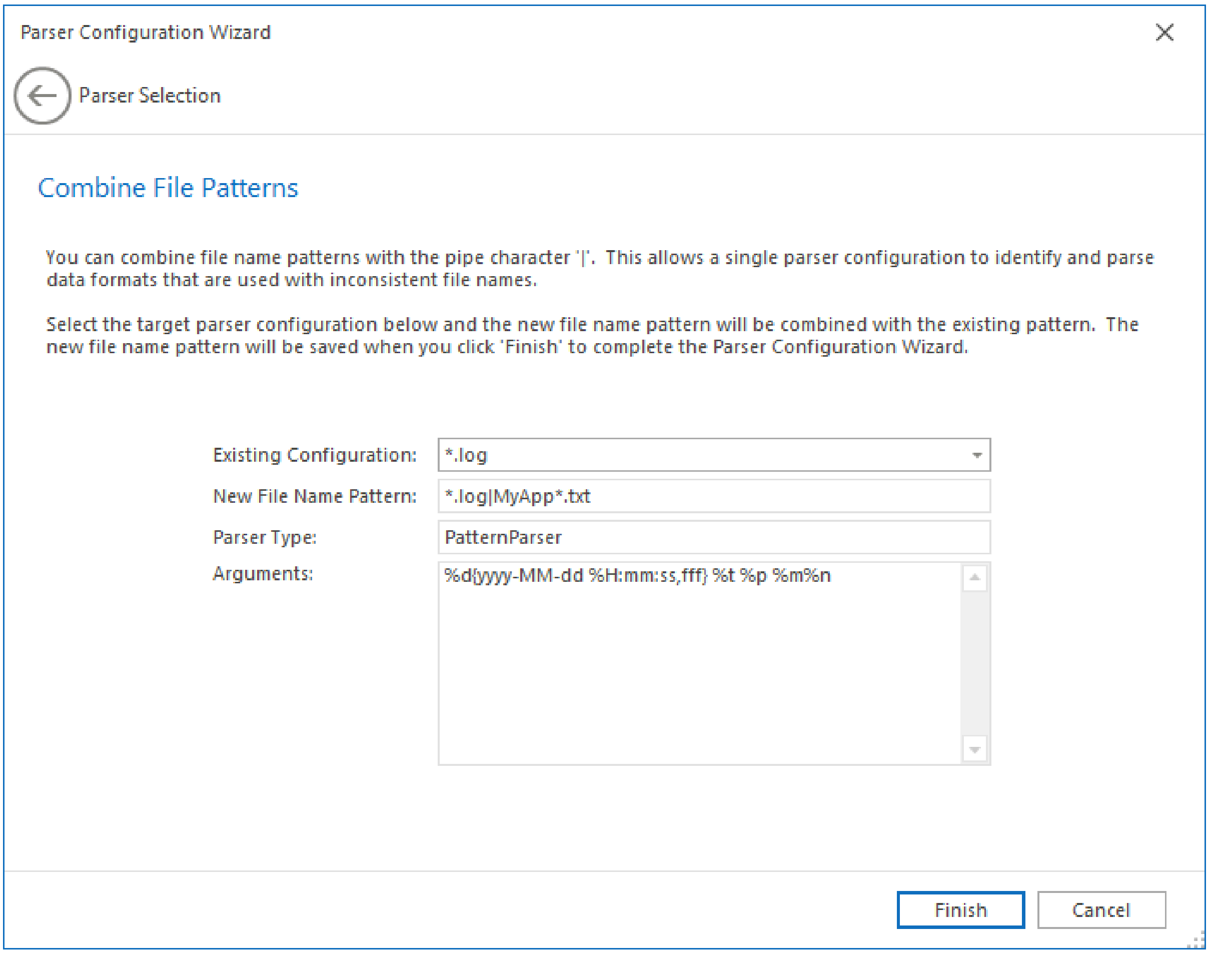
LogViewPlus supports the following metadata date extraction options:

Metadata Date	Date Used
datetoday	The current date. This setting does not use log file metadata.

filedate-created	The date the log file was created. Note that this information may not be correct if the file has been copied or moved. This setting is not currently supported for remote log files.
filedate-modified	The date the log file was modified. Note that this information may not be correct if the file has been copied or moved. This setting is not currently supported for remote log files.
filedate-namescan	LogViewPlus will try to parse the file name in order to extract the date. This process will use the same date parsing technology which is built into LogViewPlus. Unfortunately, a successful date parse cannot be guaranteed and there is currently no way to instruct LogViewPlus on the date format. Therefore, the date can only be extracted on a best-effort basis.

For more information, please see the Date Specifier documentation.

Combine File Patterns



Parser Configuration Wizard

Combine File Patterns

You can combine file name patterns with the pipe character '|'. This allows a single parser configuration to identify and parse data formats that are used with inconsistent file names.

Select the target parser configuration below and the new file name pattern will be combined with the existing pattern. The new file name pattern will be saved when you click 'Finish' to complete the Parser Configuration Wizard.

Existing Configuration: *.log

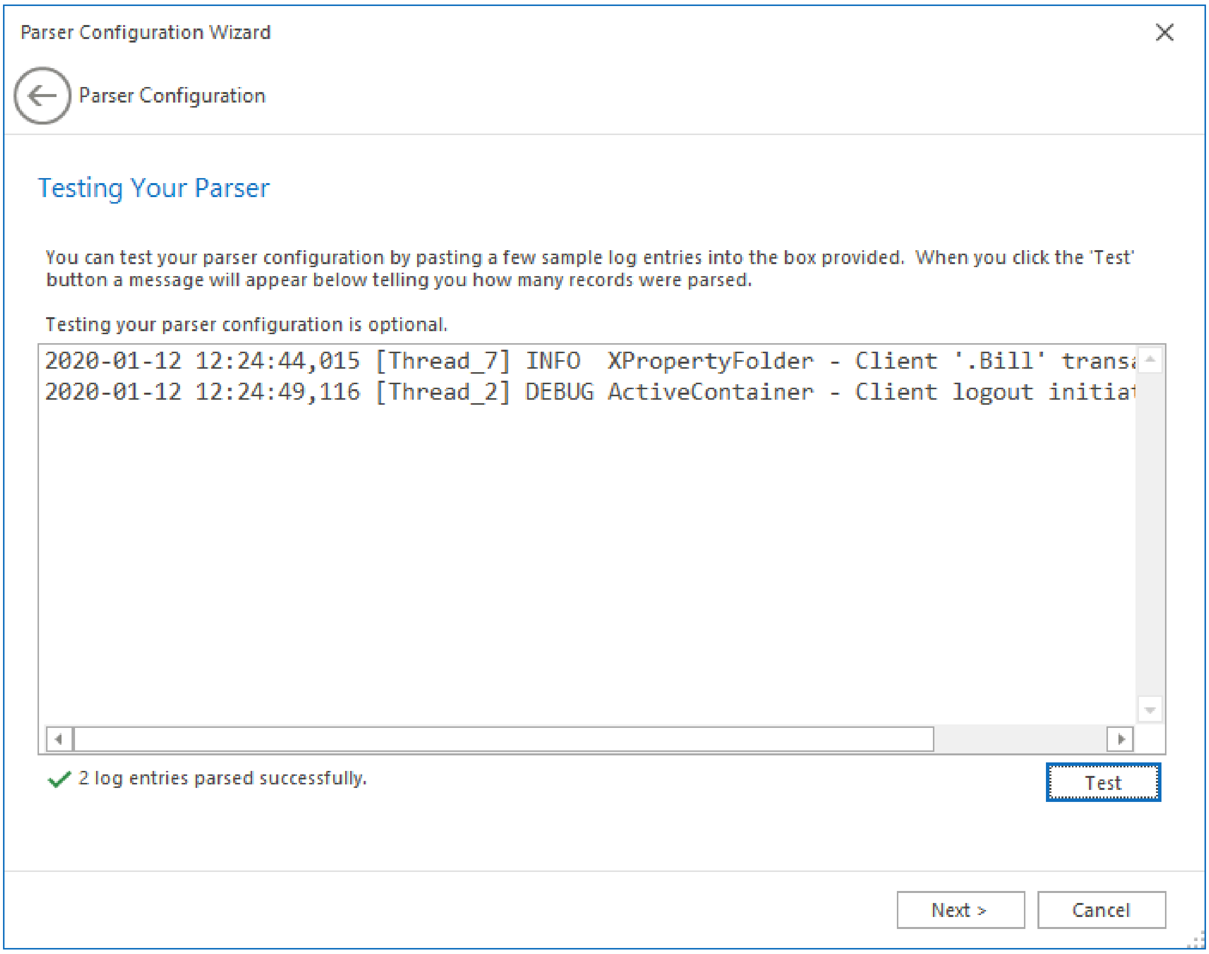
New File Name Pattern: *.log|MyApp*.txt

Parser Type: PatternParser

Arguments: %d{yyyy-MM-dd %H:mm:ss,fff} %t %p %m%n

If you want to use the same parser with multiple log files, you can use the pipe character - | - to separate file names. For example, ***.log|MyApp*.txt**. The Combine File Patterns page automates merging of file name patterns. Simply select the existing parser configuration which is capable of parsing the target log file. The filename pattern will be combined with the pattern you provided in the Log File Identification step.

Parser Testing



Testing Your Parser

You can test your parser configuration by pasting a few sample log entries into the box provided. When you click the 'Test' button a message will appear below telling you how many records were parsed.

Testing your parser configuration is optional.

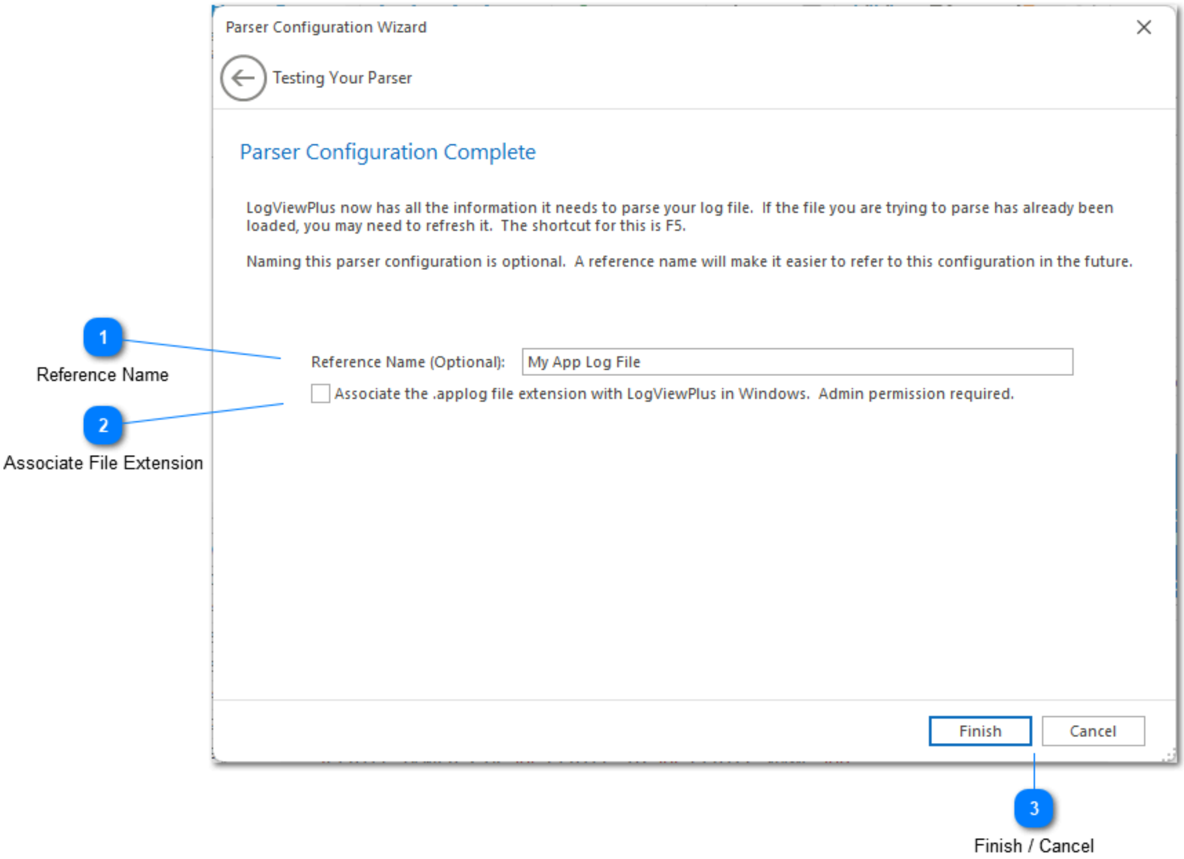
```
2020-01-12 12:24:44,015 [Thread_7] INFO  XPropertyFolder - Client '.Bill' transa
2020-01-12 12:24:49,116 [Thread_2] DEBUG ActiveContainer - Client logout initiat
```

✓ 2 log entries parsed successfully.

The parser testing stage is used to confirm that you have configured your parser correctly. Simply place any number of log entries into the text area provided. Clicking the test button will then display a dialog showing how many log entries were parsed with the configuration provided in the previous screens. In the above example, a message is displayed showing that "2 log entries were parsed successfully". If an error had occurred while parsing the log entries, an error message will be displayed instead. If an incorrect number of log entries is displayed, then parser has not been configured correctly. In this case please revisit your parser configuration.

Note that parser testing is recommended but not required.

Configuration Complete



Parser Configuration Wizard

Testing Your Parser

Parser Configuration Complete

LogViewPlus now has all the information it needs to parse your log file. If the file you are trying to parse has already been loaded, you may need to refresh it. The shortcut for this is F5.

Naming this parser configuration is optional. A reference name will make it easier to refer to this configuration in the future.

Reference Name (Optional): My App Log File

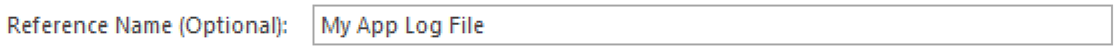
□ Associate the .applog file extension with LogViewPlus in Windows. Admin permission required.

The final screen in the parser configuration wizard confirms that everything has been set up correctly. Click Finish to save your parser configuration. If you launched the parser configuration wizard from the application settings dialog you may also need to click OK again to apply your changes.

Providing a configuration name is optional. A configuration name will make it easier to find this configuration in the future.

Once you have saved your new parser configuration you may need to refresh any log files which have already been opened. To do this select the target log file and press F5.

1 Reference Name

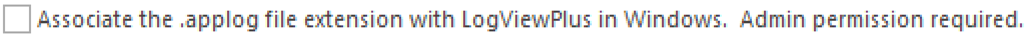


Reference Name (Optional): My App Log File

The reference name is a user friendly description which is used to identify this parser configuration. Reference names are not required, but are highly recommended as they may be referenced from other parts of the application. For example, when configuring local log levels and automatic templates.

A reference name is required by the application, but if a value is not provided, the file name pattern will be used. Therefore, it is not necessary to explicitly set a reference name.

2 Associate File Extension



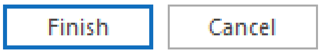
□ Associate the .applog file extension with LogViewPlus in Windows. Admin permission required.

If your log file does not use a .txt or .log file extension, you will have the option to associate your file extension with LogViewPlus in Windows. This will allow you to open files with the target extension in LogViewPlus by simply double-clicking on the target file in Windows Explorer.

If the file extension is already registered to LogViewPlus, this feature will be automatically checked. Deselecting the checkbox will remove the association.

Changes to the file associations require administrator permissions. You may be prompted by the UAC to execute a batch file which will make the necessary changes. The contents of the executed batch file can be found at %LocalAppData%\Temp\lvp.register.EXT.cmd.

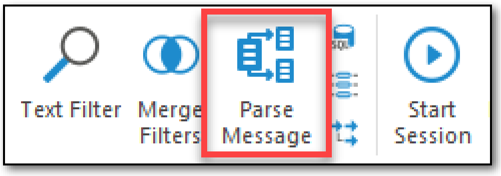
3 Finish / Cancel



The Finish command will save your parser configuration. Parser configurations are managed in Parser Mappings.

The Cancel command will exit the Parser Wizard. Your changes will not be saved.

Log Message Parsers



This chapter has discussed parsing log files into log entries using regular expressions or conversion specifiers. Log entries often contain a message which may contain a significant amount of data. Because log entries are parsed into an envelope and message, it can be difficult to extract data from the message itself. This is especially true when a log file contains a lot of variation between log entry messages.

To solve this problem, LogViewPlus employs a two stage parsing process. First, the log entries are parsed using the techniques discussed in this chapter. Once the log entry has been parsed, the log message will be parsed as a separate step. By default log entry messages will be parsed using an automatic message parse, but you can use the Parse Message Filter to configure one of three options: automatic parse, pattern parse or regex parse. These options are discussed below.

Once configured, message parsers can be associated with a log file parser configuration and will be saved as Message Parser Settings. A log file can contain multiple message parsers which you can manually configure using the Parse Message Filter. After creating or editing a message parser, all log files using the target configuration will need to be refreshed.

Information extracted from a parsed message will be displayed in the Log Entry Grid when the parse message filter is applied. When viewing parsed messages, the Message column will be temporarily removed. Extracted information can also be used in Reports & Dashboards.

Automatic Message Parse

Automatic message parsing occurs when no configured message parser has been found which matches the current log message. This is means that all configured log message parsers must be attempted before the decision to use an automatic parse can be made.

An automatic parse will scan the log message for text it finds interesting and attempt to extract this information. Examples of interesting text include:

1. Numbers

2. Words in all caps.
3. Words which contain numbers or symbols.
4. Text in brackets, parenthesis or quotes.
5. Text after a colon.

Information extracted from an automatic parse will usually be given a generic column name. For example, Column 1, Column 2, etc. However, a column name may be found in the data if a key/value pair is detected. LogViewPlus may detect a key/value pair when:

1. The key and value are separated by an equals sign. For example: **key=value**.
2. The key and value are separated by a colon. For example: **key: value**.

Occasionally, an automatic parse may result in an excessive amount of information. For example, if a log entry contains an XML or JSON statement. In these scenarios, CPU and memory is need to process log message data which may not ultimately be needed. To limit this kind of excessive parsing, an automatic parse will mark any messages with more than 10 parameters as advanced messages with 'Adv. Message'. These message are best processed manually.

Automatic message parsing is always on a best effort basis. Usually, we can obtain useful results using the heuristics described above, but sometimes you may need to manually extract the target information. This can be done using either pattern or regex message parsing discussed below.

Messages parsers can be added or changed only by using the Parse Message Filter. Existing message parsers can be viewed or removed in the Message Parser Settings.

Pattern Message Parse

A pattern log message parser uses string conversion specifiers to define a parsing configuration. The generated configuration pattern will be very similar to the configuration generated when using the Pattern Parser but only string conversion specifiers should be used.

When a manual message parse is needed, we recommend using the pattern parser instead of the regex parser. The pattern parse is generally significantly more performant. This can be particularly important when multiple log message parsers need to be associated with the log file configuration.

Regex Message Parse

A regex log message parser will use a regular expression to extract information from the log entry message. LogViewPlus uses Microsoft's regex parser internally, so only .NET regular expressions are supported.

As discussed above, the pattern message parser is recommend when a manual parse is needed. However, the regex parser can add significant value to users who are already familiar with regular expressions.

Data Table Parse

A Data Table message parse is an advanced operation that allows you to use JSON to configure the column settings and one or more parse instructions. Configuring Data Table parsers takes more time than Pattern or Regex parsers, but it gives you a much higher degree of control over how log entry messages are parsed.

Let's start with an example. Consider a log message that might look like:

123: this is a, 456 test message, 789

I happen to know that in this message 123 is actually a time span measured in seconds. 789 actually represents a size measured in megabytes. All other data in the message can be ignored. I only care about these two values.

In this case, values 123 and 789 could be parsed with:

```
{
   "name": "My Data Table Parser",
   "searchPatterns": [
      {
         "isRegex": true,
         "pattern": "(?<Time>\d+): "
      },
      {
         "isRegex": true,
         "pattern": ", (?<Size>\d+)$"
      }
   ],
   "operation": "sequentialregex",
   "columns": [
      {
         "name": "Time",
         "unitType": "timespan",
         "commonUnit": "s",
         "defaultValue": "0"
      },
      {
         "name": "Size",
         "unitType": "bytes",
         "commonUnit": "mb",
         "defaultValue": "0"
      }
   ]
}
```

There are four parts to this parser configuration, all of which are required.

The first field is the **name**. The value provided here will be used to identify the filter when it is displayed.

The second field is the **searchPatterns**. This is an array of custom parse configurations to be executed. These configurations can optionally be regular expressions if the **isRegex** property is set to true.

The third field is the **operation** type. This can be one of three values: **and**, **or**, **sequentialregex**. The operation defines how the **searchPatterns** should be processed when multiple search patterns are used. The **and** operation is used when all patterns must be matched. The **or** operation is used when only one pattern much match.

The **sequentialregex** operation is the same as **and** but the **searchPatterns** provided must all be regular expressions. Each expression must be matched in order where the next expression will start where the prior expression ends. In other words, expression 2 must be found after expression 1.

The final field is **columns** which defines the data model. The primary purpose of this field is to give names to the data extracted by the **searchPatterns**. All columns must have a name and the number of columns must match the expected number values extracted.

Additionally, the **columns** field can optionally define a **unitType** which identifies and converts standard units of measure. When using a **unitType**, a **commonUnit** must be defined to transform and normalize the data if necessary. For example, if LogViewPlus reads a time value in milliseconds, but the **commonUnit** is seconds, the time will be converted to seconds. A **defaultValue** should also be provided in case no data is found.

Unit types are optional. Currently, only two units of measure are supported: **time** and **bytes**. **Bytes** is used when a data size representation is needed and **time** is used to represent a time span.

When using a **unitType**, a **commonUnit** must be provided. The following **commonUnits** are supported.

unitType	commonUnit	Meaning
time	d	days
	h	hours
	m	minutes
	s	seconds
	f	fractional seconds
bytes	b	bytes
	kb	kilobytes
	mb	megabytes
	gb	gigabytes
	tb	terabytes

When interpreting the parsed value, data values will be scanned to determine if a unit type can be identified. Unit types in data values are often identified only by the first character to give more flexibility. For example, if the measurement type is **bytes** and the **commonUnit** is **mb**, than a value of 2048K will be converted and LogViewPlus will display a value of 2. Data values of "2048 killobytes" or "2048 KB" will produce the same result as only a case insensitive 'k' is used for identification. If a unit type cannot be identified, the **commonUnit** will be assumed and the data will not be modified.

Data Table parsers are new in LogViewPlus 3.1. If you are working with a Data Table parser and you have any questions or issues, please contact support.

Other Data Sources

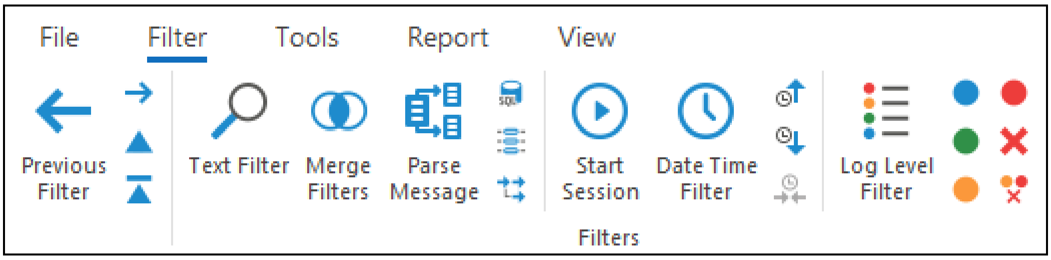
Log entries are not always stored in files. For example, Windows stores log entries in the Windows Event Log. Other examples of data source formats include relational databases, Syslog or UDP messages.

LogViewPlus can handle non-file based log entry stores as data sources - a new concept introduced in LogViewPlus 2.4. Data sources can be configured to appear as a local file in the Log Explorer.

LogViewPlus can support a number of different data sources including Windows Event Logs, Databases, Syslog, UDP, and Event Tracing for Windows (ETW).

Data sources are usually parsed as part of the data communication protocol. Where configuration is required, it is specific to the underlying data source. For more information, please see the data source configuration topic.

Analyze Log Files



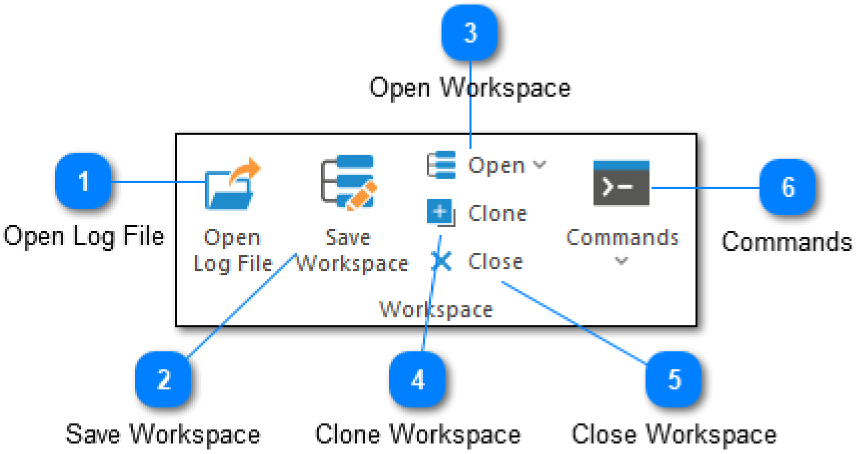
Almost all actions available in LogViewPlus can be accessed via one of the toolbars. LogViewPlus toolbar commands are covered in the following sections.

Toolbar Commands

LogViewPlus uses toolbar commands to expose features and actions. Almost all of the features available in LogViewPlus or accessible via the toolbars. Note that LogViewPlus also relies heavily on context menus. When learning LogViewPlus is useful to right-click on items you want to work with.

The following sections will cover the LogViewPlus toolbar commands in detail.

Workspace



The workspaces toolbar contains a number of commands to help you manage your workspace. These include commands like opening a log file, saving a workspace, managing directory monitors, and saving log entries.

1 Open Log File

The open log file command opens the Log Explorer which can be used to open a new file. The default directory used when opening a new file will be based on the previous file you have opened (if available). Note that once a file is opened it will automatically be tracked by default so new log entries appear automatically.

2 Save Workspace

Saves the current workspace. If you have not already saved the current workspace, you will need to provide a workspace name with the Add Workspace dialog.

Workspaces are useful when you find that you frequently open a group of files together. Note that a workspace includes files which you have opened manually, directory monitors, and any filters that you may have applied.

Files that have been opened based on rules are not part of the workspace. For example, Directory Monitors are part of the workspace while files opened by the Directory Monitor are outside of the workspace.

3 Open Workspace

The open workspace command allows you to open a previously saved workspace.

Note that files opened based on rules are not included in the workspace. The reason for this is that if you load this workspace in the future the files should be opened based on the application of the rules and not simply because they were opened before.

4 Clone Workspace

Cloning a workspace opens the Add Workspace dialog which will allow you to save the current workspace under a new name.

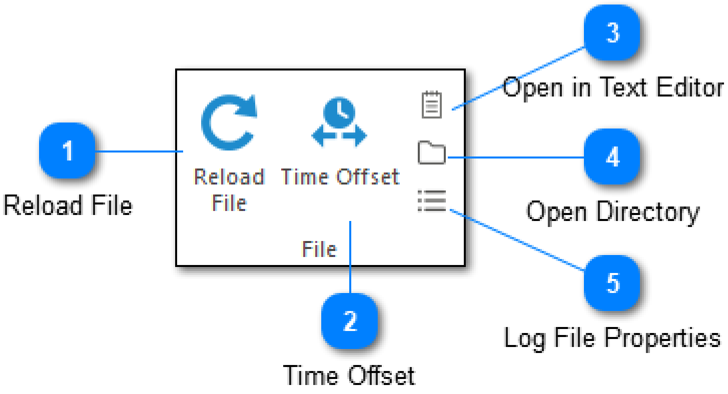
5 Close Workspace

Closes all files, filters, and directory monitors. All opened files and directory monitors are part of the 'current' workspace even if the workspace has not been saved.

6 Commands

This optional toolbar command will only be visible if you have configured an external command. Pre-configured external commands can be executed from this menu.

File



The file toolbar is used for managing your log files and views.

1 Reload File

Reloading the log file is useful if you have previously cleared all log entries and now need to see the cleared entries. It can also be helpful when you are modifying parser configurations, or to refresh a file which is not currently tailed.

2 Time Offset

Creates a time offset for the currently selected log file. This will modify all timestamps in the currently selected log file by a user configured amount. This command is useful when you intend to merge multiple log files but the timestamps of the log files are not in sync. Please see the time offset documentation for more details.

3 Open in Text Editor

Opens the currently selected log file in your default text editor.

4 Open Directory

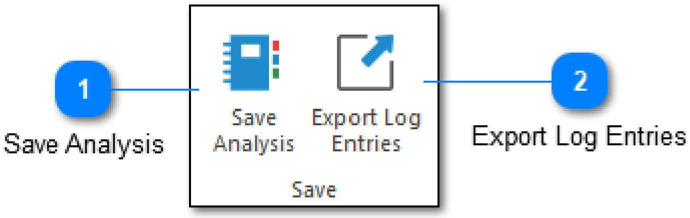
Opens the directory which contains the currently selected log file in the Log Explorer.

You can also hold down the CTRL key when executing this command to open the target directory in Windows Explorer. If this option is used and the log file is a remote log file (accessed via SFTP or FTP) then LogViewPlus will open the temporary directory which contains the local version of the log file.

5 Log File Properties

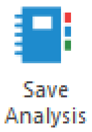
Opens the Log File Properties window for the currently selected log file.

Save



The save toolbar is used to export data from LogViewPlus. Where possible, LogViewPlus will export data using standards such as CSV files and zip compression which can be understood by other tools. However, in some cases, additional features may be available if the exported data is viewed in LogViewPlus.

1 Save Analysis



Opens the Save Analysis dialog.

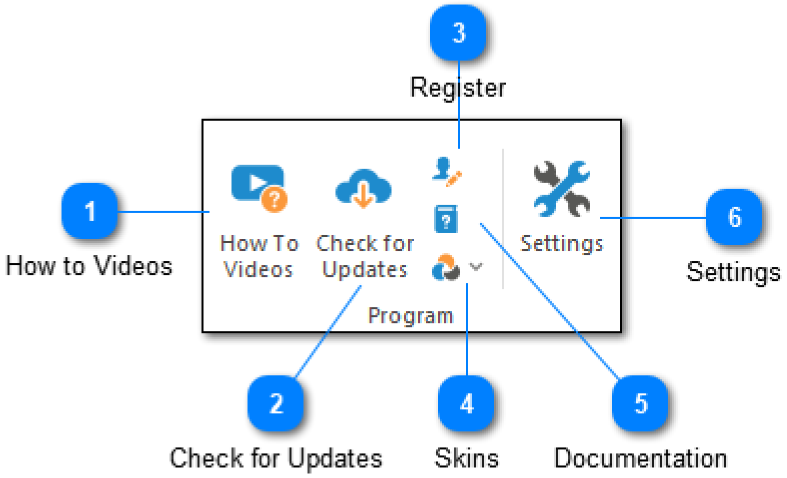
This feature maintains all log entries, filters and notes in your view in a parser independent way. This makes it easy to share your analysis with another LogViewPlus user or archive it for future reference. Your analysis will be saved in a compressed zip file to help with archiving or sharing using tools like Jira.

2 Export Log Entries

The export log entries command allows you to save the data in your current view or filter as a new log file. This is helpful if you want to share your current view with somebody else who may not have LogViewPlus installed. It is also useful when you want to save the current view for later analysis.

The exported log entries can be saved in a number of different formats including CSV, HTML, or in the format in which the log entry was written. However, the recommended format is as a custom LogViewPlus CSV file with the extension *.lvp. This format is basically CSV with a few added columns to help LogViewPlus keep track of things like bookmarks. LogViewPlus has a built-in parser for understanding files with a *.lvp extension.

Program



The Program toolbar is used to manage actions related to configuring and getting help for LogViewPlus.

1 How to Videos

The 'How to Videos' command can be used to open a window which contains a series of links pointing to the Quick Video Examples which we have included in the documentation. These videos are a great way to quickly get up to speed with LogViewPlus. We also provide a list of curated videos.

2 Check for Updates

Checks for updates to your currently installed LogViewPlus version. This command requires an Internet connection. In the event of connection difficulty, for example, if

LogViewPlus is unable to authenticate through your proxy server, you will need to download updates from the website.

3 Register

The register button begins the LogViewPlus registration process. Note that once this process is completed the register command will be removed.

4 Skins

Skins command can be used to change the look and feel of LogViewPlus.

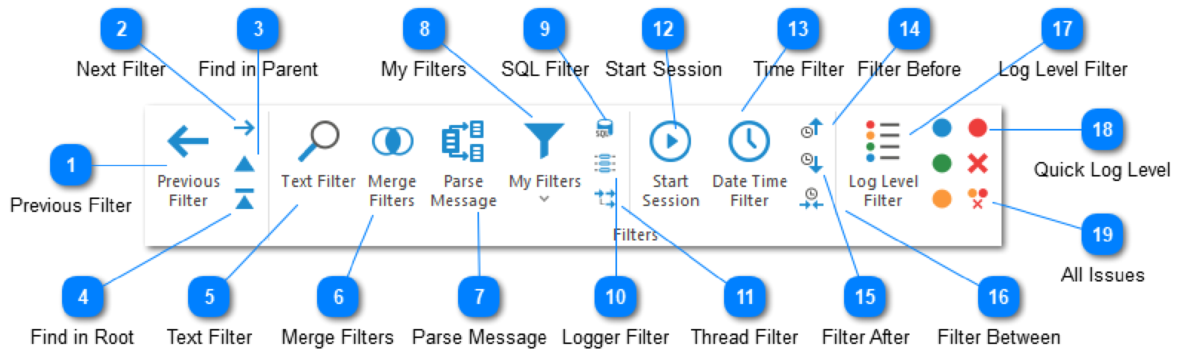
5 Documentation

The documentation command takes you to the online documentation.

6 Settings

The Settings command opens the Application Settings.

Filters



The filters toolbar is used to create new filters on the current log file or view. Filters are the primary tool used to analyze your log entries. You can create complex search criteria by either chaining filters or merging them into a single view.

When creating a new filter, it will always be created as a child of the current selection (either a Log File or a Filter). Children always contain a subset of the log entries available in the parent.

This toolbar also contains commands for navigating between filters.

1 Previous Filter

Move "back" to the previously selected filter.

2 Next Filter

→

Move "forward" to the previously selected filter. Note that this option will only be available if the "Previous" command has recently been used.

3 Find in Parent

▲

Moves up the log filter hierarchy. One interesting aspect of the log filter hierarchy is that it is not possible to have a log entry available in a child filter which is not also available in the parent filter. This command will find the currently selected log entry in the parent filter.

4 Find in Root

⤒

Finds the currently selected log entry in the original log file. This is the default action when double-clicking a log entry. Using this action as well as the "Previous" action is a great way to navigate your log files. You can quickly filter all errors, double-click an error to see the surrounding circumstances and then use the "Previous" command to move back to see your list of errors.

5 Text Filter

Creates a new text filter. A text filter is a filter on the current view which shows all logs which contain the given text. You can find out more about creating [Text Filters](#).

6 Merge Filters

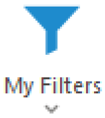
Displays the [Merge Filter Dialog](#) which can be used to create a new Merge Filter. Merge Filters can also be created by dragging and dropping filters, but for more complex scenarios we recommend using the Merge Filter Dialog.

7 Parse Message

If the target log file is parsed with a message specifier (%m), the Parser Message command will be enabled. This command can automatically sub-parse the selected message and attempt to extract the field data. Alternatively you can define a custom message parser using the Parse Message Filter dialog. Field data will then be displayed in the Log Entry Grid and the Message column will be temporarily removed.

Find out more about Log Message Parsing.

8 My Filters



The My Filter command can be used to access any custom filters you have written. This will command will only be available if you have successfully loaded a plug-in which contains a custom filter.

For more information on creating your own custom filters please see Custom Filters.

9 SQL Filter

Use a SQL query to filter your log entries. This filter is designed to work in conjunction with the Parse Message Filter (see below) which is used to extract additional data from a log entry message. You can find out more about creating a SQL Filter.

10 Logger Filter

Creates a new logger filter. A logger filter is a filter on the current view which shows all logs written by a particular logger.

11 Thread Filter

Creates a new thread filter. A thread filter is a filter on the current view which shows all logs written by a particular thread.

12 Start Session

Starts or stops a logging session. Logging sessions are useful when you want to focus on log entries from the period of time starting from 'now' and ending at some point in the future. For example, if you were debugging a program, you might start a logging session take a user action through your system and then stop a logging session. This will create a new date filter between the given start and stop times.

Logging sessions work with knowledge of the last recorded log entry. A session starts just after the last recorded entry and ends with the last recorded entry. This allows LogViewPlus to track all of the new log entries which were written over the time period regardless of time zone. Note that this may lead to confusing timespans being reported by the resulting date filter. For example, consider the case where you are tracking a log file in a different time zone where only one log entry is written during the session. You decide to track the file for ten minutes. In this case, the session filter start time will occur one millisecond after the last written log entry - which may have occurred days ago. The end time will be the timestamp associated with our single new log entry. It is therefore possible to record a 10 minute session which creates a date filter lasting for only a second. Alternatively, the timespan may cover several days. The important aspect is not the length of time elapsed, but that the filter captures all log entries written during the recording session.

Recording from the last recorded log entry allows LogViewPlus to track all new log entries written across multiple time zones when working with merged files.

A root log file can have only one active session at a time.

13 Time Filter

Creates a new date time filter. A date time filter is a filter on the current view which shows all logs written in a specified date range.

14 Filter Before

Reads the time of the currently selected log entry and creates a new Date Filter showing everything which occurred before that time.

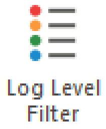
15 Filter After

Reads the time of the currently selected log entry and creates a new Date Filter showing everything which occurred after that time.

16 Filter Between

When two or more log entries are selected this command will determine the start and end time of the log entries and create a new Date Filter showing everything which occurred between the selected times.

17 Log Level Filter



Creates a new log level filter. A log level filter is a filter on the current view which shows all logs with the matching log level. You can find out more about creating Log Level Filters.

18 Quick Log Level

● ●
● ✖
● ⁖

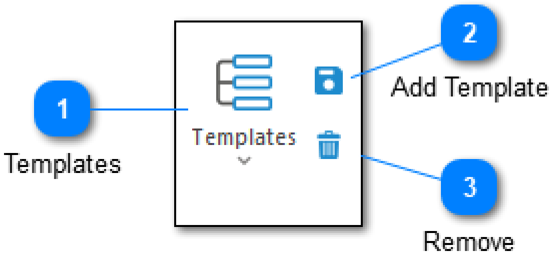
Quick log level filters can be used to quickly filter by log entry priority. Filter options include Debug, Info, Warn, Error, Fatal, and All Issues.

19 All Issues

⁖

Worth of special mention within the quick log level filters is the 'All Issues' filter. This filter is a shortcut to help you quickly create a log level filter which will track all Warning, Error and Fatal log entries. This action is the same as clicking these three quick filter commands separately.

Templating



The templating toolbar allows you to add, remove, and apply templates. If you find yourself frequently applying the same filters or highlights consider creating a template instead.

1 Templates

The templates command opens a drop-down box with all of your available templates. Selecting a template will apply it to the current view. The command is enabled when one or more templates have been previously saved.

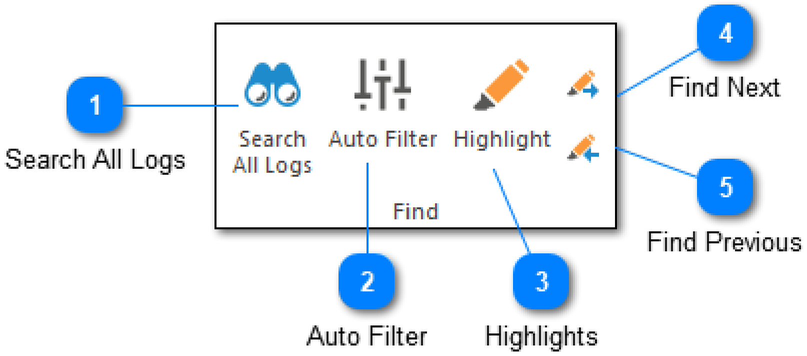
2 Add Template

Adds the selected highlight, filter or group of filters as a new template. You will be given the option to create a template name. This command will be enabled when the current log file has a template applied.

3 Remove

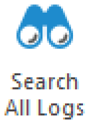
Opens the remove template dialog box. This gives you the ability to delete a previously saved template. The command is enabled when one or more templates have been previously saved.

Find



The find toolbar can be used to help you search the current view.

1 Search All Logs



Search All Logs will execute a simple text based search across all log files which are currently open. Results will be displayed in the Search Results window.

2 Auto Filter

Shows the grid search box below the column headings of the current log entry grid. This allows you to search the current log entry grid by column.

3 Highlights

Highlighting allows you to search for text and mark it to make it easier to find. Clicking on the Highlight command will bring up the Highlight Manager which allows you to create and delete highlights. Highlights are applied globally across all log files.

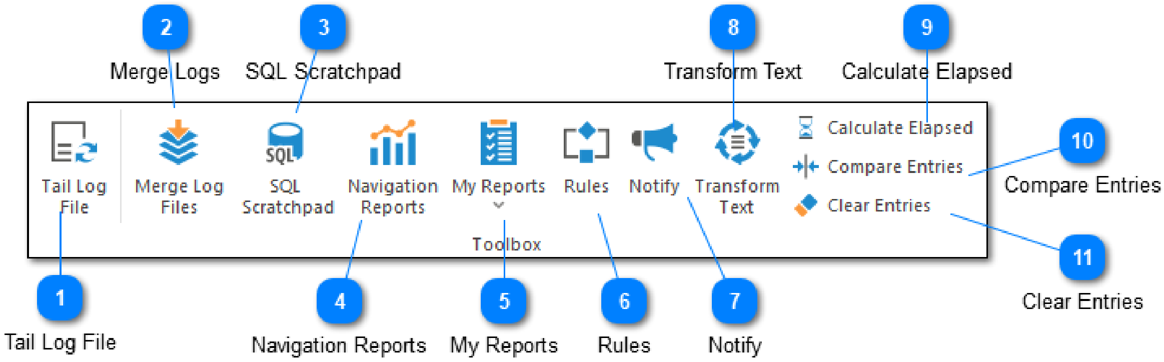
4 Find Next

Finds the next highlight. Note that any highlight will be matched. If you would like to find the next selected highlight, you can hold down the shift key while executing this command.

5 Find Previous

Finds the previous highlight. Note that any highlight will be matched. If you would like to find the previous selected highlight, you can hold down the shift key while executing this command.

Tools



The actions toolbar contains the list of actions you can use for the currently selected view.

1 Tail Log File

The tail log file command allows you to start or stop monitoring the current file for changes. Monitoring the file is the same as the UNIX tail command, which means new entries which are written to the file will be displayed in LogViewPlus as soon as they are written.

Auto-scroll is used to determine whether LogViewPlus should automatically scroll to new log entries as they are written. Note that auto-scrolling is only possible when a log file is in tail mode.

To enable auto-scroll, you simply need to select the last log entry currently in the view. An easy way to do this is to select the auto-scroll command from the quick access toolbar located in the top left corner of LogViewPlus. Alternatively, you can select the bottom of the Navigation Bar.

2 Merge Logs

The merge logs command is used to merge two or more log files into the same view. This makes it easier to work with multiple log files which are related to the same application. Executing this command will open the merge file selection window.

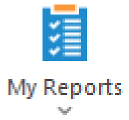
3 SQL Scratchpad

Launches the SQL Scratchpad which can be used to query your data. Generated SQL statements can be used in custom reports.

4 Navigation Reports

Navigation Reports a set of reports which are common to most log files. For example, a report showing log entries over time. Navigation Reports are distinct from Reports which are generally more static and business focused. Navigation reports can help with data navigation by automatically filtering your log file.

5 My Reports



If you have configured LogViewPlus to generate custom reports, those reports will be available for execution. This command will only be visible if custom reports have been configured.

6 Rules

Rules can be used to associate actions with a filter. For example, you could use a rule to change the background color of all log entries matched by a filter. Please see the Rules for more information.

The Rules command will be enabled if a filter is selected or if the current log file has rules applied. Based on the selection type, the command will either open the Rule Wizard or the Rule Manager respectively.

7 Notify

The notify command is used to create an alert when a new log entry is detected in a filter. This allows you to passively monitor a filter. For example, you could filter a log file for errors and be notified when a new error is detected.

8 Transform Text

Opens the Transform Text dialog which allows you to convert log entry data from one format into another. For example, you could use the Transform Text to convert parsed IDs into SQL statements.

9 Calculate Elapsed

Calculate Elapsed

Calculates the amount of time that has elapsed between the two selected log entries.

10 Compare Entries

Compare Entries

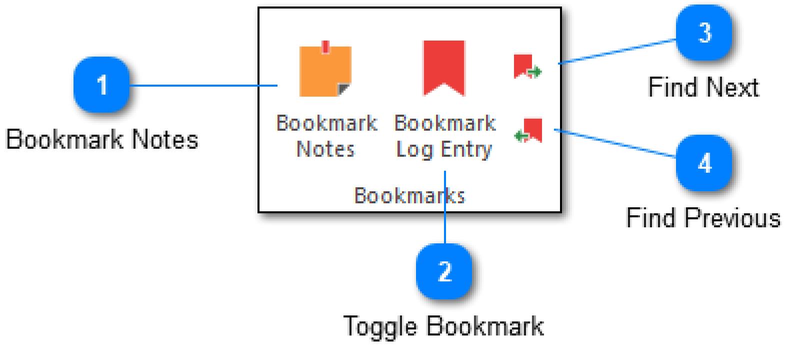
If you have configured LogViewPlus to use a compare tool (like WinMerge) the Compare Log Entries command will save the two selected log entries to separate files and open the files using your configured tool. This is helpful for quickly determining the difference between two log entries.

11 Clear Entries

Clear Entries

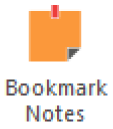
The clear entries command removes all entries from the log entries grid. This is helpful if you want a fresh view on the current log file. For example, the application has recently been restarted and you are not concerned with previous log entries.

Bookmarks



Bookmarks can be used to quickly find a given log entry. This is useful when you are frequently moving around the log file but want to return to a known log entry. The bookmarks toolbar can be used for managing bookmarks. Bookmarks also have a visual component on the log entry grid.

1 Bookmark Notes



Bookmark notes allow you to associate a given log entry with a block of free-form text. Depending on the state of the current log entry, the bookmark notes command will either convert the current bookmark, create a new bookmark, or display the already set bookmark notes.

2 Toggle Bookmark

Adds or removes a bookmark to the currently selected log entry. Note you can also add or remove bookmarks by double-clicking in the row selection column.

3

Find Next

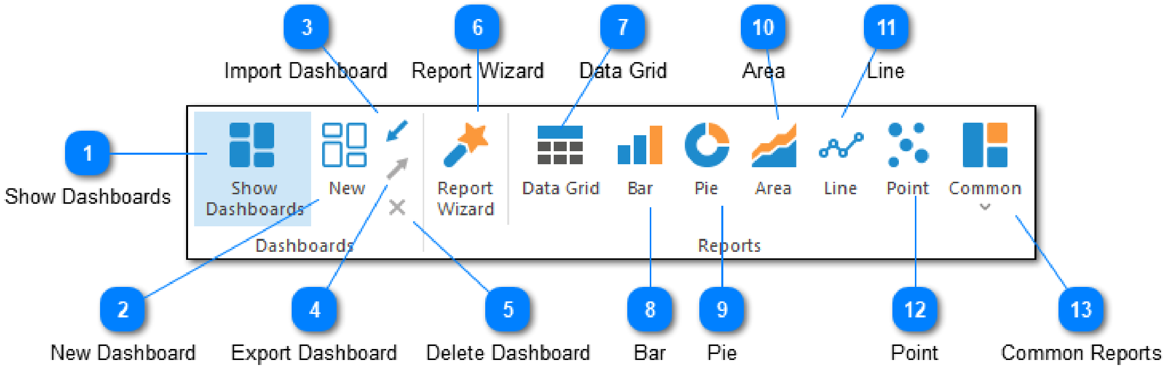
Finds the next bookmark. Note that any bookmark will be matched. If you would like to find the next selected bookmark, you can hold down the shift key while executing this command.

4

Find Previous

Finds the previous bookmark. Note that any bookmark will be matched. If you would like to find the previous selected bookmark, you can hold down the shift key while executing this command.

Report



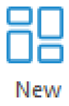
The Report toolbar is used to manage dashboards and create new dashboard reports.

1 Show Dashboards

The Show Dashboard command toggles whether dashboards should be displayed or hidden for the currently selected log file. If dashboards are displayed, they will appear as tabs next to the Log Data View tab at the bottom of the Log Entry Grid.

All other commands on the Report toolbar will be enabled only if dashboards are currently displayed.

2 New Dashboard



Creates a new dashboard tab. You will be prompted to provide a name for the new dashboard.

3 Import Dashboard

↙

Imports a previously exported dashboard (see below).

4 Export Dashboard

↗

Saves the currently selected dashboard to a file for later import (see above). Exported dashboards can be shared.

5 Delete Dashboard

✕

Deletes the currently selected dashboard.

6 Report Wizard

Report Wizard

Launches the Dashboard Report Wizard which can be used to produce any type of report. Several commands in Report dashboard rely on the Dashboard Report Wizard and simply load the Wizard directly in the required state. For example, the Bar command is simply the Report Wizard with the chart type decision predefined.

7 Data Grid

Data Grid

Create a new data grid report to show SQL query results as text in a grid.

8 Bar

Create a new bar chart.

9 Pie

Create a new pie chart.

10 Area

Create a new area chart.

11 Line

Create a new line chart.

12 Point

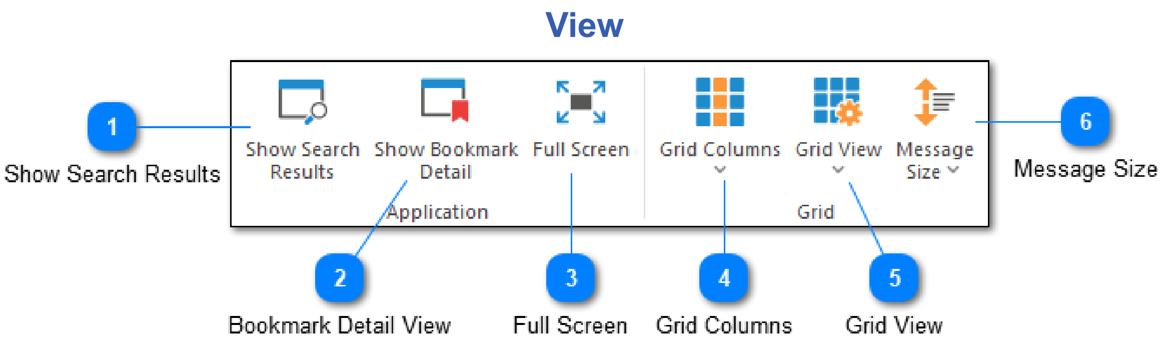
Create a new chart showing series data points.

13 Common Reports

Common reports are predefined reports that can be used with most parsed log files. Currently, the predefined report are:

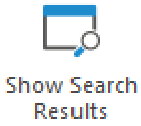
- Log Entries Per Minute
- Distinct Message Types
- Log Level Distribution
- Most Active Loggers
- Issues by Logger

Common reports are a great way to get started with dashboards. Try creating and editing a common report as a way to learn more about how Reports & Dashboards work in LogViewPlus.



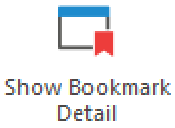
View commands can be used to control the display of the log entry grid.

1 Show Search Results



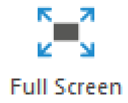
The show search results command can be used to display the Search Results window. You can add a filter to the search results window by right clicking on it and selecting "Add to Search Results". Search results are discussed in detail later in this documentation.

2 Bookmark Detail View



Opens the Bookmark Detail View which is a window that makes it easy to manage bookmarks and notes. This view can also be docked to the LogViewPlus main window.

3 Full Screen



The Full Screen command is used to toggle full-screen mode. When LogViewPlus is in full-screen mode it attempts to dedicate as much space as possible to the log entry grid and the log entry text box.

You can also toggle full-screen mode with the F11 key.

4 Grid Columns

The grid columns command displays a list of columns that may be added to the current view. The columns available will change depending on the conversion pattern used when parsing the log file.

Column settings will be persisted along with the parser configuration. Modifying or recreating your parser configuration will reset your column settings.

5 Grid View

The grid view command can be used to change the way that log entry messages are displayed within the log entry grid. Four options are available:

Show message detail: This view type can display the log entry message as multiple lines of text. Grid rows may be the sized differently. This is this is the default view.
One log entry per grid line: This view type will display the log entry message as a single line of text. All grid rows will be the same size.
Full Message: This view type will display the log entry message in a text box underneath a grid row.

Allow Horizontal Scroll: This setting is used to turn horizontal scrolling on or off. When horizontal scrolling is turned off columns will be auto sized to fit the given area.

Grid view settings will remain active for the selected log file until the file is closed. Grid view defaults can be set in Log Entry Display settings.

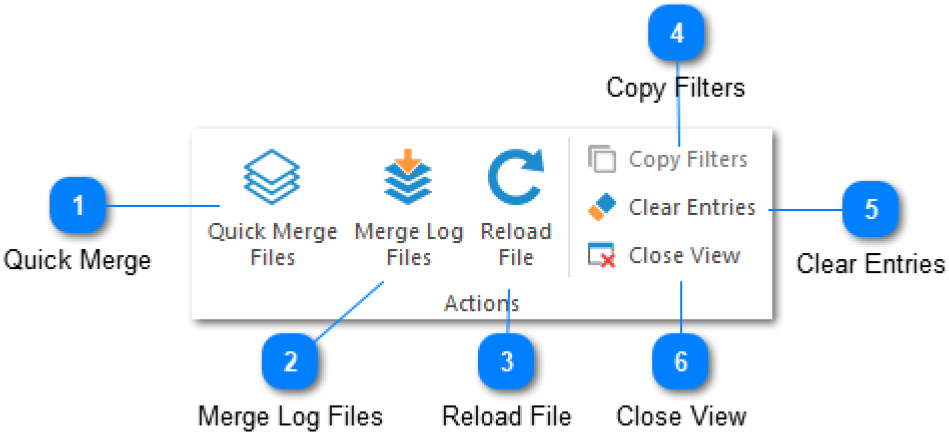
6

Message Size

The message size command can be used change the amount of text which is displayed in the message column of the log entry grid. This command will only be enabled if the grid view is not set to "one log entry per grid line". Message sizes range from "Very Small" to "Unlimited". We recommend that you experiment with this setting to determine the size appropriate for your log files.

Message size settings will remain active for the selected log file until the file is closed. Message size defaults can be set in Log Entry Display settings.

Selection



If you select multiple log files or filters at the same time, you will be presented with the Selection toolbar (shown above) and all other toolbars except for the File toolbar will be removed. To restore the default toolbars, simply select a single log file.

Most toolbar commands are unavailable when multiple log files are selected. The selection toolbar simply consolidates all of the available commands in order to reduce clutter.

1 Quick Merge

Merges the selected log files into a single view. This command will be disabled if a filter is selected.

2 Merge Log Files

The merge logs command is used to merge two or more log files into the same view. This makes it easier to work with multiple log files which are related to the same application. Executing this command will open the merge file selection window.

3 Reload File

Reloads the selected log files from source.

4 Copy Filters

Copies the selected filters to the clipboard. Filters are copied as plain text so they can be easily saved or shared. This command will be disabled if a log file is selected.

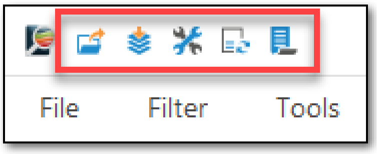
5 Clear Entries

Removes all log entries from the selected log file views.

6 Close View

Closes the selected log files or filters.

Quick Access



The quick access toolbar is located in the top left corner of LogViewPlus. It provides easy access to a number of commands without having to navigate menus. Note that commands available in the quick access toolbar are exactly the same as the commands available in the toolbar.

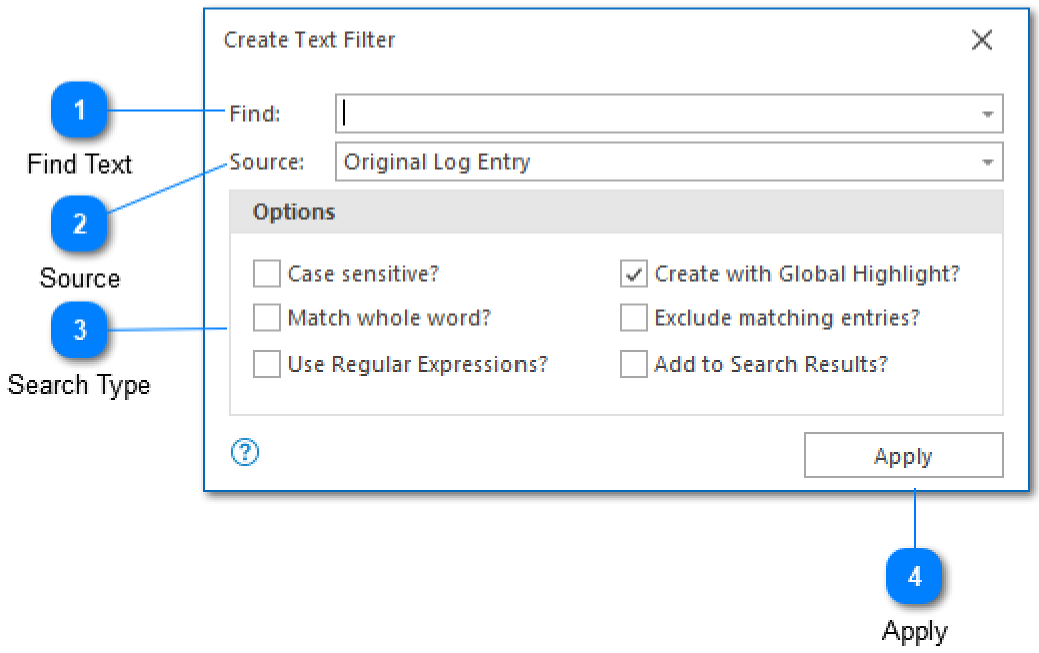
Currently, the quick access toolbar supports the following commands:

Command	Action
Open Log File	Opens the Log Explorer which can be used to browse directories and open a new file.
Merge Log Files	Opens the merge file selection window.
Settings	Opens the application settings.
Tail Log File	The track changes command allows you to start or stop monitoring the current file for changes.
Auto-Scroll	Auto scroll is used to determine whether LogViewPlus should automatically scroll to new log entries. Auto-scroll is enabled by selecting the last log entry currently in the view. If you would like to focus on the last row in the view while navigating back up the filter tree, you can always double-click on a log entry to find it in the main log file.

Toolbar Dialogs

A number of toolbar commands are used to open dialogs which request further information. These dialogs are the subject of the next section.

Text Filter



Create Text Filter

Find:

Source: Original Log Entry

Options

- ☐ Case sensitive?
- ☐ Match whole word?
- ☐ Use Regular Expressions?
- ☑ Create with Global Highlight?
- ☐ Exclude matching entries?
- ☐ Add to Search Results?

Text search filter may seem a little bit complicated when you see it for the first time. The complexity of this configuration arises due to the high degree of flexibility it provides when creating a text filter - but don't be intimidated. If you want to find text in your log files, just open the text filter, type your query, and click Apply. The default settings are appropriate for most situations. If needed, you can also change the default settings.

1 Find Text

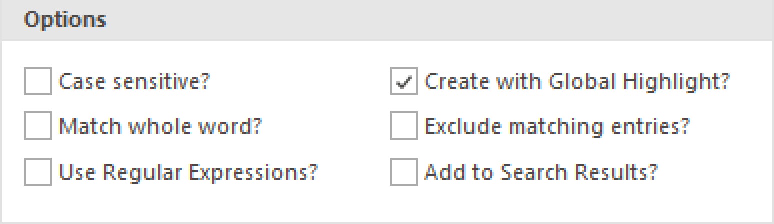
The find text box should contain the text query you want to execute. Pressing the enter key in this field will apply the current filter.

2 Source

Source: Original Log Entry

The source drop down box contains a list of all columns currently available in the selected log file. Selecting a column will restrict this text search to that particular column. To search across all columns select the "Original Log Entry" column.

3 Search Type



Options

□ Case sensitive?
□ Match whole word?
□ Use Regular Expressions?
☑ Create with Global Highlight?
□ Exclude matching entries?
□ Add to Search Results?

LogViewPlus supports four types of text search:

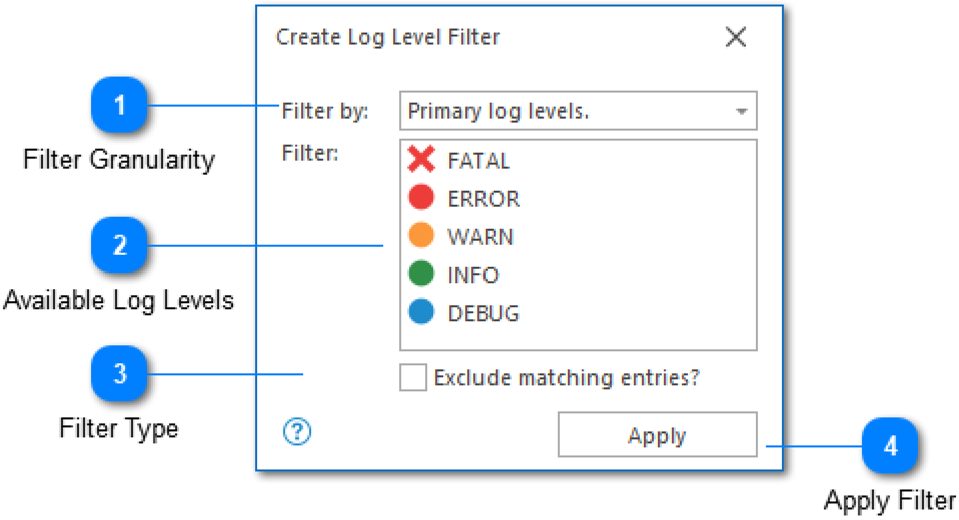
Case Sensitive: Determines the case sensitivity of the text filter. By default text searches are case insensitive.
Match Whole World: Determines whether the search should match the whole word. By default partial matches are allowed. For example, if you are matching the whole word "action" it will not be found in the word "transaction".
Use Regular Expressions: Indicates that the text provided in the find text box is a regular expression.
Create with Global Highlight: When checked a global highlight will be created when this text filter is created. This will highlight the text when it is found regardless of whether or not the filter is selected. Highlights are created by default but this can be changed in application settings.
Exclude Matching Entries: Creates the filter as an exclude filter. The filter results will show all records which do not match the search criteria.
Add to Search Results: The filter will be added to the Search Results window. This may improve navigation.

The "create as exclude filter" option is discussed separately below.

4 Apply

The apply command creates the configured filter.

Log Level Filter



Create Log Level Filter

Filter by: Primary log levels.

Filter:
- ✕ FATAL
- ● ERROR
- ● WARN
- ● INFO
- ● DEBUG

□ Exclude matching entries?

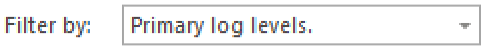
The Log Level Filter configuration is more complicated than average and is worth considering individually. The complexity of this configuration arises because this filter allows you to specify the granularity of your search. For example, frequently FATAL and ALERT messages need to be treated with the same severity- you may not want to search for each log level individually.

By default, LogViewPlus supports the following log level hierarchies.

Primary	**Secondary**
Fatal	Alert Critical Emergency Severe
Error	
Warn	Notice
Info	
Debug	Trace Verbose Fine Finer Finest

This configuration can be modified in the Log Levels settings.

1 Filter Granularity



Filter by: Primary log levels.

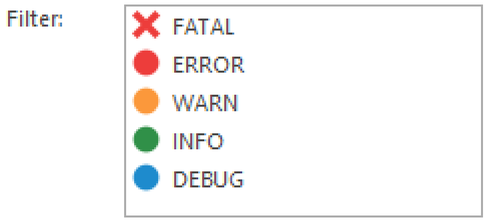
LogViewPlus supports filtering by log level in three different ways:

1. Primary log levels - when using this granularity level only the primary log levels will be available. Searching for 'Fatal' log levels will return any log entries which were declared as 'Alert' or 'Critical'. This is the default granularity level used by LogViewPlus. This granularity level will always be used when using the Quick Filters.

2. Primary and secondary log levels - using this granularity level both the primary and secondary searches are available. When searching for a primary log level, the behavior will be as discussed above. When searching for a secondary log level, the log level will need to be matched exactly. For example, if you searched for 'Critical' and 'Debug', you would be shown 'Trace' messages if they were defined, but not 'Emergency' entries.

3. Value all log levels equally - when using this granularity level the concept of 'primary' and 'secondary' log levels is abandoned completely. In this case, the given log level will need to be matched exactly. For example, searching for 'Debug' will return only 'Debug' messages and not 'Trace' messages.

2 Available Log Levels



Filter:

- ✗ FATAL
- ● ERROR
- ● WARN
- ● INFO
- ● DEBUG

The list of log levels available for searching. You can select multiple log levels by holding down the control key when selecting. Note that the log levels list will change depending on the granularity selection. Finally, note that this list may change depending on your Log Levels settings.

3

Filter Type

□ Exclude matching entries?

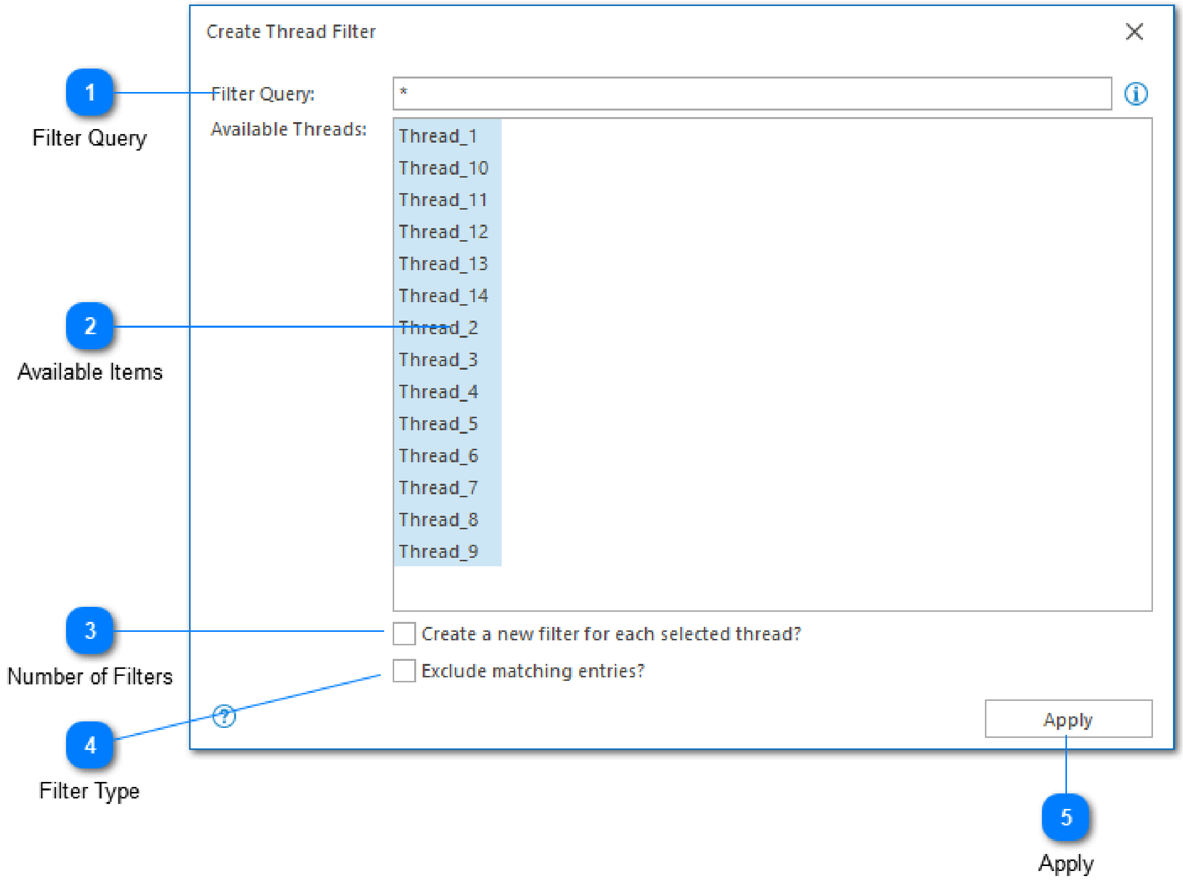
Most LogViewPlus filters allow you to specify whether they are include or exclude filters. Include filters mean, "include anything that matched the filter" whereas exclude filters mean, "exclude anything that matched the filter".

4

Apply Filter

The apply command creates the configured filter.

Value Filter



Create Thread Filter

Filter Query: *

Available Threads:

- Thread_1
- Thread_10
- Thread_11
- Thread_12
- Thread_13
- Thread_14
- Thread_2
- Thread_3
- Thread_4
- Thread_5
- Thread_6
- Thread_7
- Thread_8
- Thread_9

□ Create a new filter for each selected thread?

□ Exclude matching entries?

The Value Filter Dialog allows you to search within a column by selecting values. For example, the Thread and Logger [Filters](#) both use this approach to allow you to select the values which should be included in your filter. It is also possible to create multiple filters from the same dialog.

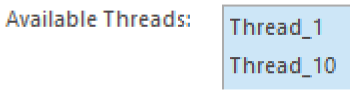
1 Filter Query

Filter Query: *

The filter query is used to define the filter. You can either manually type the filter query, or build it dynamically by selecting items from the 'Available Items' area.

If you would like to filter by data that is not currently available in the view, you can type this data manually. Alternatively, if you would like to filter by all available items as well as any new items which may appear, you can use the wildcard command '*' (as shown in the screenshot).

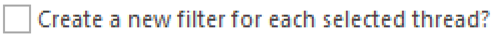
2 Available Items



Available Threads:
Thread_1
Thread_10

Select items from the Available Items area to build dynamically build the filter query. Note that the list of available items is populated by the current view. If some items appear to be missing, you may need to select a parent view.

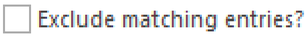
3 Number of Filters



□ Create a new filter for each selected thread?

By default, the filter query will be used to create a single filter. You can use this checkbox to indicate that you want to create a new filter for each matched item.

4 Filter Type



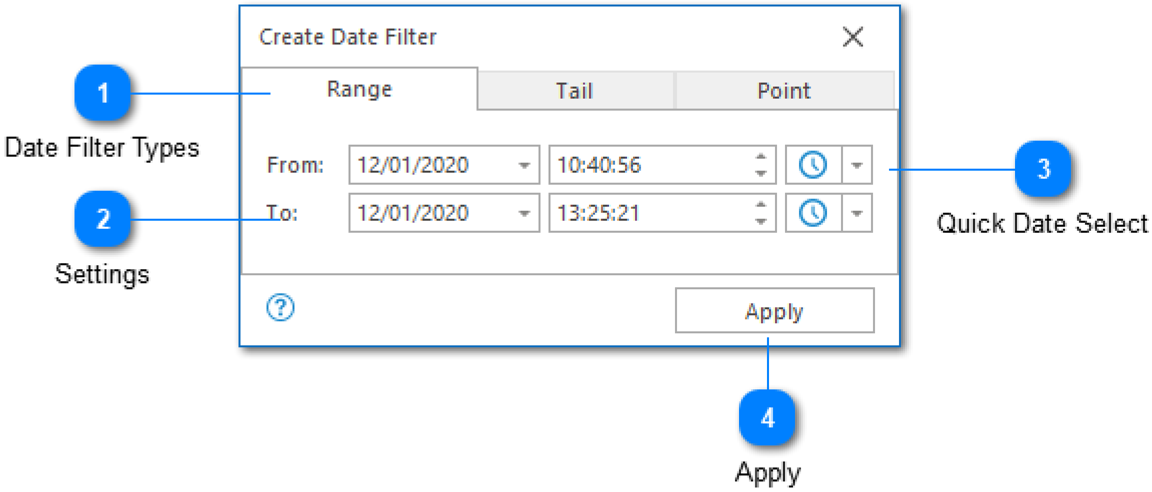
□ Exclude matching entries?

Most LogViewPlus filters allow you to specify whether they are include or exclude filters. Include filters mean, "include anything that matched the filter" whereas exclude filters mean, "exclude anything that matched the filter".

5 Apply

The apply command creates the configured filter.

Date Time Filter



Date time filters are used for creating and editing all log entry date filters. This might mean filtering log entries between two dates, or filtering log entries around a known date time.

The easiest way to create date filters is by selecting the appropriate log entries in the Log Entries Grid and then right clicking to use the context menu. This will display commands that allow you to filter before, after or between the dates provided by your selection. Another easy way to create date filters is to use the context menu available from the log level Navigation Bar.

While you can obviously create filters using the daytime filter form described here, we recommend creating date filters using the approaches described above. The date filter form can then be used to edit a filter and make minor changes.

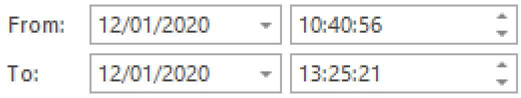
1 Date Filter Types

The tabs at the top of the date filter window allow you to select the type of date filter you want to create. Three types are available:

Type	Description
Range	Filters log entries between the From and To dates provided.
Tail	Filters log entries created recently.

Point	Filters log entries created before or after a point in time.

2 Settings



From: 12/01/2020 10:40:56

To: 12/01/2020 13:25:21

The settings displayed will depend on the filter type selected. In the example above, a range filter is selected and we are prompted to provide a From and To date.

3 Quick Date Select

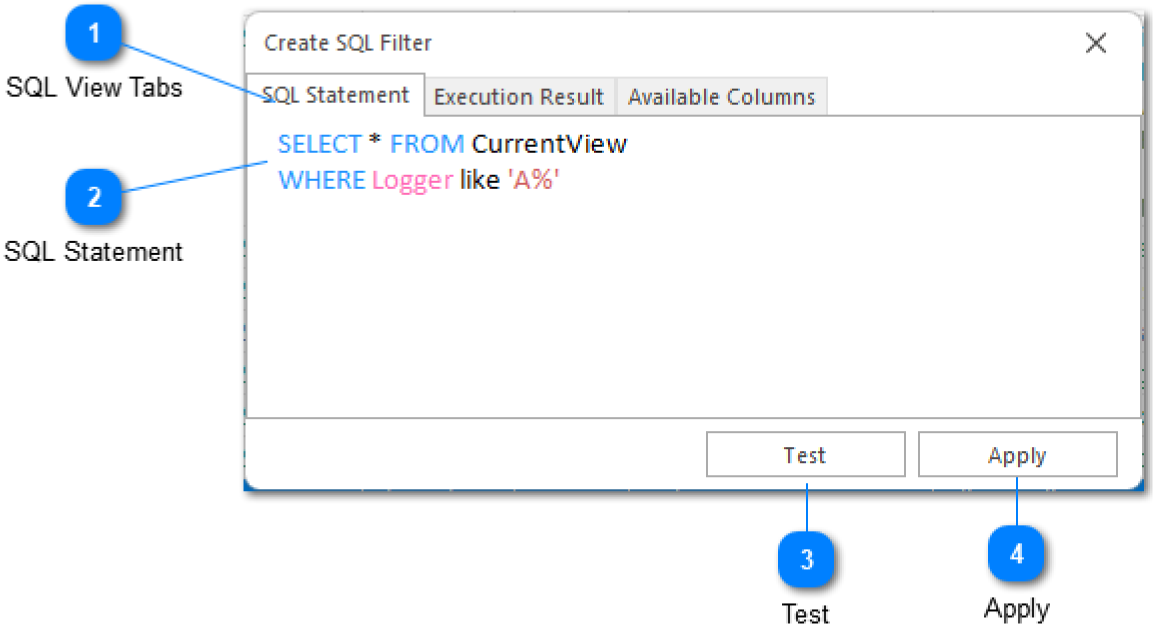
When creating a range filter, the Quick Date Select control is displayed. This control can be used to quickly input a predefined date.

The default option here is to input the date opposite the current control. For example, if the current control is the From date, the opposite control would be the To date - and vice versa. The default option can be used by simply clicking on the button. Other options are available through the pop-up menu provided.

4 Apply

The apply command creates the configured filter. The type of filter created will depend on which tab is focused.

SQL Filter



```
SELECT * FROM CurrentView
WHERE Logger like 'A%'
```

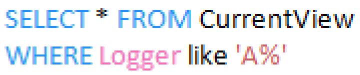
Use the SQL filter to show all log entries matching a given SQL SELECT statement. When writing a SQL filter statement it's important that only the WHERE clause is edited. The fields shown in the filter will be independent of the fields used in the select statement and the data source will always be CurrentView.

1 SQL View Tabs

The SQL view tabs can help you write your SQL statement. There are three different views:

1. The SQL Statement tab is an input box where you can write your SQL select statement.
2. The Execution Result view shows the results you will get when your SQL statement is executed. SQL statement execution occurs automatically when this tab is selected.
3. The Available Columns tab can be used to display the names of the data source columns in the current view. You can also display the names of the available columns by pressing CTRL+Period in the SQL Statement view.

2 SQL Statement



```
SELECT * FROM CurrentView
WHERE Logger like 'A%'
```

The SQL SELECT statement used to populate the SQL filter. Note that only the where clause should be modified (see above). See LVP SQL for more information on the supported SQL syntax.

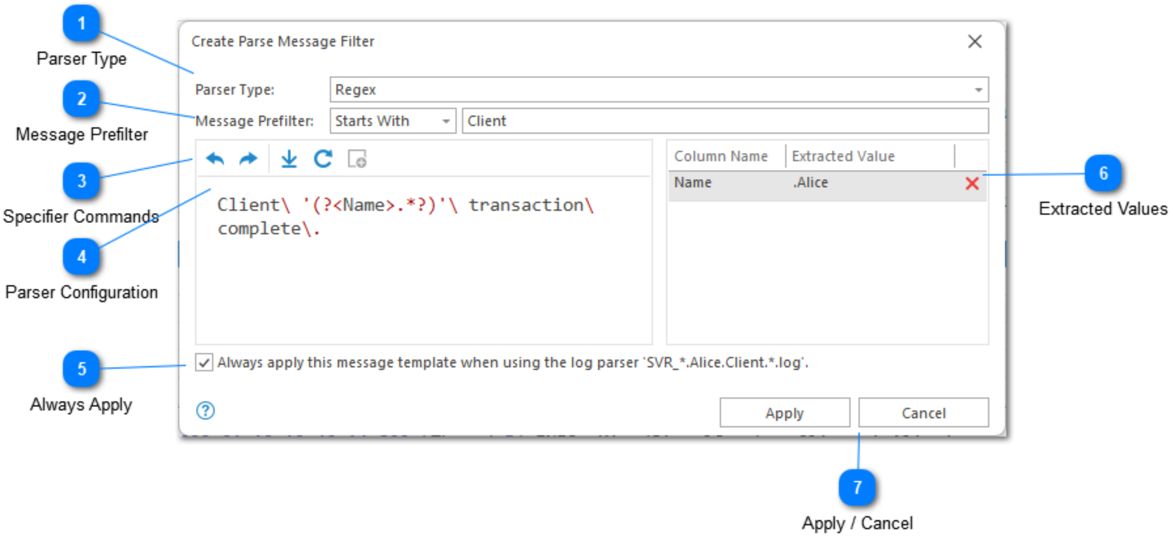
3 Test

The Test command is used to parse the provided SQL statement. The SQL statement will not be executed, only parsed. If you would like to execute the SQL statement, please navigate to the execution result tab.

4 Apply

The apply command will create the filter using the SQL statement provided.

Parse Message Filter



Parser Type: Regex

Message Prefilter: Starts With Client

```
Client\ '(?<Name>.*?)'\ transaction\
complete\.
```

Column Name	Extracted Value
Name	.Alice

☑ Always apply this message template when using the log parser 'SVR_*.Alice.Client.*.log'.

The Parse Message Filter is a very special type of filter because it does two things. First, it can modify how a log entry message is parsed and reload the log file if necessary. Second, it will create a filter that shows all of the log entries that could be parsed using the supplied parser configuration. If the configuration for the log message parser has not been modified, the first operation will be skipped and the filter will simply gather all matching log entries.

Please see the Log Message Parsers for more information.

1 Parser Type

Parser Type: Regex

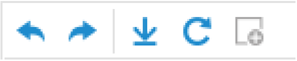
The type of algorithm used to parse the long entry message as described in Log Message Parsers.

2 Message Prefilter

Message Prefilter: Starts With Client

A message prefilter is provided when the parser type might be complex. A message prefilter will perform a simple string compare on the target log entry before applying the given regex. Message prefilters can improve application performance in some scenarios.

3 Specifier Commands

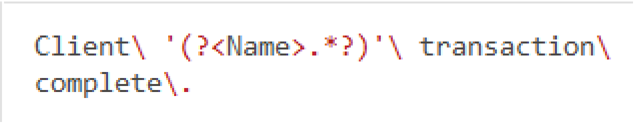


The specifier commands toolbar allows you to extract values from a log entry and replace them with a Conversion Specifier. All toolbar commands can also be accessed on the parser configuration context menu.

Unlike the Log Parser Configuration options, message parsing only supports one conversion specifier. This is a generic specifier which can be used to substitute text for column name.

You can hover over a command to see a tool tip with a full description.

4 Parser Configuration



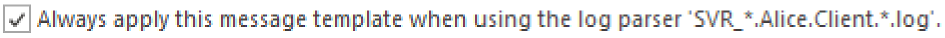
```
Client\ '(?<Name>.*?)'\ transaction\
complete\.
```

The parser configuration view shows a work in progress version of your parser configuration. If you are familiar with Conversion Specifiers, you can type your parser configuration directly. However, we recommend selecting text and marking it with the specifier command toolbar. For best results, this should be done while progressing from left to right.

In the example above the log entry message has automatically been regex escaped. This step is needed before the parsing regex can be applied.

Please see the Log Message Parsers for more information.

5 Always Apply

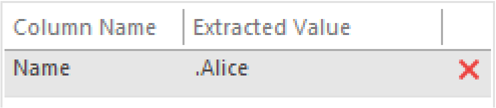


☑ Always apply this message template when using the log parser 'SVR_*.Alice.Client.*.log'.

The Always Applied checkbox will associate this message parser configuration with the known log file parser configuration. Anytime the specified log file parser configuration is used, the given message parser will also be used. Enabling this relationship is almost always recommended as it can help with parsing the log file correctly on the first attempt and prevent a later log file reload.

If this checkbox is enabled a new application setting will be created. Please see the Message Parser Settings for more information.

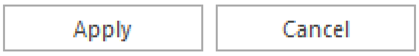
6 Extracted Values



Column Name	Extracted Value	
Name	.Alice	✕

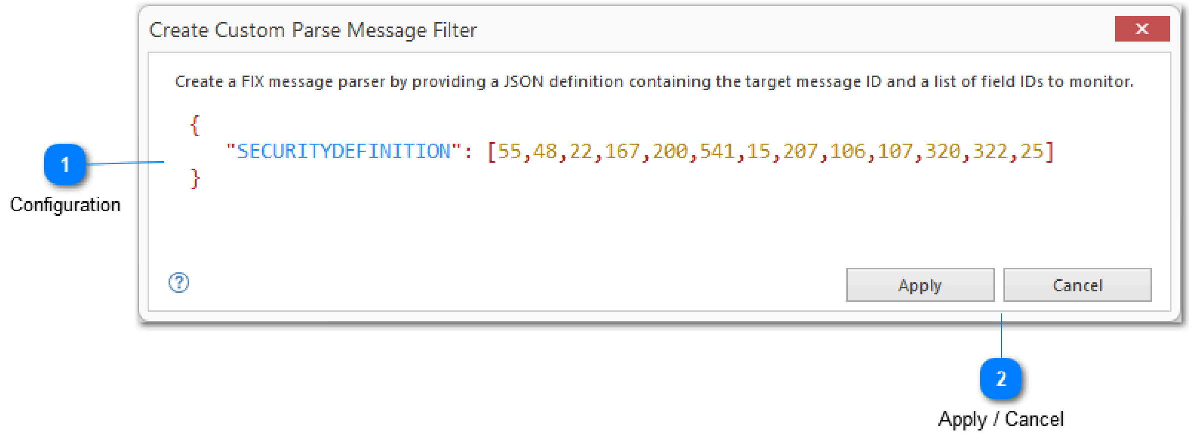
The extracted values grid displays the values that would be extracted from your sample log entry given the parser configuration provided. The column names for the values will also be displayed. Removing a value from the extracted values list will add it back to the parser configuration.

7 Apply / Cancel



The Apply command creates the configured filter. The Cancel command discards any changes.

Custom Parse Filter


Create Custom Parse Message Filter

Create a FIX message parser by providing a JSON definition containing the target message ID and a list of field IDs to monitor.

```
{
    "SECURITYDEFINITION": [55,48,22,167,200,541,15,207,106,107,320,322,25]
}
```

The Custom Parse Message Filter dialog provides an alternative means of configuring Message Parsers. Some parsers use custom message parsing techniques which are not covered by the Parse Message Filter. Currently, only the FIX Parser uses a custom message parser, so we will focus our discussion on implementing custom FIX message parsers. However, note that any string may be used to define a message parser and the interpretation of that string will be left to the ILogParser implementation.

If you have developed a Custom Parser and would like to use the Custom Parse Filter dialog, your parser will simply need to implement the ILogParserWithCustomMessageTemplates interface.

Please see the Log Message Parsers for more information.

1 Configuration

```
{
    "SECURITYDEFINITION": [55,48,22,167,200,541,15,207,106,107,320,322,25]
}
```

The configuration provided can be any string. Interpretation of the string will be up to the underlying parser configuration.

Currently, LogViewPlus only has one parser which uses a Custom Message Parse - the FIX Parser which is a niche parser designed to handle FIX Messages. The remainder of this discussion will therefore focus on FIX message parsing.

Configuration for FIX message parsing requires two fields:

1. The name of the FIX message type.
2. An array of numeric FIX fields which should be displayed.

The FIX message parsing configuration is provided as a JSON string. Defaults will be provided for all standard message types. An empty configuration value will be used as an indication that the default message parse implementation should be used.

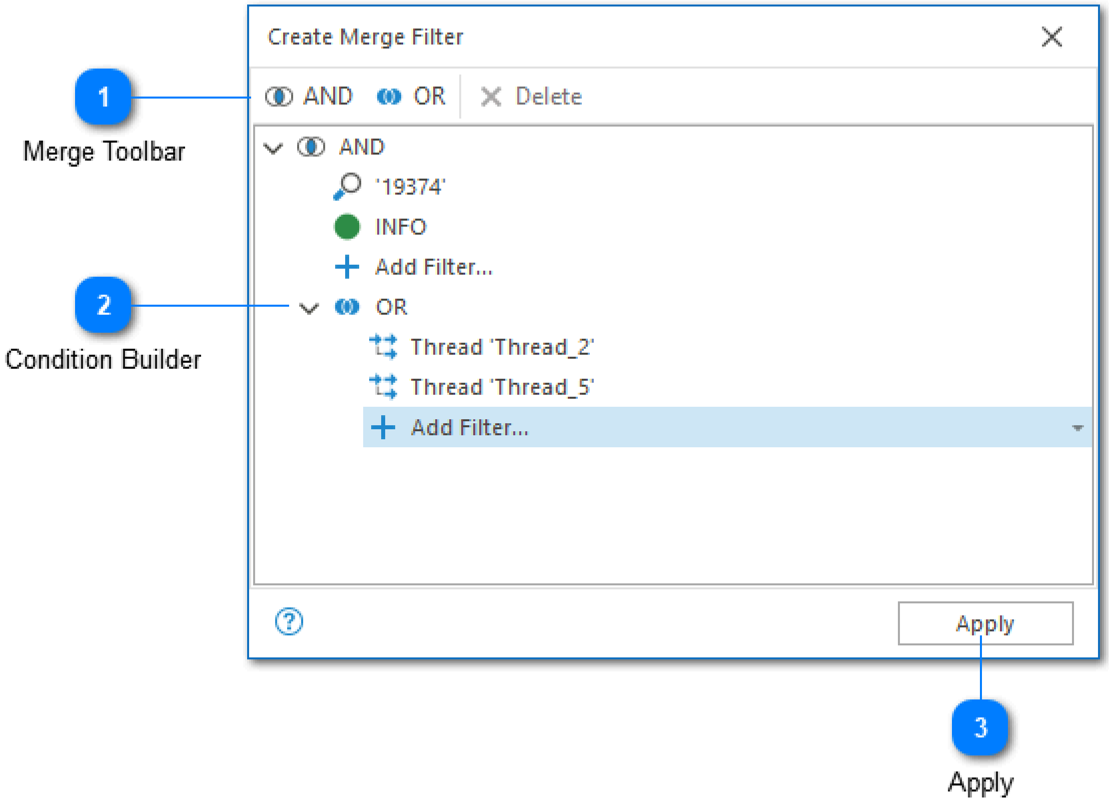
The FIX Parser will use this information to determine the structure of the Message field displayed in the Log Entry Grid. The fields will also be used to provide column definitions when the message parse filter is applied.

Numeric IDs will be converted into their standard field names before display in the log entry message. Standard field names will also be used when providing columns for parsed messages.

2 Apply / Cancel

The Apply command creates the configured filter. The Cancel command discards any changes.

Merge Filter



The merge filter dialog is used to create or edit a merge filter. The dialog works exclusively which filters that have already been created.

Merges are represented as a tree where the parent node is always a conditional operation. Children can be either a pre-existing filter, or a further conditional operation. If a conditional operation is created, it must have at least two filters. Note that a single conditional can also have more than two filters.

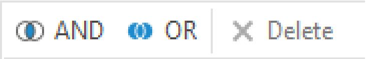
Children of conditional operations can always be thought of as working inside parenthesis as a single operation.

For example, the merge filter above could be written as:

('19374' AND Info AND (Thread 2 OR Thread 8))

Note that existing merge filters will be included in the pre-existing filters list.

1 Merge Toolbar

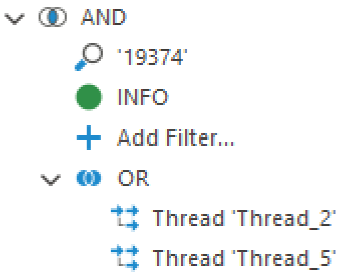


The merge toolbar is used to create or remove conditional operations from the condition builder.

The following commands are supported:

Command	Description
AND	Creates a new AND conditional.
OR	Creates a new OR conditional.
Delete	Deletes the selected value from the current merge operation. The root conditional and 'Add Filter...' commands cannot be deleted.

2 Condition Builder



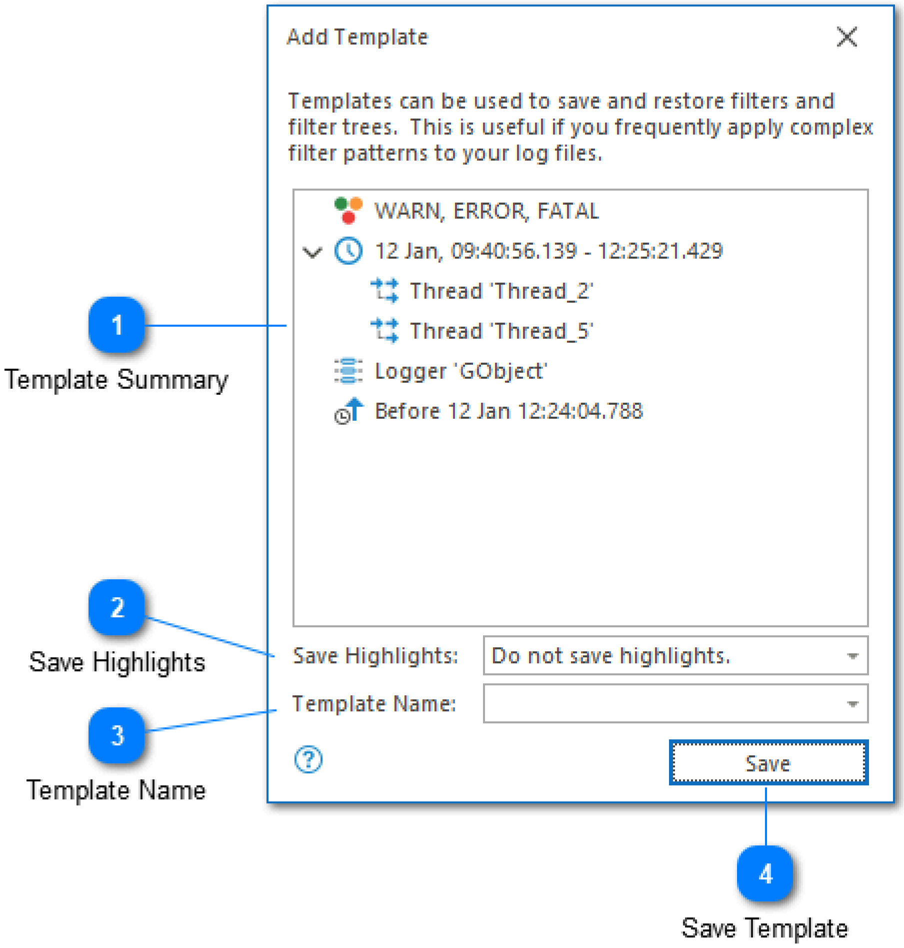
The condition builder is used to configure the merge filter. Every item in the condition builder is a drop down. For conditional operations, the drop down will contain two items - AND and OR. For filter operations the drop down will contain a list of all filters which exist in the current workspace regardless of whether those filters are available to the current log file or view.

All conditionals will always contain an 'Add Filter...' child node. This node can be used to set a new filter. After the filter is set, a new 'Add Filter...' child will be created. This allows you to set multiple filters on the same conditional.

3 Apply

The apply command creates the configured filter.

Add Template



Add Template

Templates can be used to save and restore filters and filter trees. This is useful if you frequently apply complex filter patterns to your log files.

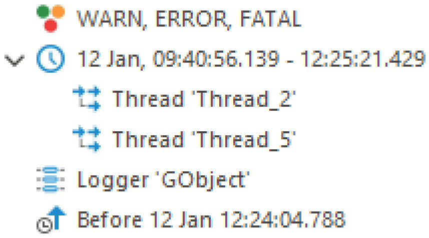
- WARN, ERROR, FATAL
- 12 Jan, 09:40:56.139 - 12:25:21.429
  - Thread 'Thread_2'
  - Thread 'Thread_5'
- Logger 'GObject'
- Before 12 Jan 12:24:04.788

Save Highlights: Do not save highlights.

Template Name:

A template is a collection of pre-saved filters or highlights which can be applied to the current log file. Templates are useful when you find yourself frequently applying the same highlight, filter or set of filters to different log files in different LogViewPlus sessions.

1 Template Summary

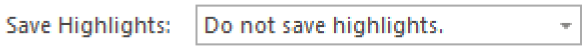


WARN, ERROR, FATAL
12 Jan, 09:40:56.139 - 12:25:21.429
Thread 'Thread_2'
Thread 'Thread_5'
Logger 'GObject'
Before 12 Jan 12:24:04.788

The template summary shows what will be saved as part of this template. In the above example four filters will be saved.

Highlights can be saved as a template, but this will not be shown in the template summary. In other words, if highlights are the only items in the template, the summary will be blank.

2 Save Highlights



Save Highlights: Do not save highlights.

The save highlights combo box allows you to specify how highlights should be saved in this template.

Highlights are global. The set of highlights saved in the template will be taken from the global list of available highlights.

Highlights are saved separately from filters and can therefore be saved even if no filters are found in the template.

The highlight save options available are:

Do not save highlights: No highlights will be saved.
Save all user generated highlights: Only highlights explicitly created by the user will be saved. Highlights created automatically, such as through the creation of text filters, will not be saved.
Save all highlights: All highlights will be saved regardless of how they were created.

3 Template Name

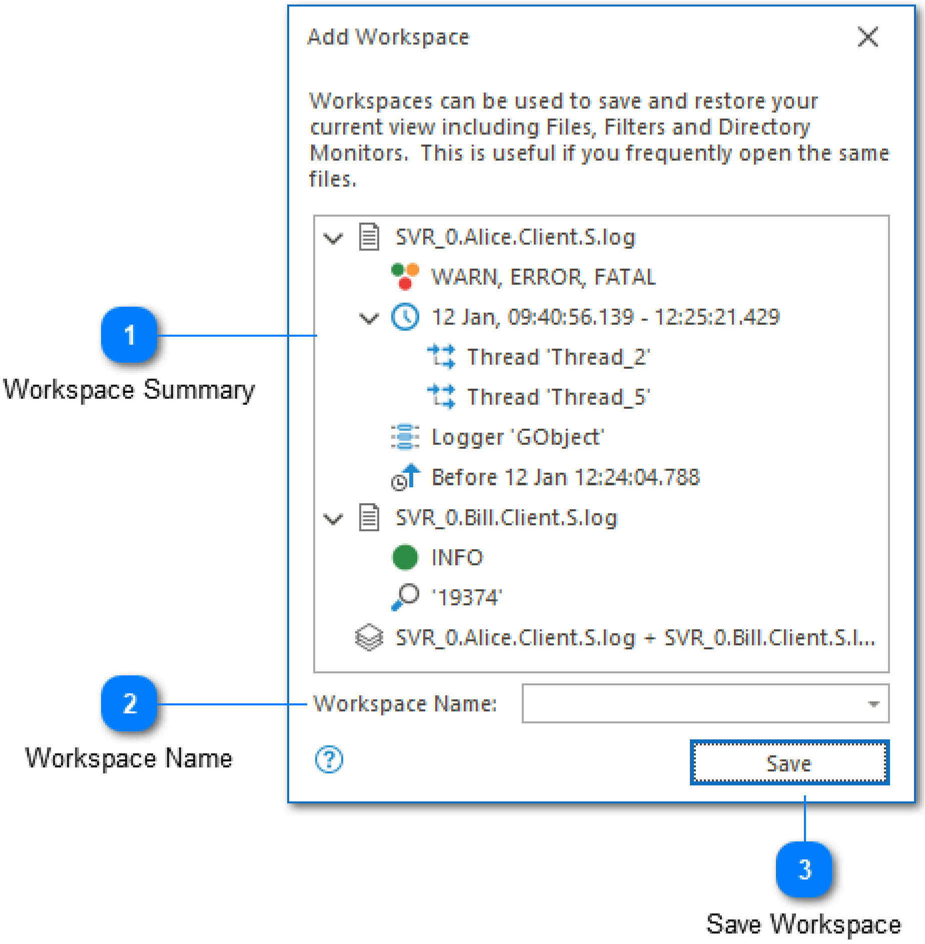
An easy to remember name for this template. This name will be used to populate the drop-down box which is displayed when you access the templates command from the toolbar.

If you choose an existing template, either by using the drop-down or typing the name manually, the existing template will be replaced.

4 Save Template

Saves the configured template. Templates are saved across LogViewPlus sessions.

Add Workspace



Add Workspace

Workspaces can be used to save and restore your current view including Files, Filters and Directory Monitors. This is useful if you frequently open the same files.

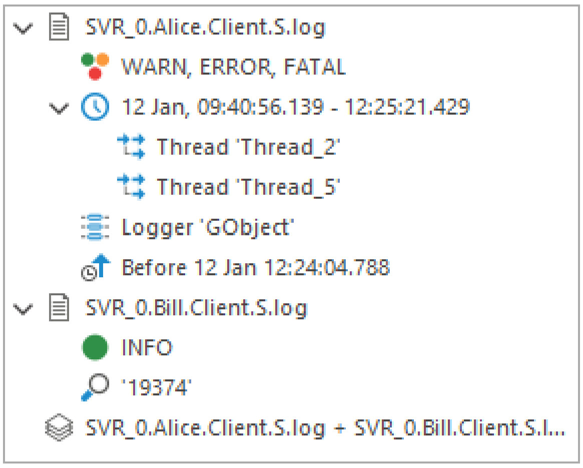
```
SVR_0.Alice.Client.S.log
    WARN, ERROR, FATAL
    12 Jan, 09:40:56.139 - 12:25:21.429
        Thread 'Thread_2'
        Thread 'Thread_5'
    Logger 'GObject'
    Before 12 Jan 12:24:04.788
SVR_0.Bill.Client.S.log
    INFO
    '19374'
SVR_0.Alice.Client.S.log + SVR_0.Bill.Client.S.l...
```

Workspace Name:

The add workspace dialog is used to save the current workspace. It shows you a summary of the current workspace and allows you to set an easy to remember name which will be displayed under the workspaces pop-up.

Note that workspaces save log file locations and not the underlying data. The log file at the given location can then be re-opened in the future. If the log file is not found, it will be ignored.

1 Workspace Summary



- SVR_0.Alice.Client.S.log
  - WARN, ERROR, FATAL
  - 12 Jan, 09:40:56.139 - 12:25:21.429
    - Thread 'Thread_2'
    - Thread 'Thread_5'
  - Logger 'GObject'
  - Before 12 Jan 12:24:04.788
- SVR_0.Bill.Client.S.log
  - INFO
  - '19374'
- SVR_0.Alice.Client.S.log + SVR_0.Bill.Client.S.l...

The workspace summary shows what will be saved as part of this workspace. Workspaces can save files, filters, merged files, and directory monitors.

2 Workspace Name

Workspace Name:

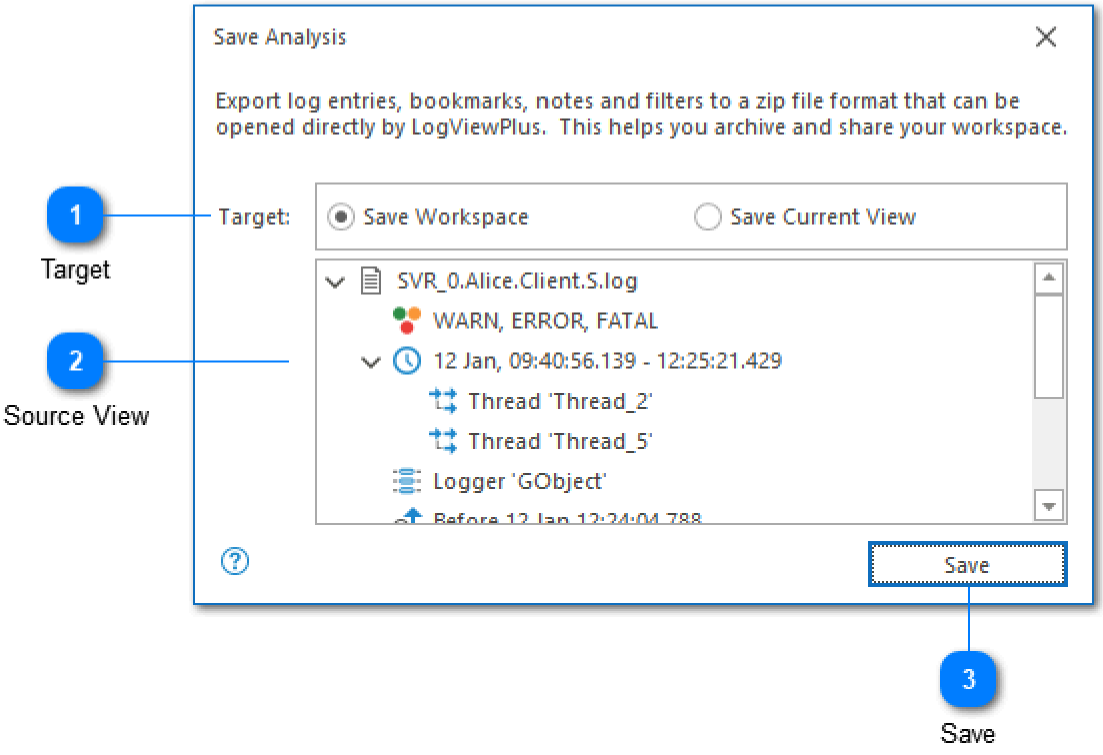
Choose an easy to remember name for this workspace. This name will be used to populate the drop-down box which is displayed when you access the workspaces command from the toolbar.

If you choose an existing workspace, either by using the drop-down or typing the name manually, the existing workspace will be replaced.

3 Save Workspace

Saves the configured workspace. Workspaces are saved across LogViewPlus sessions.

Save Analysis



Save Analysis

Export log entries, bookmarks, notes and filters to a zip file format that can be opened directly by LogViewPlus. This helps you archive and share your workspace.

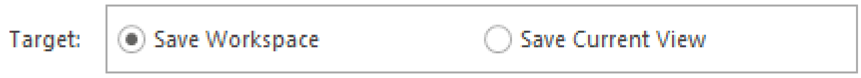
Target: ● Save Workspace ○ Save Current View

```
SVR_0.Alice.Client.S.log
    WARN, ERROR, FATAL
    12 Jan, 09:40:56.139 - 12:25:21.429
        Thread 'Thread_2'
        Thread 'Thread_5'
    Logger 'GObject'
    Before 12 Jan 12:24:04.788
```

The Save Analysis dialog can be used to export data from LogViewPlus into a compressed zip file. This zip file will also contain metadata that can be used to recreate your LogViewPlus views including filters, notes, bookmarks, etc.

When exporting data using the Save Analysis dialog, you will be given a choice of file format options - either *.logzip or *.zip. The data stored in both of these target file formats will be exactly the same. The only difference is that LogViewPlus is registered with Windows to handle *.logzip files. For example, double-clicking a *.logzip file will cause Windows to open the file in LogViewPlus. Double-clicking a *.zip file will likely open the file in another program.

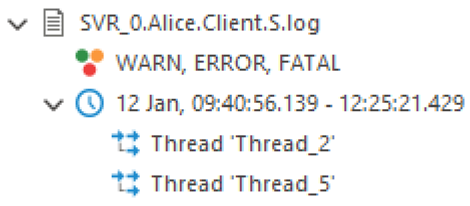
1 Target



Target: ● Save Workspace ○ Save Current View

The analysis target is used to define the data set to be exported. You can either export the entire workspace, or the currently selected LogViewPlus view. To change the current view selection, you must first exit the Save Analysis dialog.

2 Source View



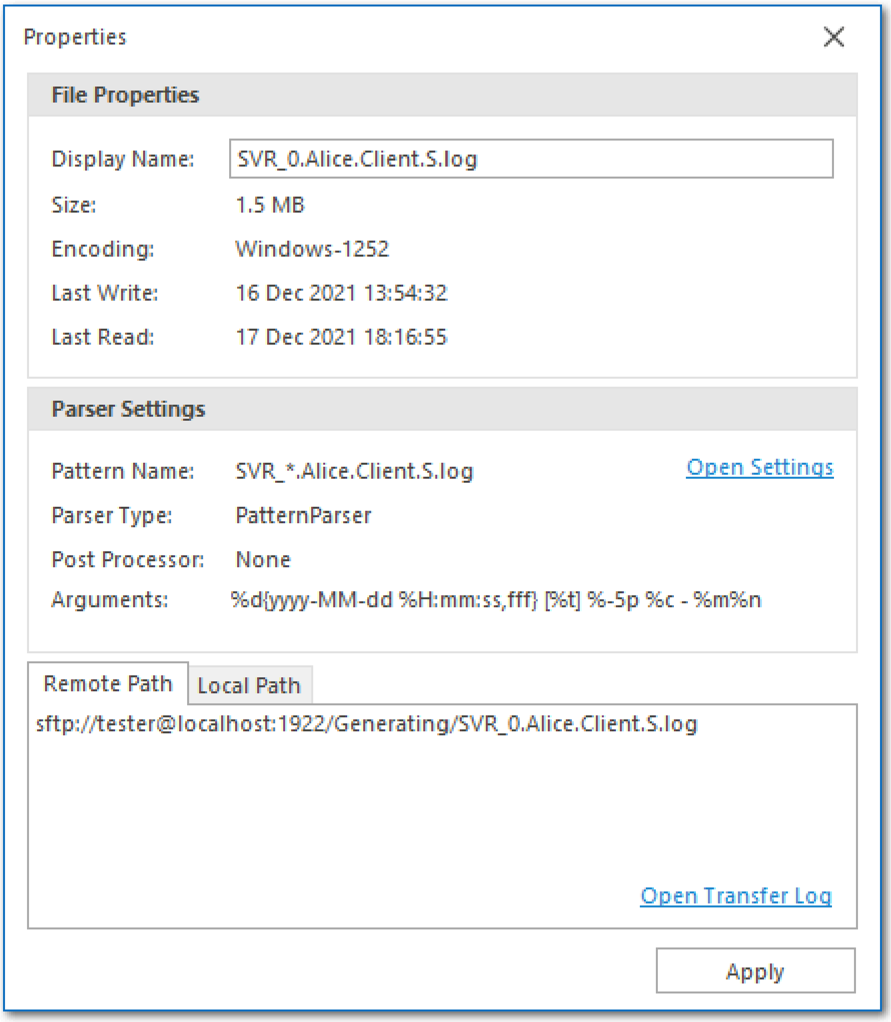
SVR_0.Alice.Client.S.log
WARN, ERROR, FATAL
12 Jan, 09:40:56.139 - 12:25:21.429
Thread 'Thread_2'
Thread 'Thread_5'

The source view is used to give an indication of the data to be exported. The source view will change depending on the Target selected.

3 Save

Opens a file browser dialog which lets you choose a target save file. All data contained in the target will be archived to the selected file.

Log File Properties



Display Name: SVR_0.Alice.Client.S.log
Size: 1.5 MB
Encoding: Windows-1252
Last Write: 16 Dec 2021 13:54:32
Last Read: 17 Dec 2021 18:16:55

Pattern Name: SVR_*.Alice.Client.S.log
Parser Type: PatternParser
Post Processor: None
Arguments: %d{yyyy-MM-dd %H:mm:ss,fff} [%t] %-5p %c - %m%n

sftp://tester@localhost:1922/Generating/SVR_0.Alice.Client.S.log

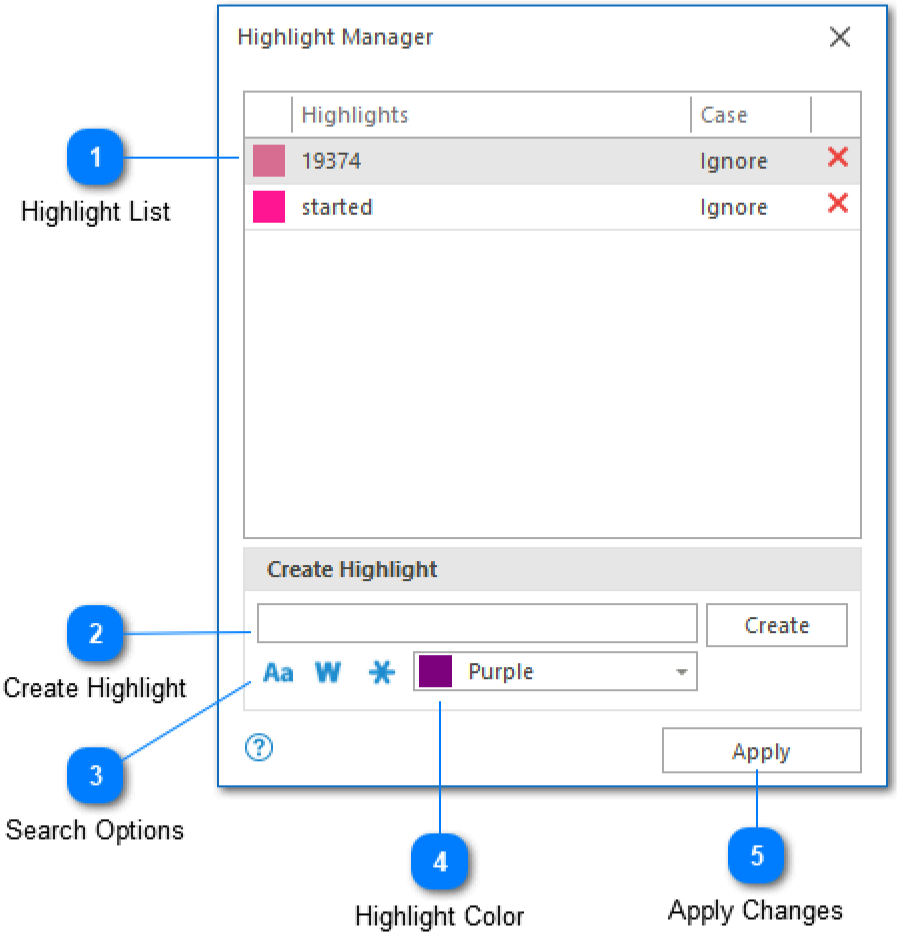
The log file properties window displays a variety of information about the selected log file including file size, encoding, and details on how the log file was parsed.

The log file properties window is context-sensitive. The displayed information may change depending on whether the selected log file is local, remote, or merged.

The information displayed in the log file properties window will change depending on the type of log file selected.

When a log file is selected in LogViewPlus, you can use Ctrl+Enter to bring up the log file properties. Alternatively, you can use Ctrl+Alt+Enter to show the log file parser configuration in application settings.

Highlight Manager



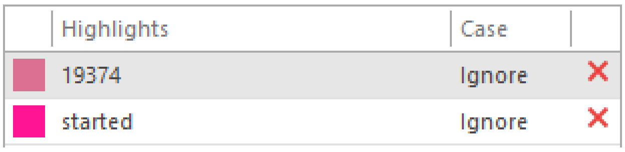
	Highlights	Case	
🟥	19374	Ignore	✕
🟥	started	Ignore	✕

Purple

Highlighting allows you to search for text and mark it to make it easier to find. The LogViewPlus highlight manager makes it easy to manage all of your text highlights.

Note that having an excessive number of highlights may lead to decreased application performance when displaying a large number of highlighted log entries. If you are experiencing performance problems and have a large number of highlights, try decreasing the number of highlights. If the performance problems persist, please contact support.

1 Highlight List



	Highlights	Case	
🟥	19374	Ignore	✕
🟥	started	Ignore	✕

The highlight list shows all current application highlights. The highlight list is editable and allows you to change the color text or case sensitivity of the given highlight. To delete highlight click the red X icon in the delete columns.

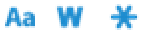
Note that when the highlight list is in dialog mode changes will only be saved when the OK button is clicked.

2 Create Highlight

The create highlight area allows you to create a new highlight. Simply type the text you want to highlight into the text box provided and click the create command.

Creating a highlight with additional settings such as search options and highlight color is discussed below.

3 Search Options



The search highlight options allow you to specify how the text search should be executed. The options include text case sensitivity, whole word matches, and the use of regular expressions.

For more information on text search execution options, please see the text filter documentation.

4 Highlight Color

Purple

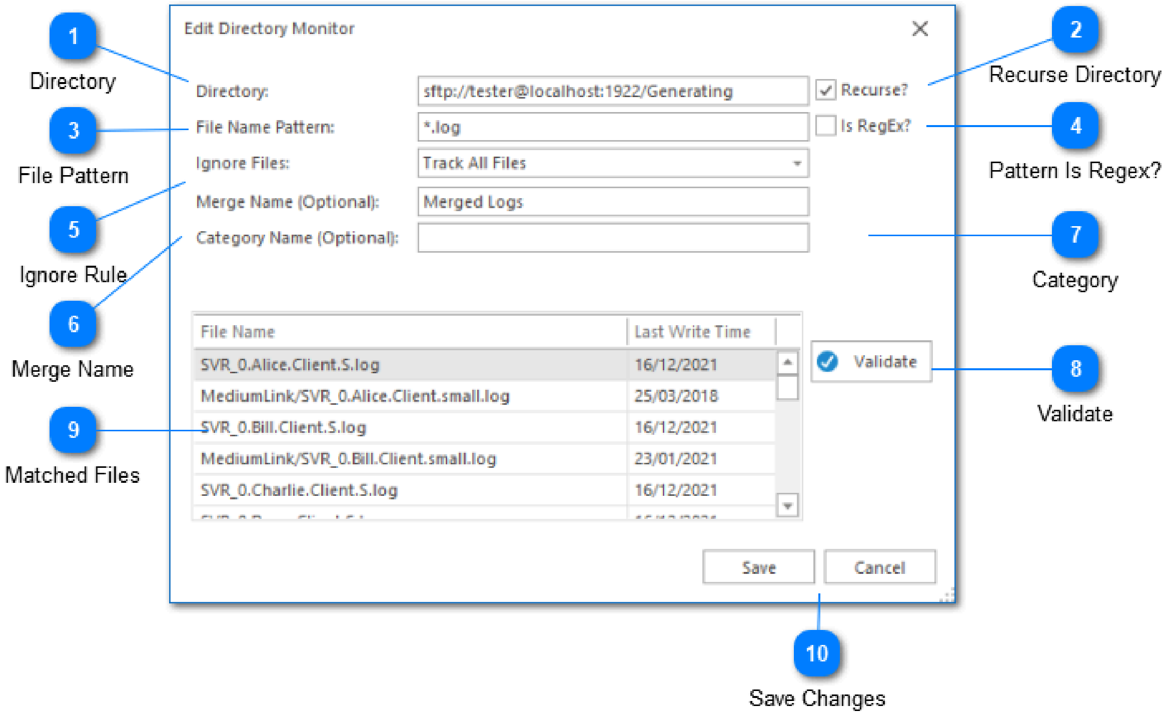
The highlight color drop-down allows you to determine a color for the new highlight.

5 Apply Changes

Once you are done configuring your highlights you can apply your changes.

Note that the option to apply changes will only be available when the highlight manager is in dialog mode. Otherwise, changes will be saved automatically.

Edit Directory Monitor



Directory: sftp://tester@localhost:1922/Generating ☑ Recurse?

File Name Pattern: *.log □ Is RegEx?

Ignore Files: Track All Files

Merge Name (Optional): Merged Logs

Category Name (Optional):

File Name	Last Write Time
SVR_0.Alice.Client.S.log	16/12/2021
MediumLink/SVR_0.Alice.Client.small.log	25/03/2018
SVR_0.Bill.Client.S.log	16/12/2021
MediumLink/SVR_0.Bill.Client.small.log	23/01/2021
SVR_0.Charlie.Client.S.log	16/12/2021

The directory monitor dialog is for adding and editing directory monitors. Directory monitors track a directory for new log files. If a new log file is found it can be automatically opened and merged.

1 Directory

Directory: sftp://tester@localhost:1922/Generating

The full path to the directory you would like to monitor.

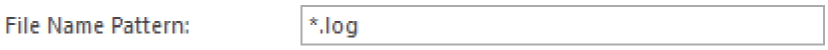
2 Recurse Directory

☑ Recurse?

The recurse check box is used to indicated if the given directory should be searched recursively for matching files. A recursive directory search will search the parent and all child directories. If the search is not recursive, then only the top level directory will be searched.

3

File Pattern



File Name Pattern: *.log

The file name pattern is used to identify whether or not a new file in this directory should be opened in LogViewPlus. In the example above all XML files in the directory will be treated as new.

If you only want to open files with a ".log" extension, you could use the pattern "*.log". Note that the filename pattern can optionally be a regular expression. If you are using a regular expression you will need to check the "Is Regex" checkbox discussed below.

4

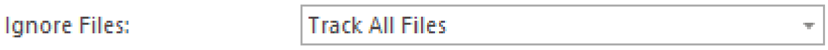
Pattern Is Regex?

□ Is RegEx?

The "Is RegEx" checkbox is used to indicate if the provided file search pattern is a regular expression. Note that wild card searches such as "*.log" are supported in searches which do not have regular expressions enabled.

5

Ignore Rule



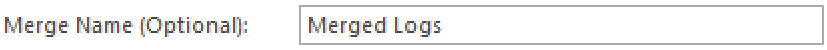
Ignore Files: Track All Files

The ignore rule allows you to ignore files which are out of date. Three possible rules are available:

Older Than Today - Matches all files modified today.
Older Than Most Recent - Matches only the most recent file as indicated by the modification date.
Track All Files - Matches all files regardless of age.
[User Defined] - Enables inputs to allow you to specify a custom time range. Files out of the time range will be ignored.

6

Merge Name



Merge Name (Optional): Merged Logs

If a merge name is provided, all files opened by the Directory Monitor will be added to the new merge file. This will act as a single view showing all log entries processed by the Directory Monitor.

7 Category

Category Name (Optional):

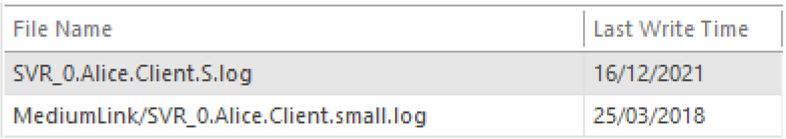
Setting a category on a directory monitor will put all files opened by the directory monitor into a folder in the workspace. Categories are useful for log file organization and will be saved as part of the workspace. For example, you may have categories like UAT and PROD in order to separate environments.

8 Validate

Once you're happy with your directory monitor configuration you can click the validate button to confirm the validity. If the directory monitor configuration is valid the matched files grid will display all files currently matched by the directory monitor. Note that your directory monitor may be valid even if no files are matched.

Note that if you change the directory monitor settings you will need to validate the settings again.

9 Matched Files

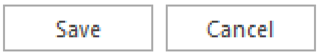


File Name	Last Write Time
SVR_0.Alice.Client.S.log	16/12/2021
MediumLink/SVR_0.Alice.Client.small.log	25/03/2018

The matched files grid shows you the results of your current directory monitor configuration. In the above example it shows the files that are matched by the current configuration. It may also display an error message if the directory monitor has been improperly configured.

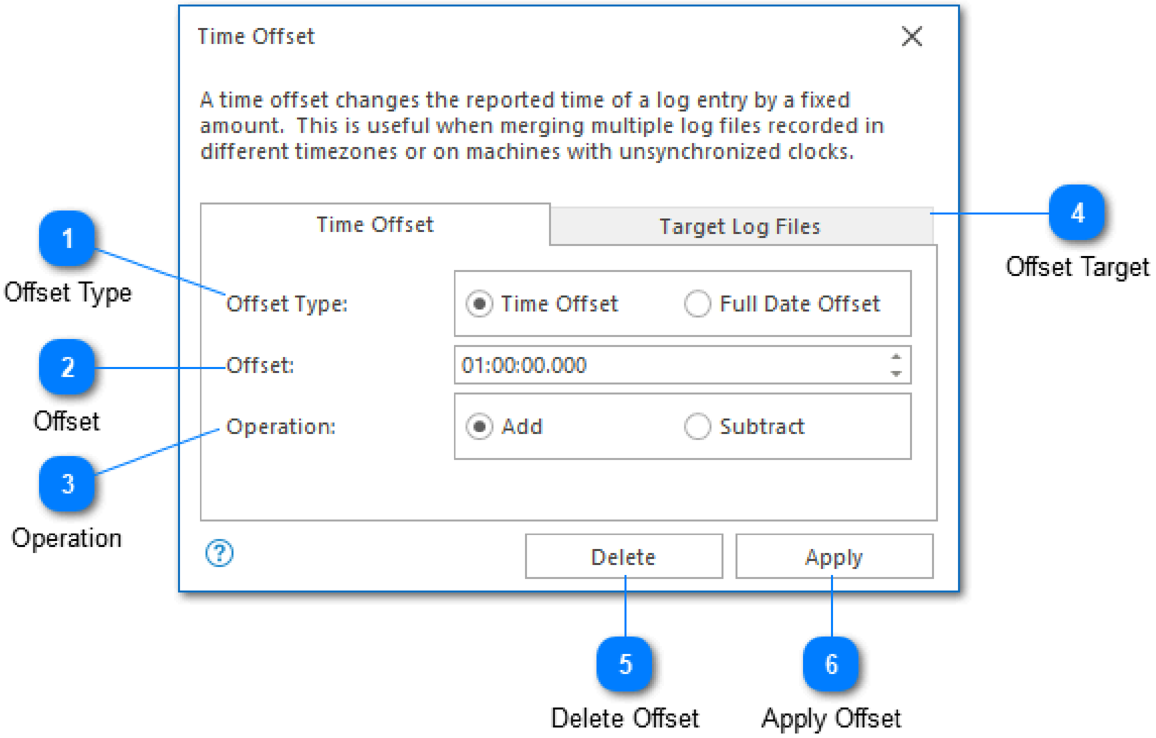
The matched files grid will only be updated when you validate your settings.

10 Save Changes



Once you are done configuring your directory monitor you can save or cancel the changes. Cancelled changes cannot be recovered.

Time Offset



Time Offset

A time offset changes the reported time of a log entry by a fixed amount. This is useful when merging multiple log files recorded in different timezones or on machines with unsynchronized clocks.

Offset Type: ● Time Offset ○ Full Date Offset

Offset: 01:00:00.000

Operation: ● Add ○ Subtract

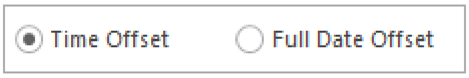
The time offset dialog can be used to modify all timestamps in your log files by a fixed amount. This command is useful when you intend to merge multiple log files but the timestamps of the log files are not in sync. For example, if you need to merge multiple log files which are recorded in local time in different time zones. The command is also useful when log files recorded on different machines are a millisecond or two out of sync.

Once a time offset has been applied to a file, it will be displayed in LogViewPlus with a notification icon indicating that a time offset is in use. You can edit the time offset by double-clicking on the notification icon.

Offsets are shown only in the Log Entry Grid. The original message displayed in the Log Entry View will be unchanged.

Note that this command is not available on merged files or filters.

1 Offset Type

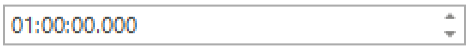


● Time Offset ○ Full Date Offset

The offset type is used to determine if the offset should be calculated based on a fixed time period or a relative period between two dates. Changing the offset type changes the form input options.

The offset type will only be visible when creating a new offset. Once created, the 'full date offset' type will no longer be available.

2 Offset

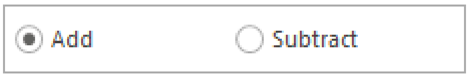


01:00:00.000

The offset can be provided in hours, minutes, seconds and milliseconds.

If you would prefer to set an offset to a specific time, you can use the Full Date Offset type. This type will show two full timestamps. The first is a reference point and cannot be modified. The second is the date that you would like to use instead of the reference time provided. The difference between these two timestamps will be used to calculate the time offset.

3 Operation



● Add ○ Subtract

The offset action can be either add or subtract depending on if you need to increase or decrease the time interval.

4 Offset Target

Target Log Files

Once your offset has been defined, you can select all of the log files to which it should be applied.

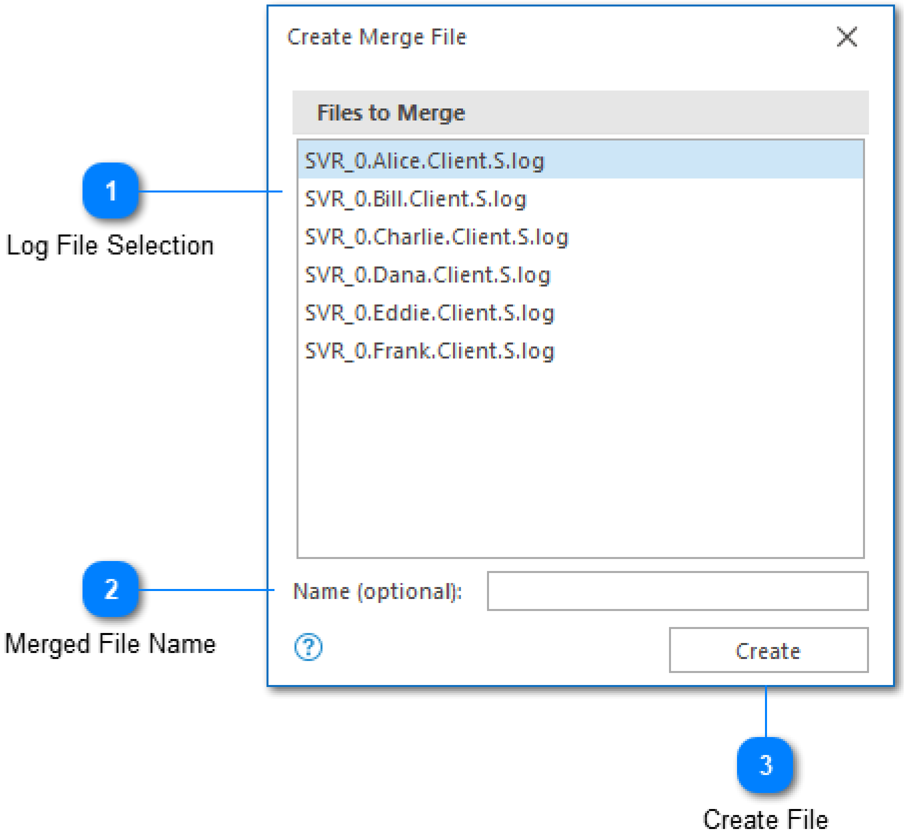
5 Delete Offset

Deletes the currently applied offset from all log files selected in the "Target Log Files" tab. Files will automatically be refreshed after the offset has been deleted.

6 Apply Offset

Applies the defined offset to all log files selected in the "Target Log Files" tab. Files will automatically be refreshed after the offset has been applied.

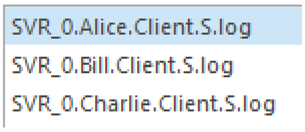
Merge File Editor



SVR_0.Alice.Client.S.log
SVR_0.Bill.Client.S.log
SVR_0.Charlie.Client.S.log
SVR_0.Dana.Client.S.log
SVR_0.Eddie.Client.S.log
SVR_0.Frank.Client.S.log

The merge file window is used to select multiple log files which should be consolidated into a single log file. Once a merged log file has been created, it can be used just like any other log file in LogViewPlus.

1 Log File Selection



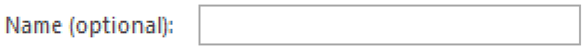
SVR_0.Alice.Client.S.log
SVR_0.Bill.Client.S.log
SVR_0.Charlie.Client.S.log

The log file selection box is used to select two or more log files. All log files currently open in LogViewPlus, including previously merged log files, will be listed as possible targets.

You can use the shortcuts CTRL+A to select all log files. If all log files are selected, you can press CTRL+A to deselect all log files.

You can also use the CTRL key with the mouse to individually select or deselect log files.

2 Merged File Name

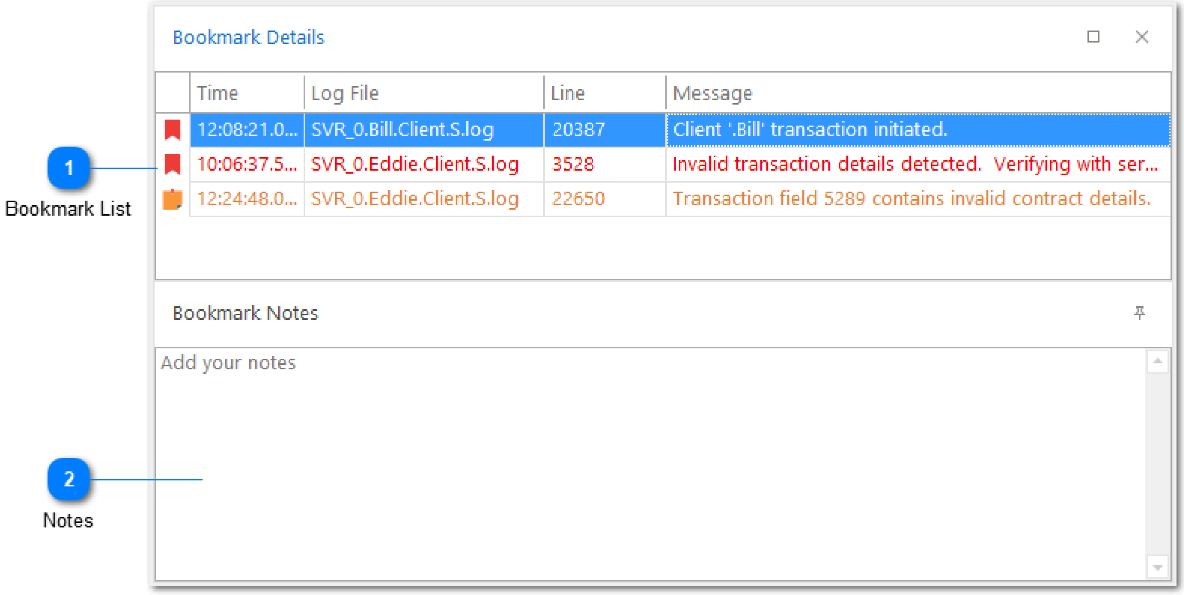


A text box is provided to give you the opportunity to name your new merged log file. If a merged log file name is not provided, one will be automatically generated based on the selected source log files.

3 Create File

Use the Create command to generate a new merge file from the selected source log files.

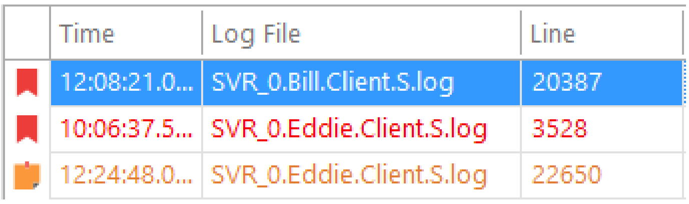
Bookmark Detail



	Time	Log File	Line	Message
	12:08:21.0...	SVR_0.Bill.Client.S.log	20387	Client '.Bill' transaction initiated.
	10:06:37.5...	SVR_0.Eddie.Client.S.log	3528	Invalid transaction details detected. Verifying with ser...
	12:24:48.0...	SVR_0.Eddie.Client.S.log	22650	Transaction field 5289 contains invalid contract details.

The Bookmark Detail View helps you easily manage your bookmarks and notes. To dock this window, simply drag the window over the LogViewPlus window and selected docking position. To undock, simply drag the window outside LogViewPlus. Note that the bookmark detail view will change orientation automatically based on the window layout.

1 Bookmark List

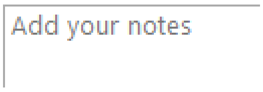


	Time	Log File	Line
	12:08:21.0...	SVR_0.Bill.Client.S.log	20387
	10:06:37.5...	SVR_0.Eddie.Client.S.log	3528
	12:24:48.0...	SVR_0.Eddie.Client.S.log	22650

The bookmark list shows all available bookmarks. Double-clicking on one of the bookmarks will automatically navigate to the bookmarked log entry. Right clicking on a bookmark will bring up the bookmark commands context menu which allows simple actions like creating quick date filters, navigation, elapsed time, and bookmark management.

2

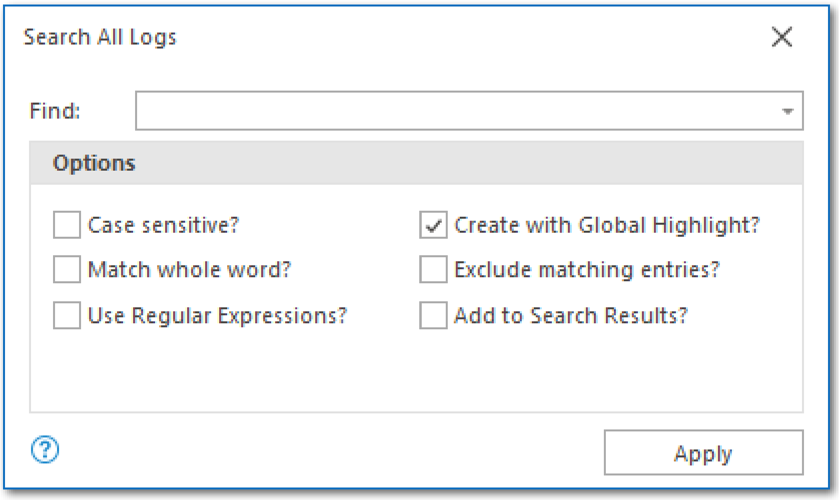
Notes



Add your notes

The notes area can be used to add or view any notes associated with the currently selected bookmark.

Search All Logs



Search All Logs

Find:

Options

□ Case sensitive?

□ Match whole word?

□ Use Regular Expressions?

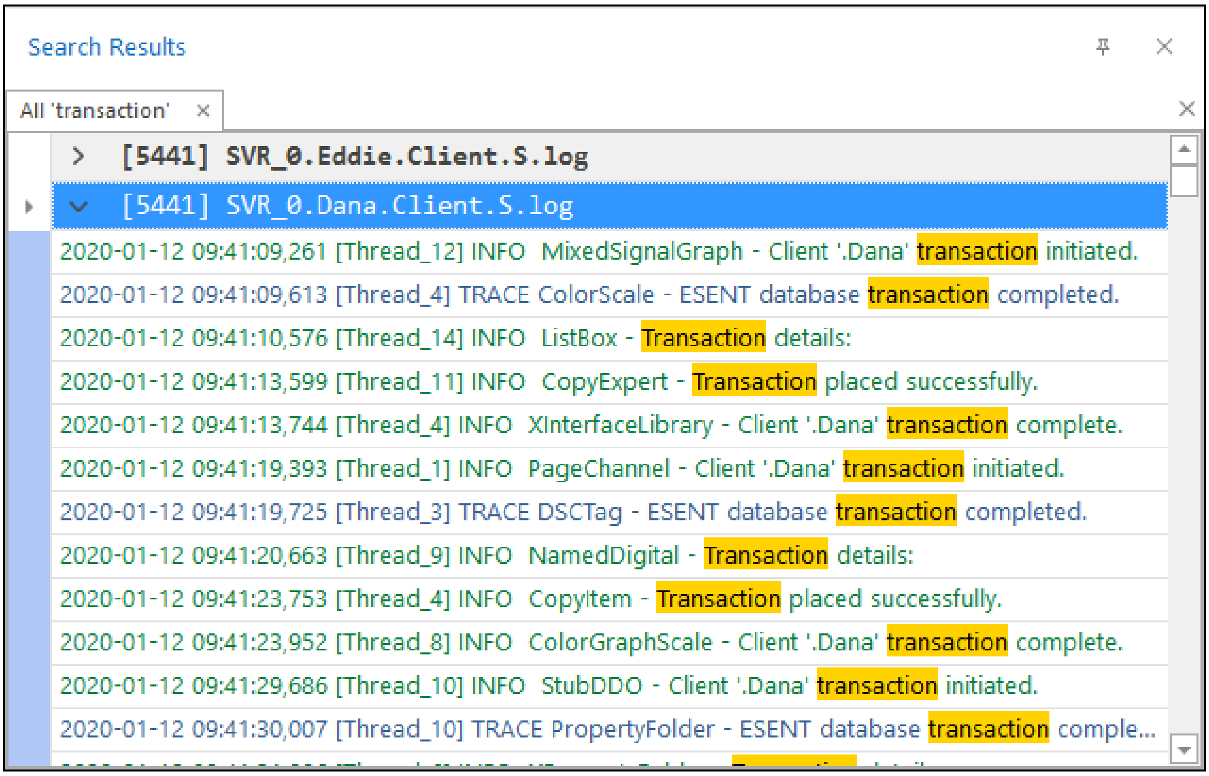
☑ Create with Global Highlight?

□ Exclude matching entries?

□ Add to Search Results?

The Search All command mirrors the Text Filter dialog's configuration options with one exception - you cannot restrict your search to a particular log file column. When searching all log files, searches will always be performed against the original log entry.

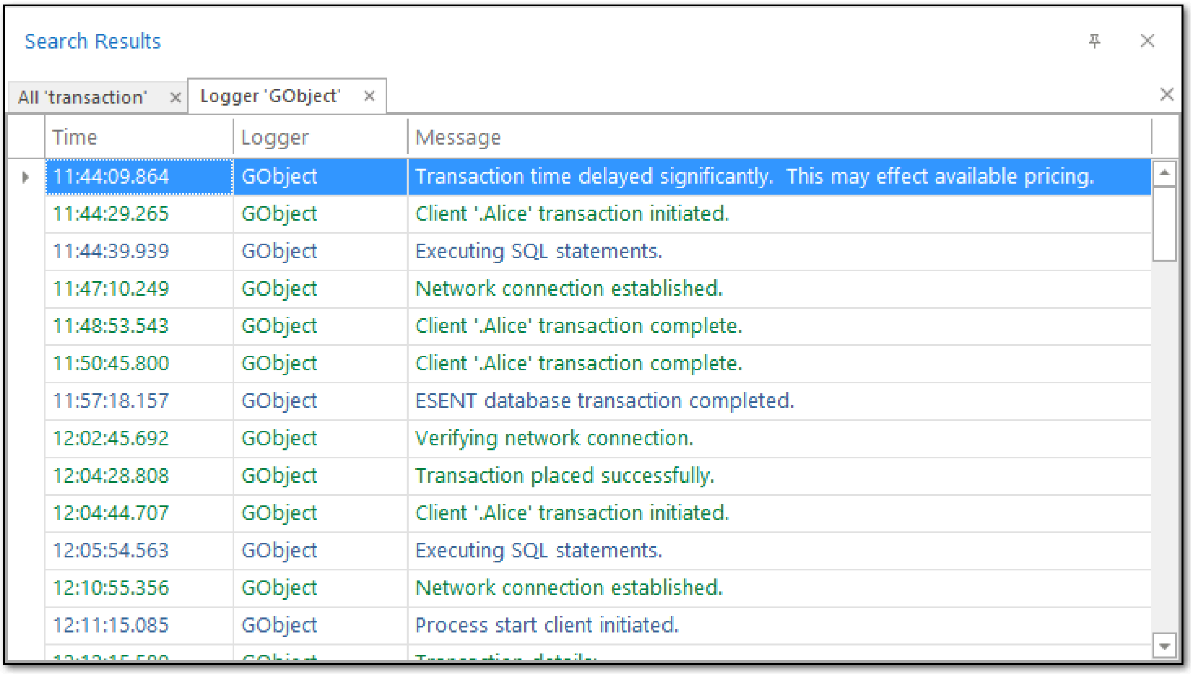
The Search All command is not a filter and it works more like a traditional search box found in most applications. Search results will be displayed in the Search Results window with results grouped by the log file where they were found. For example:



```
[5441] SVR_0.Eddie.Client.S.log
[5441] SVR_0.Dana.Client.S.log
2020-01-12 09:41:09,261 [Thread_12] INFO  MixedSignalGraph - Client '.Dana' transaction initiated.
2020-01-12 09:41:09,613 [Thread_4] TRACE ColorScale - ESENT database transaction completed.
2020-01-12 09:41:10,576 [Thread_14] INFO  ListBox - Transaction details:
2020-01-12 09:41:13,599 [Thread_11] INFO  CopyExpert - Transaction placed successfully.
2020-01-12 09:41:13,744 [Thread_4] INFO  XInterfaceLibrary - Client '.Dana' transaction complete.
2020-01-12 09:41:19,393 [Thread_1] INFO  PageChannel - Client '.Dana' transaction initiated.
2020-01-12 09:41:19,725 [Thread_3] TRACE DSCTag - ESENT database transaction completed.
2020-01-12 09:41:20,663 [Thread_9] INFO  NamedDigital - Transaction details:
2020-01-12 09:41:23,753 [Thread_4] INFO  CopyItem - Transaction placed successfully.
2020-01-12 09:41:23,952 [Thread_8] INFO  ColorGraphScale - Client '.Dana' transaction complete.
2020-01-12 09:41:29,686 [Thread_10] INFO  StubDDO - Client '.Dana' transaction initiated.
2020-01-12 09:41:30,007 [Thread_10] TRACE PropertyFolder - ESENT database transaction comple...
```

Here we can see the search 'transaction' was matched in two separate log files with 5441 matches per log file.

Search Results



Search Results

Time	Logger	Message
11:44:09.864	GObject	Transaction time delayed significantly. This may effect available pricing.
11:44:29.265	GObject	Client '.Alice' transaction initiated.
11:44:39.939	GObject	Executing SQL statements.
11:47:10.249	GObject	Network connection established.
11:48:53.543	GObject	Client '.Alice' transaction complete.
11:50:45.800	GObject	Client '.Alice' transaction complete.
11:57:18.157	GObject	ESENT database transaction completed.
12:02:45.692	GObject	Verifying network connection.
12:04:28.808	GObject	Transaction placed successfully.
12:04:44.707	GObject	Client '.Alice' transaction initiated.
12:05:54.563	GObject	Executing SQL statements.
12:10:55.356	GObject	Network connection established.
12:11:15.085	GObject	Process start client initiated.

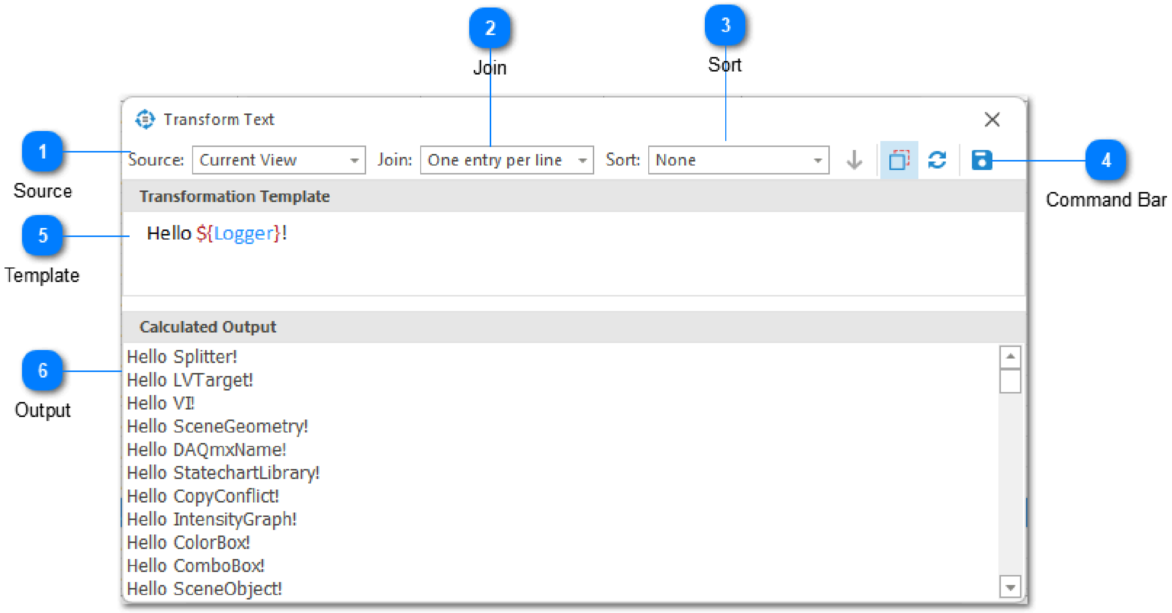
The search results window is simply another way to view a filter. This window can be docked within the LogViewPlus and this allows you to view and navigate your search results as well as another filter at the same time. This is particularly helpful if you find yourself frequently navigating back and forth between a filter and a parent view.

Double-clicking on a search result will navigate to the target log entry in the currently selected view. If the log entry does not exist in the currently selected view, the log entry will be found in the root log file instead.

To add a filter to the search results view, right click on the filter and select "Show in Search Results".

Multiple filters can be added to the search results window. Each filter will be added as a separate tab within the window.

Transform Text



Hello ${Logger}!

```
Hello Splitter!
Hello LVTarget!
Hello VI!
Hello SceneGeometry!
Hello DAQmxName!
Hello StatechartLibrary!
Hello CopyConflict!
Hello IntensityGraph!
Hello ColorBox!
Hello ComboBox!
Hello SceneObject!
```

You can use the transformation text dialog to transform LogViewPlus view data into another format. It applies the transformation template to the data contained in the log entry grid in order to calculate a new output.

Text transformations support a variety use cases. For example, you could use transformation text for exporting data as CSV or use IDs extracted from a log entry as input into a new custom SQL statement.

Variables in the transformation template are defined with the syntax:

${ColumnName}

1 Source

Source: Current View

The source is used to set the input data source. The following input data sources are supported:

1. Selected Log Entries - uses the individual lines currently selected in the Log Entry Grid.
2. Current View - uses the currently selected view.

3. Log file - uses all log entries found in the current log file regardless of the view selected.

2 Join

Join: One entry per line

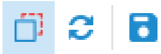
The joint command determines how rows of transformed text should be concatenated. The following options are available:
1. One entry per line - opinions each row with a new line statement.
2. Comma separated - separates each row with a comma.
3. Comma separated with double quotes - surrounds each entry with double quotes and separates each row with a comma.
4. Comma separated with single quotes - surrounds each entry with single quotes and separates each row with a comma.

3 Sort

Sort: None

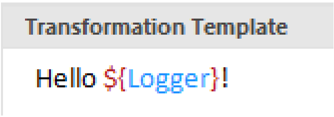
The sort command can be used to sort the input data before any text is transformed. The sort direction can either be ascending or descending.

4 Command Bar



The command bar provides additional options for working with text transforms including:
1. Remove Duplicates - can be used to show or hide duplicate source data entries.
2. Refresh - reapplies the transformation template to the source data in order to regenerate the calculated output.
3. Save - saves the calculated output as a new file.

5 Template

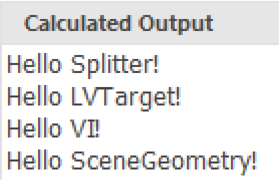


Transformation Template

```
Hello ${Logger}!
```

The transformation template is used to insert select data from the data source into a new text format. Variables in the transformation template are defined with the syntax ${ColumnName}. For example, ${Logger} would use the value of the Logger column as input.

6 Output

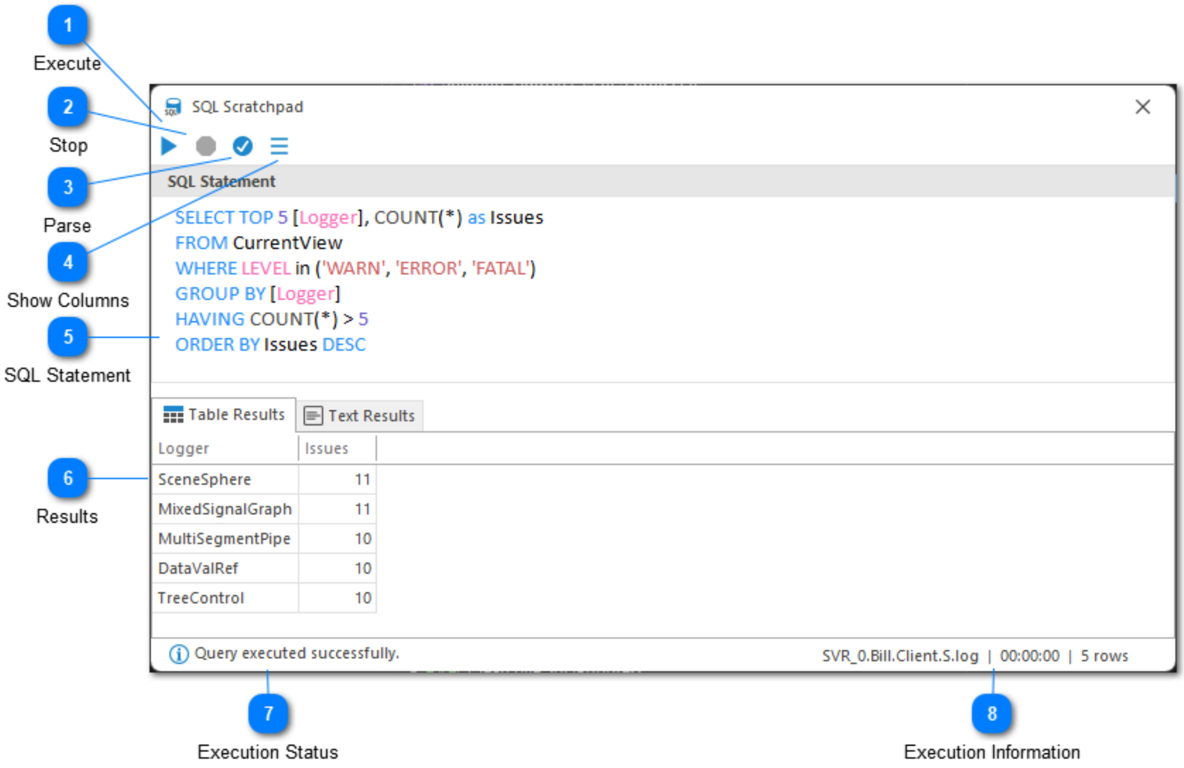


Calculated Output

```
Hello Splitter!
Hello LVTarget!
Hello VI!
Hello SceneGeometry!
```

The calculated output area shows the result of applying the text transformation to the input data. The context menu of the output area allows the text to be saved, copied and selected.

SQL Scratchpad



```
SELECT TOP 5 [Logger], COUNT(*) as Issues
FROM CurrentView
WHERE LEVEL in ('WARN', 'ERROR', 'FATAL')
GROUP BY [Logger]
HAVING COUNT(*) > 5
ORDER BY Issues DESC
```

Logger	Issues
SceneSphere	11
MixedSignalGraph	11
MultiSegmentPipe	10
DataValRef	10
TreeControl	10

Query executed successfully.

SVR_0.Bill.Client.S.log | 00:00:00 | 5 rows

The SQL Scratchpad can be used to quickly experiment with creating your SQL statement. It allows you to parse and execute any SQL SELECT statement against the currently selected view.

1 Execute

▶

Executes the SQL statement against the currently selected view. The output of the SQL statement will be displayed in one of the Results tabs. If the SQL statement cannot be executed the reason for the failure will be displayed in the Text Results tab.

2 Stop

●

Terminates SQL query execution. This command can be helpful if your SQL query is taking too long to execute.

3 Parse

✓

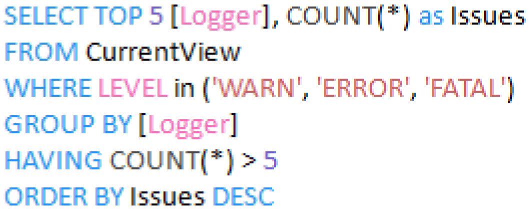
Parses the provided SQL statement. Parsing a SQL statement is a quick way to detect syntax errors without the overhead of full statement execution.

4 Show Columns

☰

Displays a popup menu at the cursor location showing a list of all available columns. Selecting a value will insert the column name into the SQL statement.

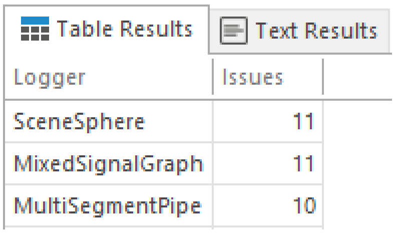
5 SQL Statement



```
SELECT TOP 5 [Logger], COUNT(*) as Issues
FROM CurrentView
WHERE LEVEL in ('WARN', 'ERROR', 'FATAL')
GROUP BY [Logger]
HAVING COUNT(*) > 5
ORDER BY Issues DESC
```

The SQL Select statement to be executed.

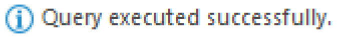
6 Results



Logger	Issues
SceneSphere	11
MixedSignalGraph	11
MultiSegmentPipe	10

SQL execution results will be displayed in one of the results tabs. The table results tab displays execution results in a table format. The text results tab displays execution results in a text-only format.

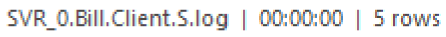
7 Execution Status



Query executed successfully.

The execution status of the SQL query. If query execution failed, or if the execution was terminated abruptly, an appropriate status would be displayed here.

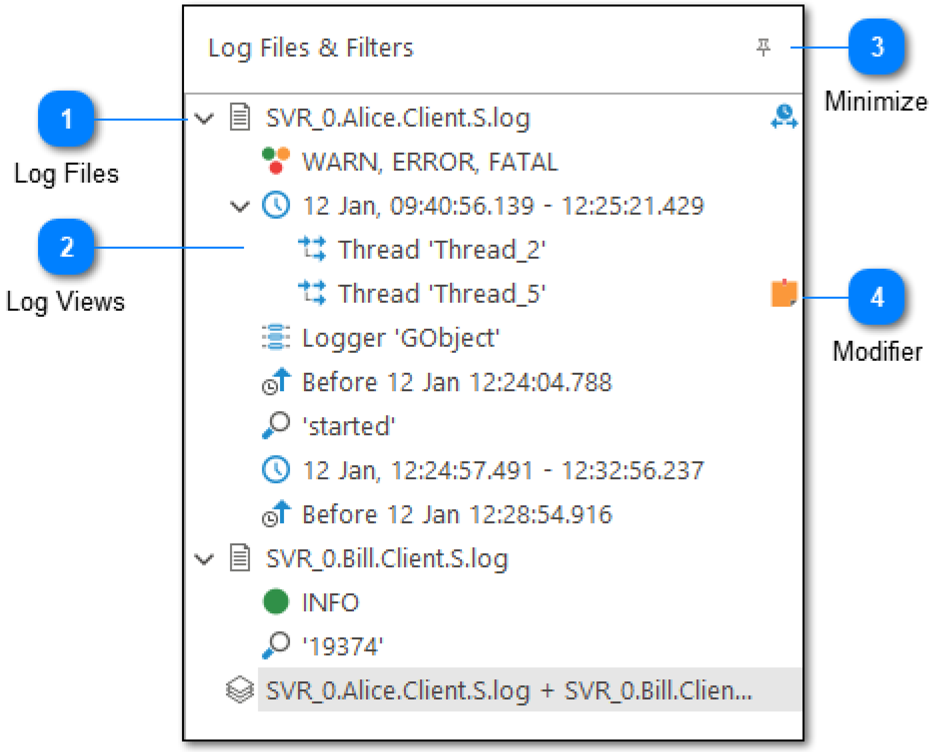
8 Execution Information



SVR_0.Bill.Client.S.log | 00:00:00 | 5 rows

The row count at the bottom of the window displays the number of results retrieved by the SQL statement.

Log Management



Log Files & Filters

SVR_0.Alice.Client.S.log

WARN, ERROR, FATAL

12 Jan, 09:40:56.139 - 12:25:21.429

Thread 'Thread_2'

Thread 'Thread_5'

Logger 'GObject'

Before 12 Jan 12:24:04.788

'started'

12 Jan, 12:24:57.491 - 12:32:56.237

Before 12 Jan 12:28:54.916

SVR_0.Bill.Client.S.log

INFO

'19374'

SVR_0.Alice.Client.S.log + SVR_0.Bill.Clien...

On the far left of LogViewPlus window, you should see a tree list which shows you all of the files and views you currently have open. You can use this list to navigate between log files.

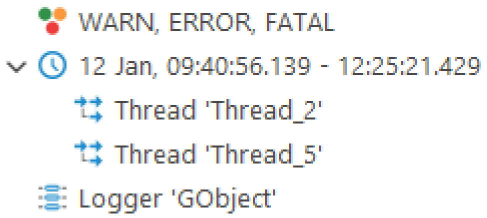
Note that this list represents a hierarchy of views on your log file. The element at the base of the hierarchy represents all entries in the log file. As you move away from the base element each generation will have an increasingly focused view of the current log file. Each new generation will have a subset of the log entries available in the previous generation. As you navigate between views LogViewPlus attempts to keep your current record in focus. This allows you to easily view records which were written before and after the current entry - even when moving between views.

1 Log Files

SVR_0.Alice.Client.S.log

Root items represent log files. The root items always contain all log entries available the log file.

2 Log Views



WARN, ERROR, FATAL
12 Jan, 09:40:56.139 - 12:25:21.429
Thread 'Thread_2'
Thread 'Thread_5'
Logger 'GObject'

Views can be thought of as child log files. They do not contain all records available in the log file. The views work by filtering out some items. Note the child views contain a subset of their parent. Therefore each successive generation narrows the records available.

3 Minimize

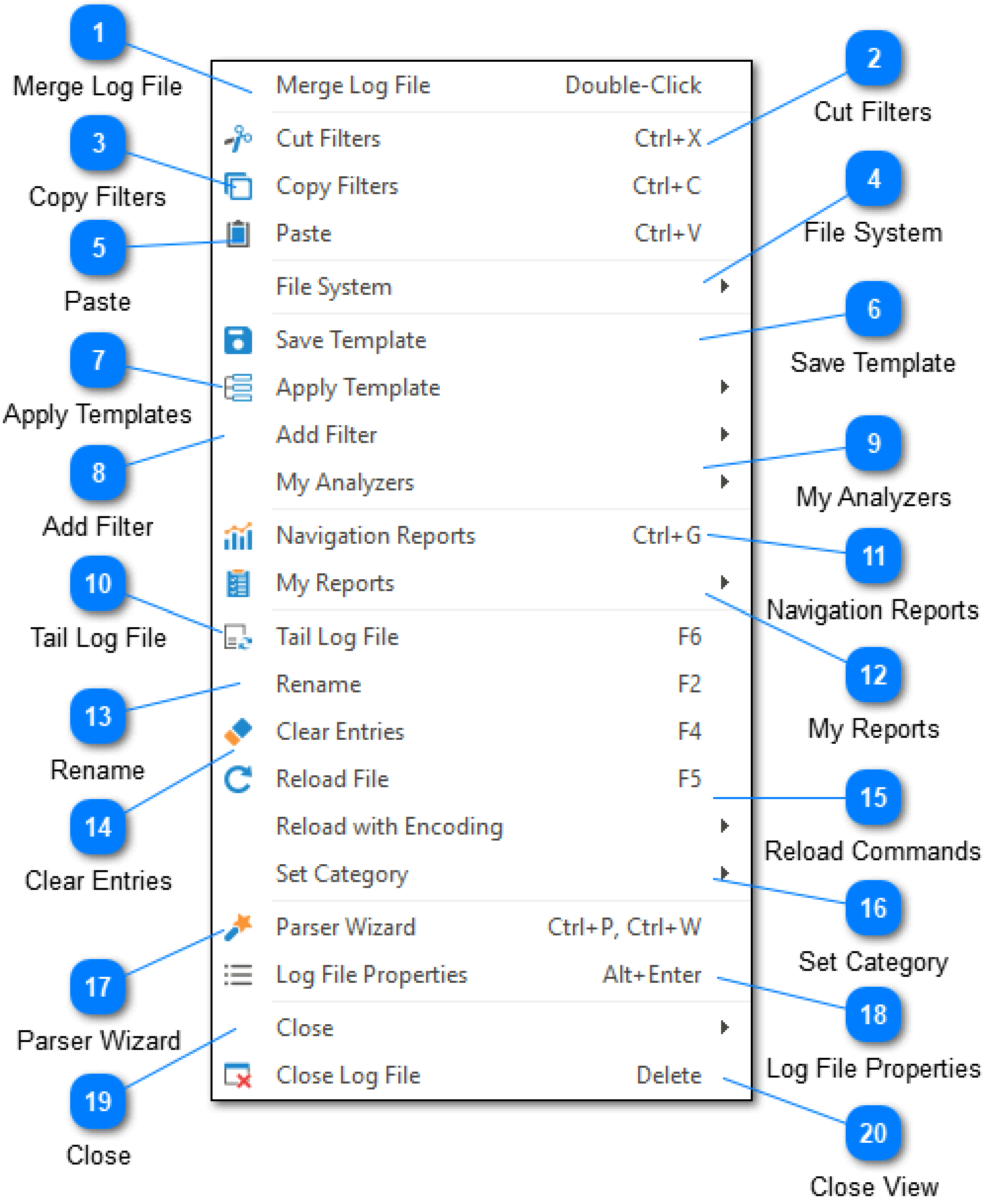
The minimize command can be used to hide the file management tree. This dedicates more screen room to the log entry grid.

Once minimized, the file management tree can be restored either by clicking on the minimize command again or by double-clicking on the log files panel.

4 Modifier

You may see an image to the right of the log file or filter. This image is called the 'modifier' and is used to indicate additional settings. In the example above, a Time Offset has been applied and a Note has been added to the filter Thread 'Thread_5'. Other modifiers include Rules and Notifications. Double clicking on the modifier will bring up the appropriate configuration.

File Context Menu



The file context menu is available whenever you right-click on a file or merged file in LogViewPlus.

1 Merge Log File

Double-clicking on a log file will bring up the Merge File Dialog with the current log file selected. If the current file is a merge file, the dialog will have all of the constituent parts selected and the action will be to edit the merge file by adding or removing files.

2 Cut Filters

Cuts all of the filters currently set on this log file to the clipboard. If these filters are later pasted within this LogViewPlus session, the selected filters will be moved.

3 Copy Filters

Copies all of the filters currently set on this log file to the clipboard.

Filters are copied to the clipboard as plain text. This allows them to be easily shared with other LogViewPlus users.

4 File System

The file system menu contains a number of commands to help you work with files directly through the file system:

Command	**Description**
Copy Path	Copies the full path to the current log file to the clipboard.
Open in Text Editor	Opens the file in your default text editor.
Open Directory	Opens the directory in Log Explorer.
Explore Directory	Opens the file in Windows Explorer.
Delete File	Permanently removes the file from the file system.

5 Paste

Paste Ctrl+V

If a filter has been copied to the clipboard, the paste filter command will apply it to the currently selected log file or view.

If the clipboard contains plain text, it will be converted into a Text Filter.

6 Save Template

Save Template

The save template command allows you to save all of the filters which are currently applied to the log file as a template. Any information associated with the filter such as notifications or notes will also be saved.

Saving filter templates helps you to quickly reapply them later.

7 Apply Templates

Apply Template

The apply templates command will show a list of all pre-saved templates. Selecting a template will apply it to the current log file.

8 Add Filter

Add Filter

The add filter command displays a list of all filters which are currently available in the filter toolbar. These commands are identical and provided here for convenience only.

9 My Analyzers

My Analyzers

This command can be used to run a custom analyzer. This command will only be available if a custom analyzer plugin has been detected by the LogViewPlus instance.

10 Tail Log File

The Tail Log File command will toggle tailing the log file.

11 Navigation Reports

Opens the Navigation Reports window. This window will display the currently selected log file as a graph base report which can then be filtered.

12 My Reports

If you have configured LogViewPlus to generate custom reports, those reports will be available for execution. This command will not be visible if custom reports have not been configured.

13 Rename

Renames the currently selected log file.

14 Clear Entries

Removes all log entries from the current log file. If the file is currently being tailed new entries will appear automatically.

The underlying log file will not be modified. No changes will be written to disk.

15 Reload Commands

Reloading the log file is useful if you have previously cleared all log entries and now need to see the cleared entries. It can also be helpful when you are modifying parser configurations, or to refresh a file which is not currently tailed.

The reload with encoding command allows you to reload a log file with one of the encodings provided in the Common Encodings application settings.

16 Set Category

Setting a category for a log file will put it into a folder in the workspace. Categories are useful for log file organization and will be saved as part of the workspace. For example, you may have categories like UAT and PROD in order to separate environments.

17 Parser Wizard

Opens the Parser Wizard which can be used to quickly add or modify the parser configuration for the currently selected log file.

18 Log File Properties

Opens the log file properties dialog.

19 Close

The close command brings up a sub-menu of different close options:

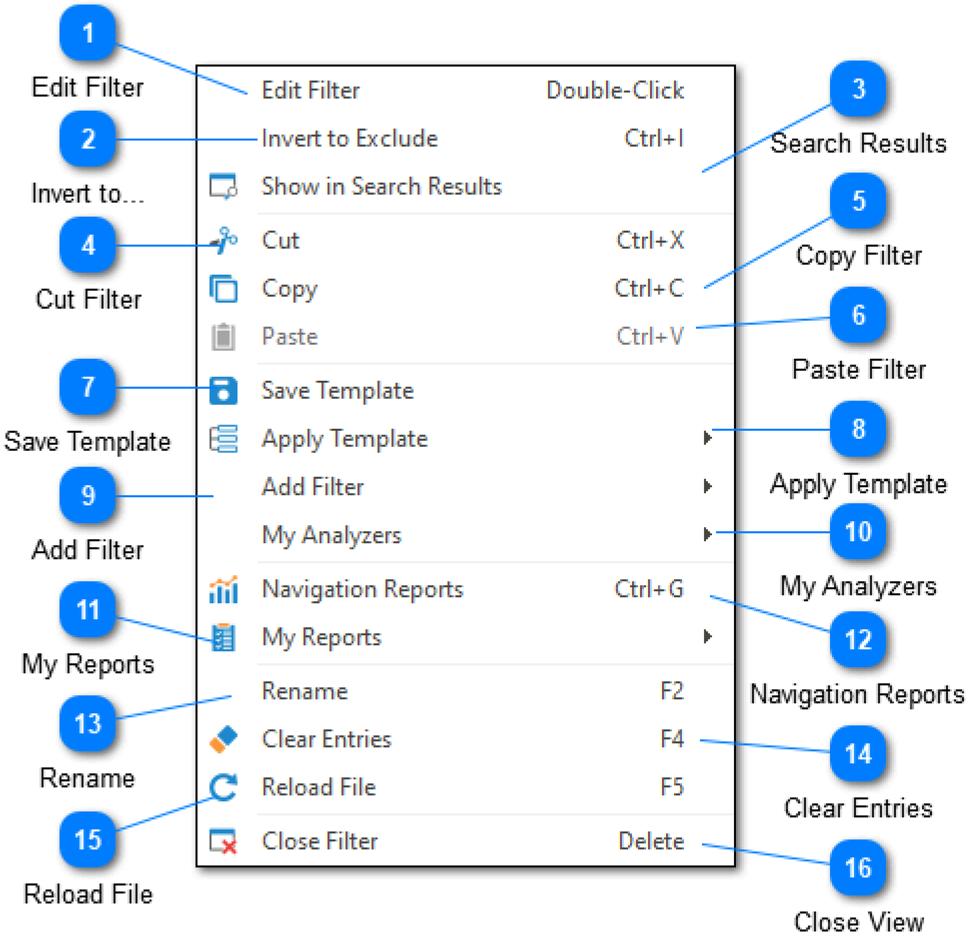
Command	**Description**
Close All	Closes all log files, filters, and directory monitors.
Close All But This	Closes all log files and filters except for the selected file.
Close Source Files	Closes all source log files. Available for merge files only.
Close All Filters	Closes all filters across all log files.

Close View	Closes the current view.

20 Close View

Closes the current log file and any child views.

Filter Context Menu



The filter context menu is available whenever you right-click on a filter in LogViewPlus.

1 Edit Filter

Edit Filter Double-Click

The edit filter command allows you to edit an existing filter. This is the same as double-clicking on the filter if the filter does not have any child filters. If the filter has children then the node will be expanded or collapsed.

The double-click behavior is configurable. The default action is to edit the filter.

2 Invert to...

Invert to Exclude Ctrl+I

The "Invert to..." command will switch the currently selected filter type to either Include or Exclude. This command will only be enabled when the target filter type supports excluding log entries.

3 Search Results

Show in Search Results

Adds the currently selected filter to the search results window.

4 Cut Filter

Cut Ctrl+X

Cuts the currently selected filter to the clipboard. If this filter is later pasted within this LogViewPlus session, the selected filter will be moved.

5 Copy Filter

Copy Ctrl+C

Copies the currently selected filter to the clipboard.

Filters are copied to the clipboard as plain text. This allows them to be easily shared with other LogViewPlus users.

6 Paste Filter

Paste Ctrl+V

If a filter has been copied to the clipboard, the paste filter command will apply it to the currently selected log file or view.

If the clipboard contains plain text, it will be converted into a Text Filter.

7

Save Template

Save Template

The save template command allows you to save all of the filters which are currently applied to the log file as a template. Any information associated with the filter such as notifications or notes will also be saved.

Saving filter templates helps you to quickly reapply them later.

8

Apply Template

Apply Template

The apply templates command will show a list of all pre-saved templates. Selecting a template will apply it to the current filter.

9

Add Filter

Add Filter

The add filter command displays a list of all filters which are currently available in the filter toolbar. These commands are also available on the toolbar and are provided here for convenience only.

10

My Analyzers

My Analyzers

This command can be used to run a custom analyzer. This command will only be available if a custom analyzer plugin has been detected by the LogViewPlus instance.

11

My Reports

My Reports

If you have configured LogViewPlus to generate custom reports, those reports will be available for execution. This command will not be visible if custom reports have not been configured.

12

Navigation Reports

Navigation Reports Ctrl+G

Opens the Navigation Reports dialog. The screen can be used the display the currently selected filter as a graph.

13

Rename

Rename F2

Renames the currently selected filter.

14

Clear Entries

Clear Entries F4

Removes all log entries from the current log file. If the file is currently being tailed new entries will appear automatically.

The underlying log file will not be modified. No changes will be written to disk.

15

Reload File

Reload File F5

Reloading the log file is useful if you have previously cleared all log entries and now need to see the cleared entries. It can also be helpful when you are modifying parser configurations, or to refresh a file which is not currently tailed.

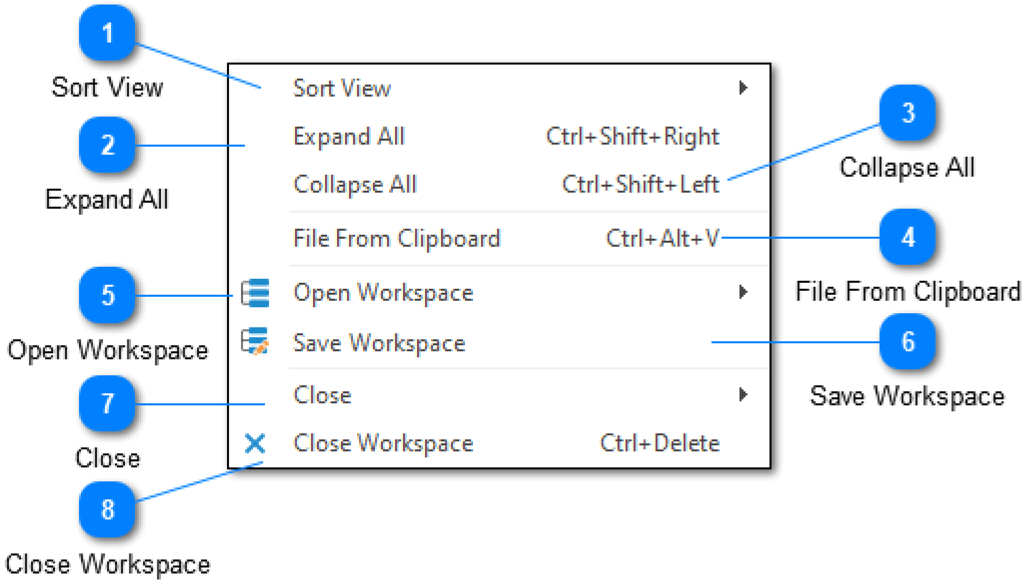
16

Close View

Close Filter Delete

Closes the current filter and any child filters.

Workspace Menu



The workspace context menu is available whenever you right-click on an empty area in the log management control.

1 Sort View

You can sort your workspace either alphabetically (ascending or descending) or by the order in which items were created. Sorting occurs independently at each level of the tree.

2 Expand All

Expands all levels in the tree.

3 Collapse All

Collapses all levels in the tree.

4 File From Clipboard

File From Clipboard Ctrl+Alt+V

Writes the clipboard contents to a temporary file and then attempts to automatically parse the file. This command is useful when your log entries are extracted from another program and not yet available as a file.

5 Open Workspace

Open Workspace

The open workspace command will show a list of all saved workspaces. Selecting a workspace will apply it to the current view.

6 Save Workspace

Save Workspace

Saves the current workspace. If the workspace has not previously been saved, you will be prompted to provide a workspace name.

7 Close

Close

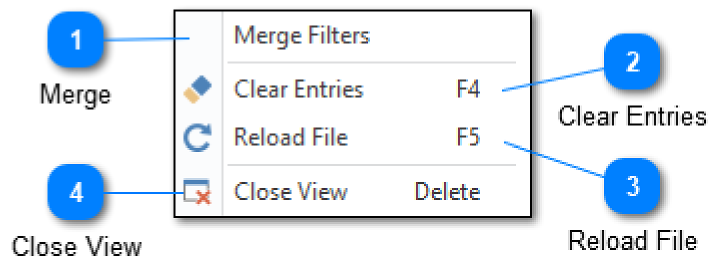
The close command brings up a sub-menu of different close options:

Command	**Description**
Close All	Closes all log files, filters, and directory monitors.
Close All But This	Closes all log files and filters except for the selected file.
Close Source Files	Closes all source log files. Available for merge files only.
Close All Filters	Closes all filters across all log files.
Close View	Closes the current view.

8 Close Workspace

Closes all log files, filters, and directory monitors.

Multiselect Menu



The multi-select context menu is available whenever you select and then right-click on multiple items in the log management control. When selecting multiple items the focused item retains control of the log entry grid. The focused item has a rectangle drawn around it.

1 Merge

When you select multiple items of the same type (either log files or filters), you will be given the option to instantly merge your selection. If you are merging filters, the merged filter will be applied as a sibling of the focused filter.

2 Clear Entries

Clears the log entries from the selected target log files. If a filter is selected, the log file associated with the filter will be cleared.

If a category is selected, this command will be disabled.

3 Reload File

Reloads all target log files. If a filter is selected, the log file associated with the filter will be reloaded.

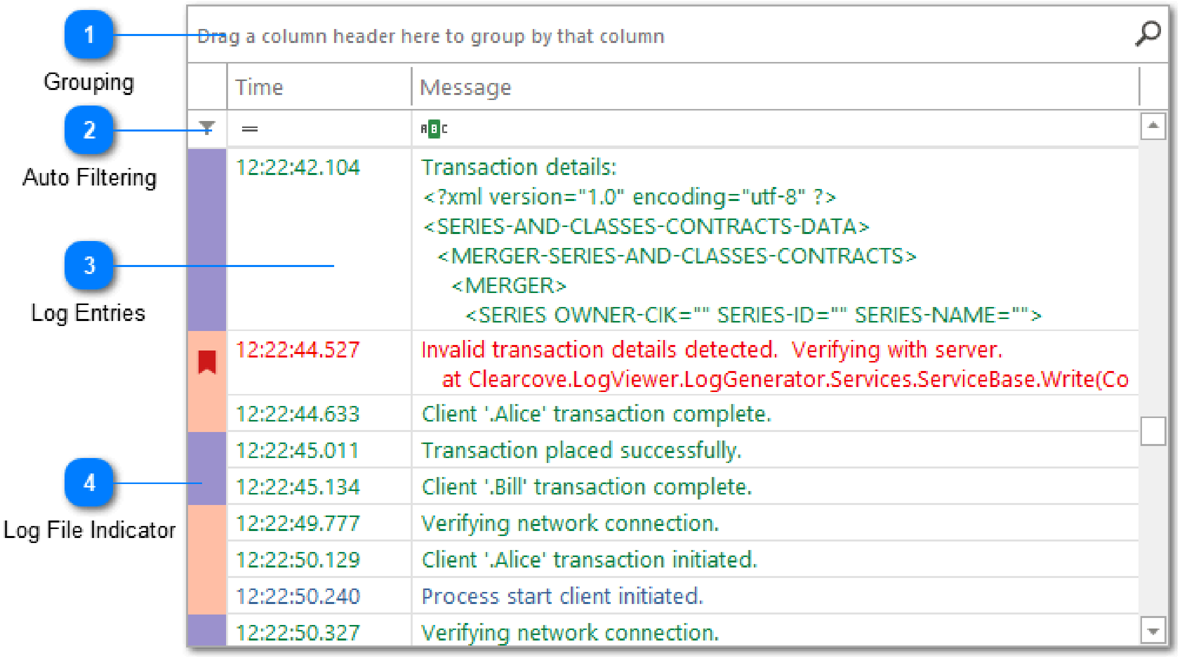
If a category is selected, this command will be disabled.

4

Close View

Closes all of the selected items.

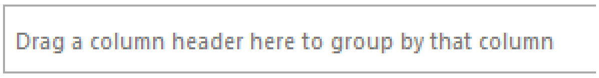
Log Entries Grid



```
12:22:42.104  Transaction details:
              <?xml version="1.0" encoding="utf-8" ?>
              <SERIES-AND-CLASSES-CONTRACTS-DATA>
                <MERGER-SERIES-AND-CLASSES-CONTRACTS>
                  <MERGER>
                    <SERIES OWNER-CIK="" SERIES-ID="" SERIES-NAME="">
12:22:44.527  Invalid transaction details detected.  Verifying with server.
                 at Clearcove.LogViewer.LogGenerator.Services.ServiceBase.Write(Co
12:22:44.633  Client '.Alice' transaction complete.
12:22:45.011  Transaction placed successfully.
12:22:45.134  Client '.Bill' transaction complete.
12:22:49.777  Verifying network connection.
12:22:50.129  Client '.Alice' transaction initiated.
12:22:50.240  Process start client initiated.
12:22:50.327  Verifying network connection.
```

The log entry grid is the heart of LogViewPlus. You can use this grid to easily view information about your log file. Note that this grid is color-coded based on the log level. LogViewPlus supports five different log levels: Debug, Info, Warn, Error and Fatal.

1 Grouping

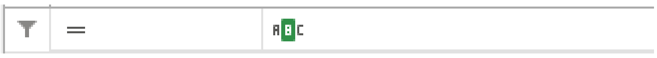


Drag a column header here to group by that column

The grouping box can be used to group a particular column. For example, by thread or log level. For more information, please see Grouping Log Entries.

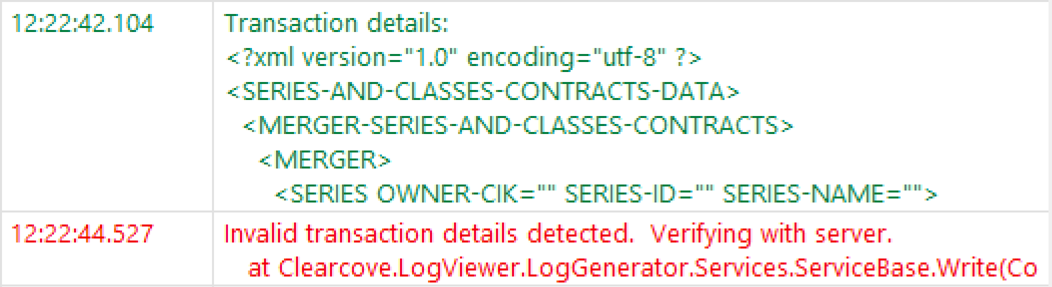
If the grouping box is displayed the Navigation Bar will be hidden.

2 Auto Filtering



Auto filtering executes a text search in the context of the given column. Rows which do not match the search criteria will be removed from the view.

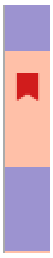
3 Log Entries



```
12:22:42.104   Transaction details:
               <?xml version="1.0" encoding="utf-8" ?>
               <SERIES-AND-CLASSES-CONTRACTS-DATA>
                 <MERGER-SERIES-AND-CLASSES-CONTRACTS>
                   <MERGER>
                     <SERIES OWNER-CIK="" SERIES-ID="" SERIES-NAME="">
12:22:44.527   Invalid transaction details detected.  Verifying with server.
                  at Clearcove.LogViewer.LogGenerator.Services.ServiceBase.Write(Co
```

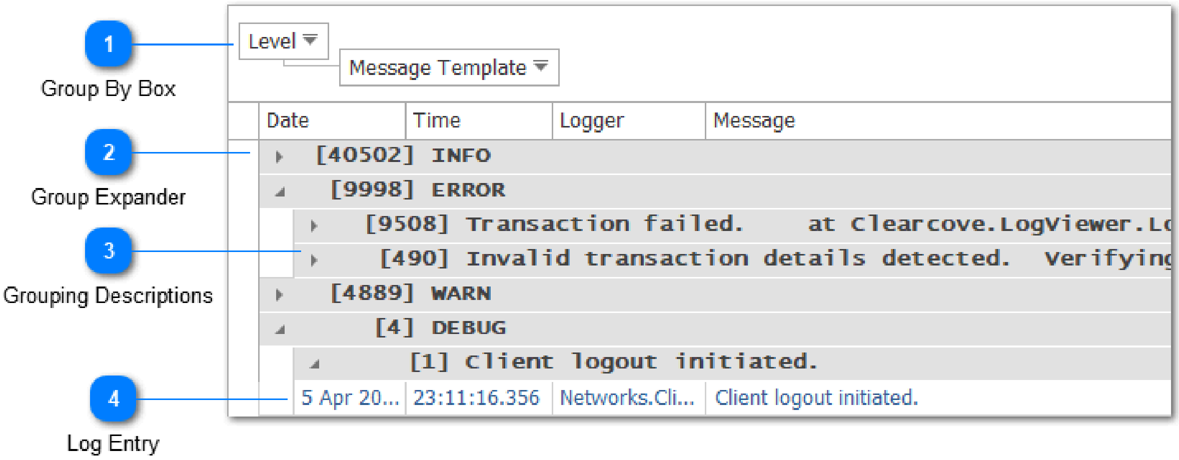
The log entries list shows all log entries available on the current view.

4 Log File Indicator



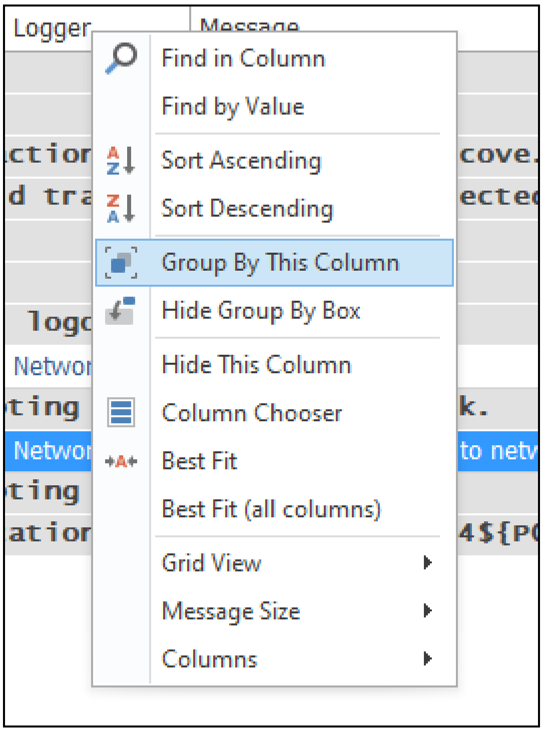
This log file indicator will appear by default when viewing a merged file. Each distinct color represents a different file. This makes it easy to see at a glance which log entries were written by the same application. Of course, there is also a 'Log File Name' column where you can see the name of the file responsible for the log entry.

Grouping Log Entries



```
[40502] INFO
 [9998] ERROR
   [9508] Transaction failed.     at Clearcove.LogViewer.Lo
    [490] Invalid transaction details detected.  Verifying
 [4889] WARN
    [4] DEBUG
       [1] Client logout initiated.
5 Apr 20... | 23:11:16.356 | Networks.Cli... | Client logout initiated.
```

LogViewPlus gives you the ability to group log entries by column. Log entries containing common values for the selected column will be grouped together. To group log entries you can either drag a column into the "Group By" box, or right click on a column and select "Group By This Column".

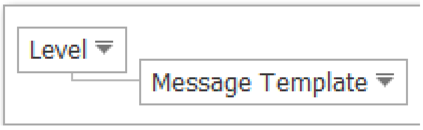


Note that grouping hierarchies are supported. In the above example log entries are grouped by Level first and Message Template second. If you need to group by Message, we recommend using the Message Template column instead. The Message Template column attempts to remove any variables from the message and produce a cleaner report.

Grouping while tailing a log file is possible. However, the groups will expand as new entries are added. This will make reading the data difficult. For this reason, we recommend you disable the tail functionality while grouping.

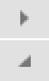
Finally, note that grouped log entries cannot be saved. If you attempt to save a view with grouping enabled, all groups will be cleared before the file is saved.

1 Group By Box



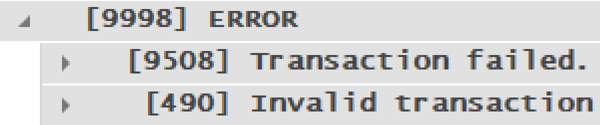
The Group By box shows the columns that are currently grouped. You can add or remove columns to the group by box by dragging and dropping the column headers.

2 Group Expander



The arrow next to each group can be used to expand all child entries within the group. Note that a group may contain child groups or log entries.

3 Grouping Descriptions



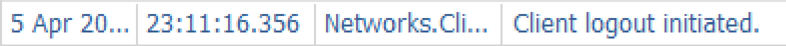
```
◢   [9998] ERROR
  ▸   [9508] Transaction failed.
  ▸    [490] Invalid transaction
```

The grouping descriptions give you information about the current groups. This information is broken into two fields. The first field is the number of records contained within the group. This field is enclosed in square brackets. For example, "[128]" would tell us that this group contains 128 log entries.

The second field contains the value for the group. This value is the column value which will be common for all log entries in the group. In the example above, "WARN" is the log level. The two subsequent group values are common messages. This is perhaps more clear if you consider the values in the "Group By" box while interpreting the grouping description.

The font used to display the grouping descriptions will be the same font that is used by the log entry box.

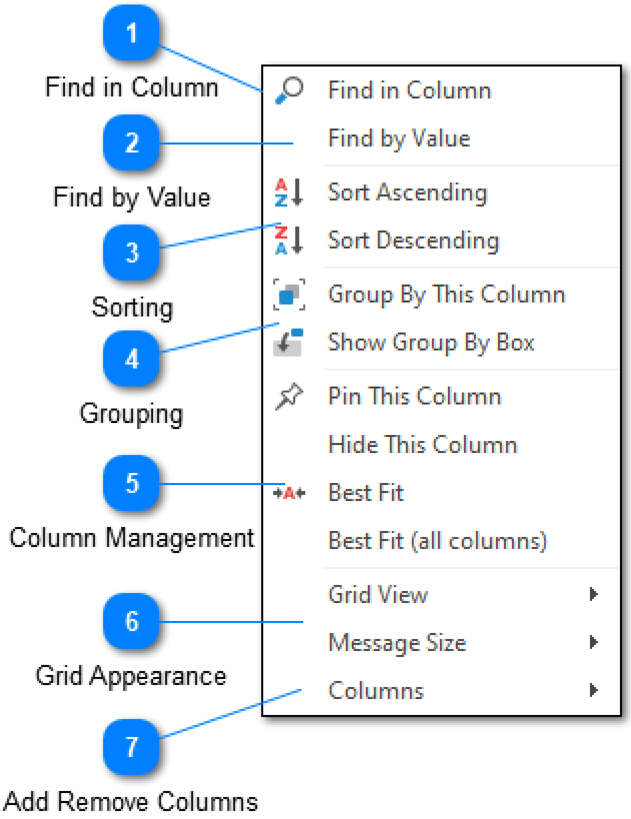
4 Log Entry



5 Apr 20...	23:11:16.356	Networks.Cli...	Client logout initiated.

If you drill down far enough in the grouping, you will eventually come to the underlying log entries. These log entries will not display columns which are included as part of the grouping. In the example above the level and message columns are not used when displaying the log entry.

Grid Column Menu



The grid menu is available by right clicking on a column header of the log entries grid.

1 Find in Column

Find in Column

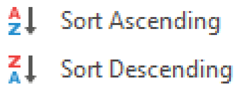
Creates a new Text Filter with the source field set to the currently selected column. This will constrain the search to only the selected column.

2 Find by Value

Find by Value

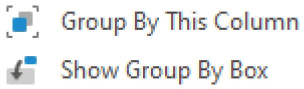
Creates a new Value Filter based on the values contained in the selected column.

3 Sorting



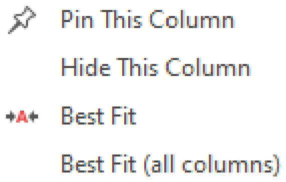
The sorting commands allow you to sort in ascending or descending order. You can also clear sorting if the selected column already has sorting applied.

4 Grouping



The grouping commands allow you to control grid grouping. You can either group by the selected column or manage whether the group by box is shown or hidden.

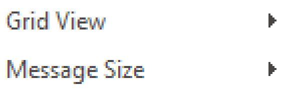
5 Column Management



The column management commands allow you to configure which columns are shown in the log entry grid.

You can use the Best Fit options to automatically manage column widths.

6 Grid Appearance

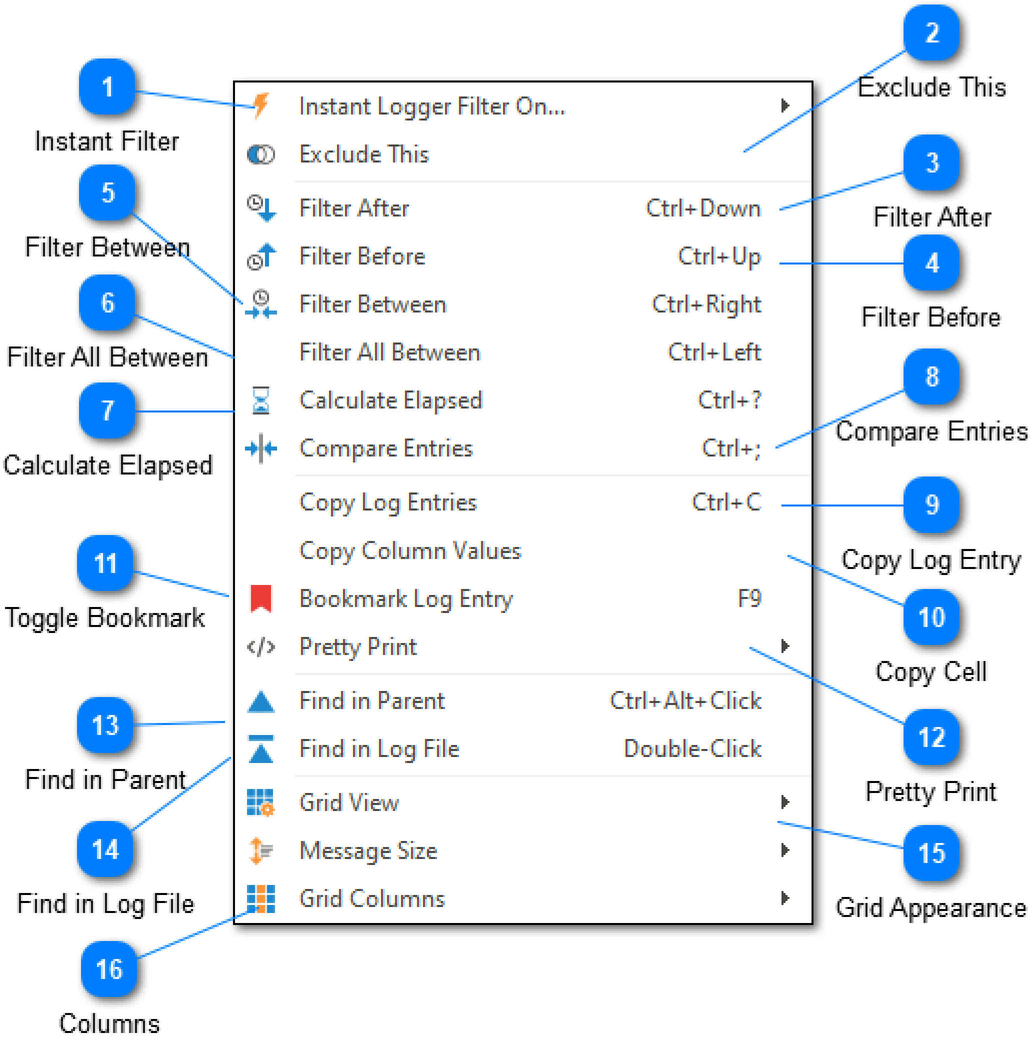


Grid appearance commands can be used to control the display of the log entry grid. Please see the view toolbar documentation for more information.

7 Add Remove Columns

The columns command can be used to quickly add or remove a column. Selecting this command will open a further set of menu items each of which represents a grid column. Currently visible columns will have a check next to them.

Grid Context Menu



The grid context menu is available by right clicking on a row in the log entries grid. Note that the actions available in the grid context menu will change depending on the column where the right-click action occurred.

1 Instant Filter

An "instant" filter is a filter which will be created without any further configuration. In this example the type of instant filter is a thread filter. Selecting this option would therefore create a thread filter at the level of the current log entry. For example, if the current log entry is at thread '5' then this command would create a new thread filter for thread '5'.

Note that in some cases, we may need to select where in the filter hierarchy the filter should be applied. Should we apply it to the log file? Or to the current filter? Or, perhaps, a child filter?

2 Exclude This

Exclude filters work the same as the "instant" filter described above, but the filter created will be an Exclude rather than an Include. This means the generated view will not contain the selected text in the given column.

3 Filter After

Reads the time of the currently selected log entry and creates a new Date Filter showing everything which occurred after that time.

4 Filter Before

Reads the time of the currently selected log entry and creates a new Date Filter showing everything which occurred before that time.

5 Filter Between

When two or more log entries are selected this command will determine the start and end time of the log entries and create a new Date Filter showing everything in the current view which occurred between the selected times.

6 Filter All Between

Filtering "all" between is the same as filtering between, but the "all" command will be executed against the root log file rather than the current view. Therefore, the filter generated by this command will contain all log entries in the log file between the two selected dates.

7 Calculate Elapsed

Calculates the amount of time that has elapsed between the two selected log entries.

8 Compare Entries

If you have configured LogViewPlus to use a compare tool (like WinMerge) the Compare Log Entries command will open the two selected log entries using your configured tool. This is helpful for quickly determining the difference between two log entries.

9 Copy Log Entry

Copies the currently selected log entry to the clipboard. Note that the copied log entry will be the full log entry as it would have appeared in a text editor.

10 Copy Cell

Copies the currently selected cell to the clipboard.

If multiple rows are selected, this command will be called "Copy Column Values". All column values in the selection will be copied to the clipboard with one value per line.

11 Toggle Bookmark

Adds or removes a bookmark to the currently selected log entry. Note you can also add or remove bookmarks by double-clicking in the row selection column.

12 Pretty Print

Sets the pretty print display format for all log entries currently selected in the grid.

13 Find in Parent

This command will find the currently selected log entry in the parent log file or filter.

14 Find in Log File

This command will find the currently selected log entry in the original log file.

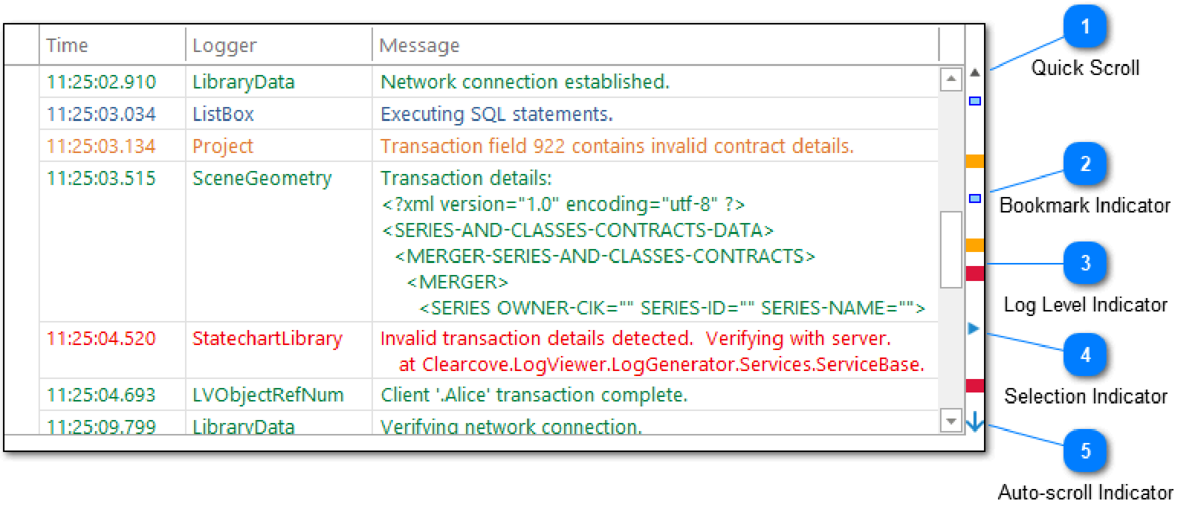
15 Grid Appearance

Grid appearance commands can be used to control the display of the log entry grid. Please see the view toolbar documentation for more information.

16 Columns

The columns command can be used to quickly add or remove a column. Selecting this command will open a further set of menu items each of which represents a grid column. Currently visible columns will have a check next to them.

Navigation Bar



Time	Logger	Message
11:25:02.910	LibraryData	Network connection established.
11:25:03.034	ListBox	Executing SQL statements.
11:25:03.134	Project	Transaction field 922 contains invalid contract details.
11:25:03.515	SceneGeometry	Transaction details: <?xml version="1.0" encoding="utf-8" ?> <SERIES-AND-CLASSES-CONTRACTS-DATA> <MERGER-SERIES-AND-CLASSES-CONTRACTS> <MERGER> <SERIES OWNER-CIK="" SERIES-ID="" SERIES-NAME="">
11:25:04.520	StatechartLibrary	Invalid transaction details detected. Verifying with server. at Clearcove.LogViewer.LogGenerator.Services.ServiceBase.
11:25:04.693	LVObjectRefNum	Client '.Alice' transaction complete.
11:25:09.799	LibraryData	Verifying network connection.

The log level navigation bar is found to the right of the log entries grid. This navigation bar is designed to give you a quick view of your log file.

The idea behind the log level navigation bar is that it shows 100% of your log file. If, for example, your log file had 100 log entries and the log level navigation bar had 100 pixels, then one pixel on the navigation bar could represent one log entry. As your log file grows beyond 100 log entries, the log level navigation bar will fold log entries based on log priority. For example, if your log file had 1000 log entries, then a pixel would represent 10 log entries. If one of those 10 log entries was an error, then the pixel would be red.

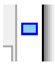
Clicking anywhere on the log level navigation bar will take you to the corresponding position in the log file. Right clicking on the log level navigation bar will display the navigation bar context menu.

Note that selecting the bottom of the navigation bar will automatically select the last log entry in the view. This will enable auto-scroll behavior if the log file is currently in tail mode.

1 Quick Scroll

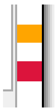
The gray arrow found at the top and bottom of the log level navigation bar can be used to quickly scroll to the first or last log entry in your log file. Clicking on the gray arrow found at the bottom of the navigation bar scrolls to the last log entry and enables auto scroll. Auto scroll is disabled by selecting any other log entry in the view.

2 Bookmark Indicator



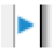
The bookmark indicator is used to show the location of bookmarked log entries. Clicking on a bookmarked indicator will select the bookmarked log entry.

3 Log Level Indicator



The log level navigation bar is color coded based on log entry priority. Log entries with the priority less than warning will not be displayed. Fatal and error log entries will be displayed as red. Warnings are displayed as orange.

4 Selection Indicator

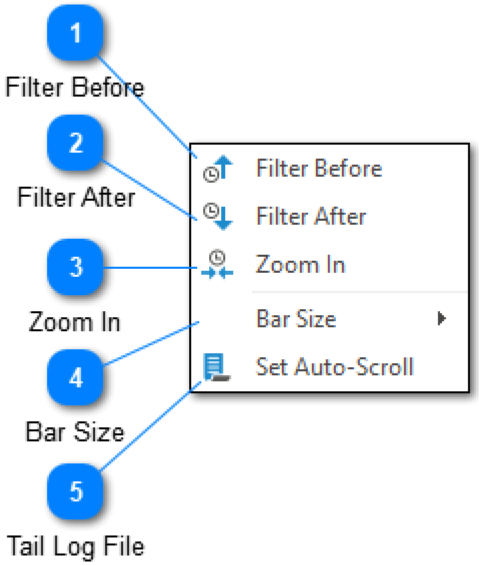


The green arrow in the log level navigation bar is used to indicate the location of the currently selected log entry.

5 Auto-scroll Indicator

If auto-scroll is currently enabled for the log file, the bottom quick scroll icon will be replaced with a green auto-scroll icon. Auto-scroll can be disabled by selecting any log entry in the view other than the last log entry.

Navigation Bar Menu



Right clicking on the log level navigation bar will display the navigation bar context menu.

1

Filter Before

Creates a date time filter which displays everything which occurred before the selected point.

2

Filter After

Creates a date time filter which displays everything which occurred after the selected point.

3

Zoom In

Zooms in on the currently selected point. In order to zoom in LogViewPlus will create a date time filter encompassing roughly 10% of the current view with the selected point in the middle of that calculated time range.

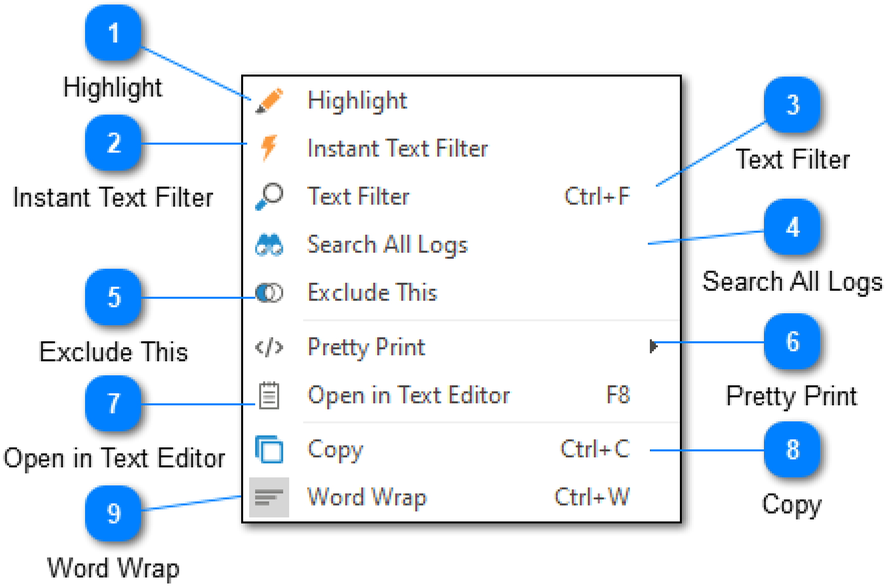
4 Bar Size

Sets the width of the Navigation Bar. Three sizes are supported: Small, Medium and Large.

5 Tail Log File

The tail log file command allows you to start or stop monitoring the current file for changes. You can also enable auto-scroll from the navigation bar by selecting the bottom of the bar. Auto-scroll can only be enabled if the log file is currently in tail mode.

Log Entry Menu



When you right-click on the log entry box which is located just below the log entry grid you will be presented with the log entry menu shown above.

1 Highlight

The highlight command can be used to create a highlight from the currently selected text.

2 Instant Text Filter

The instant text filter will immediately create a text filter from the currently selected text. Note that you will not be given an opportunity to configure the text filter the forward is created.

3 Text Filter

Text Filter Ctrl+F

The text filter command will create a new text filter from the currently selected text. This command will give you the opportunity to configure the text filter before it is created.

4 Search All Logs

Search All Logs

Searches all open log files for the selected text. Results will be displayed in the Search Results window.

5 Exclude This

Exclude This

Exclude filters work the same as the "instant" filter described above, but the filter created will be an Exclude rather than an Include. This means the generated view will not contain the selected text in the given column.

6 Pretty Print

Pretty Print

The pretty print command can be used for pretty printing and syntax highlighting of the log entry. Currently LogViewPlus supports three types of pretty printing: XML, JSON, and Symbols & Numbers. Alternatively you can also use this command to turn off pretty printing and syntax highlighting for the currently selected log entry.

7 Open in Text Editor

Open in Text Editor F8

This command will save the current log entry to a file and open it in your default text editor. The file extension for the new file will be determined based on the pretty print type. This command is useful when viewing very large, individual log entries. For example, a log entry with XML output, or a log entry containing all system environment variables.

If multiple log lines are selected in the Log Entries Grid, then multiple lines will be displayed in the log entry text area. In this case, all log entries will be saved to the new file.

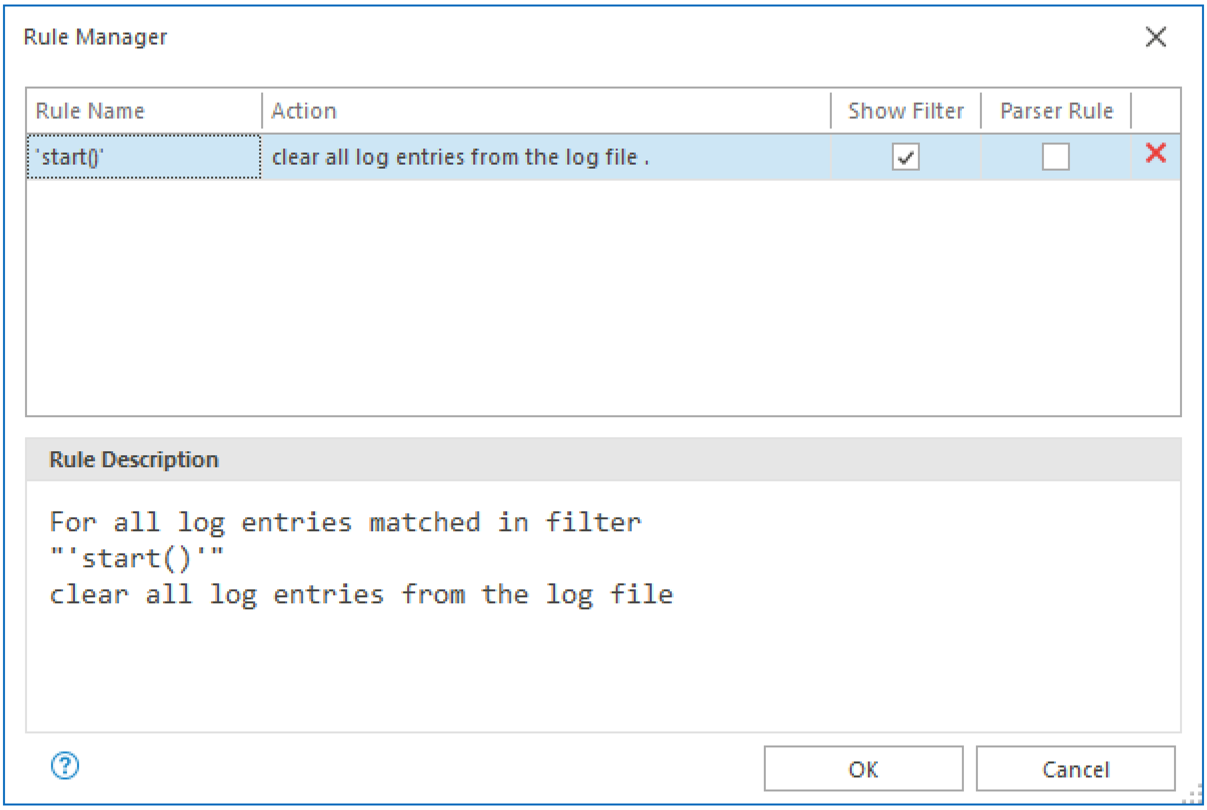
8 Copy

The copy command copies the currently selected text to the Windows clipboard.

9 Word Wrap

The word wrap command can be used to turn word wrap on or off. Turning off word wrap can be particularly helpful if the current log entry is formatted by default.

Rules



Rule Name	Action	Show Filter	Parser Rule
'start()'	clear all log entries from the log file .	☑	□

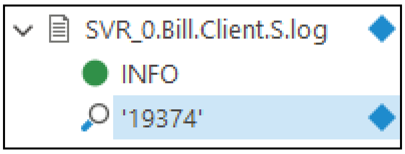
Rule Description

```
For all log entries matched in filter
"'start()'"
clear all log entries from the log file
```

Rules are used to assign an action to a filter. This is useful for changing the behaviour of LogViewPlus based on the information detected by a filter. Examples include changing the log item color or clearing the log file.

Rules can only be applied to filters. If you would like a rule to apply to all log entries in a log file, consider creating a log level filter which matches all rows.

Once created, all rules that apply to a log file can be managed as a group at the file level using the Rule Manger. Rules can also be managed individually by re-opening the Rule Wizard. This can be done by selecting the appropriate view and executing the Rules command. Alternatively, after the rule has been created you will see a blue indicator icon to the left of the view at both the log file and filter level. Double clicking this icon will also help you to manage the rule.

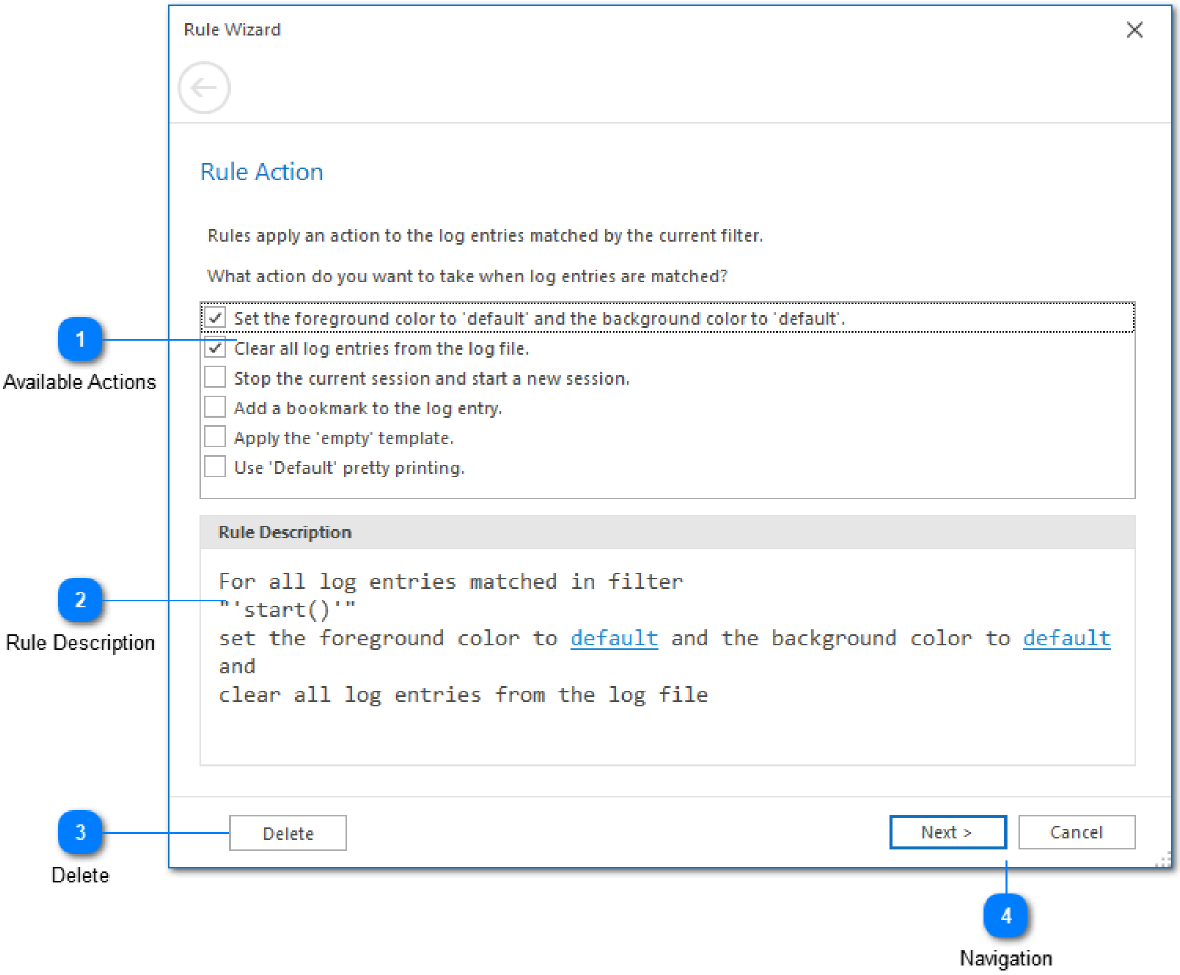


When you create a rule in LogViewPlus, you will notice two modifiers added to the log tree view. The first modifier is on the log file. This modifier can be used to edit all rules applied to the log file using the Rule Manager. The second modifier is on the filter. This modifier can be used to open edit the rule using the Rule Wizard.

LogViewPlus currently supports the following rule actions:

Action	**Description**
Set foreground and background color	Changes the foreground and background color of all rows in the f overrides all other format settings. Format settings for a log entry across all views.
Clear all log entries	Removes all log entries from the current log file. This action migh were tailing a log file and wanted to reset it on application restart
Stop / Start a new session.	For every pair of matching log entries, this will create a new date root log file. If the number of log entries is odd, a new session filt This is useful for dividing your log file into time increments.
Add a bookmark	Adds a bookmark to all rows in the filter.
Apply a template	Applies a pre-defined template to the root log file.
Set the pretty print type	Changes the pretty print format type for all rows in the filter. The will be respected across all views.

Rule Wizard



Rule Action

Rules apply an action to the log entries matched by the current filter.

What action do you want to take when log entries are matched?

- ☑ Set the foreground color to 'default' and the background color to 'default'.
- ☑ Clear all log entries from the log file.
- □ Stop the current session and start a new session.
- □ Add a bookmark to the log entry.
- □ Apply the 'empty' template.
- □ Use 'Default' pretty printing.

Rule Description

```
For all log entries matched in filter
"'start()'"
set the foreground color to default and the background color to default
and
clear all log entries from the log file
```

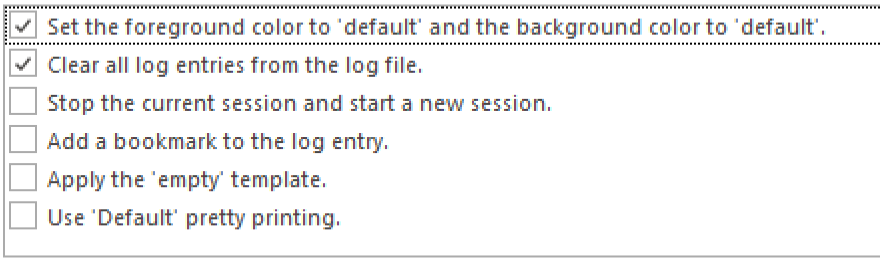
The Rule Wizard can be used to create or edit a filter rule.

LogViewPlus currently supports the following rule actions:

Action	Description
Set foreground and background color	Changes the foreground and background color of all rows in the t overrides all other format settings. Format settings for a log entr across all views.
Clear all log entries	Removes all log entries from the current log file. This action migl were tailing a log file and wanted to reset it on application restart

Stop / Start a new session.	For every pair of matching log entries, this will create a new date root log file. If the number of log entries is odd, a new session fil This is useful for dividing your log file into time increments.
Add a bookmark	Adds a bookmark to all rows in the filter.
Apply a template	Applies a pre-defined template to the root log file.
Set the pretty print type	Changes the pretty print format type for all rows in the filter. The will be respected across all views.

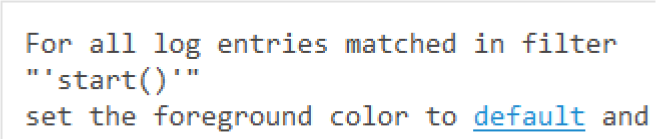
1 Available Actions



☑ Set the foreground color to 'default' and the background color to 'default'.
☑ Clear all log entries from the log file.
□ Stop the current session and start a new session.
□ Add a bookmark to the log entry.
□ Apply the 'empty' template.
□ Use 'Default' pretty printing.

A list of all actions supported by LogViewPlus. Selecting an action will add it to the Rule Description.

2 Rule Description



```
For all log entries matched in filter
"'start()'"
set the foreground color to default and
```

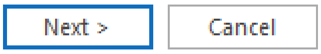
A simple description of the rule. The description states which log entries are included, the filter, and the actions to be applied.

Some action descriptions may include a hyperlink which can be used to configure the action.

3 Delete

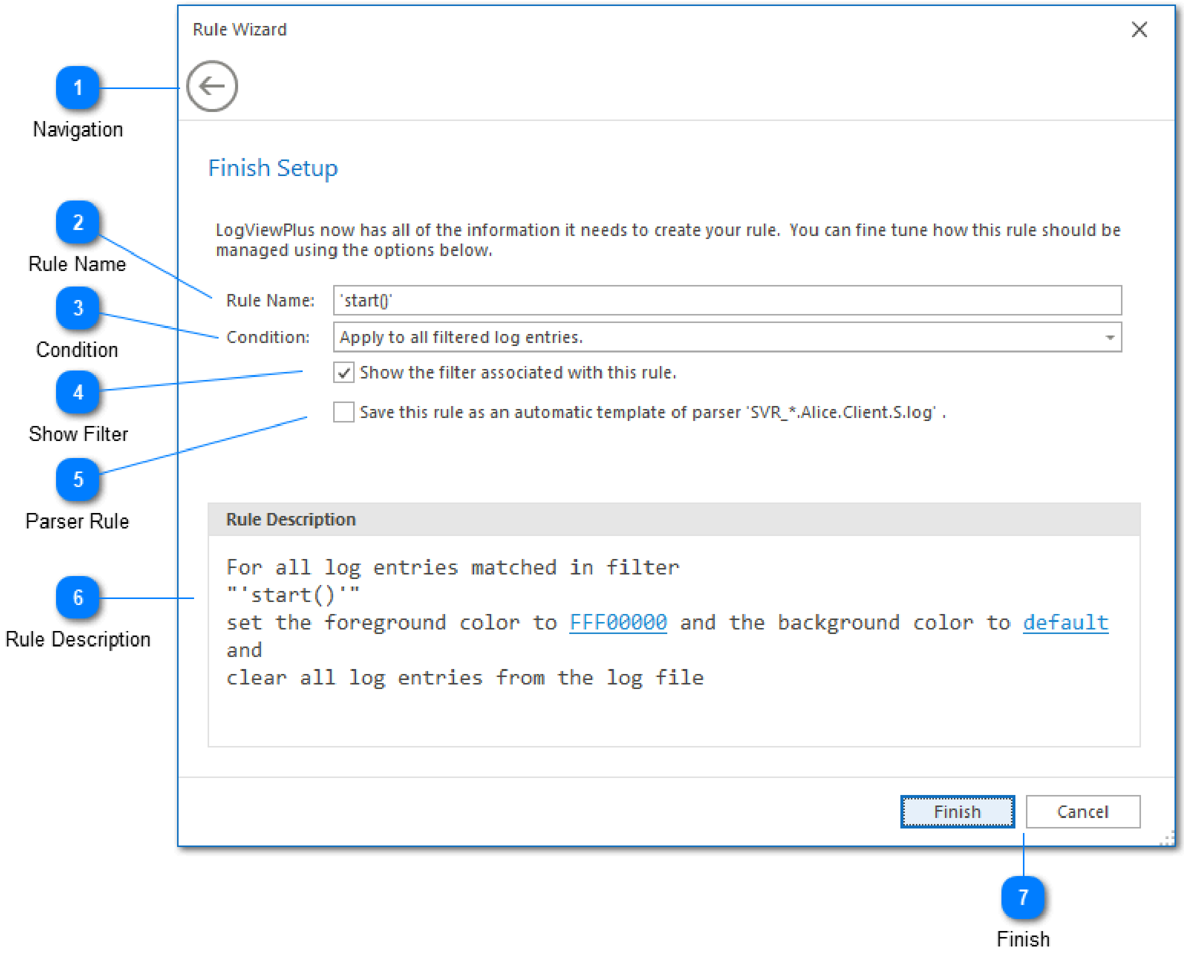
If the rule already exists, the Delete command can be used to permanently remove it.

4 Navigation



Navigate to the next page of the wizard or cancel your changes. Cancelled changes cannot be recovered.

Rule Wizard Finish



Finish Setup

LogViewPlus now has all of the information it needs to create your rule. You can fine tune how this rule should be managed using the options below.

Rule Name: 'start()'

Condition: Apply to all filtered log entries.

☑ Show the filter associated with this rule.

□ Save this rule as an automatic template of parser 'SVR_*.Alice.Client.S.log' .

Rule Description

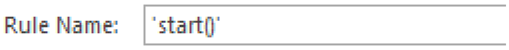
```
For all log entries matched in filter
"'start()'"
set the foreground color to FFF00000 and the background color to default
and
clear all log entries from the log file
```

The final stage of rule configuration contains a number of optional settings.

1 Navigation

Navigates back to the previous configuration screen.

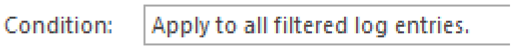
2 Rule Name



Rule Name: 'start()'

The name of the rules. This will be used when referencing the rule in the Rule Manager. By default, the name of the filter will be used.

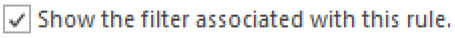
3 Condition



Condition: Apply to all filtered log entries.

The condition is used to determine which log entries in the filter will be used to trigger the rule. Rules can be applied to all log entries, or only the new log entries. New log entries are those detected by tailing the log file.

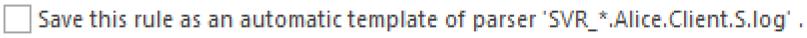
4 Show Filter



☑ Show the filter associated with this rule.

If you create a filter just to set a rule, you may not be interested in having the filter clutter your view. In this case, you can hide the filter by unticking the 'show' box. Hidden filters can be recovered using the Rule Manager.

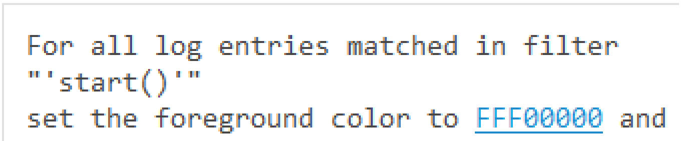
5 Parser Rule



□ Save this rule as an automatic template of parser 'SVR_*.Alice.Client.S.log' .

The parser rule checkbox is used to determine if this filter (including the rule) should be automatically applied every time the given parser is used. If selected, a new configuration setting will be added to Automatic Templates. Parser rules may also be hidden.

6 Rule Description

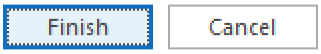


```
For all log entries matched in filter
"'start()'"
set the foreground color to FFF00000 and
```

A simple description of the rule. The description states which log entries are included, the filter, and the actions to be applied.

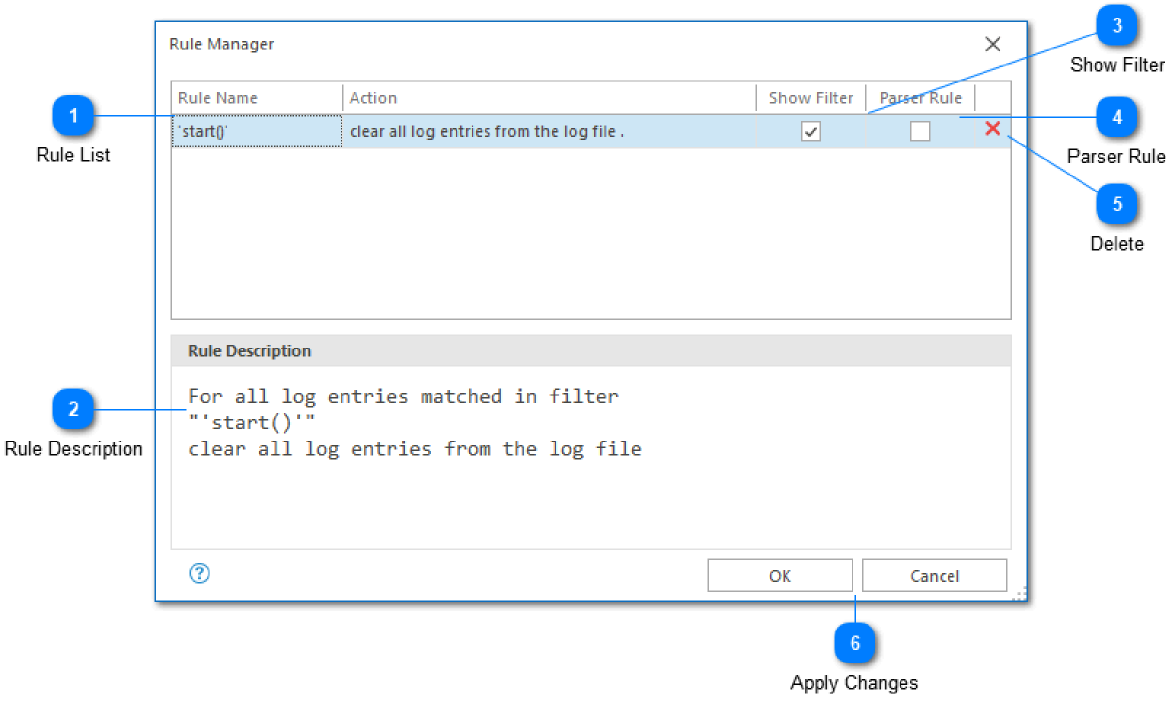
Some action descriptions may include a hyperlink which can be used to configure the action.

7 Finish



The Finish command can be used to save your changes and apply the rule. Cancelled changes cannot be recovered.

Rule Manager



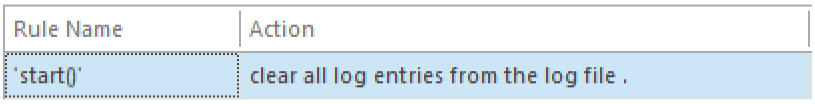
Rule Name	Action	Show Filter	Parser Rule	
'start()'	clear all log entries from the log file .	☑	□	✕

Rule Description

```
For all log entries matched in filter
"'start()'"
clear all log entries from the log file
```

The Rule Manager can be used to configure all rules currently set for the target log file.

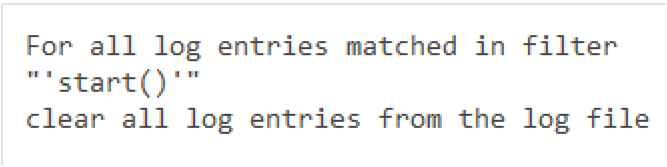
1 Rule List



Rule Name	Action
'start()'	clear all log entries from the log file .

A list of all rules currently set for the target log file. Selecting a rule will modify the Rule Description.

2 Rule Description

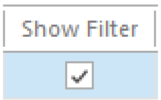


```
For all log entries matched in filter
"'start()'"
clear all log entries from the log file
```

A simple description of the currently selected rule. The description states which log entries are included, the filter, and the actions to be applied.

Some action descriptions may include a hyperlink which can be used to configure the action.

3 Show Filter

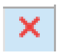


If you create a filter just to set a rule, you may not be interested in having the filter clutter your view. In this case, you can hide the filter by unticking the 'show' box.

4 Parser Rule

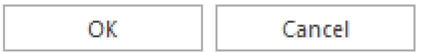
The parser rule checkbox is used to determine if this filter (including the rule) should be automatically applied every time the given parser is used. If selected, a new configuration setting will be added to Automatic Templates. Parser rules may also be hidden.

5 Delete



Removes the selected rule. If the filter associated with the rule is not shown, it will also be removed.

6 Apply Changes



The 'OK' command can be used to save your changes and apply all rules. Cancelled changes cannot be recovered.

Notifications

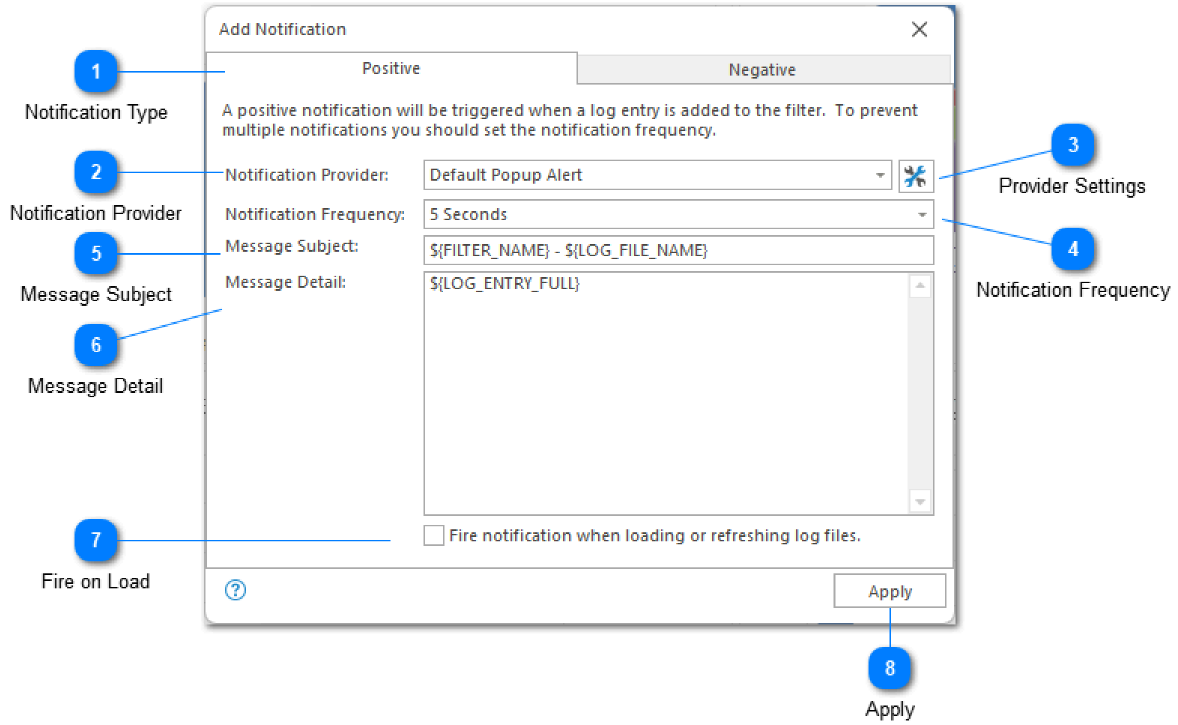
Notifications can be used to create an alert when a new log entry is detected in a filter. This allows you to passively monitor a filter. For example, you could filter a log file for errors and be notified when a new error is detected.

Creating a notification is a two-step process. First you need to create a notification provider. Notification providers are used to define how you would like to be notified. Then, you need to add a notification to a filter. This will tell LogViewPlus when you would like to be notified. Once a notification is added to a filter it will be activated when a new log entry is added to the filter.

Currently, LogViewPlus supports popup notification and SMTP notification providers.

To see event notifications in action, check out our event notifications quick video example.

Add Notification



A positive notification will be triggered when a log entry is added to the filter. To prevent multiple notifications you should set the notification frequency.

Notification Provider: Default Popup Alert

Notification Frequency: 5 Seconds

Message Subject: ${FILTER_NAME} - ${LOG_FILE_NAME}

Message Detail: ${LOG_ENTRY_FULL}

□ Fire notification when loading or refreshing log files.

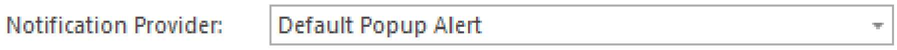
You can add a notification to a filter by clicking on the notify command in the log entries toolbar. The notify command will bring up the add notification dialogue which allows you to configure the notification.

1 Notification Type

Notifications can be either positive or negative. Positive notifications trigger events when a new log entry is detected by the filter. Negative notifications trigger events when a new log entry has not been detected after some period of time and again when log entries are restarted.

Configuration of negative notifications is very similar to the positive notification configuration discussed here.

2 Notification Provider



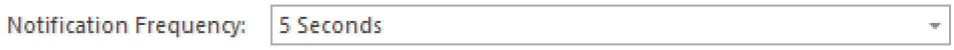
Notification Provider: Default Popup Alert

The notification provider tells LogViewPlus how a notification should be delivered. Notification providers are configured in application settings. Configuration of notification providers will be covered in the following sections.

3 Provider Settings

Opens the Notification Provider settings.

4 Notification Frequency

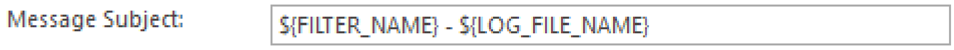


Notification Frequency: 5 Seconds

Notification frequency determines how often a notification should be activated. This is important to consider if you are adding a notification to a filter which may be triggered repeatedly over a short time.

A notification can only be fired once within the notification frequency time window.

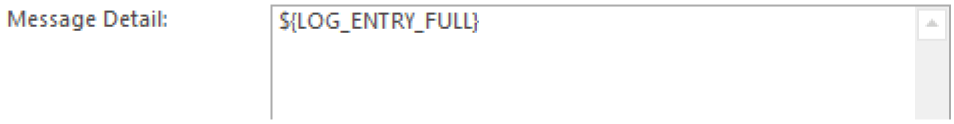
5 Message Subject



Message Subject: ${FILTER_NAME} - ${LOG_FILE_NAME}

The subject that should be displayed by the notification provider. The subject should be a short message. Subjects can be parameterized and using argument templates.

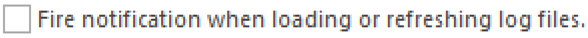
6 Message Detail



Message Detail: ${LOG_ENTRY_FULL}

The message that should be displayed by the notification provider. Note that the message can be parameterized using argument templates.

7 Fire on Load



□ Fire notification when loading or refreshing log files.

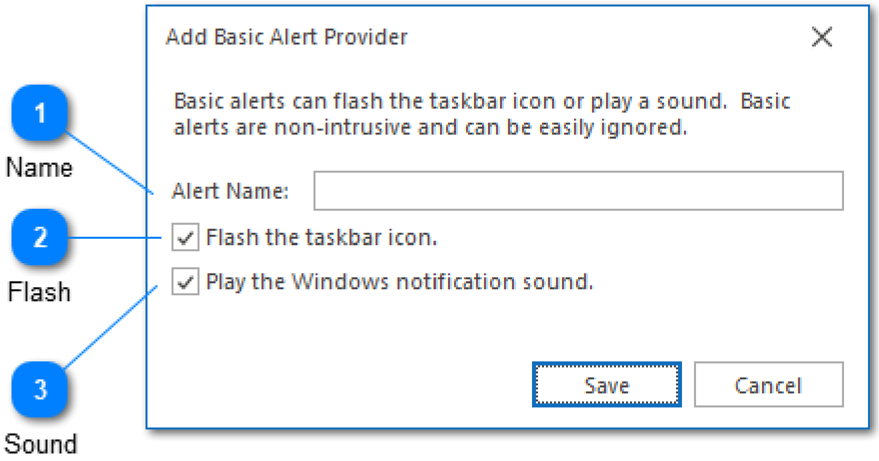
When checked, this will cause the notification events to be triggered as the file is being loaded or refreshed. By default, events will fire only when the file is in tail mode.

8 Apply

Once you are happy with your notification configuration you can click Apply to add the notification to the filter.

If a filter has a notification it will be shown with a notify icon next to it. Double-clicking on the notify icon will bring up the Edit Notification dialog. This dialog will be the same as the Add Notification dialogue discussed above with the exception that it also includes a Delete command at the bottom of the view. The Delete command can be used to remove the notification from the filter.

Basic Alerts



Add Basic Alert Provider

Basic alerts can flash the taskbar icon or play a sound. Basic alerts are non-intrusive and can be easily ignored.

Alert Name:

☑ Flash the taskbar icon.

☑ Play the Windows notification sound.

Basic alerts can flash the taskbar icon or play a sound. Basic alerts are non-intrusive and can be easily ignored.

1 Name

Alert Name:

The alert name is used to identify this alert provider configuration. This name will be used when selecting a provider in the add notification dialog.

2 Flash

☑ Flash the taskbar icon.

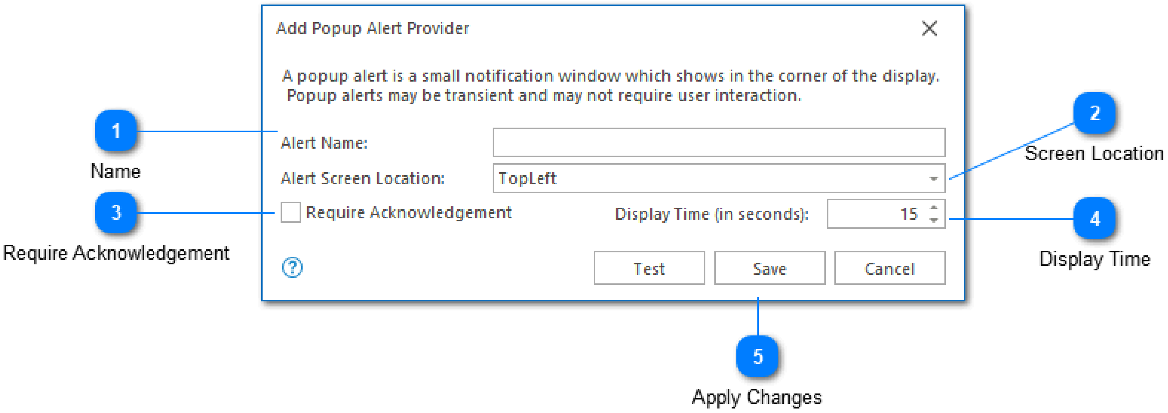
This option will flash LogViewPlus on the taskbar. The application will flash several times before remaining in the alerted state. Navigating to the application will clear the alert state.

3 Sound

☑ Play the Windows notification sound.

Plays the Windows system asterisk sound.

Popup Provider


Add Popup Alert Provider

A popup alert is a small notification window which shows in the corner of the display. Popup alerts may be transient and may not require user interaction.

Alert Name:

Alert Screen Location: TopLeft

□ Require Acknowledgement

Display Time (in seconds): 15

The pop-up notification provider configuration screen is used to create a new pop-up alert. Use this configuration to define how you would like a pop-up alert to be displayed.

1 Name

Alert Name:

The alert name is used to identify this alert provider configuration. This name will be used when selecting a provider in the add notification dialog.

2 Screen Location

Alert Screen Location: TopLeft

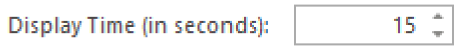
Alert screen location determines where a pop-up alert appears in your monitor. Currently, LogViewPlus supports the four corners of your monitor. These are defined as: TopLeft, BottomLeft, TopRigth, BottomRight. Note that LogViewPlus does not need to be visible or active for a pop-up to be displayed.

3 Require Acknowledgement

□ Require Acknowledgement

If a pop-up alert requires acknowledgment it will not be closed automatically. This ensures that notifications are seen by the user.

4 Display Time

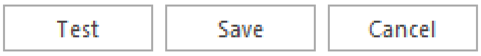


Display Time (in seconds): 15

If a pop-up alert does not require acknowledgment, then it will only be displayed for a short period of time before being closed automatically. The displayed time allows you to configure the amount of time that the alert pop-up should be displayed.

Note that alerts configured with a display time may not be seen by the user.

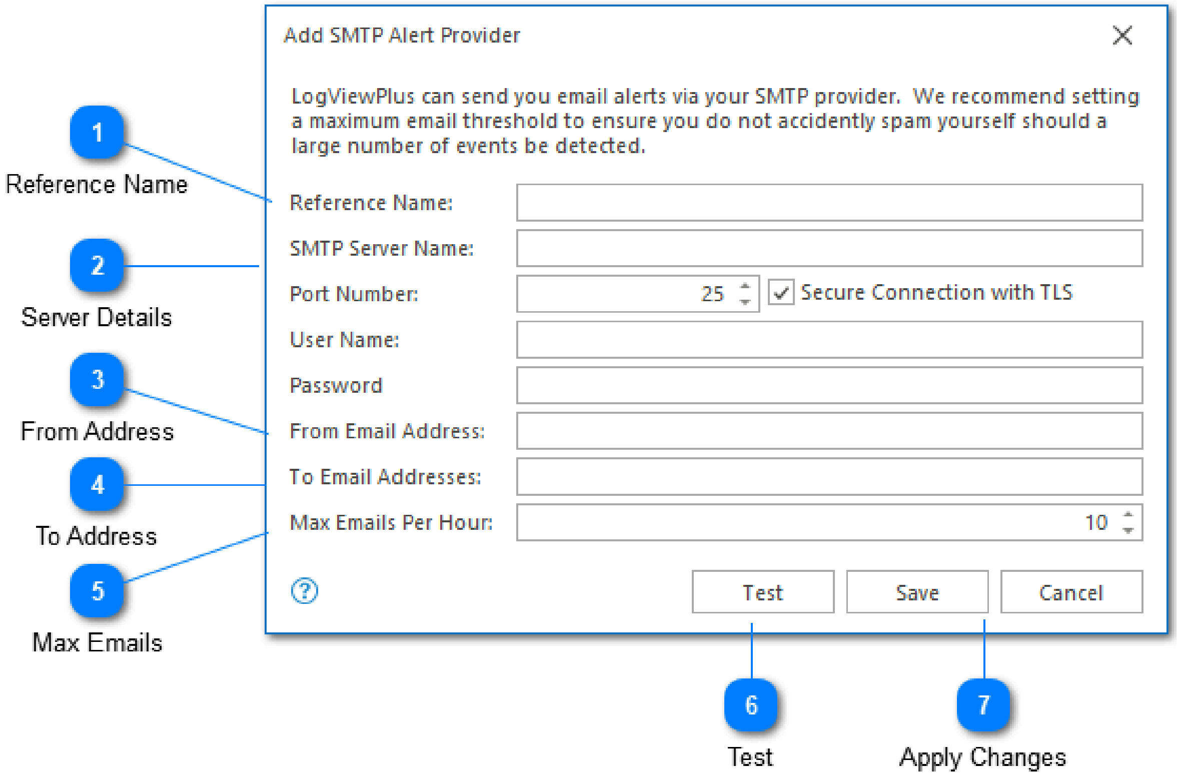
5 Apply Changes



Once you are happy with your pop-up alert configuration you can press the 'OK' button to save the configuration. Alternatively the 'Cancel' command can be used to return to the LogViewPlus application settings.

We recommend that you test the alert provider before saving your changes.

SMTP Provider



Add SMTP Alert Provider

LogViewPlus can send you email alerts via your SMTP provider. We recommend setting a maximum email threshold to ensure you do not accidently spam yourself should a large number of events be detected.

Reference Name:

SMTP Server Name:

Port Number: 25 ☑ Secure Connection with TLS

User Name:

Password

From Email Address:

To Email Addresses:

Max Emails Per Hour: 10

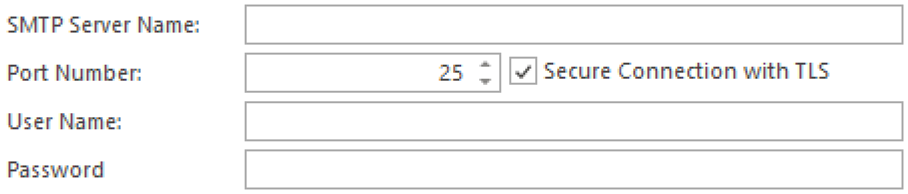
The SMTP notification provider configuration screen is used to create a new SMTP alert. To create an SMTP alert you must have permission to use an external SMTP server.

1 Reference Name

Reference Name:

The reference name is used to identify this SMTP provider alert. This name will be used when selecting a provider in the add notification dialog.

2 Server Details



SMTP Server Name:

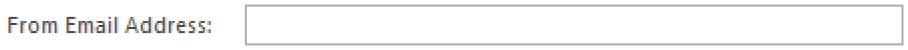
Port Number: 25 ☑ Secure Connection with TLS

User Name:

Password

The server details configuration is where you will provide all details necessary to establish a connection with your SMTP server.

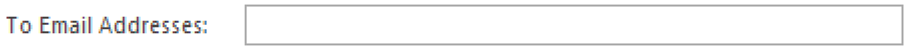
3 From Address



From Email Address:

The From Address will be used to mock the source of the alert email. Note that, just like any other email, you will be able to reply to the SMTP alerts. We therefore recommend using a valid From address. However, LogViewPlus does not ensure that the From address is valid.

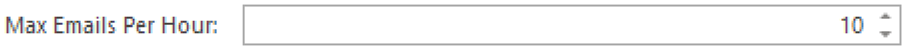
4 To Address



To Email Addresses:

The To Address specifies where the alert should be sent. This field is required.

5 Max Emails



Max Emails Per Hour: 10

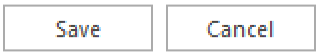
When setting up an SMTP provider alert it's important to keep in mind that sometimes log events happen more frequently than we initially anticipated.

The max emails per hour field allows you to specify a threshold beyond which no more emails will be sent. This is a useful feature to ensure that you do not accidentally spam the target recipient. Note however that if the same SMTP provider is used to monitor multiple filters then these filters will share a common threshold.

6 Test

The test command can be used to send an SMTP email message using the configuration provided. We always recommend testing your configuration before setting up your alerts.

7 Apply Changes



Once you are happy with your SMTP alert configuration you can press the 'OK' button to save the configuration. Alternatively the 'Cancel' command can be used to return to the LogViewPlus application settings.

Command Line

LogViewPlus supports the following command line options. This help is also available by executing ***logviewplus.exe /?*** at the command line. Note that LogViewPlus is not placed into your system PATH by default. Therefore it is necessary to navigate to the installation directory before executing the commands. The default installation directory is *%LocalAppData%\Programs\LogViewPlus* for a per-user installation or *%ProgramFiles(x86)%*\LogViewPlus for a system wide installation.

Usage:

LogViewPlus [-?] [-lastworkspace] [-workspace:name] file1path file2path

Options:
-? Displays the command line usage.

-lastworkspace Opens the last viewed workspace if available. Note that LogViewPlus automatically saves your current workspace every 15 seconds.

-workspace:name Opens the workspace specified by the 'name' variable if available. If the workspace does not exist, the command will be ignored.

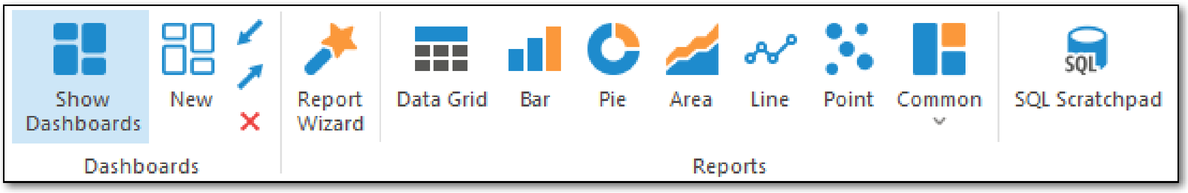
Examples:

LogViewPlus file1path file2path - Opens file1path and file2path. Note that full file paths are expected.

LogViewPlus "-workspace:My Worksapce" file1path - Opens the workspace named 'My Worksapce' as well as file1.

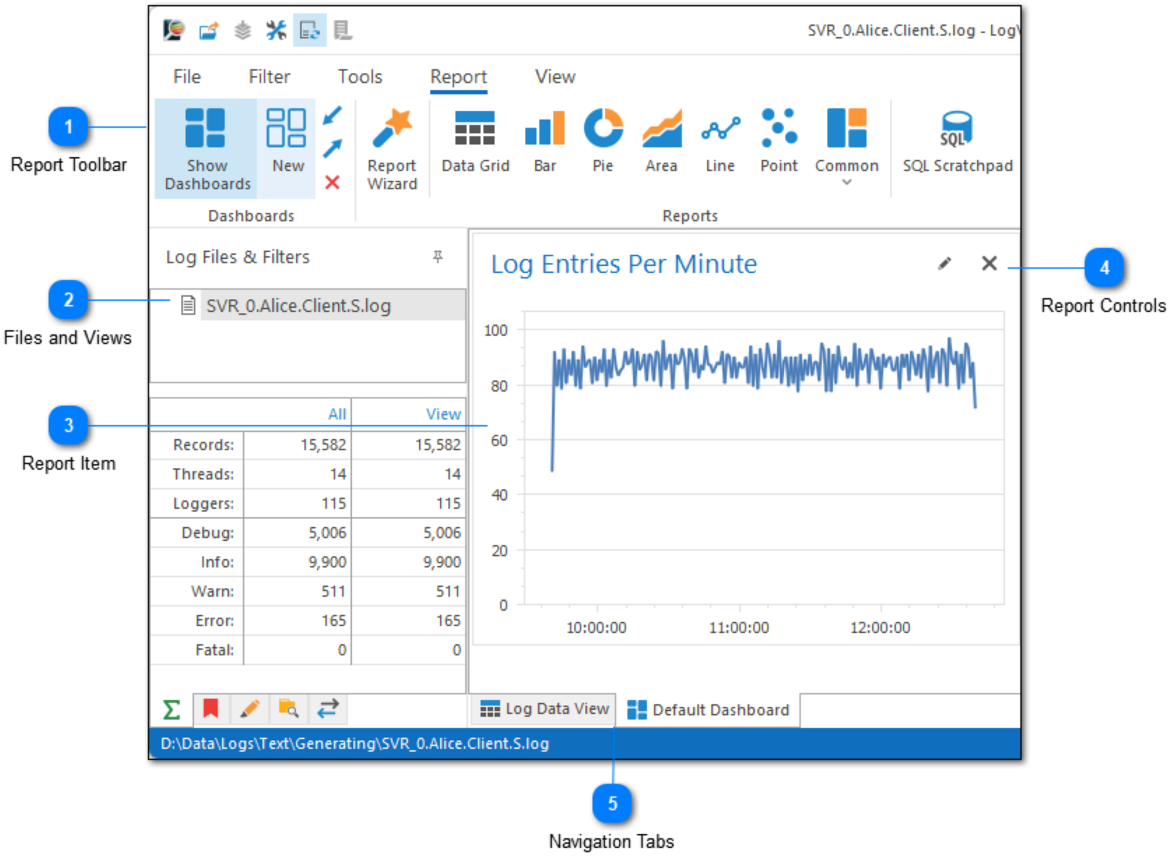
Advanced command line options are discussed in Admin Actions.

Reports & Dashboards



New in LogViewPlus 3.0 is the ability to create custom SQL-based reports which can be grouped together into a dashboard. Dashboards can be exported and shared. SQL-based reports are a great way to analyze your log file in depth. We will cover reporting and dashboards in this section.

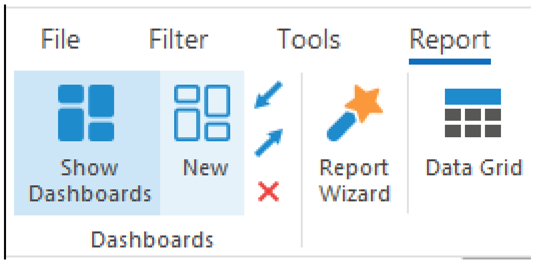
Dashboard Overview



	All	View
Records:	15,582	15,582
Threads:	14	14
Loggers:	115	115
Debug:	5,006	5,006
Info:	9,900	9,900
Warn:	511	511
Error:	165	165
Fatal:	0	0

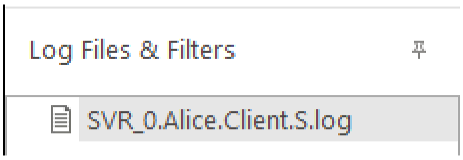
Before we dive into the details, let's just take a quick look at our dashboard view.

1 Report Toolbar



The Report Toolbar was discussed in the previous chapter. Use the report toolbar to manage dashboards and create new reports.

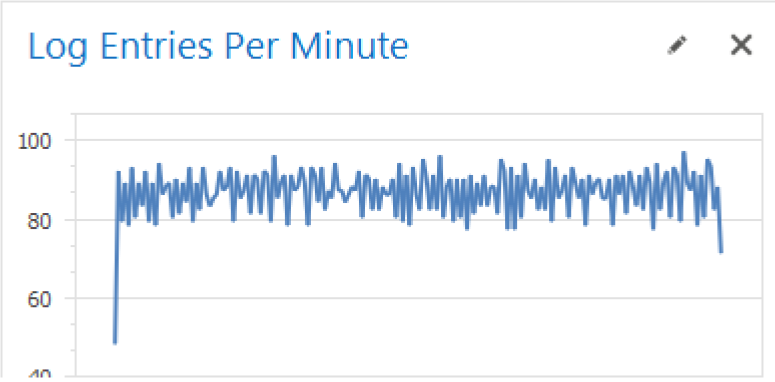
2 Files and Views



On the far left of the screen is a tree list which shows all of the files and views you currently have open. You can use this list to navigate between log files and filter results. LogViewPlus uses the same log filter tree structure to navigate both data and dashboards.

Changing the view will automatically update the current dashboard. This means that any SQL statements used when generating a report should not attempt to filter data in the where clause. Data filtering can be achieved by creating filtered view on the log data and this can make your reports more flexible.

3 Report Item



The report item typically shows a graph of data retrieved from a SQL select statement. Multiple types of graphs are supported and you can even display the data directly in a grid.

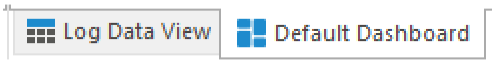
Dashboards can contain multiple report items.

4 Report Controls

✎ ✕

In the upper right corner of the report item you will find the report commands. Report commands can be used to edit or remove a given report.

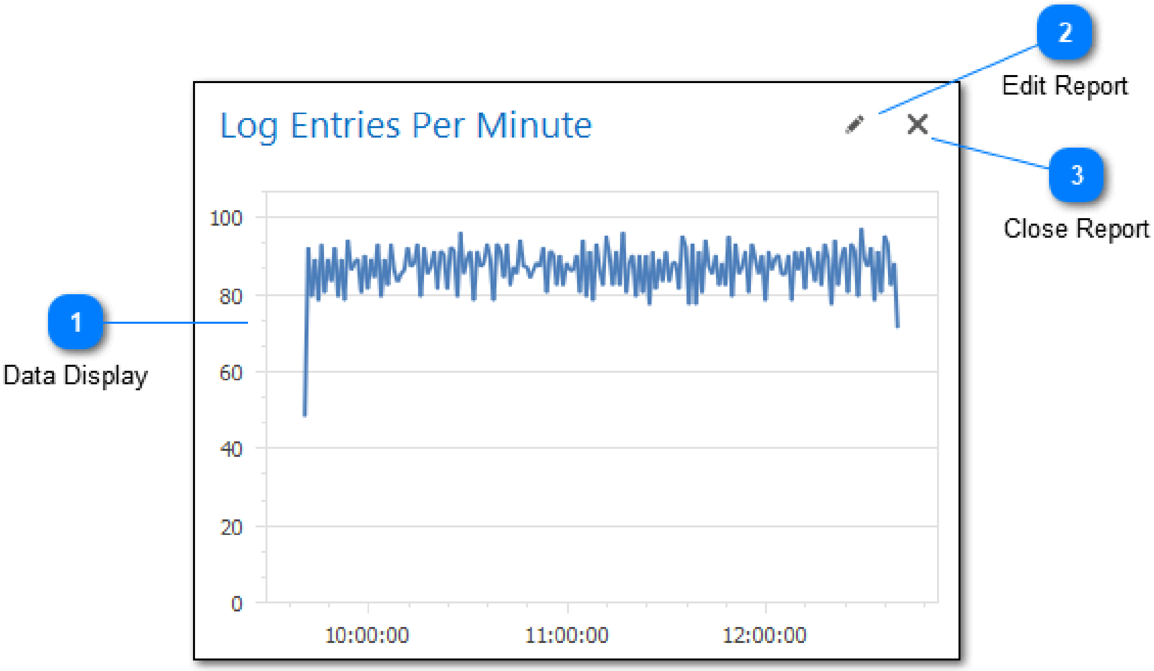
5 Navigation Tabs



If dashboards are currently enabled, you will see a minimum of two tabs at the bottom of the LogViewPlus window. These tabs can be used to navigate between the log entry grid and a given dashboard. Multiple dashboards may be assigned to the same log file configuration. In which case, more than two tabs will be shown.

The first tab will always be the log data view. Selecting this tab will show the Log Entry Grid and the underlying data used to populate your dashboard reports.

Dashboard Report



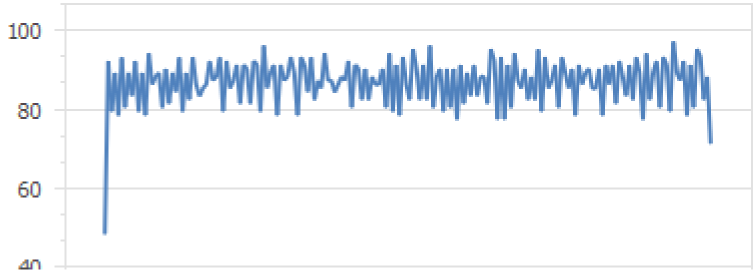
A dashboard is made up of one or more reports. Reports in LogViewPlus are generated by applying a SQL SELECT statement to the currently selected view. This is done by using the Dashboard Report Wizard which is available from the Report Toolbar.

Dashboards organize report items into a table with rows and columns. Report items are inserted into the table with a variable column and row span that allows you to customize how the dashboard is displayed. Dashboard tables are made up of 16 columns. These columns form 100% of the dashboard table width. Rows are sized at 100 pixels per row, depending on your screen DPI settings. A dashboard can contain an unlimited number of rows. The vertical scrollbar will be inserted automatically if needed.

You can drag-and-drop report items in a dashboard to move a report from one area to another. When moving report items the source and destination must be size compatible. Generally this means that both the source and destination have the same column and row span.

Because report data is gathered from the SQL SELECT statement, the information displayed in a report is very flexible. LogViewPlus supports a full range of SQL SELECT commands including data aggregation and manipulation.

1 Data Display



The data display area shows the result of applying the data in the current view with a SQL statement and the selected report type. Multiple report types are supported including data grids, pie charts, and bar graphs.

2 Edit Report

✎

Editing the report allows you to revisit report settings such as the SQL statement used, column and row span, or even the report type.

3 Close Report

✕

Closing a report will remove it from the dashboard. Once the report is closed it cannot be recovered.

LVP SQL

LogViewPlus has a custom SQL engine which executes against the parsed log entries in memory. This ensures queries can be executed quickly and without writing your log entries to another data store. We call our custom SQL implementation LogViewPlus SQL or LVP SQL.

SQL statements in LogViewPlus are based on Transact-SQL, or T-SQL, which is Microsoft's version of SQL used extensively in SQL Server. Our SQL engine is tested against a SQL Server back-end to ensure SQL statement compatibility and accuracy of results.

If you're writing a SQL statement and unsure of the syntax, it can be extremely helpful to search the web for "how to X in SQL Server", the resulting answer should also be supported in LogViewPlus. We have also added a "Copy AI Prompt" command to the context menu on all of our SQL edit dialogs. This command will look at the schema for the current view and copy a prompt to your clipboard which can be used with an AI Chatbot to help build your query.

LogViewPlus only supports SQL SELECT statements. Other SQL statements such as INSERT or CREATE TABLE are not supported.

LogViewPlus only supports one table called **CurrentView** which can be aliased with the abbreviation **CV**. Therefore, the FROM target of your SELECT statement should always be **CurrentView** or **CV** as there is only one view. Data from the current view can be enriched with JOIN conditions and functions such as LOADCSV (discussed below).

The CurrentView data matches the data which is currently visible in the Log Entry Grid. The data returned by your SQL statement will change automatically as the data in the current view changes - such as when you navigate between filters or log files. The data columns available to your SQL query will also change based on the current selection. For example, when using a message parser. In some scenarios, this may cause an existing SQL statement to move between states of being valid and invalid. This behaviour is normal and expected.

Changes to the CurrentView will impact the data available to a Dashboard. This allows filters to work as WHERE clause conditions that dynamically manage dashboard queries.

The following keywords and functions are supported.

Keywords

Keyword	Description

SELECT	The SELECT command is used to select data from a database. The data returned is stored in a result table, called the result set.
WHERE	The WHERE command filters a result set to include only records that fulfill a specified condition.
AND	The AND command is used with WHERE to only include rows where both conditions is true.
NOT	The NOT command is used with WHERE to only include rows where a condition is not true.
GROUP	The GROUP BY command is used to group the result set (used with aggregate functions: COUNT, MAX, MIN, SUM, AVG).
ORDER	The ORDER BY command is used to sort the result set in ascending or descending order.
BY	See ORDER or GROUP.
HAVING	The HAVING command is used instead of WHERE with aggregate functions.
AS	The AS command is used to rename a column or table with an alias.
DISTINCT	The SELECT DISTINCT command returns only distinct (different) values in the result set.
TOP	The TOP command is used to specify the number of records to return starting at the top of the dataset.
BOTTOM	The BOTTOM command is used to specify the number of records to return starting at the top of the dataset if the set is ordered. Otherwise, the return value will start at the N rows before the final record.
PERCENT	Selects the first X percent of the records matched by the query.
FROM	The FROM command is used to specify which table to select or delete data from.
JOIN	See INNER JOIN.
INNER JOIN	Selects records that have matching values in both tables.
LEFT JOIN	Returns all records from the left table, and the matching records from the right table.
IS	See IS NULL or IS NOT NULL.
NULL	A field with a NULL value is a field with no value. This is distinct from a field with an empty or default value.
GO	Used to indicate end of statement. Currently allowed but ignored.
CASE	The CASE command is used is to create different output based on conditions.

WHEN	See CASE.
THEN	See CASE.
ELSE	See CASE.
END	See CASE.
ASC	The ASC command is used to sort the data returned in ascending order.
DESC	The DESC command is used to sort the data returned in descending order.

String Functions

Function	Description
CHAR	The CHAR() function returns the character based on the ASCII code.
CHARINDEX	The CHARINDEX() function searches for a substring in a string, and returns the position.
CONCAT	The CONCAT() function adds two or more strings together.
CONTAINS	Determines if one string contains a another. Similar to simple forms of the SQL Server CONTAINS function.
LEFT	The LEFT() function extracts a number of characters from a string (starting from left).
LEN	The LEN() function returns the length of a string.
LOWER	The LOWER() function converts a string to lower-case.
LTRIM	The LTRIM() function removes leading spaces from a string.
NCHAR	The NCHAR() function returns the Unicode character based on the number code.
REPLACE	The REPLACE() function replaces all occurrences of a substring within a string, with a new substring.
REVERSE	The REVERSE() function reverses a string and returns the result.
RIGHT	The RIGHT() function extracts a number of characters from a string (starting from right).
RTRIM	The RTRIM() function removes trailing spaces from a string.
STR	The STR() function returns a number as a string.
STUFF	The STUFF() function deletes a part of a string and then inserts another part into the string, starting at a specified position.
SUBSTRING	The SUBSTRING() function extracts some characters from a string.
UPPER	The UPPER() function converts a string to upper-case.

FORMAT	The FORMAT() function formats a value with the specified format and culture.

Date Functions

Function	Description
DATEPART	The DATEPART() function returns a specified part of a date.
GETDATE	The GETDATE() function returns the current database system date and time, in a 'YYYY-MM-DD hh:mm:ss.mmm' format.
GETUTCDATE	The GETUTCDATE() function returns the current database system UTC date and time, in a 'YYYY-MM-DD hh:mm:ss.mmm' format.
DATE	The DATE() function extracts the date part from a date time expression.
DATEDIFF	The DATEDIFF() function returns the difference between two dates.
DATEADD	The DATEADD() function adds a date time interval to a date and then returns the date.
DATETRUNC	The DATETRUNC function returns an input date truncated to a specified datepart.
DAY	The DAY() function returns the day of the month (from 1 to 31) for a specified date.
MONTH	The MONTH() function returns the month part for a specified date (a number from 1 to 12).
YEAR	The YEAR() function returns the year part for a specified date.

Math Functions

Function	Description
ABS	The ABS() function returns the absolute value of a number.
CEILING	The CEILING() function returns the smallest integer value that is larger than or equal to a number.
FLOOR	The FLOOR() function returns the largest integer value that is smaller than or equal to a number.
RAND	The RAND() function returns a random number between 0 (inclusive) and 1 (exclusive).
ROUND	The ROUND() function rounds a number to a specified number of decimal places.

Conversion Functions

Function	Description
CAST	The CAST() function converts a value (of any type) into a specified datatype.
COALESCE	The COALESCE() function returns the first non-null value in a list.
CONVERT	The CONVERT() function converts a value (of any type) into a specified datatype.
ISNULL	The ISNULL() function returns a specified value if the expression is NULL.
NULLIF	The NULLIF() function returns NULL if two expressions are equal, otherwise it returns the first expression.

Aggregation Functions

The DISTINCT keyword can be used with all aggregate functions. LVP SQL does not currently support the OVER clause.

Function	Description
AVG	The AVG() function returns the average value of an expression.
COUNT	The COUNT() function returns the number of records returned by a select query.
MAX	The MAX() function returns the maximum value in a set of values.
MIN	The MIN() function returns the minimum value in a set of values.
SUM	The SUM() function calculates the sum of a set of values.
VAR	Returns the statistical variance of all values in the specified expression. Our implementation does not support the OVER syntax.
VARP	Returns the statistical variance for the population for all values in the specified expression.
STDEV	Returns the statistical standard deviation of all values in the specified expression.
STDEVP	Returns the statistical standard deviation for the population for all values in the specified expression.
STRING_AGG	Concatenates the values of string expressions and places separator values between them. Our implementation does not currently support the order_clause syntax.

System Functions

Function	Description
ROW_NUMBER	Numbers the output of a result set. More specifically, returns the sequential number of a row within a partition of a result set, starting at 1 for the first row in each partition.

Custom Functions

The following functions are specific to LogViewPlus and enhance the application's ability to work with data commonly found in log files.

Function	Description
PIVOT	The PIVOT function transforms rows into columns, creating a summary cross-column report from detailed data. It restructures the data by using the value found in PivotColumn (see below) to create an array of new columns. When using the PIVOT function, data should be pre-grouped in a source table, typically provided by a subquery. The PIVOT function takes 3 parameters: **GroupColumn**: Specifies the column used to group the output, organizing the data vertically. **PivotColumn**: Determines the headers of the new columns, each unique value in this column generates a corresponding column in the output. **ValueColumn**: Contains the data that populates the body of the pivot table, under the headers specified by the PivotColumn. **Example:** SELECT PIVOT(Date, Logger, Entries) FROM (SELECT Date, Logger, COUNT(*) AS Entries FROM CV WHERE Logger IN (SELECT TOP 5 Logger FROM CV) GROUP BY Logger, Date)

LOADCSV	Given a file name or full file path to a CSV file, this function will parse the file and provide the contents to the query as a data table. CSV columns will be automatically scanned to determine an appropriate data type. The provided CSV file must have column headers. If a file name is provided without a path, the following directories will be searched recursively on a first match basis: %AppData%\LogViewPlus\LookupTables %ProgramData%\LogViewPlus\LookupTables Files loaded by LOADCSV are assumed to be static. They will be cached in memory until the application is closed. **Example:** SELECT * FROM LoadCsv('myfile.csv')
GETFILENAME	Given a Unix or Windows file path, this function will return the name of the file, or the last value in the path. Query string values, if any, will be removed. **Example:** GetFileName('c:\myfile.txt') **Returns:** myfile.txt
GETFILEEXTENSION	Given a Unix or Windows file path, this function will return the file extension. If the file does not have an extension, an empty string will be returned. **Example:** GetFileExtension('c:\myfile.txt') **Returns:** .txt
SPLITPART	This will convert a string into an array using a given character as the delimiter. The function will then return the value at the array index position. **Example:** SplitPart('hello,world', ',', 1)

	Returns: world
HEX	Converts a given value (such as a string, integer) into its hexadecimal representation. Only integers and string data types are supported. **Example:** Hex(30) **Returns:** 1E
UNHEX	Takes a hexadecimal string and converts it back into the original data type (such as integer or string). An optional second argument can be provided to specify the target data type. If no type is provided, an integer will be assumed. **Example:** UnHex('68656C6C-6F20776F726C64', varchar) **Returns:** hello world
QUERYSTRINGVALUE	This function will parse a query string and return a named value. **Example:** QueryStringValue('TopicID=569&PageIndex=1', 'TopicID') **Returns:** 569
REVERSEDNS	This function will execute a reverse DNS lookup on an IP address. Given an IP address, it will return the domain name for the IP. **WARNING**: This function is extremely slow when used for a large number of IP addresses. We decided to maintain support for the functionality only because it is extremely useful in some scenarios. **Example:** ReverseDns('157.240.240.35')

	Returns: edge-star-mini-shv-01-lcy1.facebook.com
LASTCHARINDEX	Starting from the end of a string, this function will search for a substring in a string, and return the position. This function is similar to CHARINDEX, but it works in reverse. **Example:** LastCharIndex('Hello', 'l') **Returns:** 4
WIN32ERRORDESC	Given a Win32 error code, this function will return the error description. **Example:** Win32ErrorDesc(13) **Returns:** The data is invalid
HTTPSTATUSCODEDESC	Given an HTTP status code, this function will return a brief description of the status code. For example, given the status code 404, the function will return "Not Found". Only common status codes are supported. **Example:** HttpStatusCodeDesc(504) **Returns:** Gateway Timeout

Add On Functions

The following functions are available only through the use of Add Ons which must be downloaded and installed separately.

Function	Description
CountryFromIP	Given an IP address, this function will return the name of the country that is associated with the address.

	Example: CountryFromIP('157.240.240.35') **Returns:** United Kingdom
CountryCodeFromIP	Given an IP address, this function will return the two letter country code that is associated with the address. **Example:** CountryCodeFromIP('157.240.240.35') **Returns:**: GB

IIS Log SQL Examples

LogViewPlus has a built-in dashboard with about 8 different reports to display data from an IIS log file, but the power of using SQL to generate reports lies in its ability to dynamically adapt to suit your needs.

We want to give you some ideas of what you can achieve by using SQL to analyze your log files. All of the examples below will work with the LogViewPlus IIS default parser configuration. You can copy and paste these examples, but we hope they provide inspiration to help you dig deeper.

Most Active Users

We kept this query out of our built-in report because the REVERSEDNS function can be very slow. That said - it's also very powerful and the performance impact can be limited by restricting the amount of data processed.

```
SELECT REVERSEDNS([c-ip]) As Name, [c-ip] As Machine, Hits FROM (
    SELECT TOP 5 [c-ip], COUNT(*) As Hits
    FROM CurrentView
    GROUP BY [c-ip]
    ORDER BY Hits DESC
)
```

Request Methods

```
SELECT cs-method As Method, COUNT(*) As Hits
FROM CurrentView
GROUP BY Method
```

Peak Traffic by Hour

```
SELECT DATEPART(hour, [Timestamp]) AS Hour, COUNT(*) AS Requests
FROM CV
GROUP BY DATEPART(hour, [Timestamp])
ORDER BY Requests DESC
```

Popular User Agent

```
SELECT COUNT(*) AS Total, [cs_User-Agent_]
FROM CV
GROUP BY [cs_User-Agent_]
ORDER BY Total DESC
```

Error Status Codes

```
SELECT TOP 5 sc-status, sc-substatus, sc-win32-status, COUNT(*) AS ErrorCount
FROM CV
WHERE sc-status NOT LIKE '2%'
GROUP BY sc-status, sc-substatus, sc-win32-status
ORDER BY ErrorCount DESC
```

Top Referring Domains

```
SELECT COUNT(*) AS Referrals, cs_Referer_ AS Source
FROM CV
WHERE cs_Referer_ IS NOT NULL
GROUP BY cs_Referer_
ORDER BY Referrals DESC
```

Slowest Requests

```
SELECT TOP 10 Timestamp, [cs-uri-stem], [time-taken]
FROM CV
ORDER BY [time-taken] DESC
```

Unique Visitors

```
SELECT COUNT(DISTINCT [c-ip]) AS UniqueVisitors
FROM CV
```

Most Popular Pages

```
SELECT COUNT(*) AS PageHits, [cs-uri-stem]
FROM CV
GROUP BY [cs-uri-stem]
ORDER BY PageHits DESC
```

Authentication Analysis

```
SELECT TOP 5 COUNT(*) AS LoginAttempts, cs-username
FROM CV
WHERE cs-username IS NOT NULL
GROUP BY cs-username
ORDER BY LoginAttempts DESC
```

Traffic Source Analysis

```
SELECT TOP 5 COUNT(*) AS Visits, [cs_Referer_] AS Referer~
FROM CurrentView
WHERE [Referer] IS NOT NULL AND [Referer] NOT LIKE '%yourwebsite.com%'
GROUP BY [Referer]
ORDER BY Visits DESC
```

Most Active Users by IP Address

```
SELECT TOP 5 COUNT(*) AS RequestCount, [c-ip]
FROM CV
GROUP BY [c-ip]
ORDER BY RequestCount DESC
```

Analysis of Response Status Distribution

```
SELECT [sc-status], COUNT(*) AS StatusCount
FROM CV
GROUP BY [sc-status]
ORDER BY StatusCount DESC
```

Request Types by Time

```
SELECT DATEPART(hour, Timestamp) AS Hour, cs-method, COUNT(*) AS MethodCount
FROM CV
GROUP BY DATEPART(hour, Timestamp), cs-method
ORDER BY Hour, MethodCount DESC
```

Server Load Analysis

```
SELECT AVG([time-taken]) AS AverageTime, MAX([time-taken]) AS MaxTime
FROM CV
```

File Type Analysis

```
SELECT TOP 5 RIGHT([cs-uri-stem], CHARINDEX('.', REVERSE([cs-uri-stem])) - 1) AS
FileType, COUNT(*) AS Requests
FROM CV
WHERE CHARINDEX('.', [cs-uri-stem]) > 0
GROUP BY RIGHT([cs-uri-stem], CHARINDEX('.', REVERSE([cs-uri-stem])) - 1)
ORDER BY Requests DESC
```

Failed Login Attempts

```
SELECT TOP 5 [cs-username], [c-ip], COUNT(*) AS FailedAttempts
FROM CV
WHERE sc-status = '401'
GROUP BY [cs-username], [c-ip]
ORDER BY FailedAttempts
```

Most Common Sub-Status Codes

```
SELECT TOP 5 [sc-substatus], COUNT(*) AS Occurrences
FROM CV
GROUP BY [sc-substatus]
ORDER BY Occurrences DESC
```

Web Requests by Result Code

```
SELECT [cs-method] AS Method, [sc-status] AS Status, COUNT(*) AS Count
FROM CV
GROUP BY [cs-method], [sc-status]
ORDER BY Method ASC, Count DESC
```

Average Number of Requests Per User

```
SELECT AVG(RequestCount) AS AverageRequests
FROM (SELECT [c-ip], COUNT(*) AS RequestCount
    FROM CV
    GROUP BY [c-ip]) AS UserRequests
```

Users with Error Codes

```
SELECT TOP 5 [c-ip], sc-status, COUNT(*) AS ErrorCount
FROM CV
WHERE sc-status LIKE '4%' OR sc-status LIKE '5%'
GROUP BY [c-ip], sc-status
ORDER BY ErrorCount DESC
```

Analysis of Error Codes by Date

```
SELECT FORMAT(Timestamp, 'yyyy-MM-dd') AS Date, sc-status, COUNT(*) AS
StatusCount
FROM CV
WHERE sc-status NOT LIKE '2%'
GROUP BY FORMAT(Timestamp, 'yyyy-MM-dd'), sc-status
```

Analysis of Error Codes by Hour

```
SELECT DATEPART(hour, [Timestamp]) AS Hour, sc-status, COUNT(*) AS StatusCount
FROM CV
WHERE sc-status NOT LIKE '2%'
GROUP BY DATEPART(hour, [Timestamp]) AS Hour, sc-status
```

Top Visited Pages by Unique Visitors

```
SELECT  TOP 5 COUNT(DISTINCT [c-ip]) AS UniqueVisitors, [cs-uri-stem]
FROM CV
GROUP BY [cs-uri-stem]
ORDER BY UniqueVisitors DESC
```

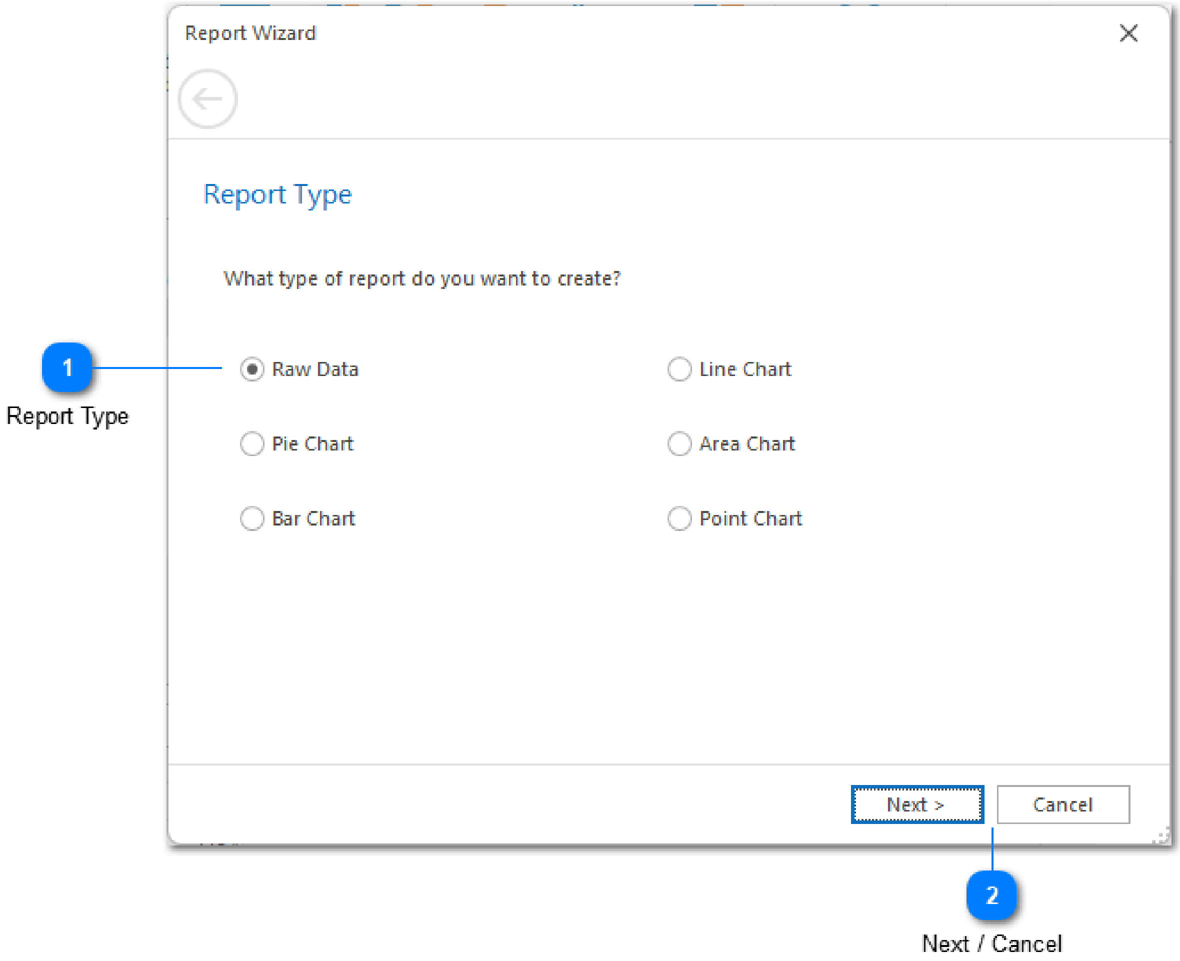
Query String Analysis

```
SELECT TOP 5 COUNT(*) AS QueryCount, [cs-uri-query]
FROM CV
WHERE [cs-uri-query] IS NOT NULL
GROUP BY [cs-uri-query]
ORDER BY QueryCount DESC
```

Performance Analysis by Server Port

```
SELECT [s-port] AS Port, AVG([time-taken]) AS AvgTimeTaken, COUNT(*) AS Requests
FROM CV
GROUP BY [s-port]
ORDER BY AvgTimeTaken DESC
```

Dashboard Report Wizard



Report Wizard

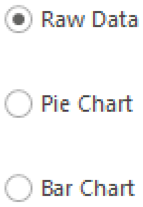
Report Type

What type of report do you want to create?

● Raw Data
○ Line Chart
○ Pie Chart
○ Area Chart
○ Bar Chart
○ Point Chart

The Dashboard Report Wizard is used to add a new report to the dashboard, or edit an existing report. This dual functionality means it provides the core functionality required by LogViewPlus dashboard reporting.

1 Report Type



● Raw Data

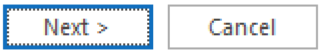
○ Pie Chart

○ Bar Chart

The first step in creating a new dashboard report is to select how you want to view the data. This determines the type of chart that will be needed by the Report Wizard.

LogViewPlus currently supports six different chart types: raw data, pie chart, bar chart, line chart, area chart and point chart.

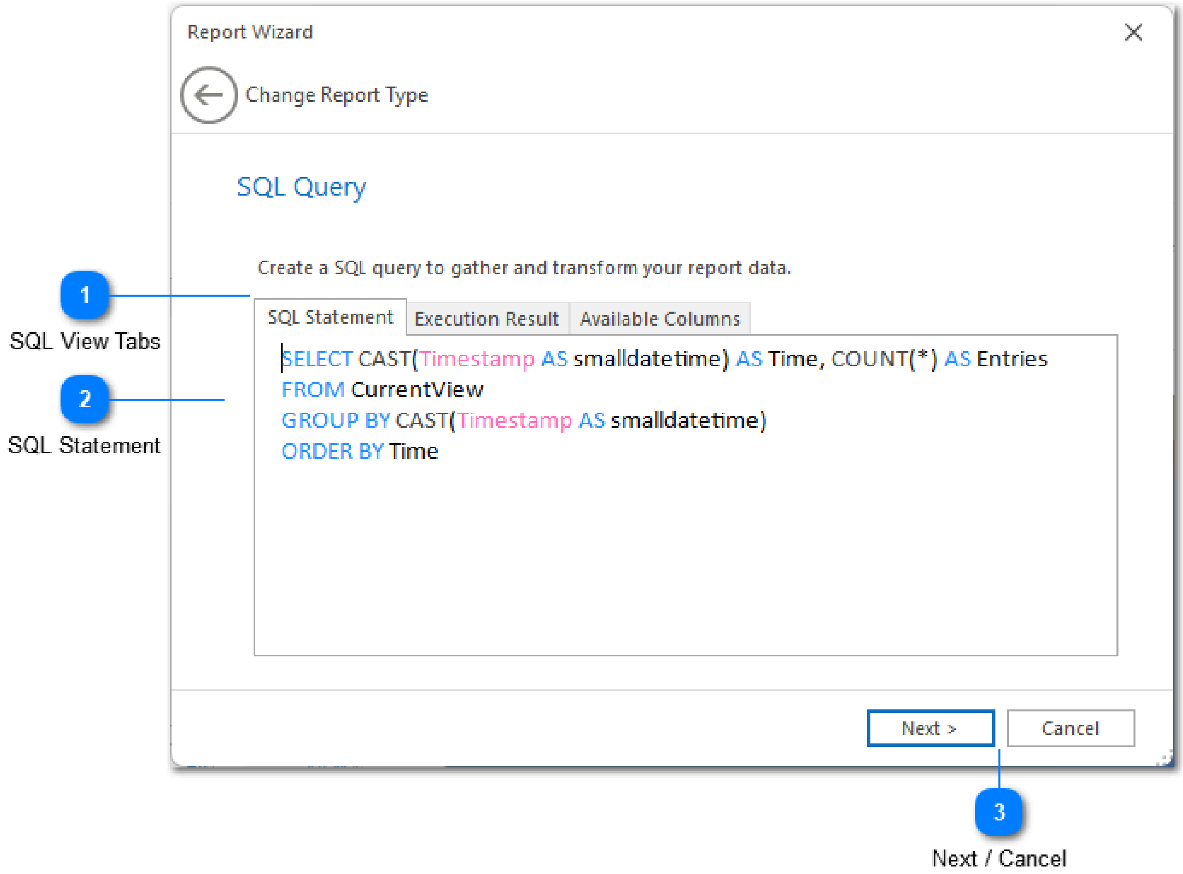
2 Next / Cancel



The Next button progresses the Report Wizard to the Report SQL Query stage.

The Cancel button exits the report wizard. Changes will not be saved.

Report SQL Query



Create a SQL query to gather and transform your report data.

```
SELECT CAST(Timestamp AS smalldatetime) AS Time, COUNT(*) AS Entries
FROM CurrentView
GROUP BY CAST(Timestamp AS smalldatetime)
ORDER BY Time
```

The SQL Query step allows you to create a SQL statement which will be used to gather the data displayed in your report. Find out more about using SQL statements in LogViewPlus.

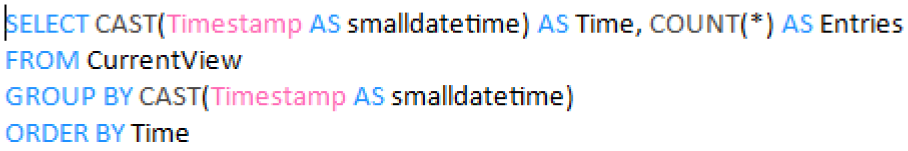
1 SQL View Tabs

The SQL view tabs can help you write your SQL statement. There are three different views:

1. The SQL Statement tab is an input box where you can write your SQL select statement.

2. The Execution Result view shows the results you will get when your SQL statement is executed. SQL statement execution occurs automatically when this tab is selected.
3. The Available Columns tab can be used to display the names of the data source columns in the current view. You can also display the names of the available columns by pressing CTRL+Period in the SQL Statement view.

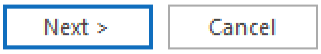
2 SQL Statement



```
SELECT CAST(Timestamp AS smalldatetime) AS Time, COUNT(*) AS Entries
FROM CurrentView
GROUP BY CAST(Timestamp AS smalldatetime)
ORDER BY Time
```

The SQL statement provided here will be used to gather the data to be displayed in your chart. See LVP SQL for more information on the supported SQL syntax.

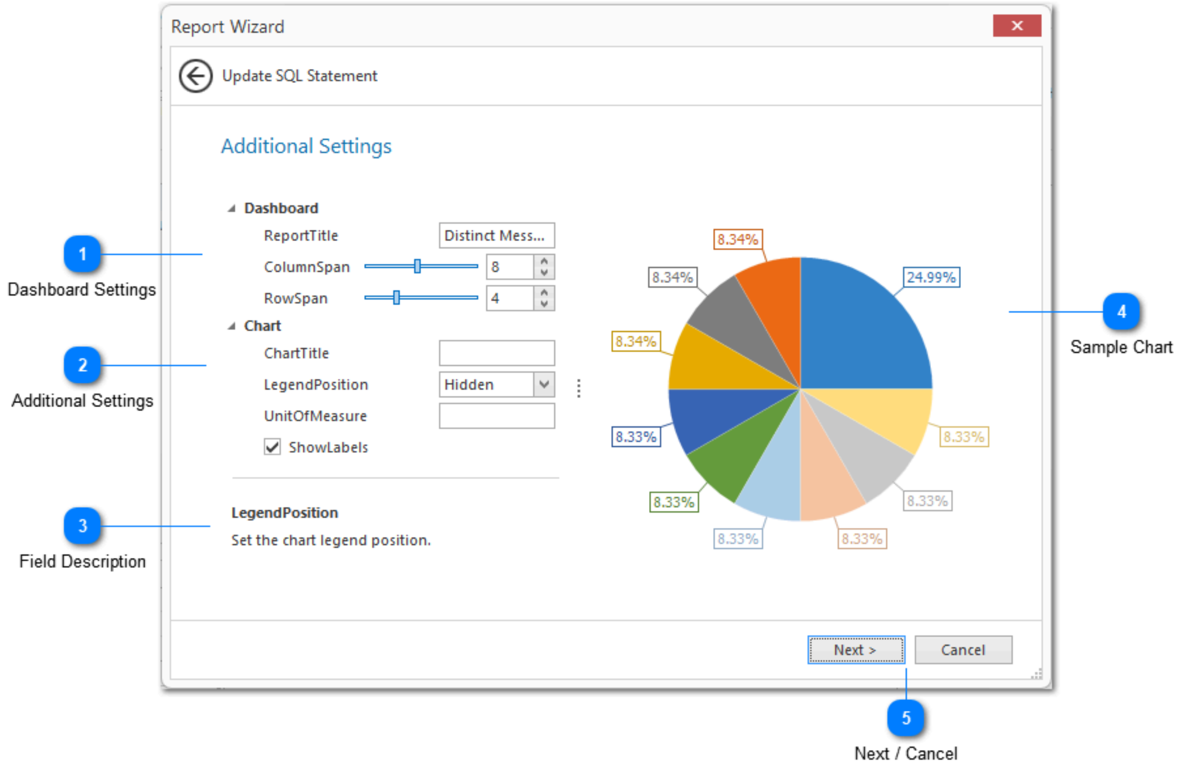
3 Next / Cancel



The Next button progresses the Report Wizard to the Report Settings stage.

The Cancel button exits the report wizard. Changes will not be saved.

Additional Settings



Report Wizard

Update SQL Statement

Additional Settings

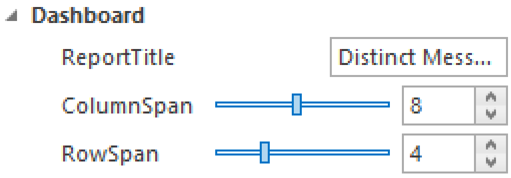
Dashboard
- ReportTitle: Distinct Mess...
- ColumnSpan: 8
- RowSpan: 4

Chart
- ChartTitle:
- LegendPosition: Hidden
- UnitOfMeasure:
- ☑ ShowLabels

LegendPosition
Set the chart legend position.

The final stage in creating or editing a report is to apply the report settings. Report settings are all optional but they give you a great deal of control over how your report should be displayed.

1 Dashboard Settings



Dashboard
- ReportTitle: Distinct Mess...
- ColumnSpan: 8
- RowSpan: 4

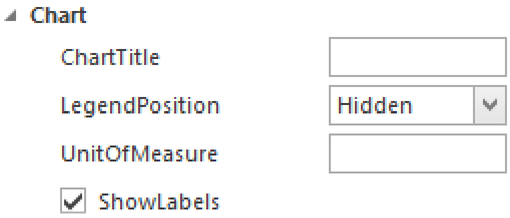
The dashboard settings are used to determine how your report should be displayed within the dashboard. Dashboard settings are common across all report types. For example, you can provide a dashboard title to describe your report in the dashboard.

The most important dashboard settings are the row span and column span. These are used to determine the size of your report within the dashboard.

Dashboards organize report items into a table with rows and columns. Report items are inserted into the table with a variable column and row span that allows you to customize how the dashboard is displayed. Dashboard tables are made up of 16 columns. These columns form 100% of the dashboard table width. Rows are sized at 100 pixels per row, depending on your screen DPI settings. A dashboard can contain an unlimited number of rows. The vertical scrollbar will be inserted automatically if needed.

You can drag-and-drop report items in a dashboard to move a report from one area to another. When moving report items the source and destination must be size compatible. Generally this means that both the source and destination have the same column and row span.

2 Additional Settings



Chart

ChartTitle

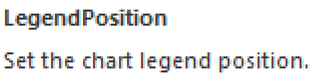
LegendPosition Hidden

UnitOfMeasure

☑ ShowLabels

The additional settings area provides optional settings which are specific to the report type you have selected. Use the Field Description (discussed below) to find out more about a specific setting.

3 Field Description

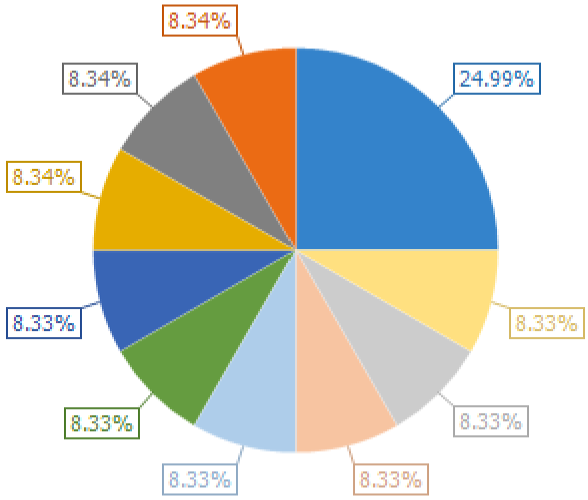


LegendPosition

Set the chart legend position.

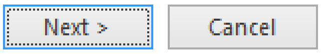
The field description displays context-sensitive help on all report settings. To see a description of any field, simply select the field by clicking on it. The field description will change as the window focus changes.

4 Sample Chart



The sample chart displays a final version of your chart with all additional settings applied. Note that dashboard settings cannot be visualized in this view.

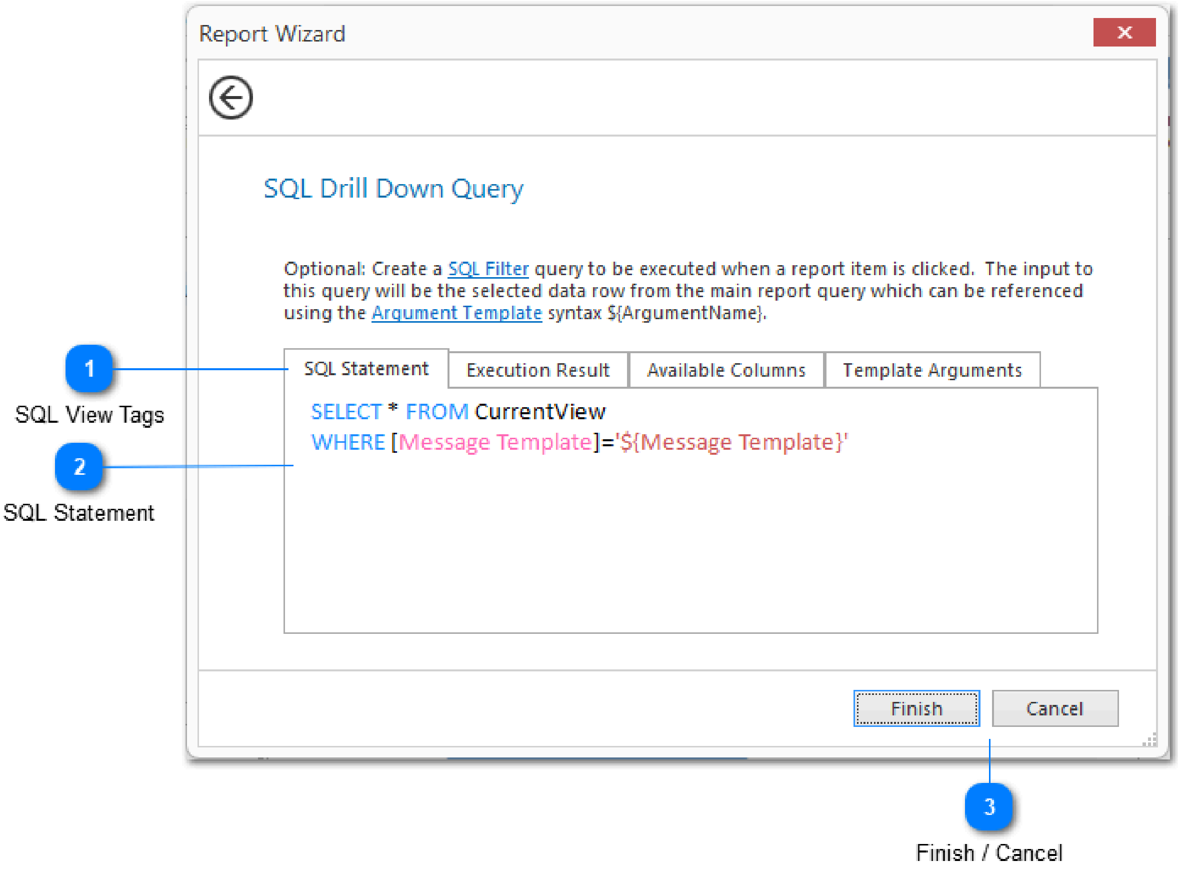
5 Next / Cancel



The Next button progresses the Report Wizard to the SQL Drill Down Query stage.

The Cancel button exits the report wizard. Changes will not be saved.

SQL Drill Down Query



Optional: Create a SQL Filter query to be executed when a report item is clicked. The input to this query will be the selected data row from the main report query which can be referenced using the Argument Template syntax ${ArgumentName}.

```
SELECT * FROM CurrentView
WHERE [Message Template]='${Message Template}'
```

The SQL Query step allows you to create a SQL statement which will be used to gather the data displayed in your report. Find out more about using SQL statements in LogViewPlus.

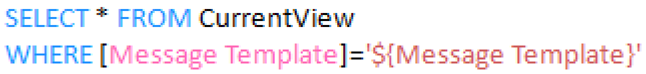
1 SQL View Tags

The SQL view tabs can help you write your SQL statement. There are four different views:

1. The SQL Statement tab is an input box where you can write your SQL select statement.

2. The Execution Result view shows the results you will get when your SQL statement is executed. SQL statement execution occurs automatically when this tab is selected.
3. The Available Columns tab can be used to display the names of the data source columns in the current view. You can also display the names of the available columns by pressing CTRL+Period in the SQL Statement view.
4. The Template Arguments tab displays the columns returned by the Report SQL Query as well as the values extracted from the first row of the query return value. The Argument Names can be used as parameters in the SQL Statement discussed below.

2 SQL Statement

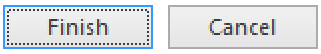


```
SELECT * FROM CurrentView
WHERE [Message Template]='${Message Template}'
```

The SQL statement provided here will be used to drill down into the report data. Typically, this is done by double click on item in a chart, or clicking on a hyperlink in a grid. See LVP SQL for more information on the supported SQL syntax.

The SQL statement provided here can optionally reference an argument using the Argument Template syntax. Available arguments are shown in the Template Arguments tab discussed above. Before drill down query execution, LogViewPlus will consider the data row the user is trying to access and make this data available for as a template argument. Template arguments can be tested by clicking on the Execution Results tab discussed above.

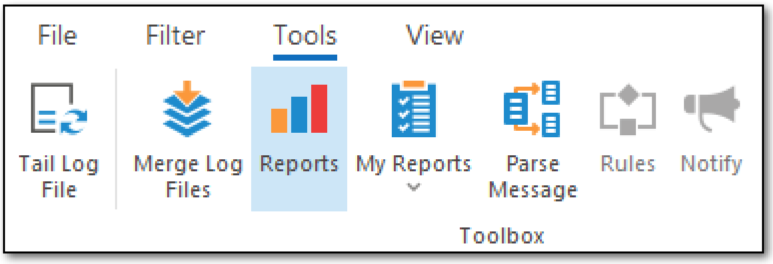
3 Finish / Cancel



The Finish button will save your changes, exit the wizard, and update the target dashboard.

The Cancel button exits the report wizard. Changes will not be saved.

Navigation Reports



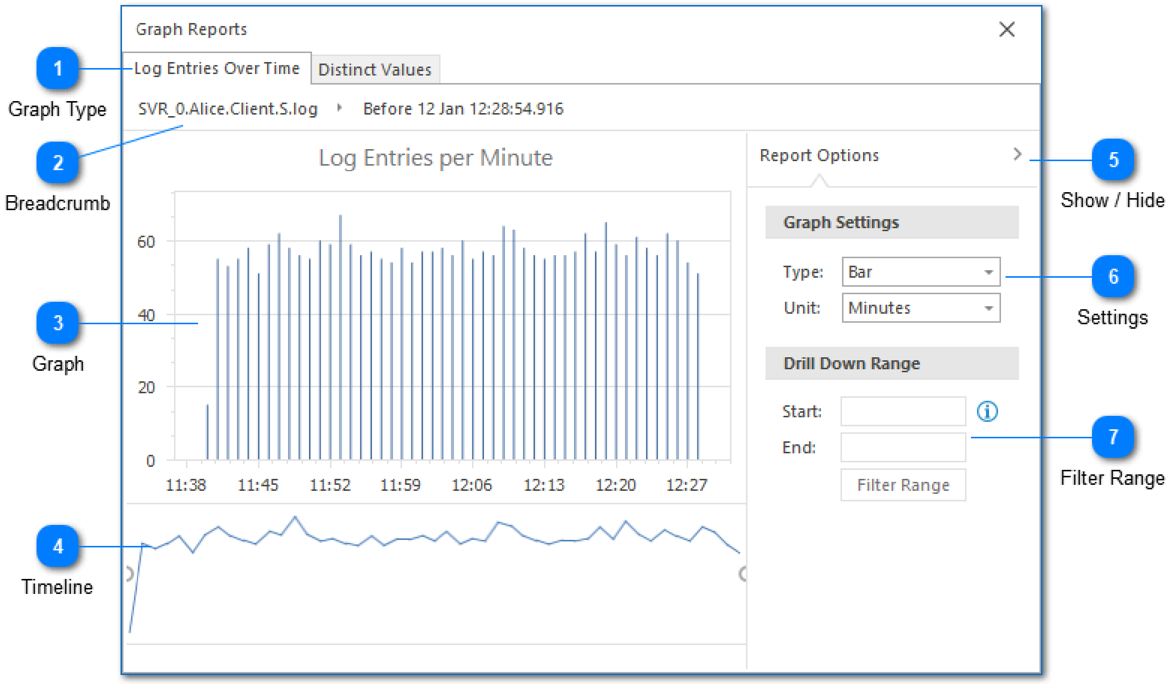
LogViewPlus can parse your log files and transform the data into information which can then be exported to a CSV file or HTML.

As you work with the information displayed in LogViewPlus you may find it helpful to see the information displayed as a graph. LogViewPlus can generate graphs based on any log entry view (any log file or filter). These graphs can give you better insight into your application behavior.

The graphs can also be used to further filter the data. Using the LogViewPlus Graph Reports to generate filters to further subdivide and analyze your log files can be a powerful tool.

Currently, LogViewPlus supports to main graph types: Log Entries Over Time and Distinct Values.

Log Entries Over Time



Graph Reports

Log Entries Over Time | Distinct Values

SVR_0.Alice.Client.S.log ‣ Before 12 Jan 12:28:54.916

Report Options

Graph Settings

Type: Bar

Unit: Minutes

Drill Down Range

Start:

End:

Filter Range

The log entries over time report shows the number of log entries which are contained in the current view at a given time interval. This can be used to better understand how log entries are distributed through the current view.

1 Graph Type

Log Entries Over Time | Distinct Values

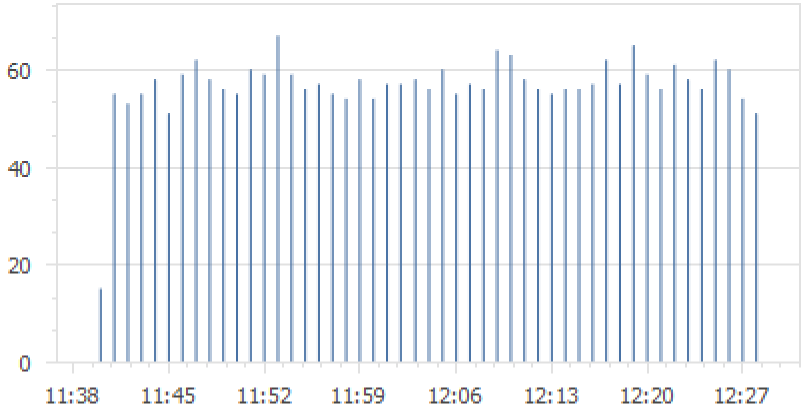
LogViewPlus supports two primary graph types. The first shows log entries over time. This graph is helpful for giving you a quick feel for how your log entries are distributed over time. The second graph type shows the distribution of values for individual columns. This type of graph can be useful for answering questions such as what is the ratio of debug log entries to error log entries.

2 Breadcrumb

SVR_0.Alice.Client.S.log ‣ Before 12 Jan 12:28:54.916

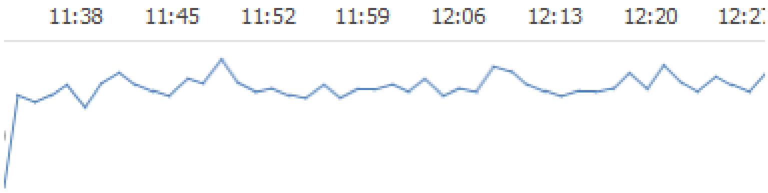
The breadcrumb navigation is used to manipulate the filter tree. Modifying the breadcrumb navigation changes the selected filter which will automatically update the report.

3 Graph



The graph area shows the currently selected graph drawn according to the graph settings provided. Note that hovering over the graph will display information about the currently selected data point. In this case, the number of log entries that were written at a particular point in time.

4 Timeline



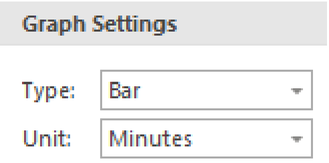
By default the timeline of a graph will be large enough to include all log entries in a view. However, you can use the handle to the left and right of the timeline to narrow the graph down to an area that you find more interesting. The Filter Range command (discussed below) will allow you to create a new Date Time Filter from the selected timeline range. This allows you to drill into the data you find interesting.

5 Show / Hide

>

You can show or hide the graph settings by clicking on the report options title. This is helpful when you want to provide more room to draw the graph.

6 Settings



Graph Settings

Type: Bar

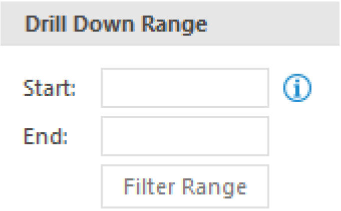
Unit: Minutes

The log entries over time graph can be displayed as either a bar or line chart. We recommend using a bar chart as line charts can sometimes be misleading if data for a particular point in time is not available. In this case, a lined can be drawn through a phantom point.

LogViewPlus will attempt to detect a time unit based on the timestamps contained in the view. However, you can also manually change the time unit.

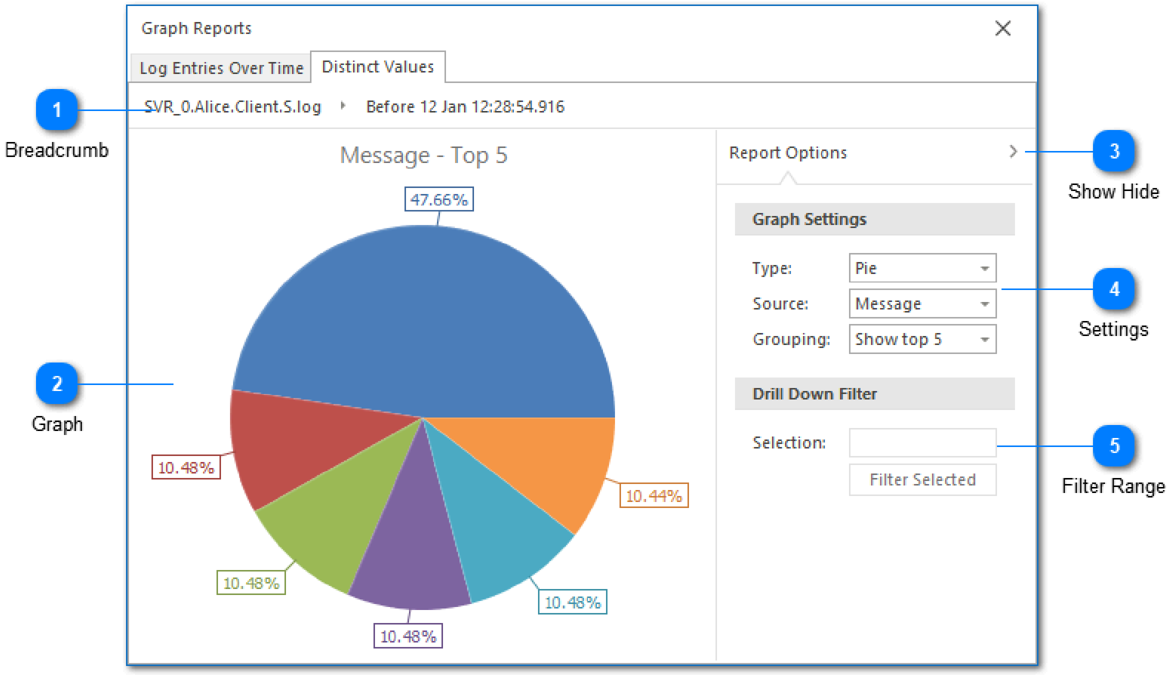
Changes to graph settings will be applied automatically.

7 Filter Range



Allows you to create a Date Time Filter for the selected timeline range (discussed above). This helps you find out more about the log entries that were created during the selected time range.

Distinct Values



SVR_0.Alice.Client.S.log ‣ Before 12 Jan 12:28:54.916

Type: Pie
Source: Message
Grouping: Show top 5
Selection:

The distinct values report is used to group the common values found in a given column. For example, you can use this report to find the thread or logger which produced the most log entries in the current view.

The values contained in the message column is treated a little bit differently from other columns. For messages, LogViewPlus will generate a template which attempts to extract any variable data from the core message. When creating a template, LogViewPlus will substitute out any numeric values or values contained between brackets.

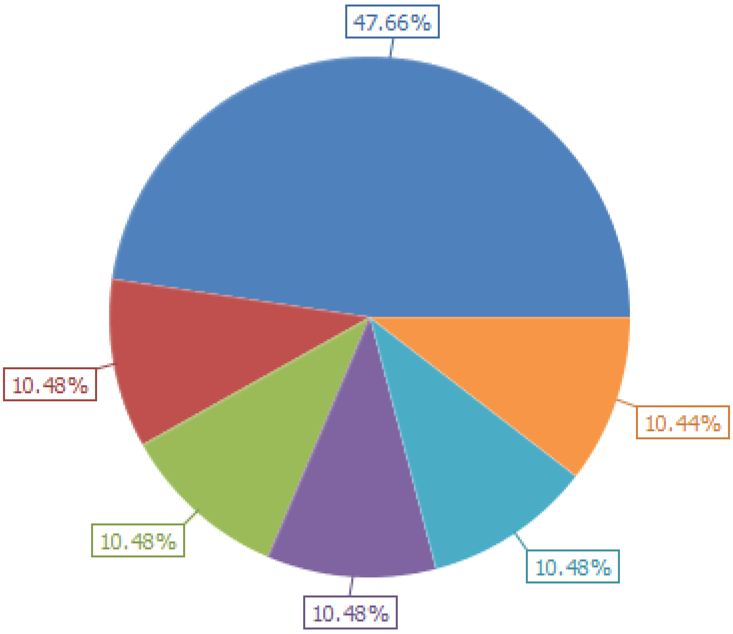
Functionally, the distinct values report is very similar to the log entries over time report. The data used by the Distinct Values report is always provided by the current view.

1 Breadcrumb

SVR_0.Alice.Client.S.log ‣ Before 12 Jan 12:28:54.916

The breadcrumb navigation is used to manipulate the filter tree. Modifying the breadcrumb navigation changes the selected filter which will automatically update the report.

2 Graph



The graph area shows the currently selected graph drawn according to the graph settings provided. Hovering over the graph will display information about the currently selected data point. In this case, a description of the value identified along with statistical information regarding its commonality.

You can double-click a graph element to automatically create a filter based on the selected value.

A legend will automatically be show in the graph if the window width allows.

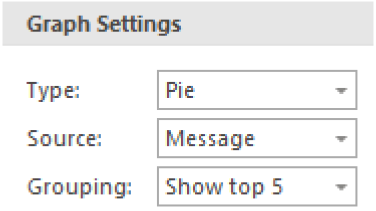
Clicking on a graph element will populate the drill down filter (discussed below).

3 Show Hide

›

You can show or hide the graph settings by clicking on the report options title. This is helpful when you want to provide more room to draw the graph.

4 Settings



Graph Settings

Type: Pie

Source: Message

Grouping: Show top 5

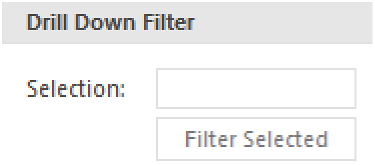
The distinct values report can be displayed as either a pie or bar chart.

You can also change the source column to report on data from different parts of the view.

Finally, you can change the number of values to be grouped. Values which fall outside of the group number will automatically be categorized into an 'Other' category. You can filter on the 'Other' category to find more information about its constituents.

Changes to graph settings will be applied automatically.

5 Filter Range



Drill Down Filter

Selection:

LogViewPlus can create a Text Filter from the selected chart element. The text filter will automatically be applied specifically to the column currently being analyzed.

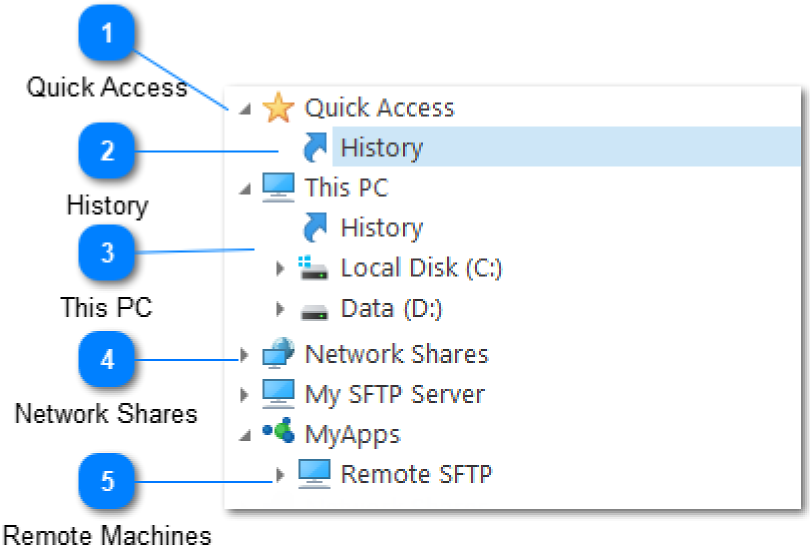
File System Navigation

Unlike most applications, LogViewPlus uses bespoke file system access. This allows you to quickly and easily browse your local file system as well as remote file systems via SFTP or FTP. The file browsing part of LogViewPlus is called the Log Explorer.

Browsing your file systems is discussed in detail in the next section. If you have not already used the LogViewPlus file system to open a log file, we recommend you take a First Look to get a high level overview before continuing.

File system configuration settings are discussed separately in the File System Settings documentation topic.

Folder Tree View



The folder tree view gives quick access to all available file systems. Note that file systems can be local or remote via SFTP or FTP.

1 Quick Access

The quick access node is always the first node available in the Log Explorer. This node contains shortcuts and quick links to help you navigate to frequently accessed directories and files.

To add the directory to the quick access list right-click on a directory and select "Add to Quick Access" as discussed in the file context menu documentation.

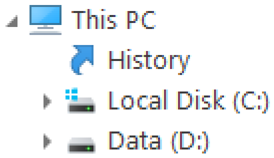
When removing an item from the quick access list, you do so with the "Delete" command. This command will remove the quick access item, but will have no effect on the underlying file system.

2 History

History links are special nodes within the directory browser. They contain a list of your file access history. History links work at two levels. Quick access history contains the last 20 items you opened regardless of where those items point two. Alternatively, computer history links contain the last 20 items you have opened on that particular computer or drive.

Please see the history node documentation for more information.

3 This PC



The "This PC" node contains a list of all of the drives which are available on your local machine. Browsing these drives should be very similar to using Windows Explorer.

Note that there is a separate history note for your local file system. This history node will only contain recently accessed items on your local machine.

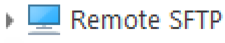
4 Network Shares

The network shares node contains a list of all available Windows or SMB shares.

Note that Network Shares will always be unpopulated when you first install LogViewPlus. This is because some networks may contain a large number of machines and quickly scanning the network to find the machine you want to access may not be possible. Instead, LogViewPlus uses an approach that requires you to know the name of the machine you want to connect to an advance. You can either explicitly add this machine name in the file system settings, or you can paste the full path to the file you want to open into the open file text box. Once a local network file has been opened by LogViewPlus, the network node will be available for future access.

5

Remote Machines

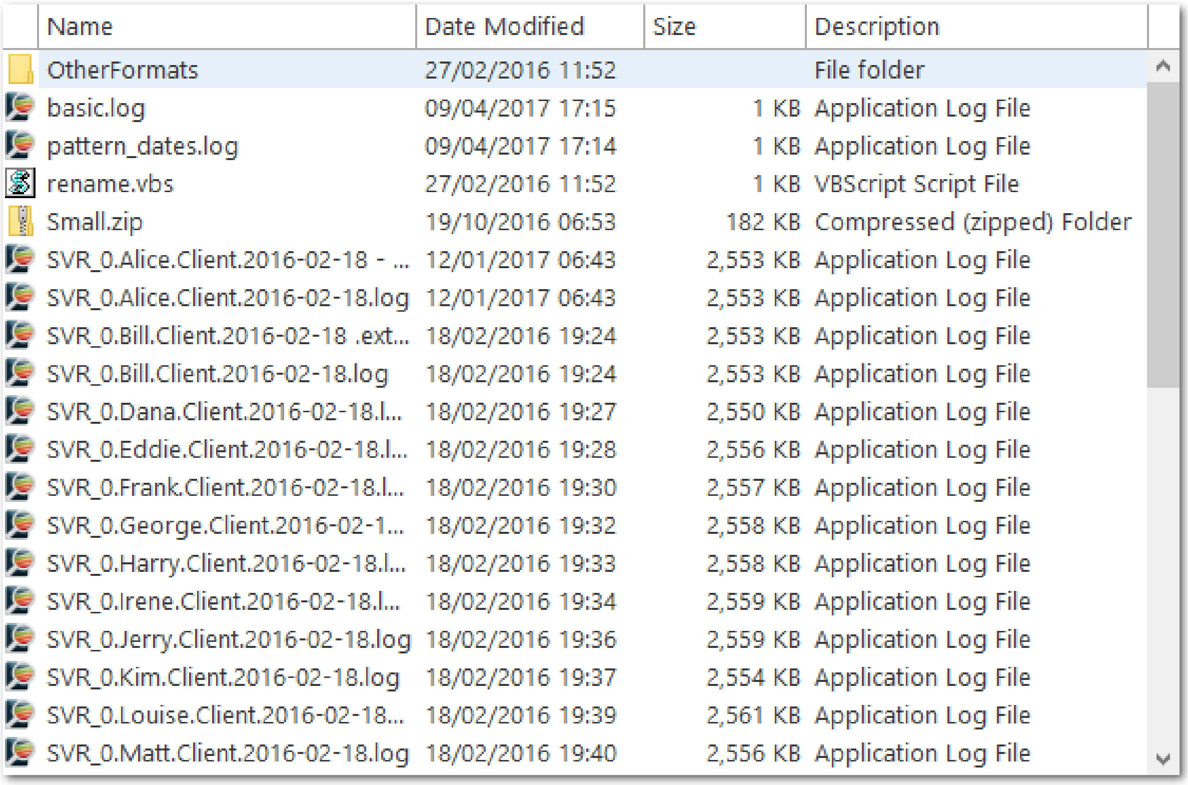


Once a remote SFTP or FTP server has been added to the LogViewPlus file system configuration settings, you will be able to browse the remote server here.

Note that the example above shows a server named "Remote SFTP" with a category name of "MyApps".

If you have any difficulty with your remote machine connection, you may find it helpful to view the file transfer log file located at %Temp%\LogViewPlus.

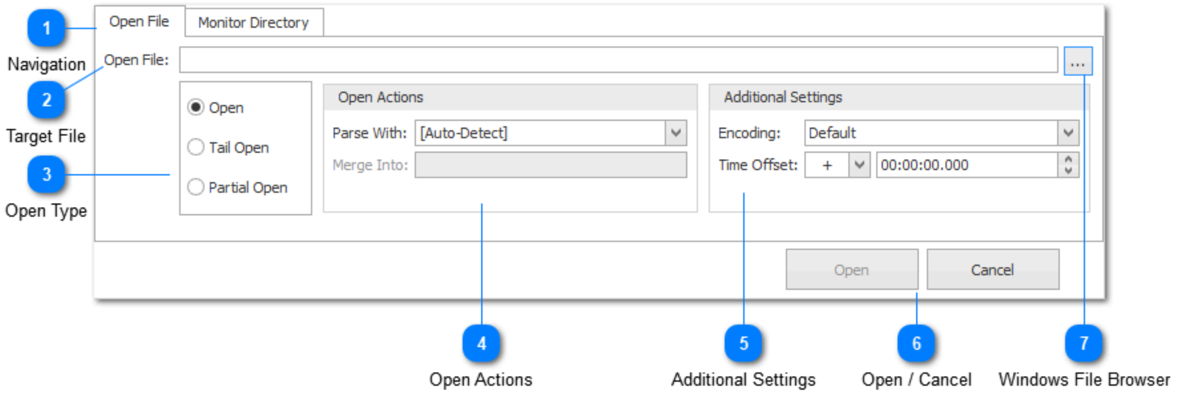
File List View



Name	Date Modified	Size	Description
OtherFormats	27/02/2016 11:52		File folder
basic.log	09/04/2017 17:15	1 KB	Application Log File
pattern_dates.log	09/04/2017 17:14	1 KB	Application Log File
rename.vbs	27/02/2016 11:52	1 KB	VBScript Script File
Small.zip	19/10/2016 06:53	182 KB	Compressed (zipped) Folder
SVR_0.Alice.Client.2016-02-18 - ...	12/01/2017 06:43	2,553 KB	Application Log File
SVR_0.Alice.Client.2016-02-18.log	12/01/2017 06:43	2,553 KB	Application Log File
SVR_0.Bill.Client.2016-02-18 .ext...	18/02/2016 19:24	2,553 KB	Application Log File
SVR_0.Bill.Client.2016-02-18.log	18/02/2016 19:24	2,553 KB	Application Log File
SVR_0.Dana.Client.2016-02-18.l...	18/02/2016 19:27	2,550 KB	Application Log File
SVR_0.Eddie.Client.2016-02-18.l...	18/02/2016 19:28	2,556 KB	Application Log File
SVR_0.Frank.Client.2016-02-18.l...	18/02/2016 19:30	2,557 KB	Application Log File
SVR_0.George.Client.2016-02-1...	18/02/2016 19:32	2,558 KB	Application Log File
SVR_0.Harry.Client.2016-02-18.l...	18/02/2016 19:33	2,558 KB	Application Log File
SVR_0.Irene.Client.2016-02-18.l...	18/02/2016 19:34	2,559 KB	Application Log File
SVR_0.Jerry.Client.2016-02-18.log	18/02/2016 19:36	2,559 KB	Application Log File
SVR_0.Kim.Client.2016-02-18.log	18/02/2016 19:37	2,554 KB	Application Log File
SVR_0.Louise.Client.2016-02-18...	18/02/2016 19:39	2,561 KB	Application Log File
SVR_0.Matt.Client.2016-02-18.log	18/02/2016 19:40	2,556 KB	Application Log File

The file list view is located to the right of the folder tree view. This control shows a list of all of the files and folders that are contained within the selected folder. Selecting one or more files will populate the open file settings automatically. You can also right-click on the file or folder to open the file context menu.

Open File Settings



Open File:

● Open
○ Tail Open
○ Partial Open

Parse With: [Auto-Detect]
Merge Into:

Encoding: Default
Time Offset: + 00:00:00.000

At the bottom of the Log Explorer are a number of settings which provide flexibility in how log files are opened.

1 Navigation

The tabs open file settings panel were used to determine whether you are opening a log file or directory. The transfer log tab shows remote server connection logs.

2 Target File

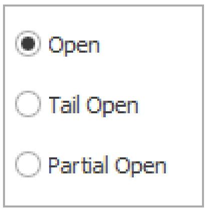
Open File:

The open file text box should be automatically populated based on your file selection in the files list view. Alternatively you can paste the full path to the file you want to open.

If you enter the full file path to open a file which exists on a network share LogViewPlus will automatically add the network share to its configuration settings. From that point on the server containing your log file will be visible in your Network Shares.

LogViewPlus also supports SCP. SCP does not support directory browsing, so to open a file via SCP you will need the full URL to the file. LogViewPlus SCP URLs are always prefixed with "scp://". For example, scp://server:port/path/file.log.

3 Open Type



● Open

○ Tail Open

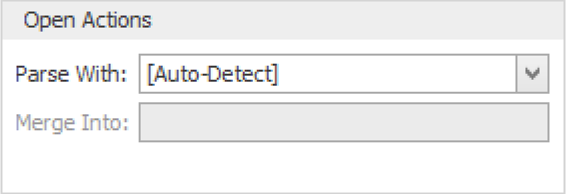
○ Partial Open

LogViewPlus provides three ways to open a log file. To simply "Open" the log file means that you will read the entire log file from start to finish.

If you are only interested in new log file entries, you may prefer to "Tail Open" the log file. This option will read a little bit from the end of the log file and then update LogViewPlus with any additional log entries.

For very large log files, you may only be interested in a part of the log file. For example, if you have a 1 GB log file and are interested in a problem that occurred an hour ago, you may want to try opening the file at the 700 MB to 800 MB range. In LogViewPlus this is called a "Partial Open".

4 Open Actions



Open Actions

Parse With: [Auto-Detect]

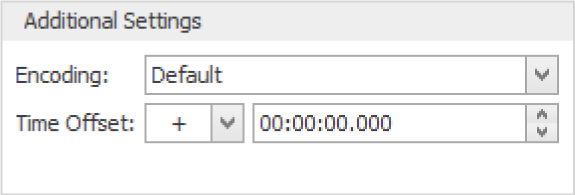
Merge Into:

The Open Actions settings can be used to determine how the selected log files should be processed.

By default, LogViewPlus will parse the file according to the rules defined by pattern matching the log file name. If a parser is manually selected the target parser will be used and the default parser will be ignored.

If more than one log file is selected the Merge Into option will be enabled. This option allows you to easily merge the selected log files without having to perform a separate action after the files are loaded.

5 Additional Settings



Additional Settings

Encoding: Default

Time Offset: + 00:00:00.000

Regardless of how you choose to open a log file in LogViewPlus, you will be able to set two additional settings - the file encoding and a time offset.

By default LogViewPlus will use the Windows configured file encoding. This changes depending on your locale and you may need to choose a different option depending on how your log files or written. The encoding you use to read your log files should be the same encoding you use to write your log files.

The time offset can be used to modify all timestamps in the currently selected log file by a user configured amount. This command is useful when you intend to merge multiple log files but the timestamps of the log files are not in sync. For example, if you need to merge multiple log files which are recorded in local time in different time zones. The command is also useful when log files recorded on different machines are a millisecond or two out of sync. A time offset can either add or subtract time depending on if you need to increase or decrease the time interval.

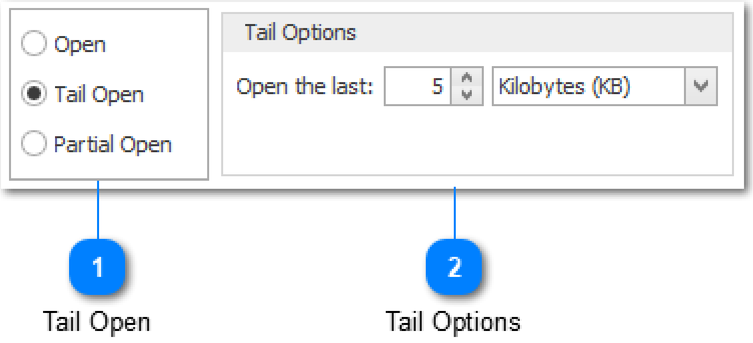
6 Open / Cancel

Once you have configured your open settings, you can click the "Open" command at the bottom of the screen. Use the "Cancel" command to return to LogViewPlus.

7 Windows File Browser

LogViewPlus gives you the ability to select log files using the Windows file browser. This should be unnecessary as the LogViewPlus file browser should have access to all of your local files. This ability is included for redundancy.

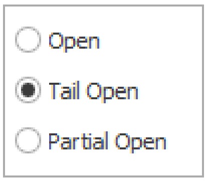
Tail Open



Opens a file and tail mode. When in tail mode only the last few entries of the log file will be read. The number of entries will be expanded as new log entries are written.

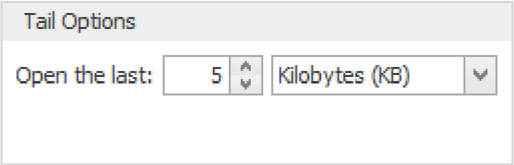
When tail opening a file, there are additional settings options which are not discussed here. For more information, please see Open File Settings.

1 Tail Open



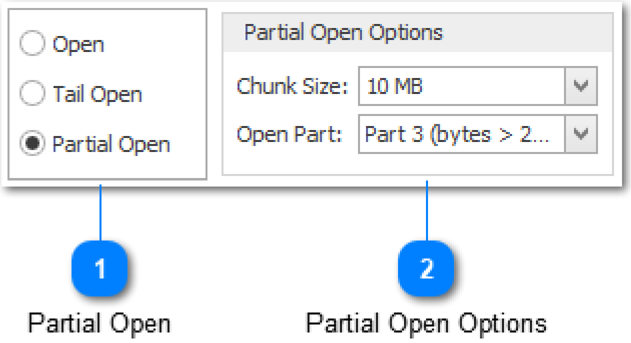
To tail open a log file, you must first set the Tail Open option.

2 Tail Options



When tail opening a log file, you need to specify how much data you want to read from the end of the log file. Regardless of how much data you read from the end of the log file, LogViewPlus will read new log entries as they are written.

Partial Open



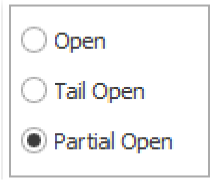
○ Open
○ Tail Open
● Partial Open

Partial Open Options
Chunk Size: 10 MB
Open Part: Part 3 (bytes > 2...

Partial open is useful when dealing with large files. It allows you to open a chunk of the file without having to process all log entries.

When partial opening a file, there are additional settings options which are not discussed here. For more information, please see Open File Settings.

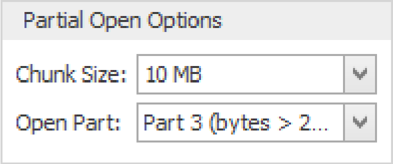
1 Partial Open



○ Open
○ Tail Open
● Partial Open

To partial open a log file, you must first set the Partial Open option.

2 Partial Open Options



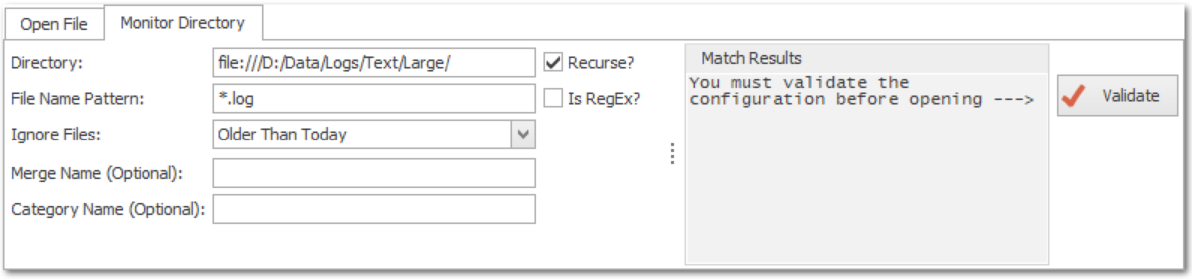
Partial Open Options
Chunk Size: 10 MB
Open Part: Part 3 (bytes > 2...

When opening a part of the file, there are two settings you need to specify. The first is the chunk size, this determines how much data you will be reading from the log file. The second is the part of the log file you are interested in opening.

For example, a 1 GB log file with the chunk size of 100 MB will have 10 parts. The same log file with a 50 MB chunk size will have 20 parts.

Note that once you have opened a part of a log file, you may then choose to open another part of the log file. Log file parts can be merged just like normal log files.

Monitor Directory



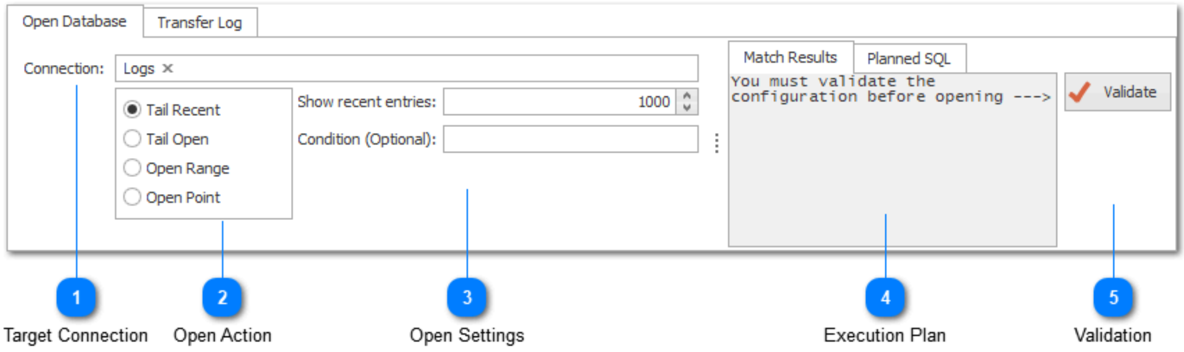
Directory: file:///D:/Data/Logs/Text/Large/ ☑ Recurse?
File Name Pattern: *.log □ Is RegEx?
Ignore Files: Older Than Today
Merge Name (Optional):
Category Name (Optional):

```
You must validate the
configuration before opening --->
```

Occasionally, you might find that you need to monitor an entire directory for new log files. This is particularly helpful in situations where you have rolling log files and the names of new log files are automatically generated. In these situations it's helpful to have a directory monitor which can poll a target directory and automatically open new files as needed.

For detailed instructions in how to configure a new directory monitor, please see the Edit Directory Monitor documentation.

Open Database



Connection: Logs ×

● Tail Recent
○ Tail Open
○ Open Range
○ Open Point

Show recent entries: 1000

Condition (Optional):

```
You must validate the
configuration before opening --->
```

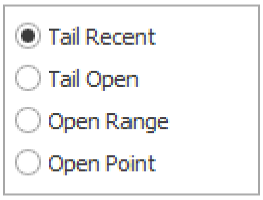
When you select a database in the Log Explorer, you will be presented with the configuration options shown above. These settings allow you to customize the SQL to be executed. You must test the proposed SQL before you will be able to retrieve the data.

1 Target Connection

Connection: Logs ×

The target connection contains a reference to the connection string selected in the Log Explorer.

2 Open Action



● Tail Recent
○ Tail Open
○ Open Range
○ Open Point

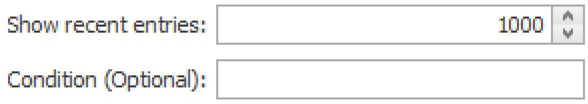
LogViewPlus supports a number of different database open actions. Note that, regardless of the open action type, new log entries will only be retrieved if the database connection has been configured to allow tail.

1. **Tail Recent** - allows you to retrieve the most recent log entries. The number of entries retrieved is defined by the user.

2. **Tail Open** - allows you to open all log entries after a user defined point in time.

3. **Open Point** - allows you to open all log entries between a user defined date range.

3 Open Settings



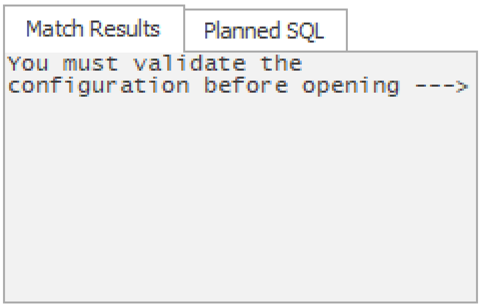
Show recent entries: 1000

Condition (Optional):

The Open Settings will change based on the action type selected (see above).

The Condition field is always available regardless of the open action type. This field allows you to manually enter a conditional which will be included in the SQL to be executed. For example, you might restrict your data set to only records where ColumnName = '%value1%'. Conditions provided must be valid SQL conditional for the table defined in the connection setup. Multiple conditionals can be provided if you also include the operation (AND / OR).

4 Execution Plan



```
You must validate the
configuration before opening --->
```

After validation, the match results tab will show the top 5 results returned from your query as well as a count with the number of elements LogViewPlus expects to load. This is just to give you an indication of what LogViewPlus is about to execute.

The Planned SQL tab shows the SQL that will be executed against the database should you decided to open the full results.

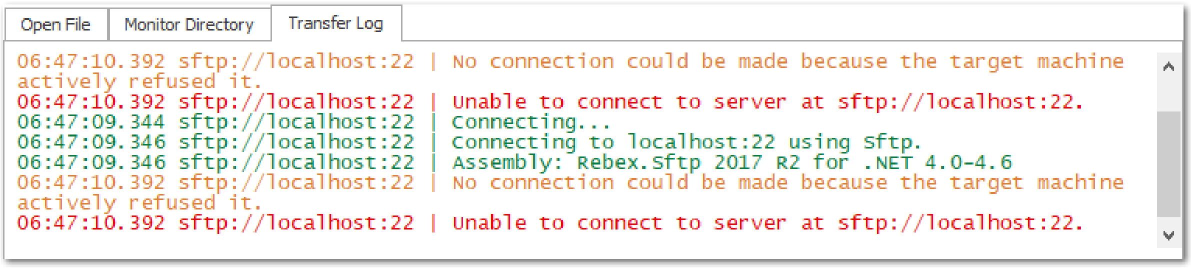
5 Validation

Once you're happy with your database query configuration you can click the validate button. This will verify that the SQL to be executed is valid and any errors will be reported to the user.

You must validate your query to enable full execution. LogViewPlus will disable opening the data set until the query is validated.

Note that if you database query configuration you will need to re-validate.

Transfer Log



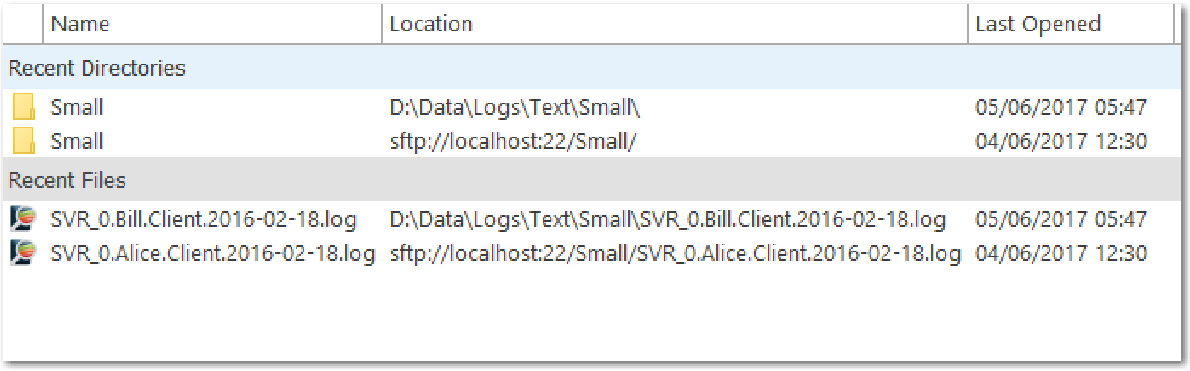
```
06:47:10.392 sftp://localhost:22 | No connection could be made because the target machine
actively refused it.
06:47:10.392 sftp://localhost:22 | Unable to connect to server at sftp://localhost:22.
06:47:09.344 sftp://localhost:22 | Connecting...
06:47:09.346 sftp://localhost:22 | Connecting to localhost:22 using Sftp.
06:47:09.346 sftp://localhost:22 | Assembly: Rebex.Sftp 2017 R2 for .NET 4.0-4.6
06:47:10.392 sftp://localhost:22 | No connection could be made because the target machine
actively refused it.
06:47:10.392 sftp://localhost:22 | Unable to connect to server at sftp://localhost:22.
```

The transfer log shows a running log of all remote file access attempts. This log will only be visible if the currently selected directory is a remote directory. This log can be very helpful when trying to diagnose connection issues.

The transfer log can be accessed on a per-server basis through the Transfer Commands context menu available in the File Transfers view.

A more detailed version of the transfer log is also written to disk. By default this log is located at %Temp%\LogViewPlus.

History



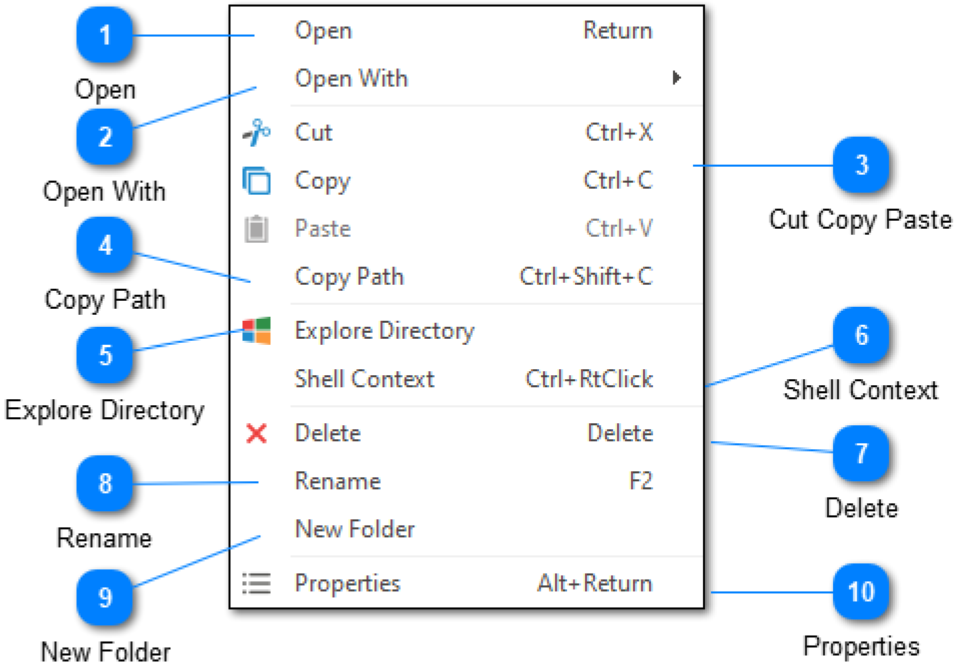
Name	Location	Last Opened
Recent Directories		
Small	D:\Data\Logs\Text\Small\	05/06/2017 05:47
Small	sftp://localhost:22/Small/	04/06/2017 12:30
Recent Files		
SVR_0.Bill.Client.2016-02-18.log	D:\Data\Logs\Text\Small\SVR_0.Bill.Client.2016-02-18.log	05/06/2017 05:47
SVR_0.Alice.Client.2016-02-18.log	sftp://localhost:22/Small/SVR_0.Alice.Client.2016-02-18.log	04/06/2017 12:30

When you click on a history node in the folder tree view, the file list view will automatically switch to history mode. When in history mode, the file list view will scan all of the recently accessed log files on the selected computer. For each log file LogViewPlus will extract the directory which is then displayed in the recent directories category. Log files will be displayed in the recent files category. The location column is used to show the full path to the target log file or directory.

When managing your local history LogViewPlus can remember up to 20 files for each computer you access. In addition to this LogViewPlus keeps a global history of the 20 most recently accessed files across all computers. You can configure the number of recent history items stored in the recent history settings.

The global history will be displayed in the quick access history node. History for each computer will be displayed in the specific computer's history node.

File Context Menu



The file context menu is displayed whenever you right click on a file in the Log Explorer. Note that some actions may be disabled or hidden when accessing a remote file system.

1 Open

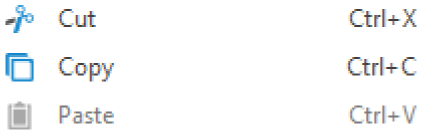
Opens the currently selected file in LogViewPlus. This action is the same as double-clicking on the file.

2 Open With

The Open With command can be used to open a file in another application. The alternative application can either be configured in advance or added at the time the action is taken. If the file exists on a remote machine it will be downloaded before being opened by the target application.

3

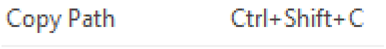
Cut Copy Paste



The cut copy and paste commands can be used to copy or move files. These commands are only available when working with the local file system.

4

Copy Path



The copy path command can be used to copy the full path to the target file or directory. When working with remote files the full URL to the target will be copied.

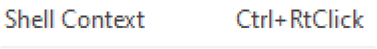
5

Explore Directory

Opens the currently selected directory in Windows Explorer. This command is only available when working with local file systems.

6

Shell Context



The shell context command can be used to display the Windows Explorer context menu for the selected item. Note that if you select "Open" from the shell context menu LogViewPlus will interpret this to mean that you want to open the file in LogViewPlus as opposed to the Windows configured default application.

7

Delete

Delete Delete

The delete command can be used to remove the selected file or directory. When working with local file systems deleted items will be moved to your recycle bin. When working with remote file systems deletion is permanent.

8 Rename

Rename F2

The rename command can be used to rename the selected file or folder.

9 New Folder

New Folder

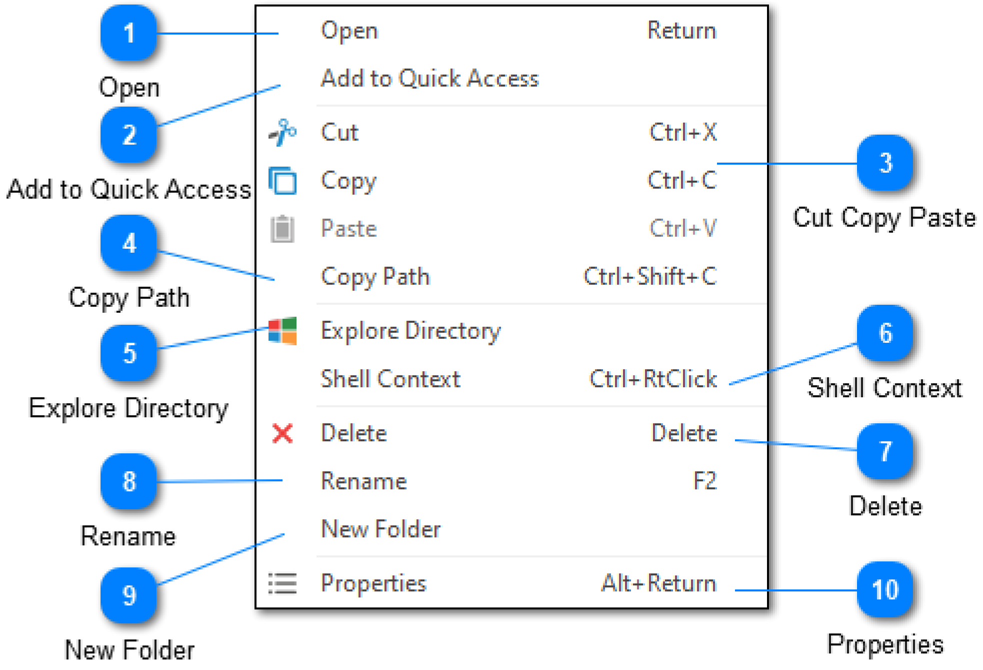
The new folder command creates a new folder in the target directory.

10 Properties

☰ Properties Alt+Return

The properties command will display the Windows Shell file properties for the selected file or directory. This command is currently disabled for remote file systems.

Folder Context Menu



The folder context menu is displayed whenever you right click on a folder in the Log Explorer. Note that some actions may be disabled or hidden when accessing a remote file system.

1 Open

Opens the currently selected folder in the browser. This action is the same as clicking or on the folder.

2 Add to Quick Access

Adding a folder to the quick access menu is useful when you frequently access the folder and you want that folder to be available regardless of your recent history settings. Note that removing a folder from the quick access list has no impact on the underlying file system.

3 Cut Copy Paste

Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V

The cut copy and paste commands can be used to copy or move folders. These commands are only available when working with the local file system.

4 Copy Path

The copy path command can be used to copy the full path to the target directory. When working with remote file systems the full URL to the target will be copied.

5 Explore Directory

Opens the currently selected directory in Windows Explorer. This command is only available when working with local file systems.

6 Shell Context

The shell context command can be used to display the Windows Explorer context menu for the selected item. Note that if you select "Open" from the shell context menu LogViewPlus will interpret this to mean that you want to open the file in LogViewPlus as opposed to the Windows configured default application.

7 Delete

The delete command can be used to remove the selected directory. When working with local file systems deleted items will be moved to your recycle bin. When working with remote file systems deletion is permanent.

8 Rename

The rename command can be used to rename the selected folder.

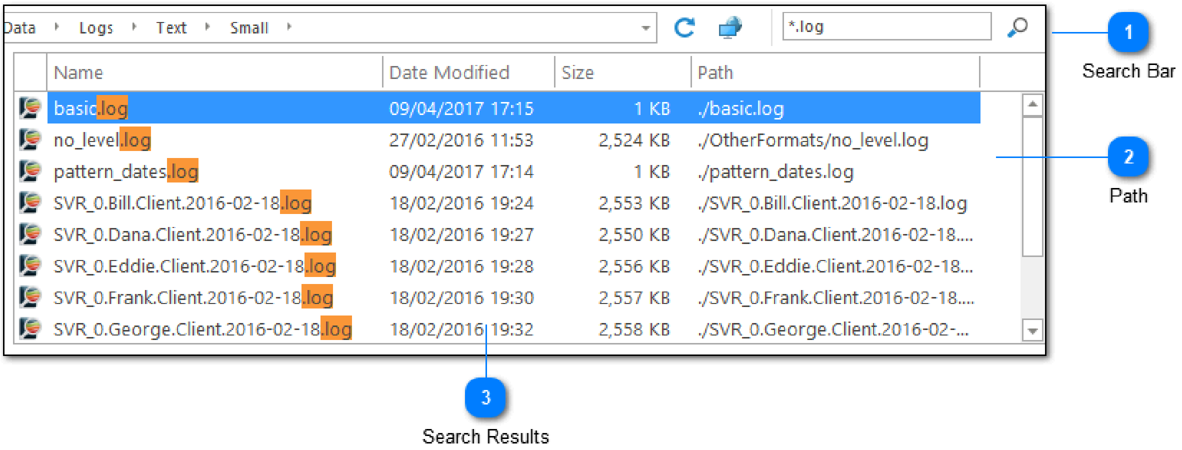
9 New Folder

The new folder command creates a new folder in the target directory.

10 Properties

The properties command will display the Windows Shell file properties for the selected directory. This command is currently disabled for remote file systems.

Searching for Files



Name	Date Modified	Size	Path
basic.log	09/04/2017 17:15	1 KB	./basic.log
no_level.log	27/02/2016 11:53	2,524 KB	./OtherFormats/no_level.log
pattern_dates.log	09/04/2017 17:14	1 KB	./pattern_dates.log
SVR_0.Bill.Client.2016-02-18.log	18/02/2016 19:24	2,553 KB	./SVR_0.Bill.Client.2016-02-18.log
SVR_0.Dana.Client.2016-02-18.log	18/02/2016 19:27	2,550 KB	./SVR_0.Dana.Client.2016-02-18....
SVR_0.Eddie.Client.2016-02-18.log	18/02/2016 19:28	2,556 KB	./SVR_0.Eddie.Client.2016-02-18...
SVR_0.Frank.Client.2016-02-18.log	18/02/2016 19:30	2,557 KB	./SVR_0.Frank.Client.2016-02-18....
SVR_0.George.Client.2016-02-18.log	18/02/2016 19:32	2,558 KB	./SVR_0.George.Client.2016-02-...

LogViewPlus supports a basic file search by file name. Note that file contents are not accessed by the LogViewPlus search.

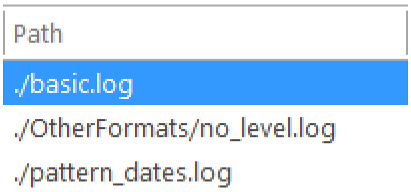
1 Search Bar

To execute a file search in LogViewPlus, simply enter your search text in the search bar and press return or click the apply button. Once a search is started the apply button will change to allow you to cancel the in progress search. All LogViewPlus searches are recursive starting at the currently selected directory.

Only file names and directory names will be searched. LogViewPlus will not inspect the contents of the files.

Note that the asterisk character (*) is optional when used at the beginning or end of a search command. Searching by wildcard is implied. You can think of a search for ".log" to really mean "*.log*".

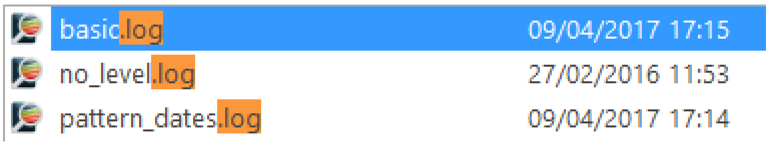
2 Path



Path
./basic.log
./OtherFormats/no_level.log
./pattern_dates.log

The path column shows the path to a given search result relative to the currently selected directory.

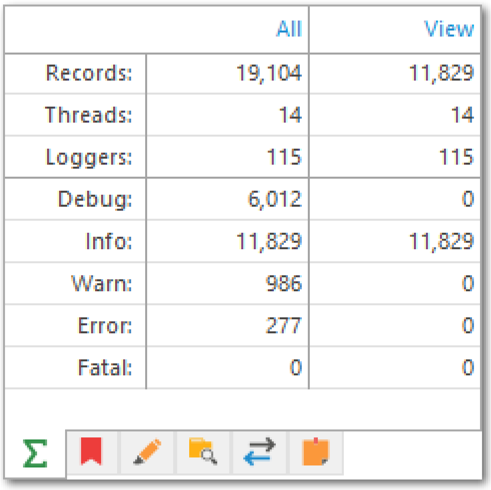
3 Search Results



basic.log	09/04/2017 17:15
no_level.log	27/02/2016 11:53
pattern_dates.log	09/04/2017 17:14

Search results are displayed in the log file list. Text matched by the file name search appears highlighted.

Toolbox Features

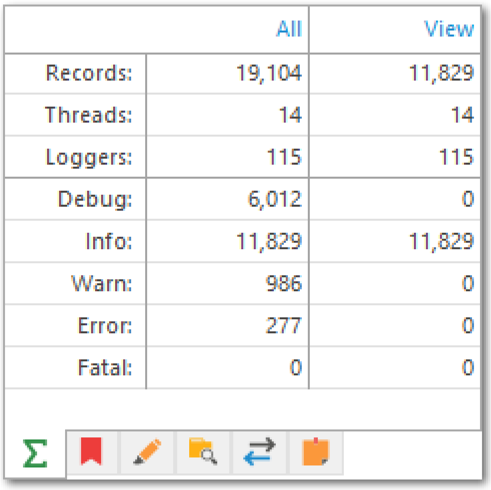


	All	View
Records:	19,104	11,829
Threads:	14	14
Loggers:	115	115
Debug:	6,012	0
Info:	11,829	11,829
Warn:	986	0
Error:	277	0
Fatal:	0	0

The LogViewPlus toolbox is located in the bottom left corner of LogViewPlus. The toolbox contains a number of tabs. Each tab contains a different tool designed to help you get the most out of your log files.

Each of the toolbox tabs will be discussed in detail in the following sections.

Statistics Grid



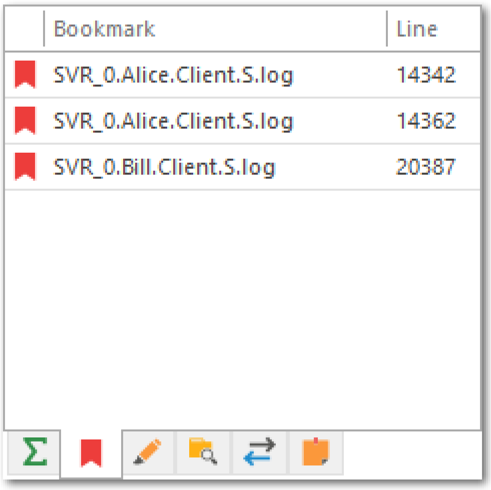
	All	View
Records:	19,104	11,829
Threads:	14	14
Loggers:	115	115
Debug:	6,012	0
Info:	11,829	11,829
Warn:	986	0
Error:	277	0
Fatal:	0	0

The statistics grid can be used to give you an idea of how many elements are in your log file. It's designed to give you a quick idea of what important information might be available in this log file. The All column represents all statistics on all log entries in the log file. The View column represent statistics on the current view.

Clicking on the column links at the top of the LogViewPlus statistics grid will open the graph log entries dialog for either the log file or the view depending on which link is clicked.

Double-clicking on a row in the statistics grid will bring up a create filter configuration screen with settings relevant to the selected statistic row.

Bookmarks

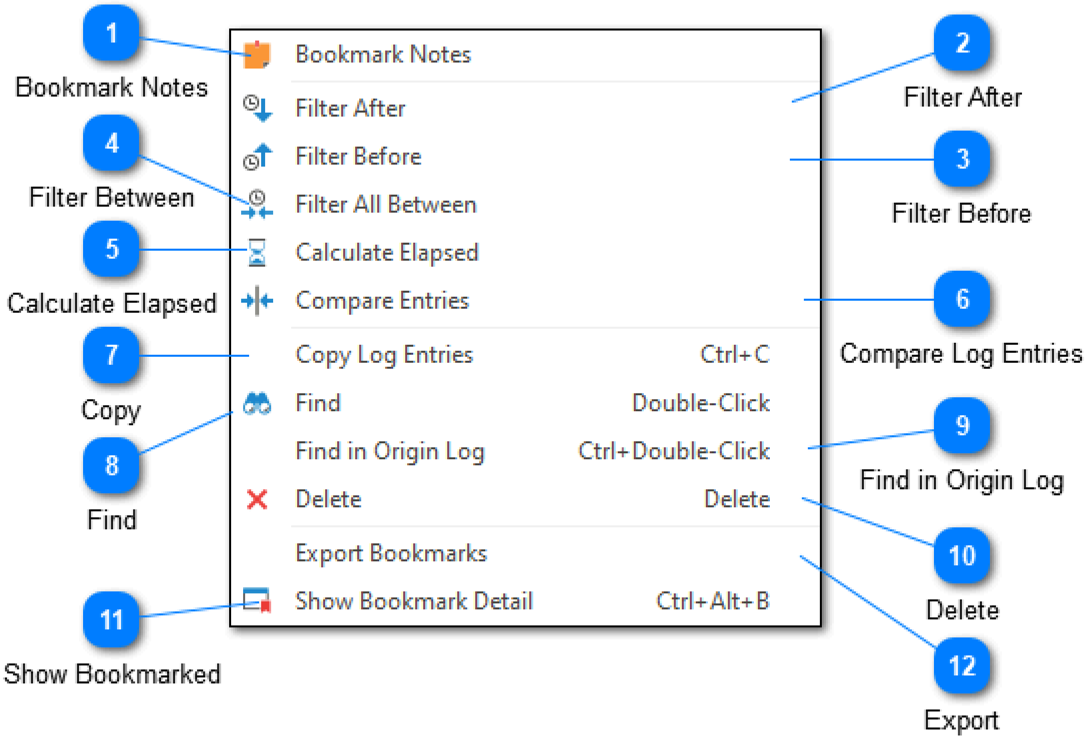


Bookmark	Line
SVR_0.Alice.Client.S.log	14342
SVR_0.Alice.Client.S.log	14362
SVR_0.Bill.Client.S.log	20387

The bookmarks toolbar shows all available bookmarks. Double-clicking on one of the bookmarks will automatically navigate to the bookmarked log entry. Right clicking on a bookmark will bring up the bookmark commands context menu which allows simple actions like creating quick date filters, navigation, elapsed time, and bookmark management.

The bookmark toolbox is space limited. The Bookmark Detail view available from the bookmark toolbar can be used to display more detail.

Bookmark Commands



The bookmark commands context menu is available when you right-click on the bookmark in the bookmarks toolbar.

1 Bookmark Notes

Bookmark Notes

Bookmark notes allow you to associate a given log entry with a block of free-form text. Depending on the state of the current log entry, the bookmark notes command will either convert the current bookmark or display the already set bookmark notes.

2 Filter After

Filter After

Reads the time of the bookmarked log entry and creates a new Date Filter showing everything which occurred after that time.

3 Filter Before

Filter Before

Reads the time of the bookmarked log entry and creates a new Date Filter showing everything which occurred before that time.

4 Filter Between

Filter All Between

When two or more bookmarks are selected this command will determine the start and end time of the underlying log entries and create a new Date Filter showing everything which occurred between the selected times.

5 Calculate Elapsed

Calculate Elapsed

Calculates the amount of time that has elapsed between the two selected bookmarks.

6 Compare Log Entries

Compare Entries

If you have configured LogViewPlus to use a compare tool (like WinMerge) the Compare Log Entries command will open the log entries of the two selected bookmarks using your configured tool. This is helpful for quickly determining the difference between two bookmarked log entries.

7 Copy

Copy Log Entries Ctrl+C

The copy commands are used to copy data to the Windows clipboard. You can either copy the full log entry as it was originally written or you can copy a particular cell within the grid. Copying cells is particularly helpful if you intend to create a text filter from the cell data.

8 Find

Finds the currently selected bookmark in the current log file. This action is the same as double-clicking on the bookmark.

9 Find in Origin Log

Finds the currently selected bookmark in the log source file log file.

10 Delete

Permanently deletes the currently selected bookmark. Any notes associated with the bookmark will also be deleted.

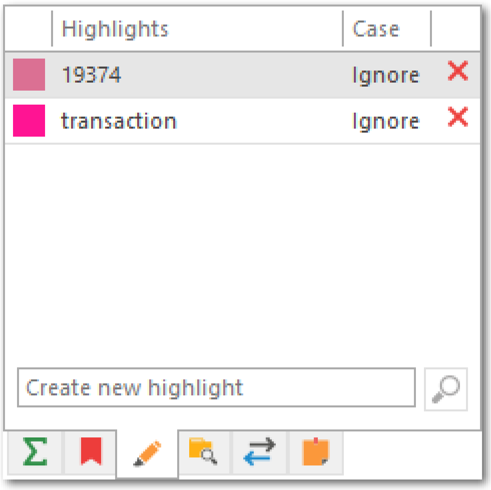
11 Show Bookmarked

The show bookmark detail command opens the docked bookmark view.

12 Export

Saves all current bookmarks to a log file in your Windows Temp directory. This log file is then opened in LogViewPlus using a predefined pattern. This is helpful when you want to quickly view all log entries associated with your bookmarks. It can also be helpful if you need to remember the bookmarks you have created.

Highlights

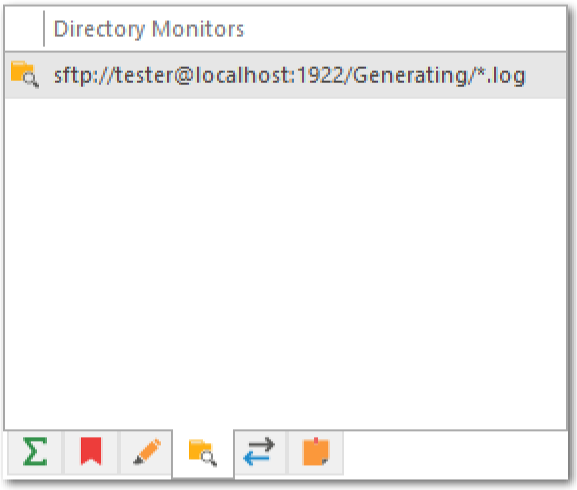


	Highlights	Case	
🟥	19374	Ignore	✕
🟥	transaction	Ignore	✕

Highlighting allows you to search for text and mark it to make it easier to find. The LogViewPlus highlight toolbar is a scaled down version of the LogViewPlus highlight manager. Please see the LogViewPlus highlight manager documentation for more details.

Note that changes made in the highlights toolbar will be automatically saved.

Directory Monitors

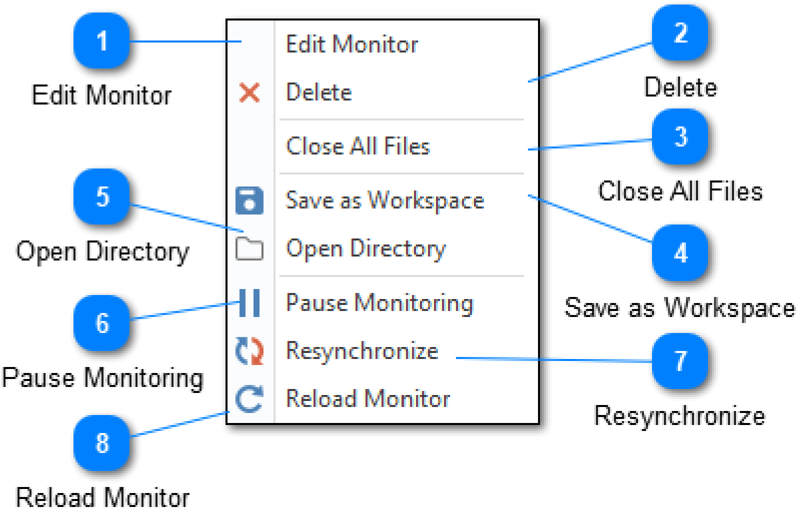

Directory Monitors

sftp://tester@localhost:1922/Generating/*.log

Occasionally, you might find that you need to monitor an entire directory for new log files. This is particularly helpful in situations where you have rolling log files and the names of new log files are automatically generated. In these situations it's helpful to have a directory monitor which can poll a target directory and automatically open new files as needed.

The directory monitor toolbox item shows the list of currently monitored directories. Right clicking on a directory monitor in the toolbar will bring up the monitor commands context menu which will allow you to edit and delete directory monitors.

Monitor Commands



The monitor commands context menu is displayed whenever you right click on the directory monitor in the directory monitors toolbox.

1 Edit Monitor

This command can be used to invoke the edit directory monitor dialog.

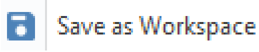
2 Delete

The delete command can be used to remove the current directory monitor. Any changes to the directory will be ignored after the directory monitor has been deleted.

3 Close All Files

The close all files command can be used to remove all files opened by the directory monitor except for the merge file (if provided). This is a great way to clean-up your view if you use directory monitors to open a lot of files which are then merged.

4 Save as Workspace



Save as Workspace

The save as workspace command can be used to save the currently selected directory monitor as a workspace. Note that only the selected directory monitor will be part of the workspace. Regardless of other log files which have been opened or other directory monitors which may be running.

5 Open Directory

Open Directory

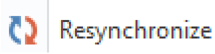
The open directory command can be used to open the local directory being monitored in the Log Explorer.

6 Pause Monitoring

Pause Monitoring

The pause monitoring command can be used to pause the current directory monitor. Any changes to the directory will be ignored if the directory monitor has been paused.

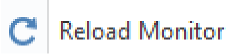
7 Resynchronize



Resynchronize

Reapply the directory monitor to mirror the current file system. All files opened by the directory monitor which no longer exist on the underlying file system will be closed. Files which still exist will be refreshed.

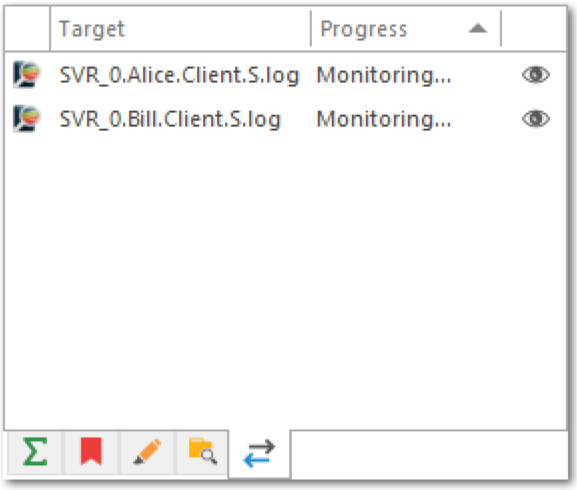
8 Reload Monitor



Reload Monitor

Reloading a directory monitor will completely reapply the directory monitor settings. This is useful if you have removed some of the files initially detected by the directory monitor and would like the files to be re-added. Note that log files in LogViewPlus can only be open once. This will prevent duplicate log files from being opened by the directory monitor.

File Transfers



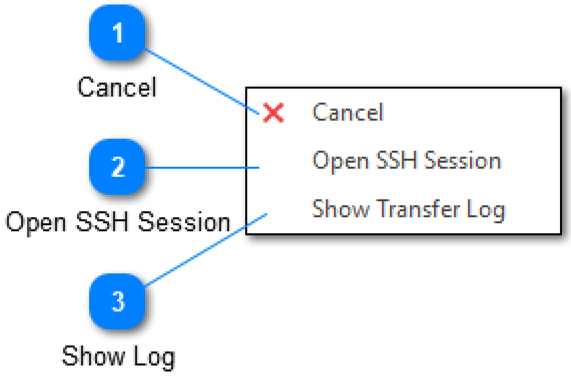
	Target	Progress	
	SVR_0.Alice.Client.S.log	Monitoring...	
	SVR_0.Bill.Client.S.log	Monitoring...	

The file transfers toolbar is used to display all of the remote files that LogViewPlus is currently tracking. Remote files will only be monitored in the event that tail is enabled for the remote file. If LogViewPlus detects that a remote file has been updated LogViewPlus will only download the updated data. This work similar to a "resume download" feature.

If LogViewPlus detects a problem with the transfer a warning icon may be displayed. You can find out more information about the warning by hovering over the icon or viewing the transfer log.

Right clicking on a file in the file transfers toolbar will bring up the transfer commands context menu.

Transfer Commands



The transfer commands context menu is shown whenever you right-click on the file transfers toolbox.

1 Cancel

Cancel

The cancel command can be used to stop monitoring a remote file. This has a similar impact as disabling tail in that it will not impact the current display of the log file but new log entries will not be added.

2 Open SSH Session

Open SSH Session

If the target log file has been downloaded from an SFTP server, this command can be used to open a new SSH session to the server. However, LogViewPlus does not have an SSH terminal built-in. Instead, LogViewPlus will rely on Windows directing an SSH url request to the appropriate application. For example, LogViewPlus will ask Windows to open the url: ssh://user@localhost:22.

If your local Windows machine is not configured to handle SSH urls, you can install PuTTY and run the command ssh_url_register.reg located in the LogViewPlus installation directory. The default installation directory for LogViewPlus is %LOCALAPPDATA%\LogViewPlus.

Alternatively, if you have another application you use for SSH terminal sessions, you can either use that application's built-in SSH url handling or modify the ssh_url_register.reg script.

Finally, note that if you do not have SSH url handling configured and you have installed PuTTY to the default installation directory, LogViewPlus will call PuTTY directly to establish the session.

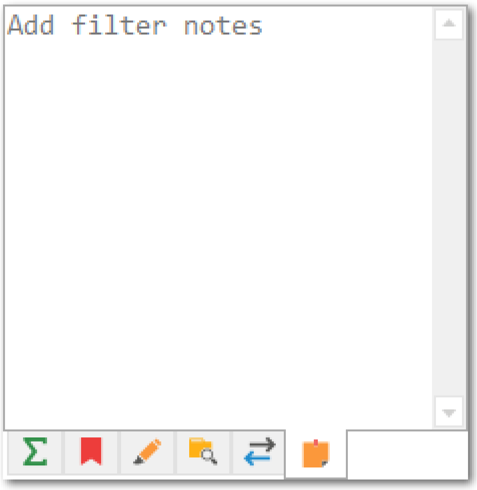
This command is also available on the Folder Context Menu when browsing SFTP directories.

3 Show Log

The show transfer log command can be used to display the LogViewPlus file transfers log. This log file contains detailed information on background file transfer operations in LogViewPlus. This log file is very useful for debugging if you are experiencing file transfer problems.

By default, this log is located at %Temp%\LogViewPlus. One transfer log is created per LogViewPlus instance.

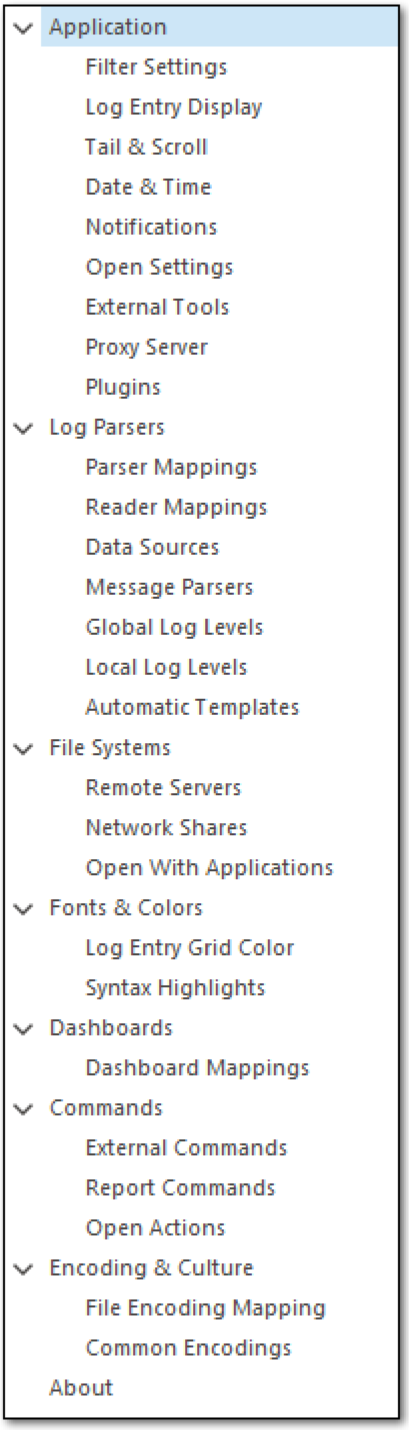
Notes



Add filter notes

The notes toolbar is only visible if a filter is currently selected. The notes toolbar contains a free-form text box that allows you to create notes to be associated with the selected filter. Notes that have been assigned to a filter will be persisted with the filter when if it is saved as template. Notes will also be copied to the clipboard as part of the text which represents the filter when using the copy and paste commands.

Application Settings

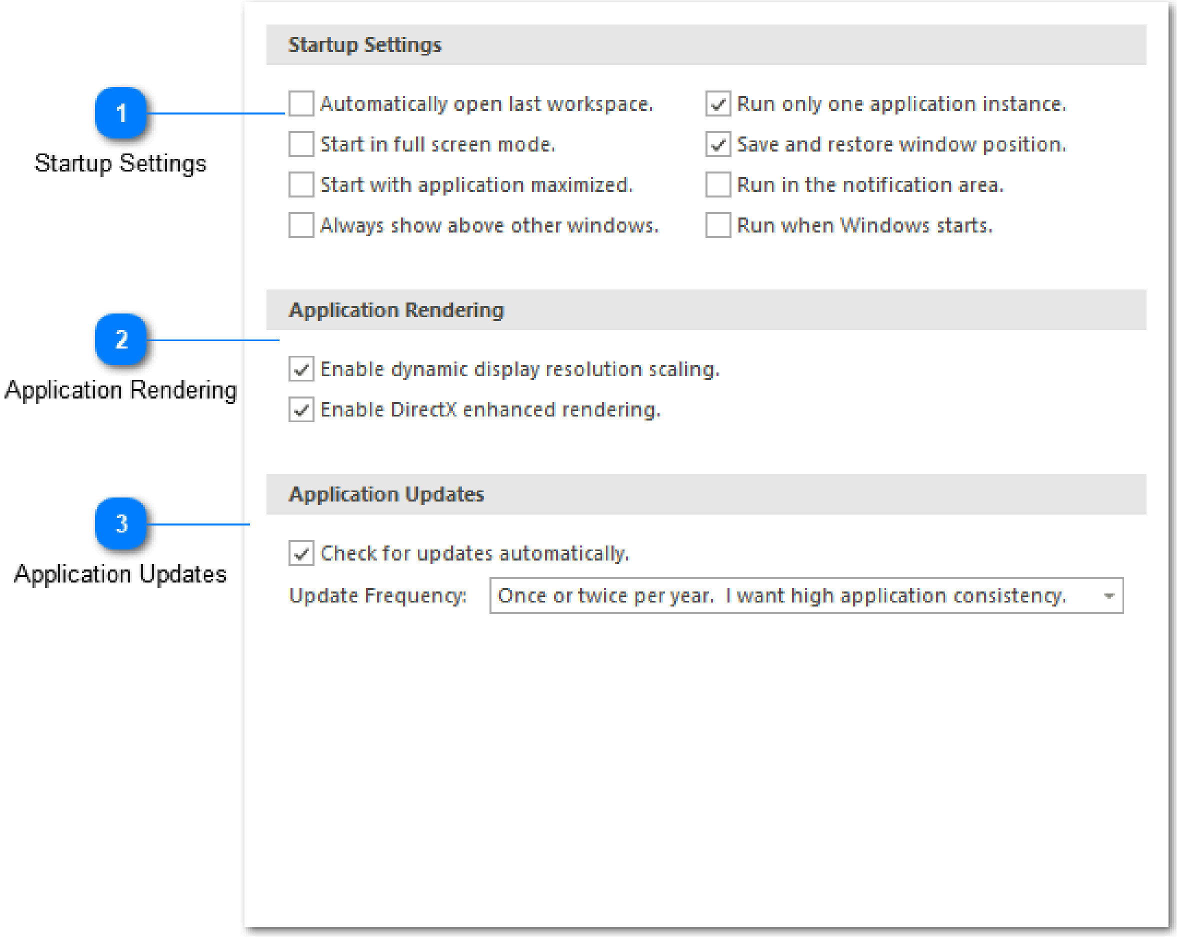

Application
Filter Settings
Log Entry Display
Tail & Scroll
Date & Time
Notifications
Open Settings
External Tools
Proxy Server
Plugins
Log Parsers
Parser Mappings
Reader Mappings
Data Sources
Message Parsers
Global Log Levels
Local Log Levels
Automatic Templates
File Systems
Remote Servers
Network Shares
Open With Applications
Fonts & Colors
Log Entry Grid Color
Syntax Highlights
Dashboards
Dashboard Mappings
Commands
External Commands
Report Commands
Open Actions
Encoding & Culture
File Encoding Mapping
Common Encodings
About

On the far left side of the settings window you will find the navigation menu. The navigation menu allows you to select the settings configuration category that you're interested in. LogViewPlus settings are divided into seven separate sections: Application, Log Parsers, File Systems, Fonts & Colors, Dashboards, Commands, Encoding & Culture, and About.

When navigating application settings, you can use the shortcut key F1 to view the relevant online documentation.

For more information about settings management - including importing and exporting settings - please see the Settings Management documentation.

Application



Startup Settings

□ Automatically open last workspace.
□ Start in full screen mode.
□ Start with application maximized.
□ Always show above other windows.
☑ Run only one application instance.
☑ Save and restore window position.
□ Run in the notification area.
□ Run when Windows starts.

Application Rendering

☑ Enable dynamic display resolution scaling.
☑ Enable DirectX enhanced rendering.

Application Updates

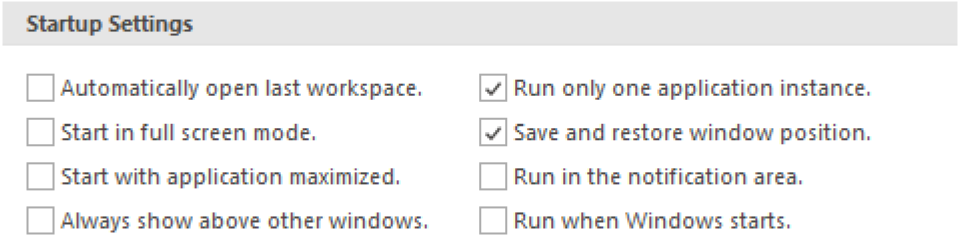
☑ Check for updates automatically.

Update Frequency: Once or twice per year. I want high application consistency.

The general settings section contains configuration options which affect the overall behavior of LogViewPlus.

1

Startup Settings



Startup Settings

☐ Automatically open last workspace.

☐ Start in full screen mode.

☐ Start with application maximized.

☐ Always show above other windows.

☑ Run only one application instance.

☑ Save and restore window position.

☐ Run in the notification area.

☐ Run when Windows starts.

Startup settings allow you to specify:

1. LogViewPlus can automatically open the last known workspace on start-up. This setting is helpful if you frequently work with the same log files.

2. LogViewPlus can start in full screen mode with the ribbon minimized. You can also run LogViewPlus in full screen mode by pressing F11.

3. LogViewPlus can start with the window maximized.

4. LogViewPlus can be shown above other windows. This can be useful if you want LogViewPlus to remain visible on your desktop.

5. LogViewPlus can run as a single application instance. If set, starting the application a second time will cause the first application instance to be displayed. This setting is recommended. If disabled, it is important to note that application settings will be shared between application instances. Therefore writing settings in one instance may override the settings saved by another instance.

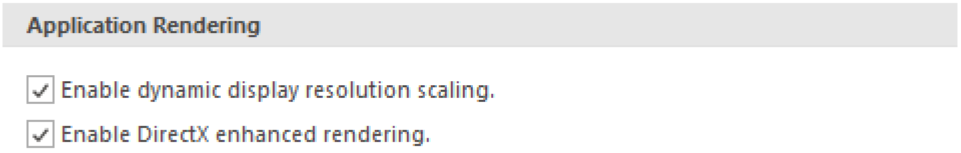
6. LogViewPlus can save and restore to the same window position. This setting can only be enabled if you are running LogViewPlus in single instance mode.

7. LogViewPlus can run from the Windows notification area. If enabled, closing LogViewPlus will minimize the application to the notification area. You can exit LogViewPlus by using the appropriate menu command from the notification icon popup menu. This setting can only be enabled if you are running LogViewPlus in single instance mode.

8. You can run LogViewPlus automatically at Windows startup. This is helpful if you want to monitor a workspace for notifications automatically.

All startup settings require an application restart to take effect.

2 Application Rendering



Application Rendering

☑ Enable dynamic display resolution scaling.

☑ Enable DirectX enhanced rendering.

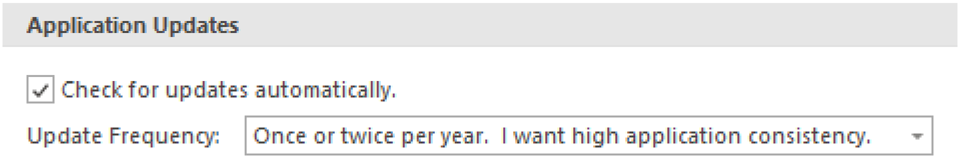
Application rendering settings give you control over how LogViewPlus should be displayed. These settings are particularly important for users running LogViewPlus on high resolution screens, or on multi-monitor setups with different scaling configurations.

If you are having problems with font size where the application font appears to be dramatically out of proportion, we recommend disabling dynamic resolution scaling.

DirectX enhanced rendering can improve performance and is recommended for most users. However, it may cause issues in some scenarios and is disabled by default.

All rendering settings require an application restart to take effect.

3 Application Updates



Application Updates

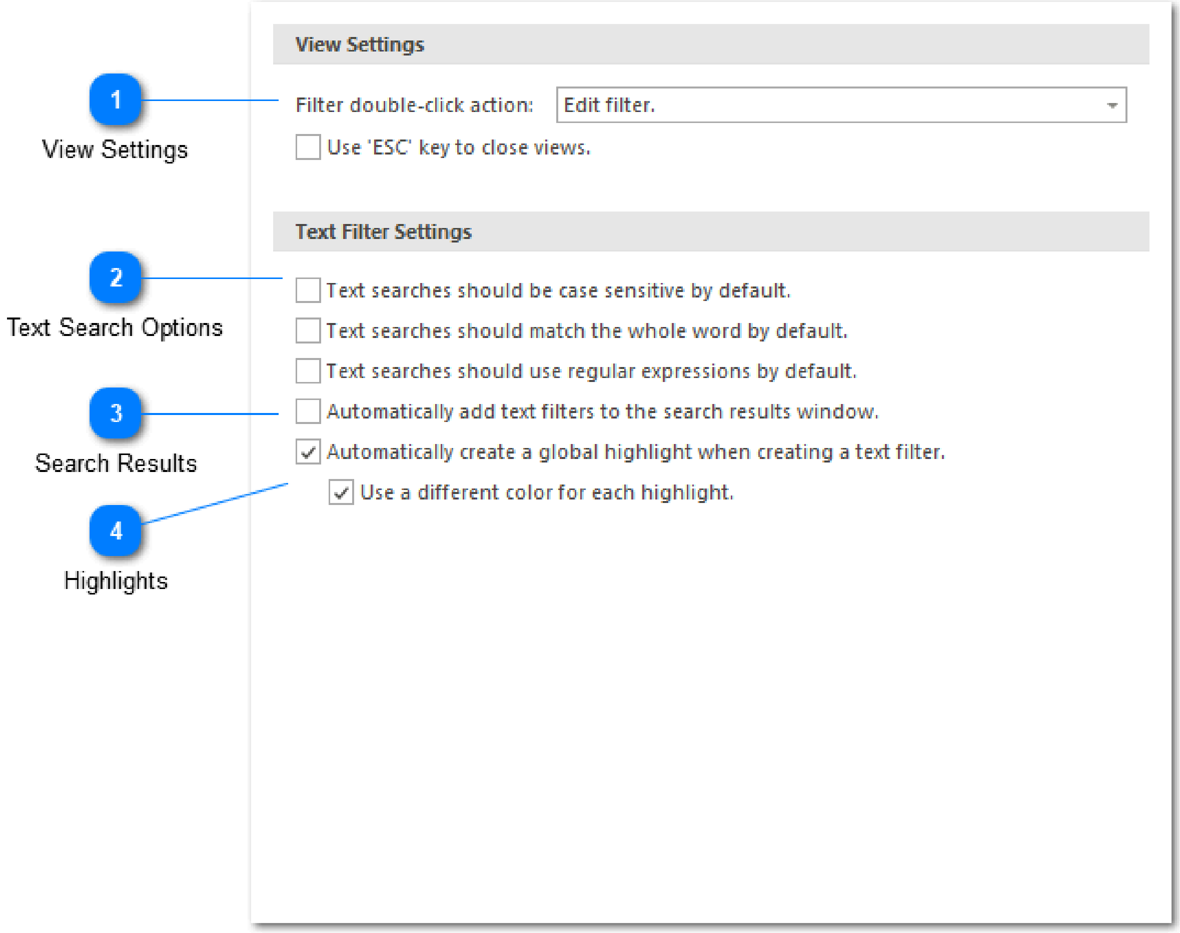
☑ Check for updates automatically.

Update Frequency: Once or twice per year. I want high application consistency.

LogViewPlus can check for updates automatically on start-up. Checking for updates automatically may be disabled by an administrator by setting the 'OfflineMode' flag in the application configuration file. This will also disable manual error reporting.

New versions of LogViewPlus are released every one to three months. Beta releases are frequently available and may be updated several times a week. Application update settings allow you to configure how often you would like LogViewPlus to be updated.

Text Filters



View Settings

Filter double-click action: Edit filter.

□ Use 'ESC' key to close views.

Text Filter Settings

□ Text searches should be case sensitive by default.

□ Text searches should match the whole word by default.

□ Text searches should use regular expressions by default.

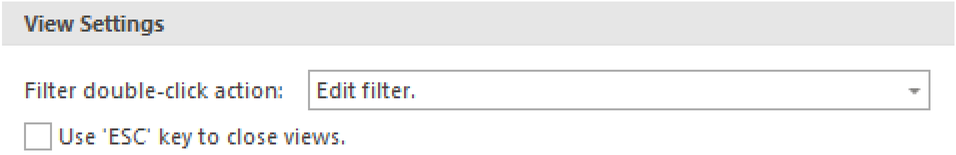
□ Automatically add text filters to the search results window.

☑ Automatically create a global highlight when creating a text filter.

☑ Use a different color for each highlight.

The text filter options allow you to set the default options that should be used when creating a text filter.

1 View Settings



View Settings

Filter double-click action: Edit filter.

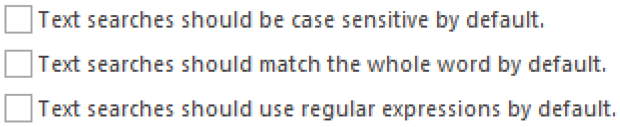
□ Use 'ESC' key to close views.

View settings allow you to specify:

1. The default action when you double click a filter. This can be set to either edit the filter or expand / collapse the tree node. If the node has no children, double-clicking will always result in an edit action.

2. If the escape key (ESC) can be used to close a view. A view can be either a filter or a log file. Note that the delete key can always be used to close a view.

2 Text Search Options



□ Text searches should be case sensitive by default.

□ Text searches should match the whole word by default.

□ Text searches should use regular expressions by default.

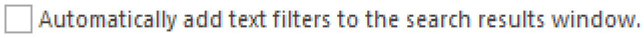
The text search options allow you to specify:

1. If text searches should be case-sensitive by default. For example, should a search for "error" also match "ERROR"?

2. If text searches should match the whole word by default by default. For example, should a search for "or" also match "error".

3. If text searches should use regular expressions by default. Enable this setting if you are familiar with and frequently use regular expressions.

3 Search Results

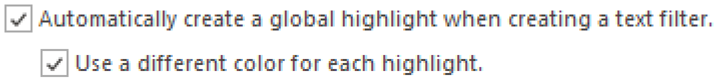


□ Automatically add text filters to the search results window.

If the search results checkbox is enabled then whenever you create a new text filter the results of the filter will be added to the search results window. Additionally, the new filter will not be automatically selected. This will allow you to quickly search a parent filter using the contents of the search result window.

This feature allows you to search for text in a way that may feel more familiar if you are used to searching for text in applications like Notepad++ or Visual Studio.

4 Highlights



☑ Automatically create a global highlight when creating a text filter.

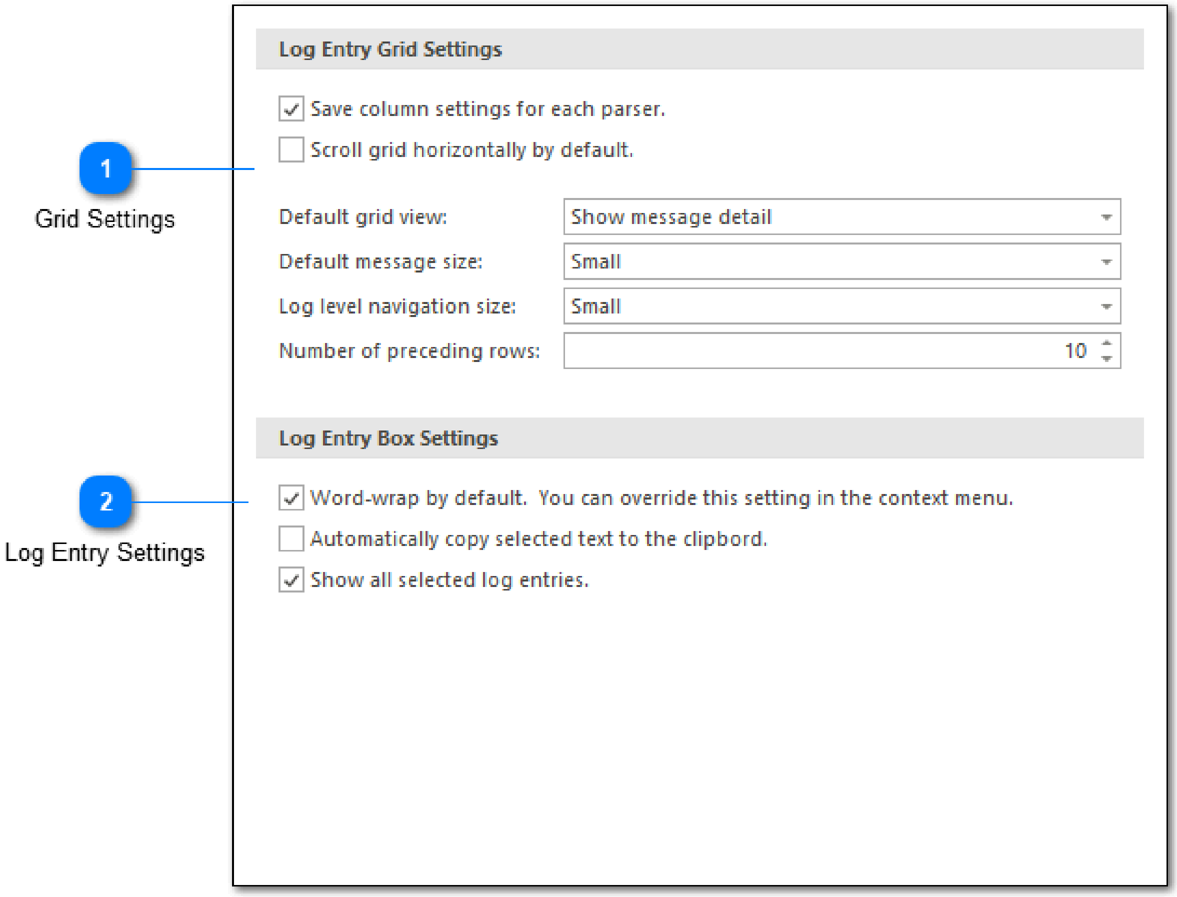
☑ Use a different color for each highlight.

Highlight options allow you to specify:

1. If LogViewPlus should create a global highlight whenever a text filter is created.

2. If LogViewPlus should use different colors when creating highlights. Note that you can always explicitly set a highlight color.

Log Entry Display



Log Entry Grid Settings

☑ Save column settings for each parser.

□ Scroll grid horizontally by default.

Default grid view: Show message detail

Default message size: Small

Log level navigation size: Small

Number of preceding rows: 10

Log Entry Box Settings

☑ Word-wrap by default. You can override this setting in the context menu.

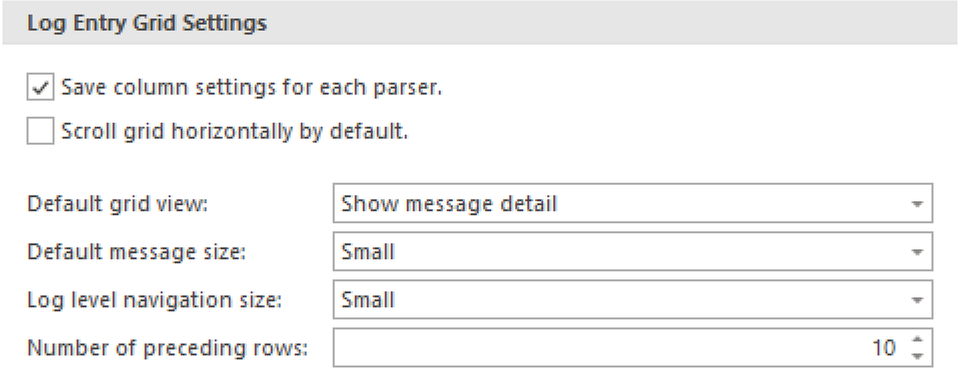
□ Automatically copy selected text to the clipbord.

☑ Show all selected log entries.

The log entry grid settings are used to configure how the log entries should be managed and displayed in the grid.

1

Grid Settings



Log Entry Grid Settings

☑ Save column settings for each parser.

□ Scroll grid horizontally by default.

Default grid view: Show message detail

Default message size: Small

Log level navigation size: Small

Number of preceding rows: 10

The Grid Settings allow you to specify:

1. If LogViewPlus should automatically save any columns setting changes you make to a log entry grid. For example, adding or removing a column. Column settings will be associated with a parser configuration and not a particular log file. This means that future log files opened with the same parser configuration will have the same column settings. This setting requires a restart.

2. If LogViewPlus should show a horizontal scroll bar in the log entry grid. Showing a horizontal scroll bar implies that you do not want the application to auto-size the grid view columns.

3. The default grid view setting can be used to change the way that log entry messages are displayed within the log entry grid. Three options are available:

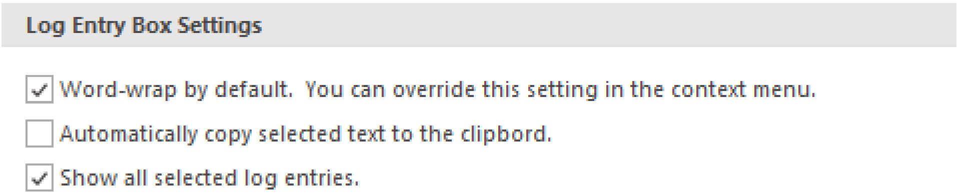
Show message detail: This view type can display the log entry message as multiple lines of text. Grid rows may be the sized differently. This is this is the default view.
One log entry per grid line: This view type will display the log entry message as a single line of text. All grid rows will be the same size.
Full Message: This view type will display the log entry message in a text box underneath a grid row.

4. The default grid message size can be used change the amount of text which is displayed in the message column of the log entry grid. This command will only be enabled if the grid view is not set to "one log entry per grid line". Message sizes range from "Very Small" to "Unlimited". Configuring the log entry grid view settings can also be done through the grid column context menu.

5. The size of the log level navigation bar. The log level navigation bar is located to the right of the log entry grid and displays a summary of the log file based on log entry priority. This setting can also be used to hide the navigation bar.

6. The number of log entries to show before the selected entry. This is helpful when navigating a file. Should the focused log entry be placed at the top of the grid, or would you prefer to be able to see a few of the preceding log entries?

2 Log Entry Settings



Log Entry Box Settings

☑ Word-wrap by default. You can override this setting in the context menu.

□ Automatically copy selected text to the clipbord.

☑ Show all selected log entries.

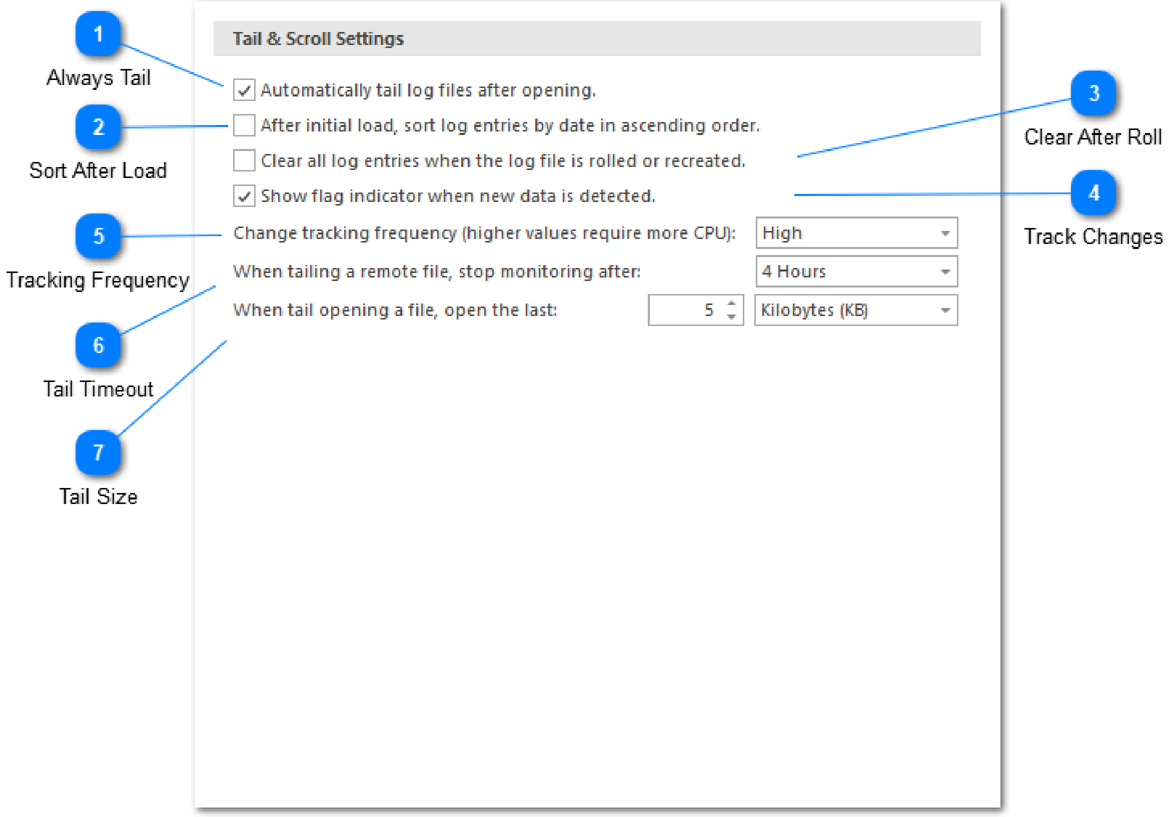
The Log Entry Settings allow you to specify:

1. If word-wrap should be on or off by default. Note that word wrap can also be turned on or off via the Log Entry Box context menu.

2. If selecting text in the log entry box will automatically copy it to the clipboard. There will be no need to press Ctrl+C or use the context menu.

3. If all log entries selected in the grid should be shown in the log entry text area, or only the focused log entry.

Tail & Scroll



Tail & Scroll Settings

☑ Automatically tail log files after opening.

☐ After initial load, sort log entries by date in ascending order.

☐ Clear all log entries when the log file is rolled or recreated.

☑ Show flag indicator when new data is detected.

Change tracking frequency (higher values require more CPU): High

When tailing a remote file, stop monitoring after: 4 Hours

When tail opening a file, open the last: 5 Kilobytes (KB)

Tail & Scroll Settings allow you to configure how a log file should be tailed.

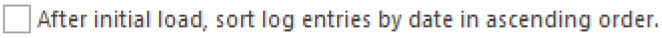
By default, tail is enabled and auto-scroll is controlled by selecting the last row in the view. If you would like to focus on the last row in the view while navigating back up the filter tree, you can always double-click on a log entry to find it in the main log file.

1 Always Tail

☑ Automatically tail log files after opening.

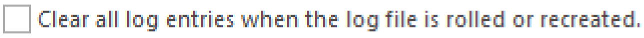
If enabled, LogViewPlus will automatically tail the log file once it is opened. Disable this check box if you do not frequently tail log files.

2 Sort After Load


□ After initial load, sort log entries by date in ascending order.

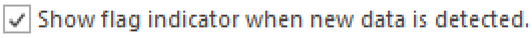
If enabled, your log files do not contain naturally sorted log entries, you have the option of sorting them on load. With this option selected, newer log entries will be located at the bottom of the grid. If the file is in tail mode, new log entries will always be found at the bottom of the grid - regardless of the log entry time stamp. This is to prevent 'lost' entries which are not seen by the user. This setting only applies to log files opened directly by LogViewPlus. It does not apply to merge files which are always sorted on load.

3 Clear After Roll


□ Clear all log entries when the log file is rolled or recreated.

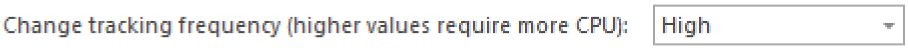
If enabled, LogViewPlus should remove all existing entries when a log file is rolled. This is helpful if previous log entries become irrelevant after roll.

4 Track Changes


☑ Show flag indicator when new data is detected.

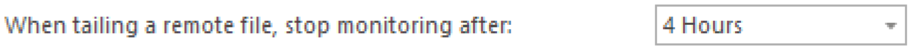
If enabled, the new data indicator flag will be shown in the Files & Views tree list.

5 Tracking Frequency


Change tracking frequency (higher values require more CPU): High

The frequency LogViewPlus will use when checking a file for changes. Checking the file more frequently requires more CPU which may be an issue on low-power machines like laptops.

6 Tail Timeout


When tailing a remote file, stop monitoring after: 4 Hours

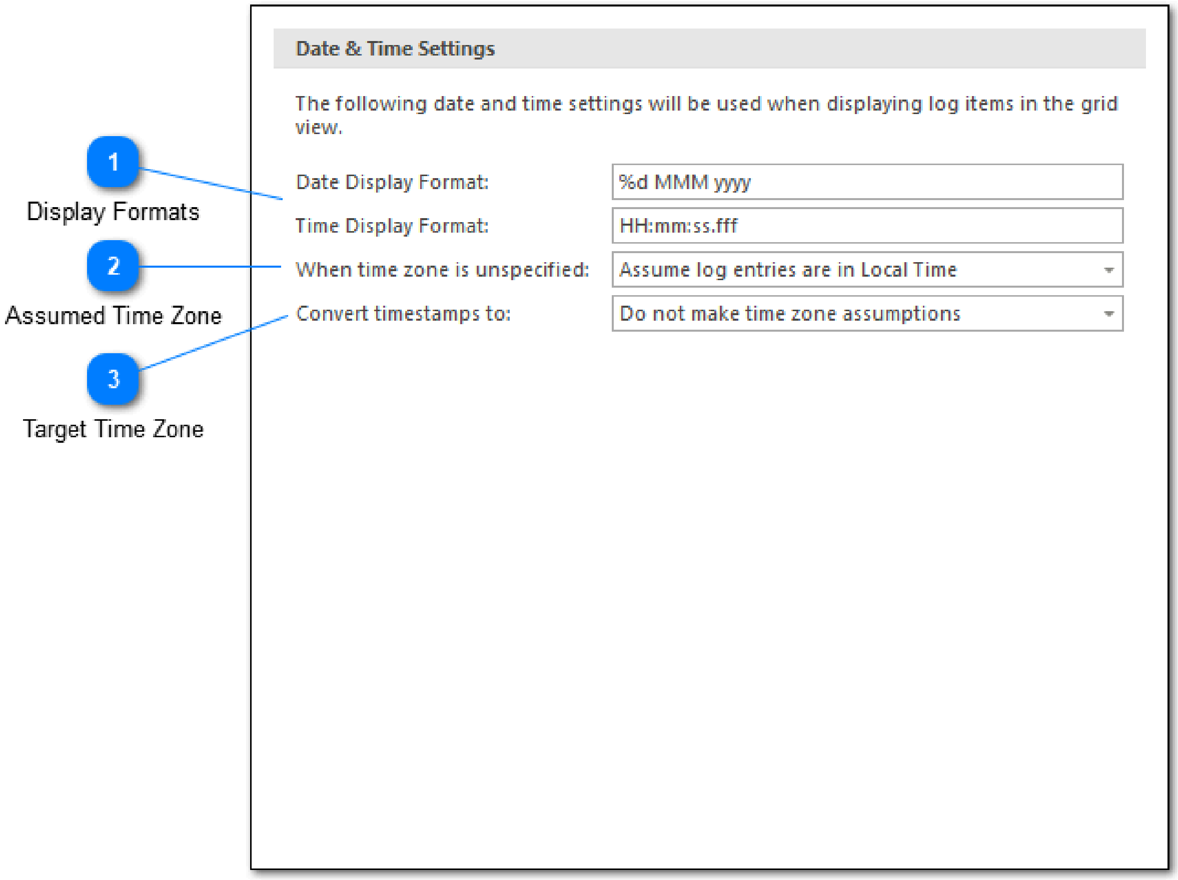
The time in which LogViewPlus will monitor a remote log file after the file has been opened. Note that monitoring remote log files requires polling the server for changes via SFTP or FTP.

7 Tail Size

When tail opening a file, open the last: 5 Kilobytes (KB)

The default log file tail size. When tail opening a log file, you will have the option of overriding this default value.

Date & Time



Date & Time Settings

The following date and time settings will be used when displaying log items in the grid view.

Date Display Format: %d MMM yyyy

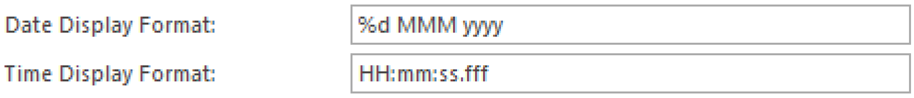
Time Display Format: HH:mm:ss.fff

When time zone is unspecified: Assume log entries are in Local Time

Convert timestamps to: Do not make time zone assumptions

The date and time settings allow you to control how dates and times are displayed within the LogViewPlus Log Entry Grid.

1 Display Formats

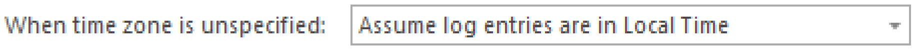


Date Display Format: %d MMM yyyy

Time Display Format: HH:mm:ss.fff

The display format settings allow you to specify the format that should be used to display dates and times in the Log Entry Grid. Note that the display format is independent of the log file parse format.

2 Assumed Time Zone

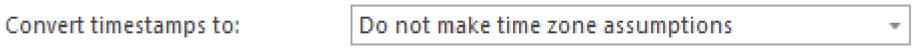


When time zone is unspecified: Assume log entries are in Local Time

Often log entries are written using a date time format that does not specify the time zone. In this case LogViewPlus must make an assumption about the underlying time zone. This setting allows you to specify what LogViewPlus should assume about timestamps which do not explicitly specify a time zone. The options available are:

Make no assumptions about time zone - The timestamp should be treated as "unspecified".
Assume log entries are in Local Time - Assume the log entries written in the same time zone as the current machine.
Assume log entries are in UTC Time - Assume the log entries were written in a standard UTC time zone.

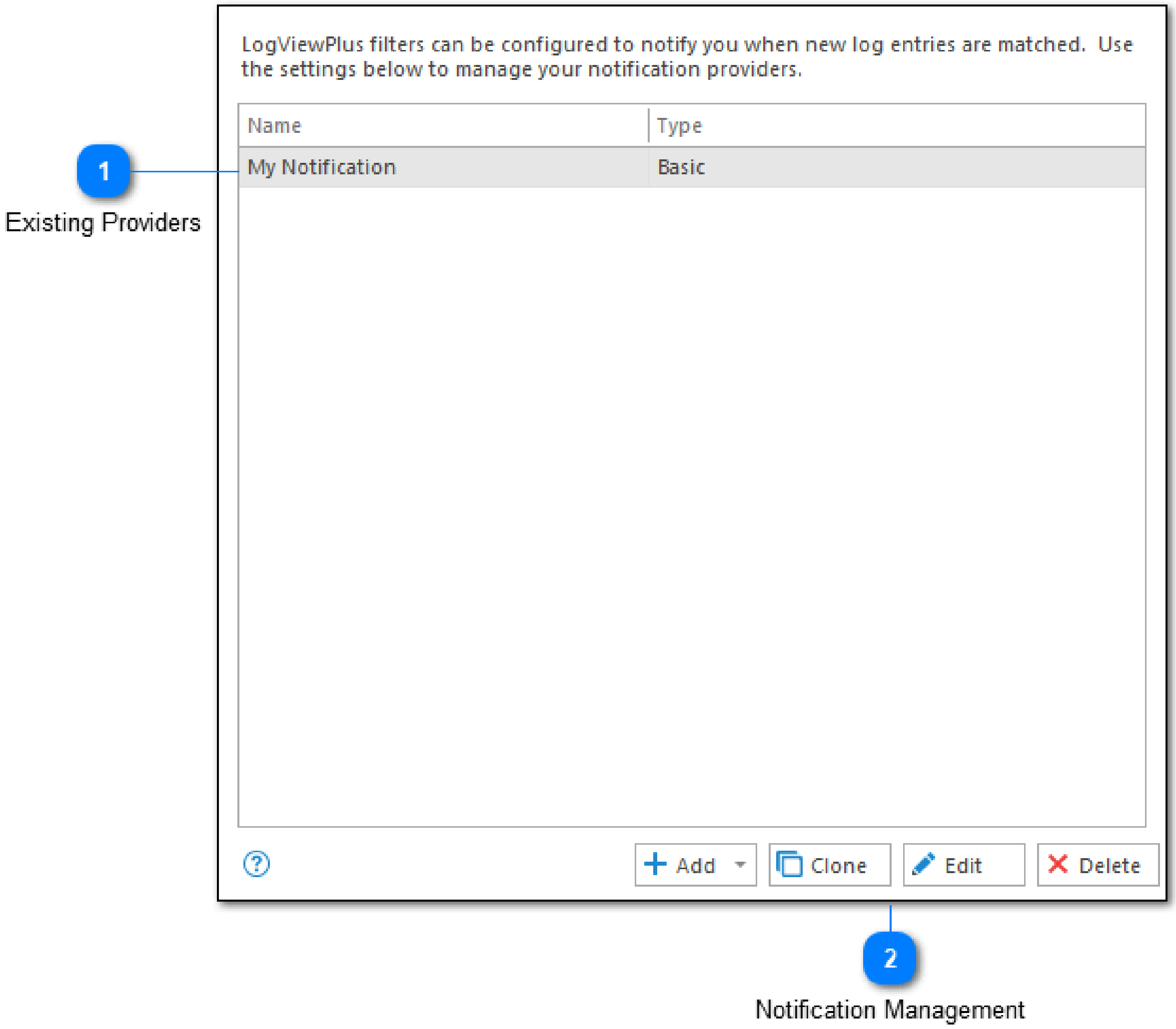
3 Target Time Zone



Convert timestamps to: Do not make time zone assumptions

This setting allows you to specify the display time zone for log entry timestamps. The displayed time zone can either be local or UTC. By default LogViewPlus does not modify the display time.

Notifications



LogViewPlus filters can be configured to notify you when new log entries are matched. Use the settings below to manage your notification providers.

Name	Type
My Notification	Basic

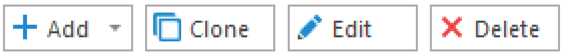
Notification settings allow you to add, edit and delete notification providers.

1 Existing Providers

Name	Type
My Notification	Basic

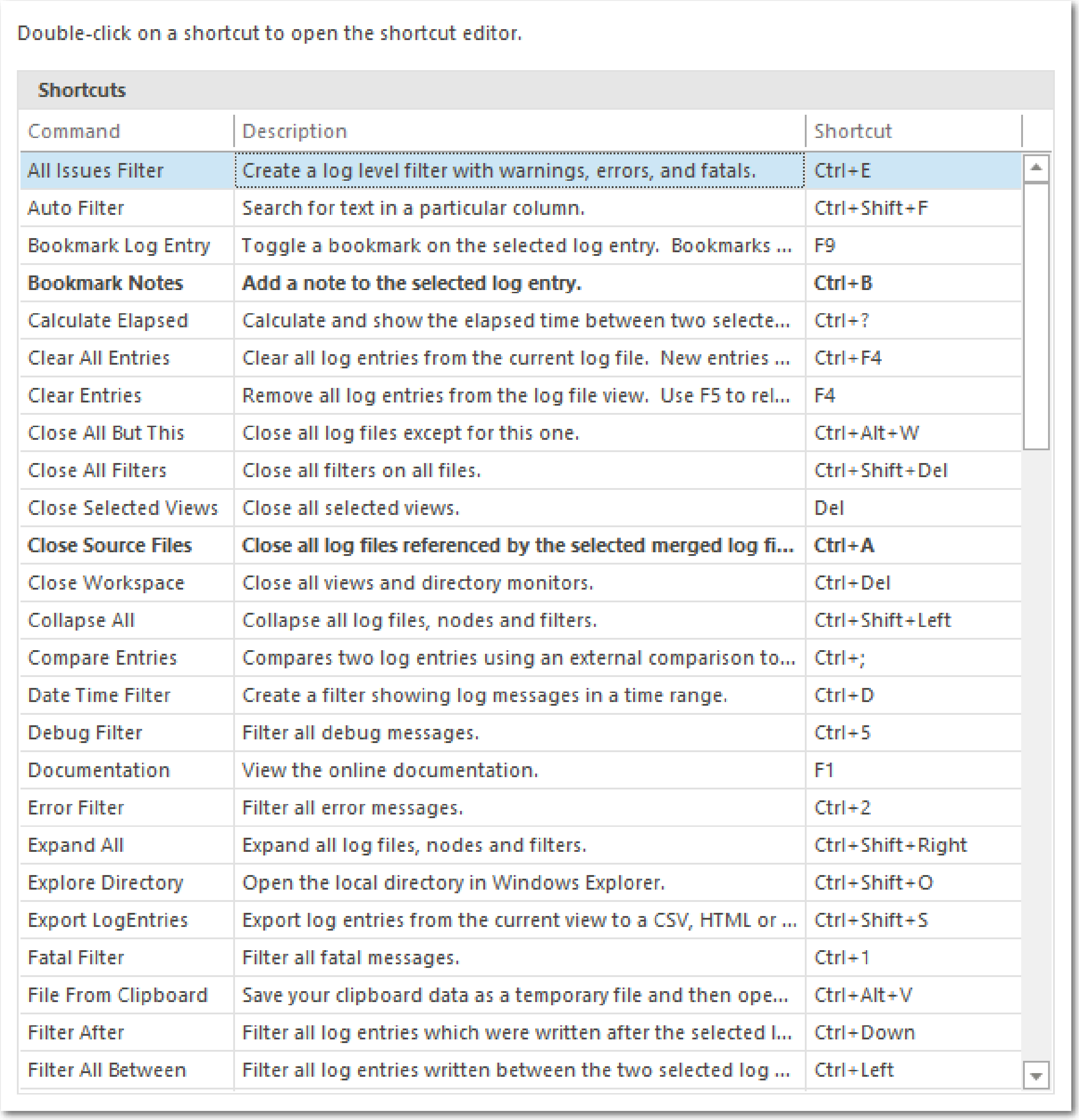
Existing providers are shown in the notification configuration grid. Select a provider in order to edit or delete the configuration.

2 Notification Management



The notification management commands are located at the bottom of the notification provider's configuration.   These commands allow you to add, clone, edit and delete notification providers.

Shortcuts



Double-click on a shortcut to open the shortcut editor.

Shortcuts

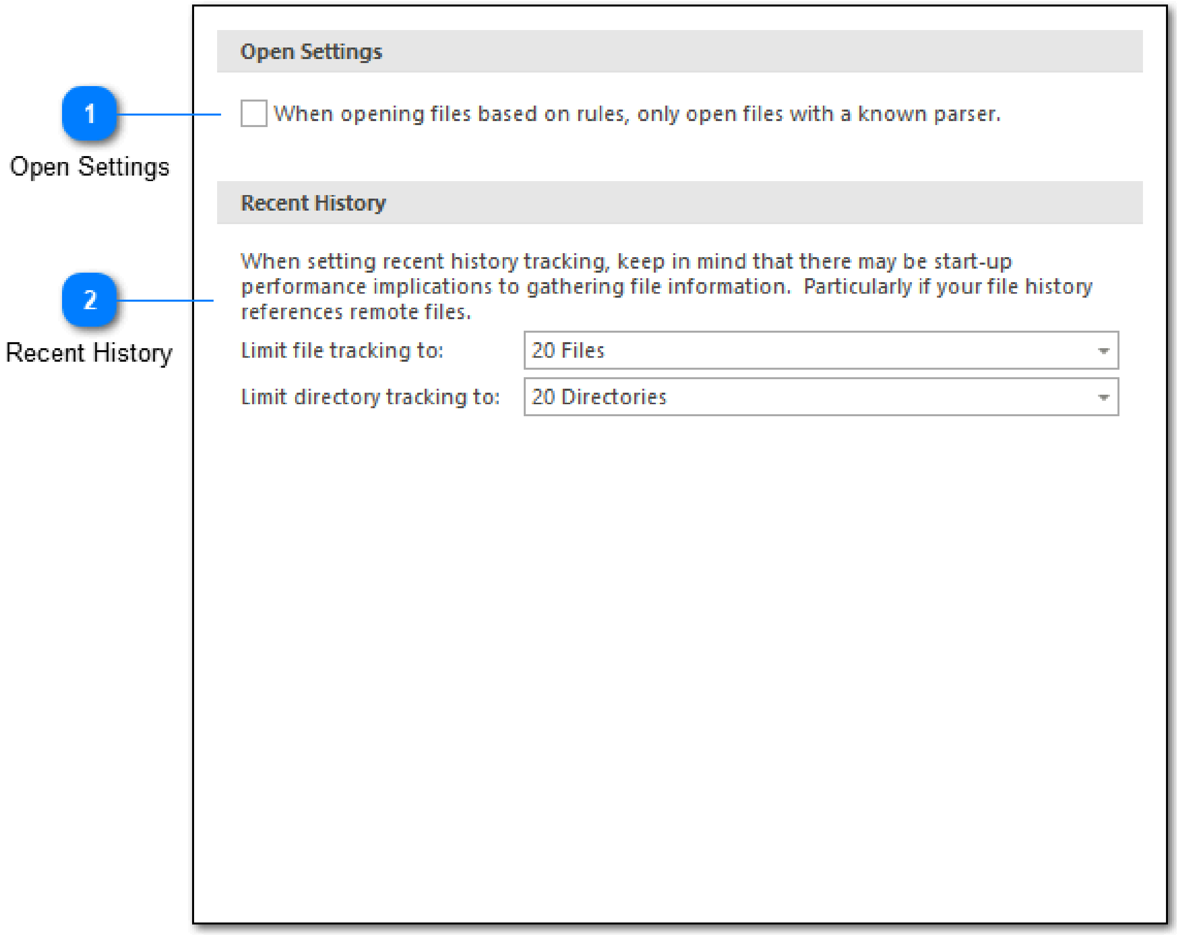
Command	Description	Shortcut
All Issues Filter	Create a log level filter with warnings, errors, and fatals.	Ctrl+E
Auto Filter	Search for text in a particular column.	Ctrl+Shift+F
Bookmark Log Entry	Toggle a bookmark on the selected log entry. Bookmarks ...	F9
Bookmark Notes	**Add a note to the selected log entry.**	**Ctrl+B**
Calculate Elapsed	Calculate and show the elapsed time between two selecte...	Ctrl+?
Clear All Entries	Clear all log entries from the current log file. New entries ...	Ctrl+F4
Clear Entries	Remove all log entries from the log file view. Use F5 to rel...	F4
Close All But This	Close all log files except for this one.	Ctrl+Alt+W
Close All Filters	Close all filters on all files.	Ctrl+Shift+Del
Close Selected Views	Close all selected views.	Del
Close Source Files	**Close all log files referenced by the selected merged log fi...**	**Ctrl+A**
Close Workspace	Close all views and directory monitors.	Ctrl+Del
Collapse All	Collapse all log files, nodes and filters.	Ctrl+Shift+Left
Compare Entries	Compares two log entries using an external comparison to...	Ctrl+;
Date Time Filter	Create a filter showing log messages in a time range.	Ctrl+D
Debug Filter	Filter all debug messages.	Ctrl+5
Documentation	View the online documentation.	F1
Error Filter	Filter all error messages.	Ctrl+2
Expand All	Expand all log files, nodes and filters.	Ctrl+Shift+Right
Explore Directory	Open the local directory in Windows Explorer.	Ctrl+Shift+O
Export LogEntries	Export log entries from the current view to a CSV, HTML or ...	Ctrl+Shift+S
Fatal Filter	Filter all fatal messages.	Ctrl+1
File From Clipboard	Save your clipboard data as a temporary file and then ope...	Ctrl+Alt+V
Filter After	Filter all log entries which were written after the selected l...	Ctrl+Down
Filter All Between	Filter all log entries written between the two selected log ...	Ctrl+Left

Shortcut settings allow you to override most application shortcuts. Double-click on one of the selected shortcuts to change it.

If an override for a default shortcut exists, it will be displayed in the shortcut grid using a bold font. Custom shortcuts can be deleted to revert to the original default shortcut. For the deletion to take effect, the application will need to be restarted.

The following shortcuts are available by default:

Open Settings



Open Settings

□ When opening files based on rules, only open files with a known parser.

Recent History

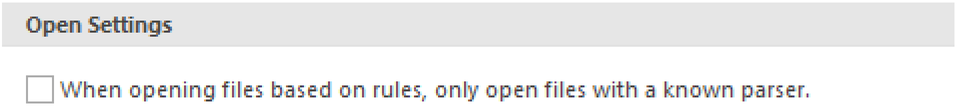
When setting recent history tracking, keep in mind that there may be start-up performance implications to gathering file information. Particularly if your file history references remote files.

Limit file tracking to: 20 Files

Limit directory tracking to: 20 Directories

The Open Settings view can be used to fine tune how you open files.

1 Open Settings

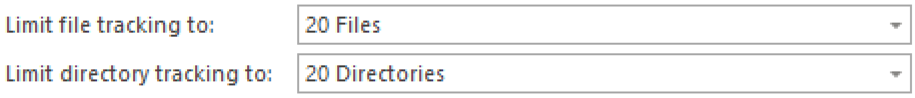


Open Settings

□ When opening files based on rules, only open files with a known parser.

Currently, there is only one open setting. This setting allows you to control what happens when an unknown file is identified by a rule based open command. For example, if you are opening a zip file or using a directory monitor, you can choose to ignore unknown files rather than attempting to open them.

2 Recent History



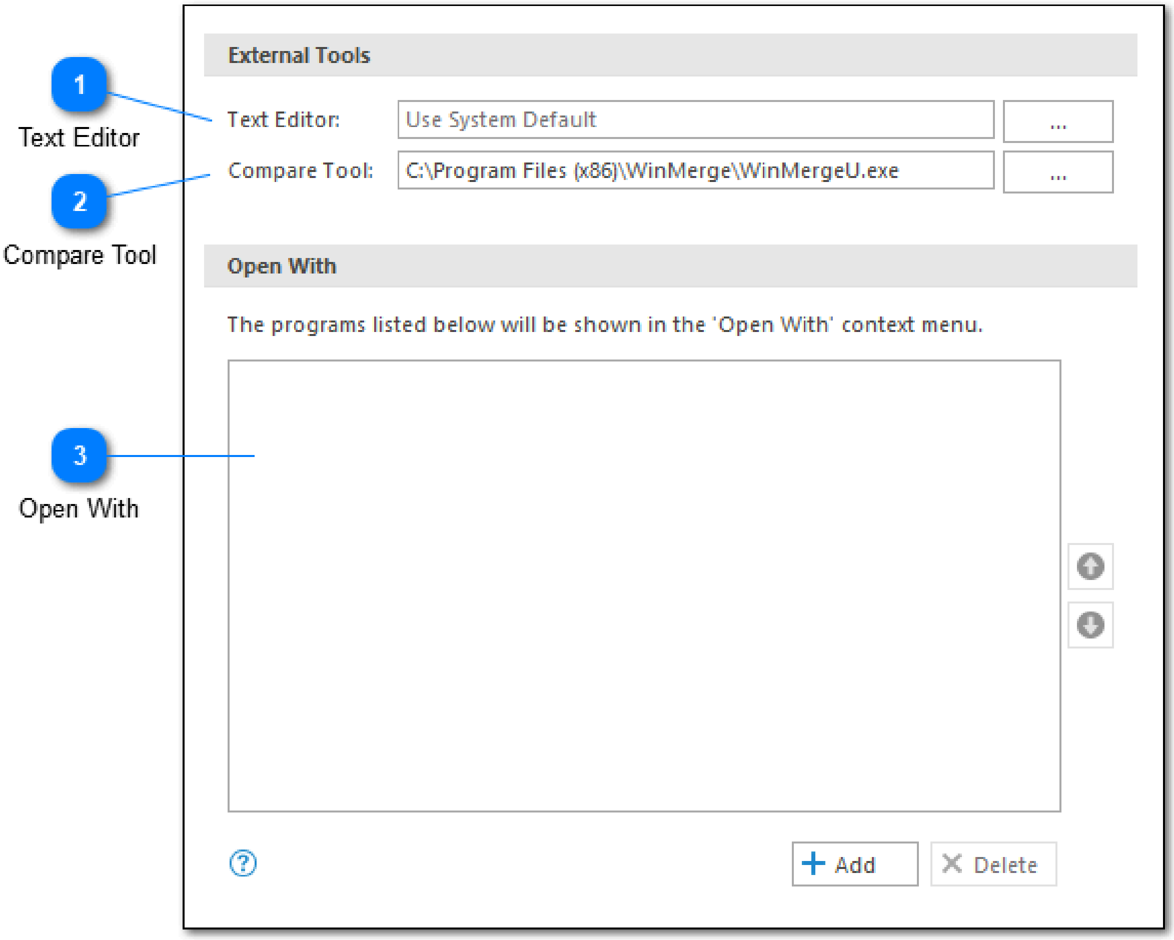
Limit file tracking to: 20 Files

Limit directory tracking to: 20 Directories

Recent history settings can be used to manage the number of items that LogViewPlus will track when managing your log file access history. Recent history items are managed in batches of 10 up to a maximum of 50 items. By default LogViewPlus will track the most recent 20 log files.

For more information please see the file system history documentation.

External Tools



Text Editor: Use System Default

Compare Tool: C:\Program Files (x86)\WinMerge\WinMergeU.exe

The programs listed below will be shown in the 'Open With' context menu.

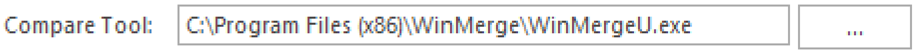
LogViewPlus attempts to make use of external tools where possible. Use the External Tools view to configure the default tools used.

1 Text Editor

Text Editor: Use System Default

There are several features available in LogViewPlus that make use of a text editor. If this setting is not configured, LogViewPlus will use the editor configured in Windows for opening *.txt files.

2 Compare Tool


Compare Tool: C:\Program Files (x86)\WinMerge\WinMergeU.exe

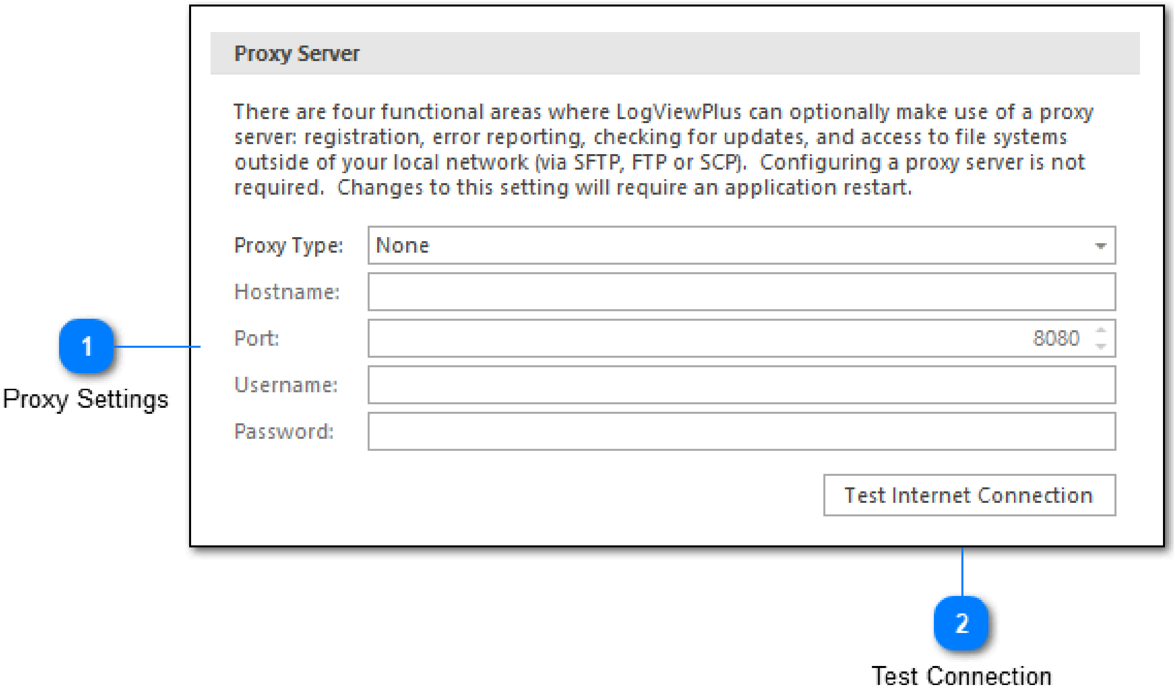
You can optionally configure LogViewPlus to point to a local compare tool (such as WinMerge). Doing so will allow you to compare two log entries by executing the "Compare Log Entries" command on the Log Entries menu.

The tool configured must support a command line with the signature "cmd.exe Arg1 Arg2" where cmd.exe is the configured process and arg1 and arg2 are the files to be compared.

3 Open With

The 'Open With' settings allow you to configure a list of applications which will be available in the LogViewPlus File System Context Menu.

Proxy Settings



Proxy Server

There are four functional areas where LogViewPlus can optionally make use of a proxy server: registration, error reporting, checking for updates, and access to file systems outside of your local network (via SFTP, FTP or SCP). Configuring a proxy server is not required. Changes to this setting will require an application restart.

Proxy Type: None

Hostname:

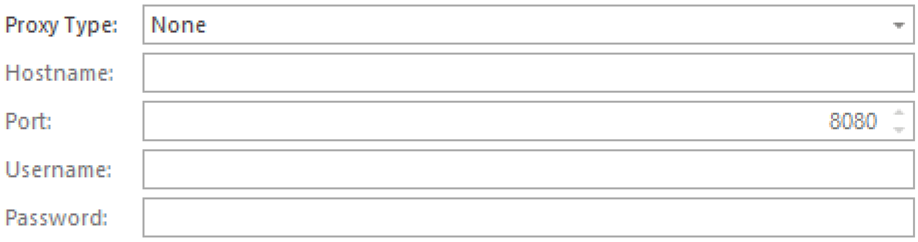
Port: 8080

Username:

Password:

There are four functional areas where LogViewPlus can optionally make use of a proxy server: registration, error reporting, checking for updates, and access to file systems outside of your local network (via SFTP, FTP or SCP). Configuring a proxy server is not required.

1 Proxy Settings



Proxy Type: None

Hostname:

Port: 8080

Username:

Password:

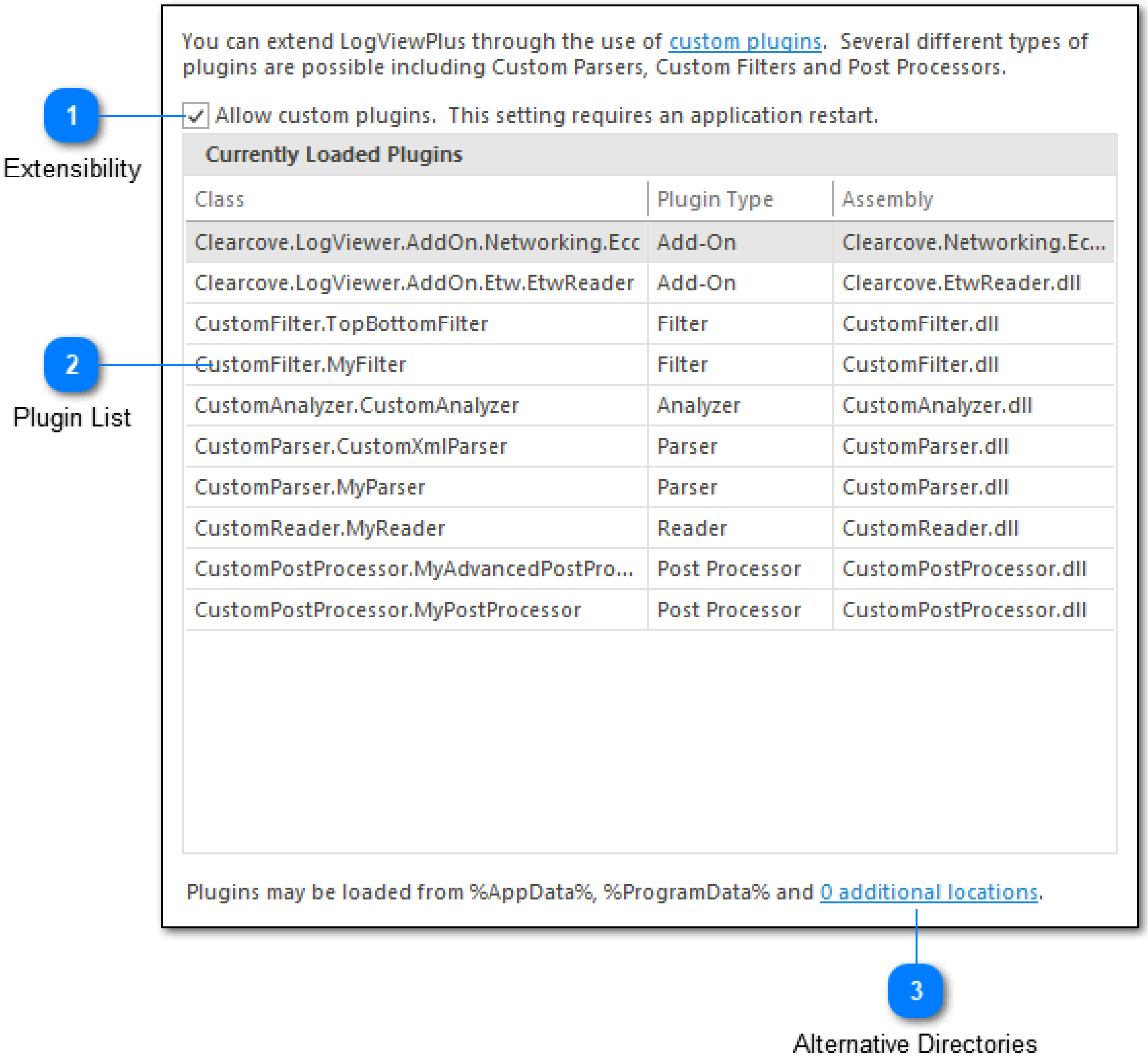
Use the available proxy settings to configure your proxy server. If you are unfamiliar with how to connect to your proxy server, please contact local your system administrator.

2 Test Connection

The test Internet connection command is used to verify that you can connect successfully to remote sites. If you have configured a proxy server, the test will attempt to use the configuration provided.

Note that this test may be executed even if no proxy server has been configured.

Plugins



You can extend LogViewPlus through the use of custom plugins. Several different types of plugins are possible including Custom Parsers, Custom Filters and Post Processors.

☑ Allow custom plugins. This setting requires an application restart.

Currently Loaded Plugins

Class	Plugin Type	Assembly
Clearcove.LogViewer.AddOn.Networking.Ecc	Add-On	Clearcove.Networking.Ec...
Clearcove.LogViewer.AddOn.Etw.EtwReader	Add-On	Clearcove.EtwReader.dll
CustomFilter.TopBottomFilter	Filter	CustomFilter.dll
CustomFilter.MyFilter	Filter	CustomFilter.dll
CustomAnalyzer.CustomAnalyzer	Analyzer	CustomAnalyzer.dll
CustomParser.CustomXmlParser	Parser	CustomParser.dll
CustomParser.MyParser	Parser	CustomParser.dll
CustomReader.MyReader	Reader	CustomReader.dll
CustomPostProcessor.MyAdvancedPostPro...	Post Processor	CustomPostProcessor.dll
CustomPostProcessor.MyPostProcessor	Post Processor	CustomPostProcessor.dll

Plugins may be loaded from %AppData%, %ProgramData% and 0 additional locations.

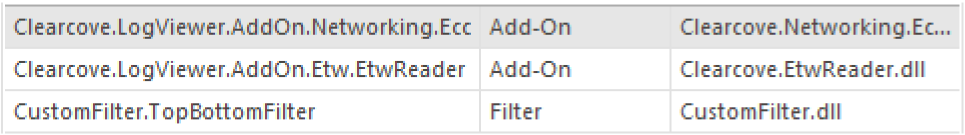
The plug-ins settings menu can be used to view which plug-ins are currently running in the application. This is particularly helpful when debugging problems loading custom built extensions.

1 Extensibility

☑ Allow custom plugins. This setting requires an application restart.

The extensibility settings allow you to specify whether custom log filters, parsers and post processors should be allowed by the application. Changing this settings will require an application restart. Please see the customization documentation for more information.

2 Plugin List



Clearcove.LogViewer.AddOn.Networking.Ecc	Add-On	Clearcove.Networking.Ec...
Clearcove.LogViewer.AddOn.Etw.EtwReader	Add-On	Clearcove.EtwReader.dll
CustomFilter.TopBottomFilter	Filter	CustomFilter.dll

The plug-ins list shows all custom plug-ins which are currently running in LogViewPlus. This list will only be visible if extensibility has been enabled since application startup.

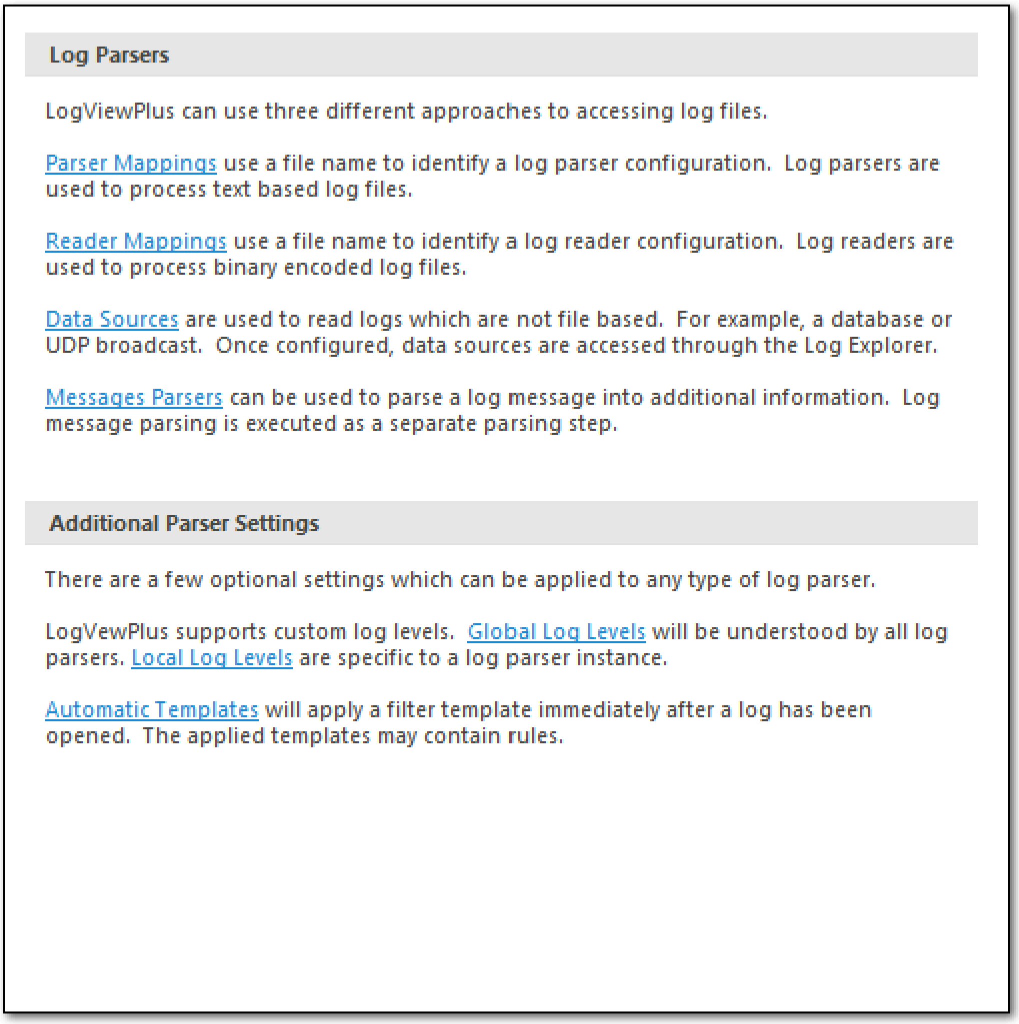
3 Alternative Directories

0 additional locations

By default, LogViewPlus will search for plugins in %AppData%\LogViewPlus\Plugins and %ProgramData%\LogViewPlus\Plugins. If you would like LogViewPlus to search additional directories or network shares, you can add them here.

This feature is useful as it can make it easier to manage plugin deployment. However, this feature is not recommended as it may bypass some of the Windows directory security controls. It is important to manage the risk that the target plugin directory could be accessed by a malicious user.

Log Parsers



Log Parsers

LogViewPlus can use three different approaches to accessing log files.

Parser Mappings use a file name to identify a log parser configuration. Log parsers are used to process text based log files.

Reader Mappings use a file name to identify a log reader configuration. Log readers are used to process binary encoded log files.

Data Sources are used to read logs which are not file based. For example, a database or UDP broadcast. Once configured, data sources are accessed through the Log Explorer.

Messages Parsers can be used to parse a log message into additional information. Log message parsing is executed as a separate parsing step.

Additional Parser Settings

There are a few optional settings which can be applied to any type of log parser.

LogVewPlus supports custom log levels. Global Log Levels will be understood by all log parsers. Local Log Levels are specific to a log parser instance.

Automatic Templates will apply a filter template immediately after a log has been opened. The applied templates may contain rules.

LogViewPlus supports three different types of log parser:

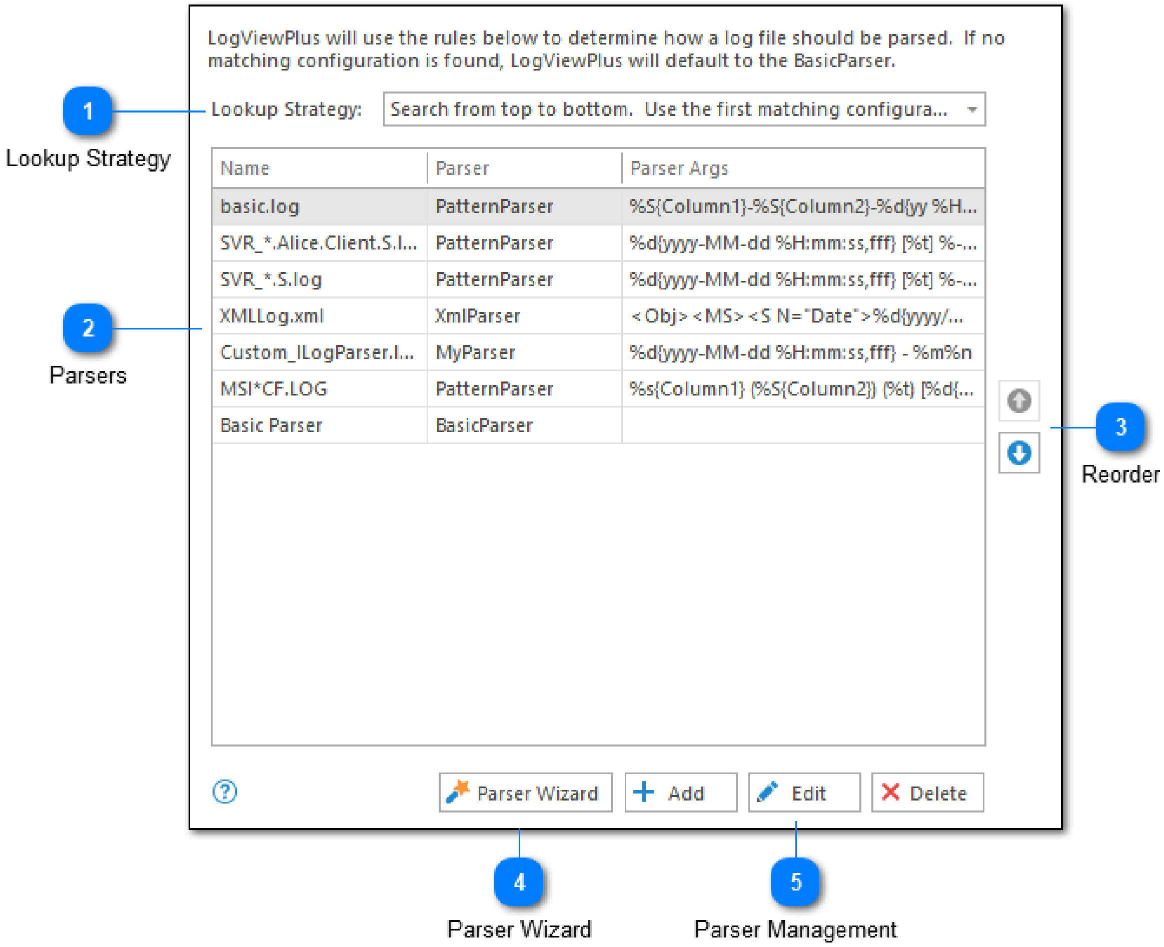
1. Parsers - are used process text based log files.

2. Readers - are used to process binary log files.

3. Data Sources - are used to access log entries which are not file based. Data sources are discussed separately in the next chapter.

All parser types can support additional settings including Message Parsers, Local Log Levels and Automatic Templates.

Parser Mappings



LogViewPlus will use the rules below to determine how a log file should be parsed. If no matching configuration is found, LogViewPlus will default to the BasicParser.

Lookup Strategy: Search from top to bottom. Use the first matching configura...

Name	Parser	Parser Args
basic.log	PatternParser	%S{Column1}-%S{Column2}-%d{yy %H...
SVR_*.Alice.Client.S.l...	PatternParser	%d{yyyy-MM-dd %H:mm:ss,fff} [%t] %-...
SVR_*.S.log	PatternParser	%d{yyyy-MM-dd %H:mm:ss,fff} [%t] %-...
XMLLog.xml	XmlParser	<Obj><MS><S N="Date">%d{yyyy/...
Custom_ILogParser.l...	MyParser	%d{yyyy-MM-dd %H:mm:ss,fff} - %m%n
MSI*CF.LOG	PatternParser	%s{Column1} (%S{Column2}) (%t) [%d{...
Basic Parser	BasicParser	

The 'log parser mappings' setting configuration is used to determine how a given log file will be processed. The rules for determining how a log file is processed are keyed off of the log file name. LogViewPlus will try to match the log filename using the filename pattern according to the Lookup Strategy selected.

You can find out more about the Log Parsers available in LogViewPlus.

1 Lookup Strategy

Lookup Strategy: Search from top to bottom. Use the first matching configura...

The Lookup Strategy is used to determine the how the list of known file configurations should be searched. Two types of algorithms are currently supported.

First Match - LogViewPlus will try to match the log file name using the first filename pattern. If the first file name pattern doesn't match, LogViewPlus will move its second file name pattern and so on until a match is found. In the event that no match is found, LogViewPlus will parse the file using the basic parser.

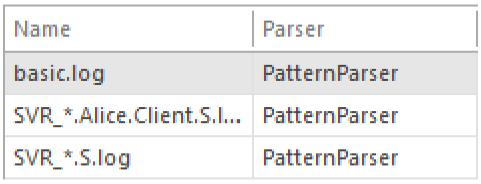
Heuristics - Heuristics work by finding all matching patterns for a given log file name. The target file will then be scanned using all matching patterns. The final pattern will be selected based on the criteria below (listed in order of importance).

1. The number of log entries parsed.
2. The number of arguments in the pattern. More detail is better.
3. The configuration position in the list.

Heuristics processing is slightly slower than First Match and it may be difficult to determine 'why' a certain parser configuration is chosen. For these reasons, the First Match algorithm is recommended.

It is important to note that the parser chosen may be used for tasks beyond parsing. For example, parser configurations may be mapped to Automatic Templates.

2 Parsers

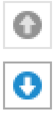


Name	Parser
basic.log	PatternParser
SVR_*.Alice.Client.S.l...	PatternParser
SVR_*.S.log	PatternParser

The parsers grid shows the currently configured parsers. This grid is read-only.

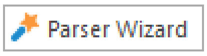
The 'Name' column will display the file name pattern for the parser configuration if a reference name has not been provided.

3 Reorder



You can use the ordering commands on the far right side of the log parser mappings configuration to specify the order in which file name patterns are processed.

4 Parser Wizard

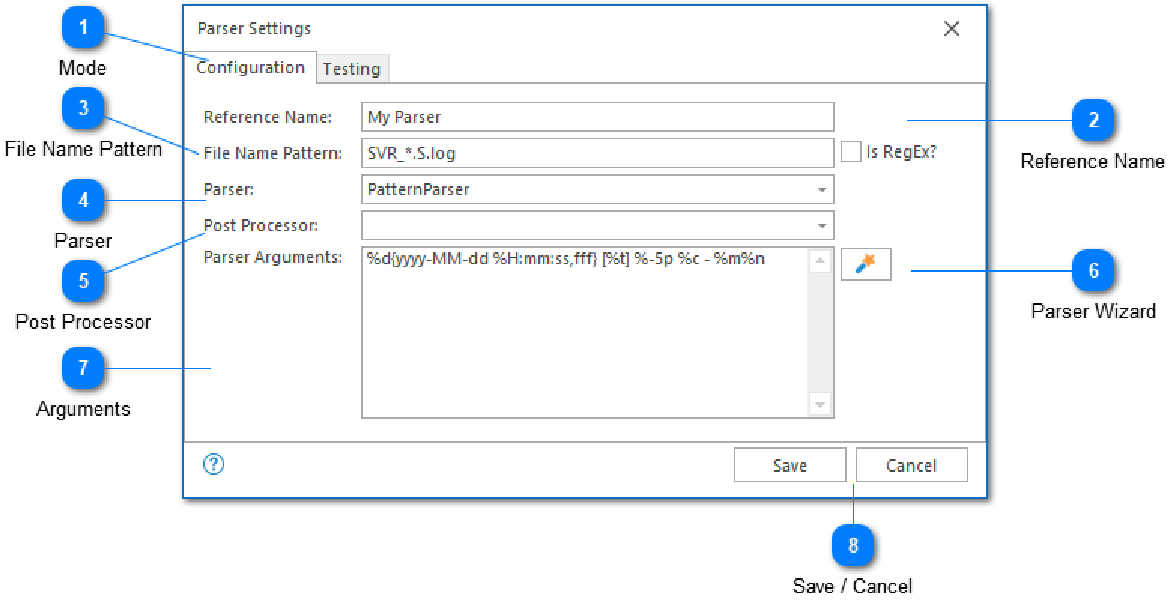


The Parser Wizard can be used to guide you through the process of selecting and configuring a LogViewPlus parser. Please see the Parser Wizard documentation for more information.

5 Parser Management

The parser management commands located at the bottom of the log parser mapping configuration allow you to add, edit and delete log parser mappings.

Parser Settings



Reference Name: My Parser

File Name Pattern: SVR_*.S.log □ Is RegEx?

Parser: PatternParser

Post Processor:

Parser Arguments: %d{yyyy-MM-dd %H:mm:ss,fff} [%t] %-5p %c - %m%n

The parser settings dialog is used to create a new parser mapping. A parser mapping is a relationship between a log file name and instructions on how the log file should be parsed. Parsing instructions include setting the parser type and providing any arguments which may be required by the parser.

You can find out more about the Log Parsers available in LogViewPlus. It is also possible to create custom log parsers.

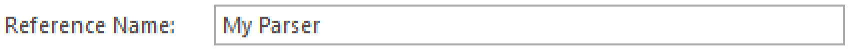
1 Mode

There are two basic functions of the parser settings dialog.

1. Creating the parser mapping.

2. Testing the mapping to confirm that it is working correctly. Parser testing is discussed in the next section.

2 Reference Name

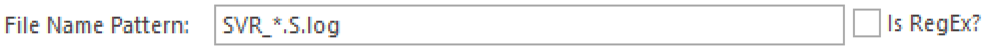


Reference Name: My Parser

The reference name is a user friendly description which is used to identify this parser configuration. Reference names are not required, but are highly recommended as they may be referenced from other parts of the application. For example, when configuring local log levels and automatic templates.

A reference name is required by the application, but if a value is not provided, the file name pattern will be used. Therefore, it is not necessary to explicitly set a reference name.

3 File Name Pattern



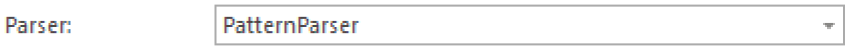
File Name Pattern: SVR_*.S.log □ Is RegEx?

Use the file name pattern text box to specify a pattern which can be used to match the filenames of your application log file. By default, the file name can contain a wildcard character - an asterisk *. This character will match one or more other characters. For example, say the name of your log file has a date suffix, something like MyApp_12.2.16.log. In this case, you could match the date part of the filename using the asterisk wildcard. Your pattern might be **MyApp_*.log**.

If you want to use the same parser with multiple log files, you can use the pipe character - | - to separate file names. For example, **SVR_*.log|*MyOtherApp***.

Usually, the asterisk wildcard is sufficient, but if you find you need more power to match your log file name, then you can use a regular expression instead. To do this, check the "Is Regex?" checkbox to let LogViewPlus know the search needs to be performed differently.

4 Parser



Parser: PatternParser

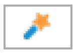
Select the parser you want to use with the given log files. Find out more about the Log Parsers available in LogViewPlus.

5 Post Processor

Post Processor:

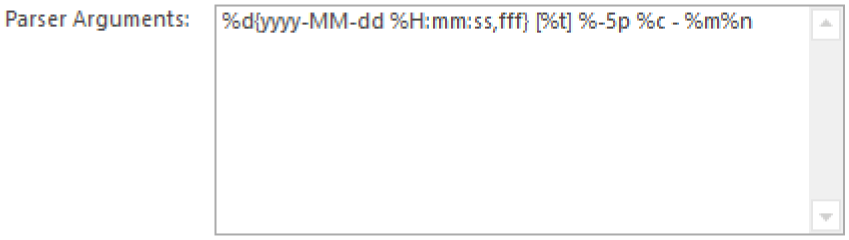
If you have configured LogViewPlus to allow custom plugins, you may see an option to set a post processor. Post processors are discussed later in Custom Extensions.

6 Parser Wizard



The Parser Wizard can be used to guide you through the process of configuring your log file parser.

7 Arguments

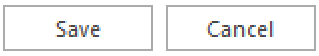

Parser Arguments: %d{yyyy-MM-dd %H:mm:ss,fff} [%t] %-5p %c - %m%n

You can use the parser arguments text box to configure the selected parser. Note that different parsers require different configuration. Please see the relevant Log Parser section for more information about how to configure your parser.

The parser arguments text box is optional depending on the type of parser selected. Some log parsers do not need configuration and therefore will not provide a parser arguments option.

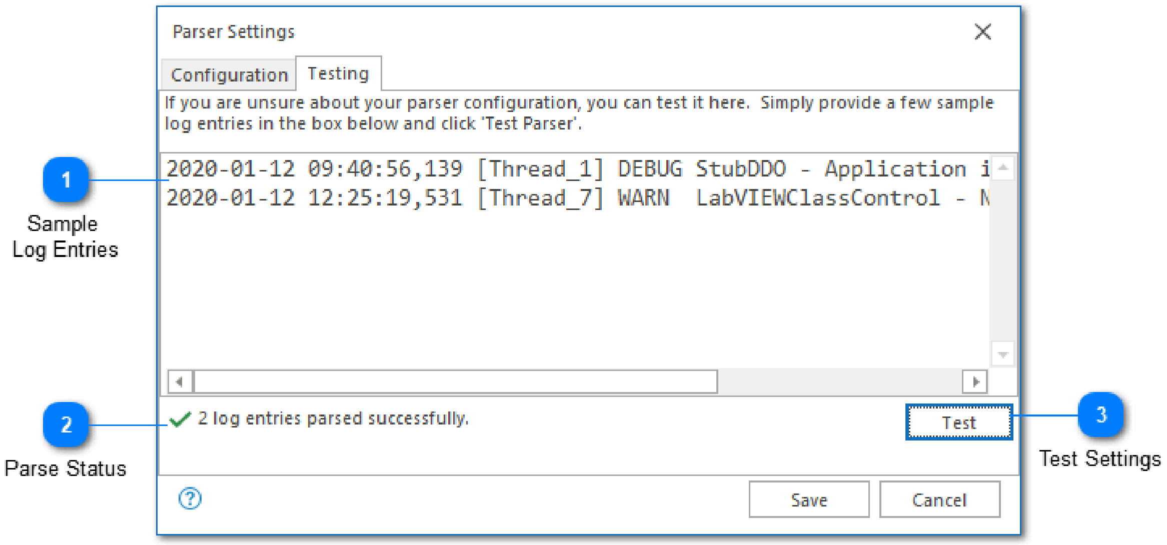
If you have written a custom parser and it needs the full path to the target log file, consider using the appropriate target argument template.

8 Save / Cancel



Once you are done configuring your parser you will need to save your settings. Alternatively, if you're not happy with your parser configuration, you can cancel it.

Parser Testing



If you are unsure about your parser configuration, you can test it here. Simply provide a few sample log entries in the box below and click 'Test Parser'.

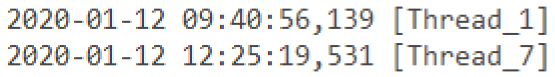
```
2020-01-12 09:40:56,139 [Thread_1] DEBUG StubDDO - Application i
2020-01-12 12:25:19,531 [Thread_7] WARN  LabVIEWClassControl - N
```

✓ 2 log entries parsed successfully.

Parser configuration can be tricky and it may take a few attempts to get it right. Using the testing tab of the parser settings dialog, you can input a few sample log entries and use the current unsaved parser configuration to try to parse those log entries. If parsing is successful, LogViewPlus will display a dialog containing the number of log entries parsed. In the example above, we expect LogViewPlus to tell us that two log entries have been successfully parsed.

Testing your log parser configuration in this way is generally easier than closing and reopening your target log file. Note that test data will be saved along with other parser configuration settings.

1 Sample Log Entries



```
2020-01-12 09:40:56,139 [Thread_1]
2020-01-12 12:25:19,531 [Thread_7]
```

Sample log entries can be placed in the large text area provided.

2 Parse Status

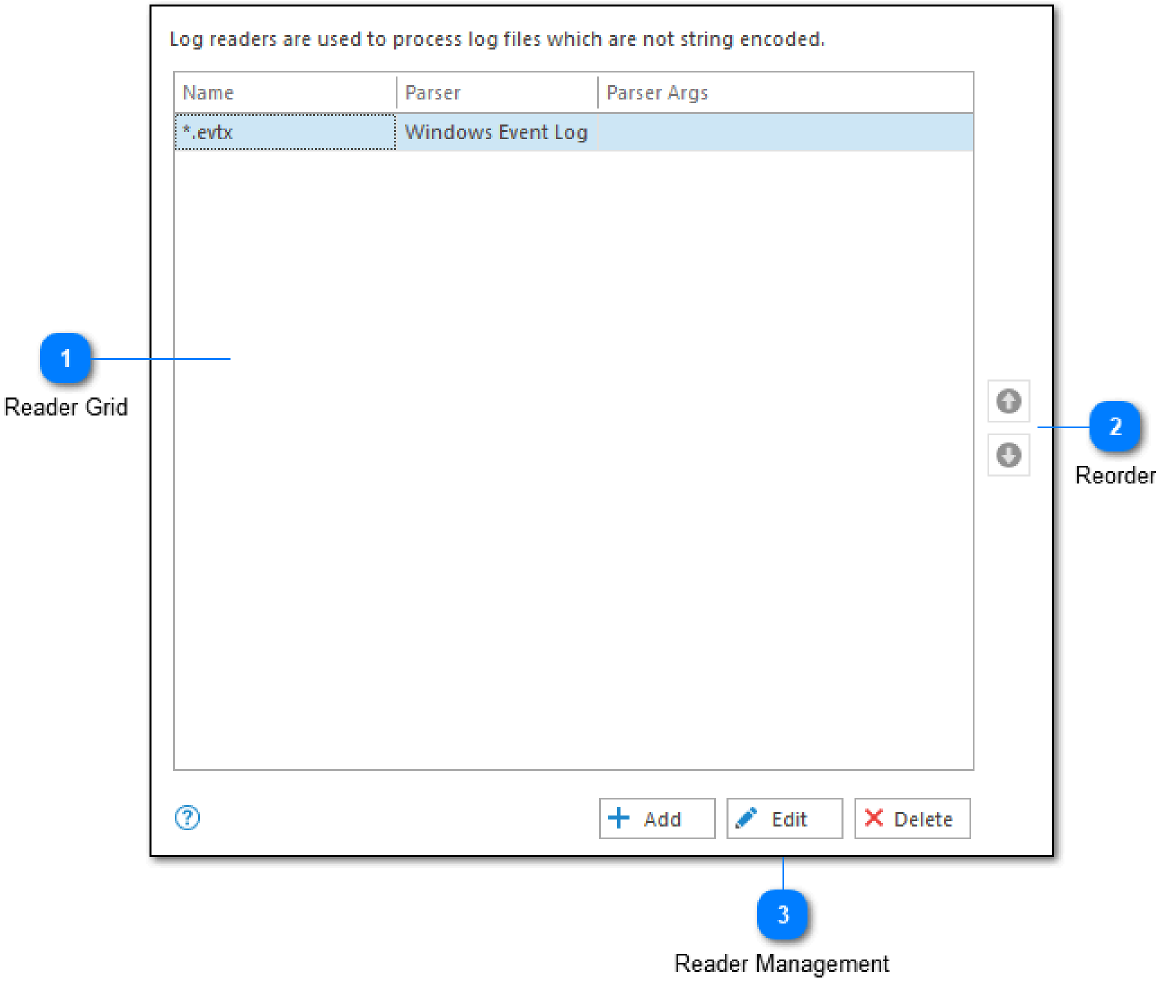
✓ 2 log entries parsed successfully.

The parse status shows the number of log entries that have been successfully parsed. If an error occurred during parsing, an error message will be displayed instead. This information will only be displayed after the sample log entries have been tested.

3 Test Settings

Once you have entered your sample log entries, you can test your parser using the 'Test' command.

Reader Mappings

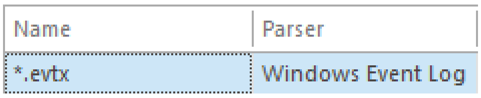


Log readers are used to process log files which are not string encoded.

Name	Parser	Parser Args
*.evtx	Windows Event Log	

The reader mappings settings dialog shows the list of currently configured log file readers. Log file readers can be used the process log files which are not stored as text. LogViewPlus only ships with one log file reader - the Windows Event Log reader. However, LogViewPlus can be extended through the creation of custom readers.

1 Reader Grid



Name	Parser
*.evtx	Windows Event Log

The reader grid shows the currently configured log readers. This grid is read-only.

The 'Name' column will display the file name pattern for the reader configuration if a reference name has not been provided.

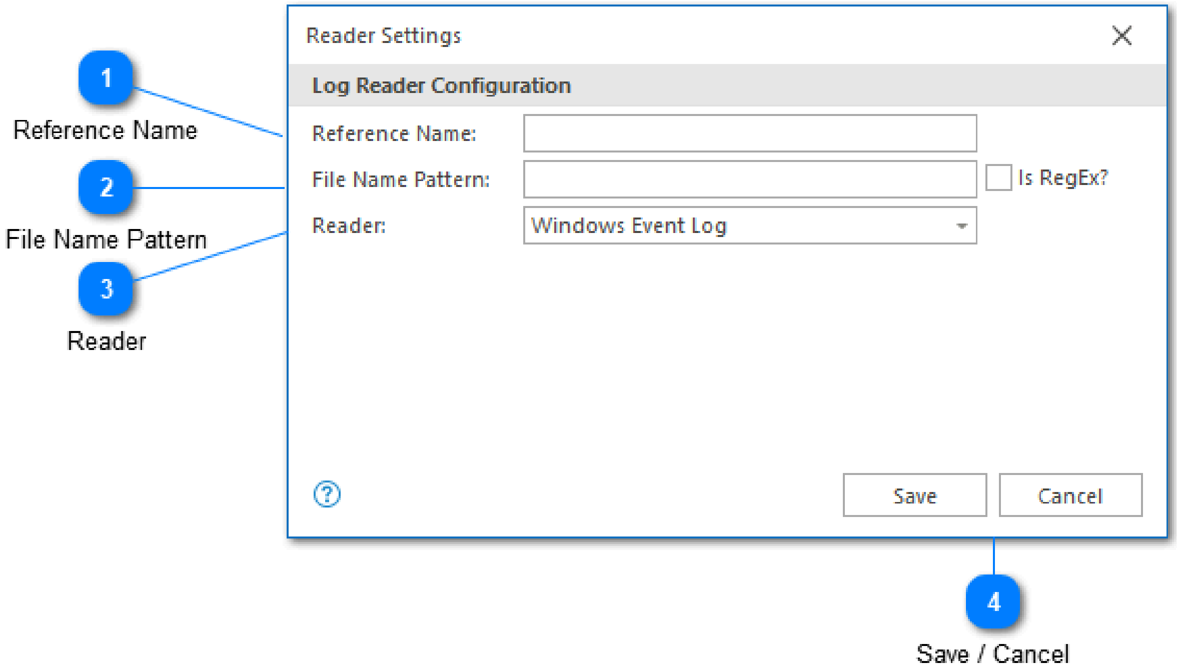
2 Reorder

You can use the ordering commands on the far right side of the log parser mappings configuration to specify the order in which file name patterns are processed.

3 Reader Management

The reader management commands located at the bottom of the log reader mapping configuration allow you to add, edit and delete log reader mappings.

Reader Settings



Log Reader Configuration

Reference Name:

File Name Pattern: □ Is RegEx?

Reader: Windows Event Log

Most log files are persisted as text. Binary log files can be read using a log file reader. By default, LogViewPlus includes a Windows Event Log reader, but you can create additional custom log file readers.

Configuring a log file reader is discussed below.

1 Reference Name

Reference Name:

A reference name can be set to more easily manage and access this configuration. Reference names should be unique. By default, the reference name will mirror the file name pattern. Reference names are also be used by the local log level and automatic template settings.

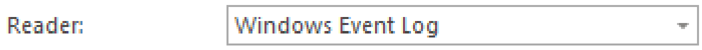
2 File Name Pattern

File Name Pattern: □ Is RegEx?

Use the file name pattern text box to specify a pattern which can be used to match the filenames of your application log file. By default, the file name can contain a wildcard character - an asterisk *. This character will match one or more other characters. For example, say the name of your log file has a date suffix, something like MyApp_12.2.16.log. In this case, you could match the date part of the filename using the asterisk wildcard. Your pattern might be MyApp_*.log.

Usually, the asterisk wildcard is sufficient, but if you find you need more power to match your log file name, then you can use a regular expression instead. To do this, check the "Is Regex?" checkbox to let LogViewPlus know the search needs to be performed differently.

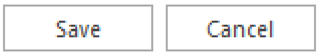
3 Reader



Reader: Windows Event Log

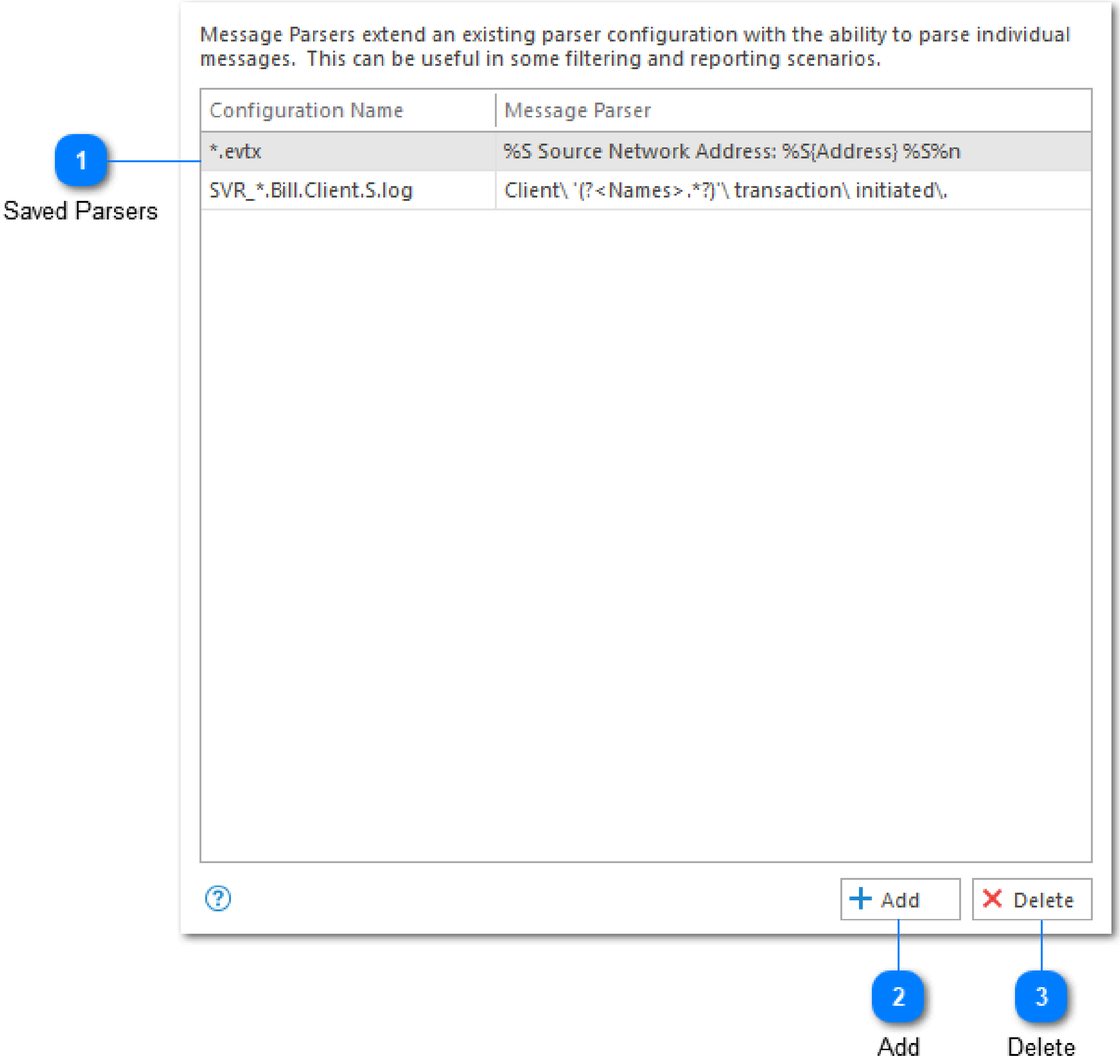
The reader you want to associate with the given filename pattern.

4 Save / Cancel



Once you are done configuring your reader you will need to save your settings. Alternatively, if you're not happy with your reader configuration, you can cancel it.

Message Parsers



Message Parsers extend an existing parser configuration with the ability to parse individual messages. This can be useful in some filtering and reporting scenarios.

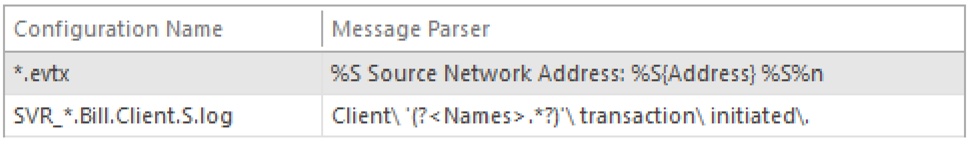
Configuration Name	Message Parser
*.evtx	%S Source Network Address: %S{Address} %S%n
SVR_*.Bill.Client.S.log	Client\ '(?<Names>.*?)'\ transaction\ initiated\.

The message parsers configuration helps you manage all message parsers which have been permanently associated with a log parser. Message parsers which have been associated with a log parser will be automatically applied every time the log parser configuration is used.

Message parsers can only be created by the Parse Message Filter.

1

Saved Parsers



Configuration Name	Message Parser
*.evtx	%S Source Network Address: %S{Address} %S%n
SVR_*.Bill.Client.S.log	Client\ '(?<Names>.*?)'\ transaction\ initiated\.

The safety parsers grid shows all message parsers which are currently associated with a log parser configuration. These message parsers will be applied automatically whenever the log parser configuration is used.

2

Add

The Add command will display a list of current message parsers which are not yet associated with a log parser configuration. Selecting and saving one of these message parsers will permanently associate the message parser with the target log file configuration.

Message parsers can only be created through the Parse Message Filter. They cannot be created with the Add command.

The Parse Message Filter has a 'Always Apply' option which allows you to automatically associate the new message parser with the target log file's parser configuration. This option is selected by default. Therefore, LogViewPlus defaults to adding message parsers to the target log file configuration. This may appear to make the Add command redundant.

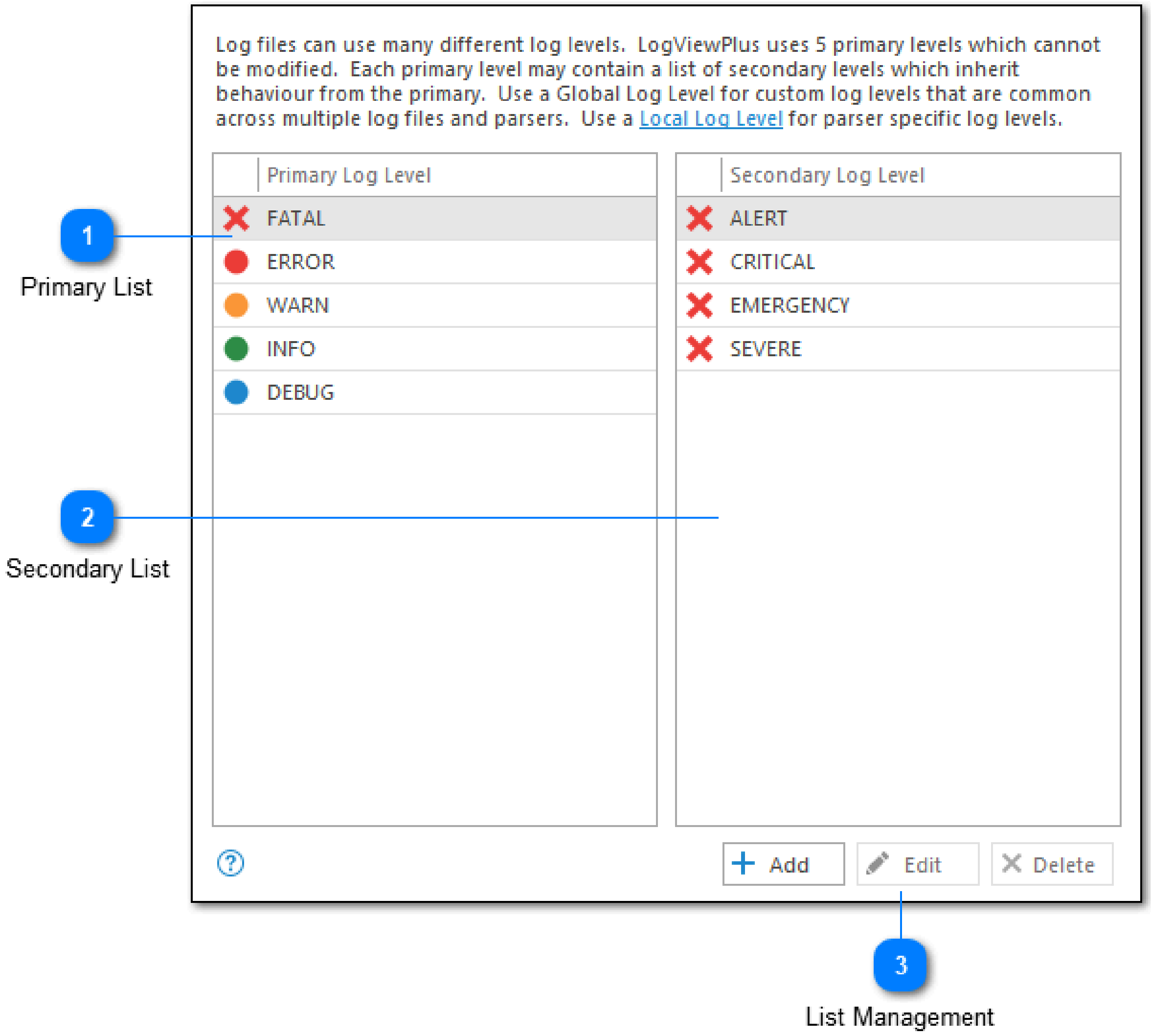
However, if you choose to ignore the default behavior by deselecting the 'Always Apply' option, you will create a message parser which will not be saved with the target log file configuration. The Add command is used to add only these known but not yet saved message parsers.

3

Delete

Removes the association between the selected message parser and the log parser configuration. The selected message parser will no longer be applied automatically when the log parser is used.

Global Log Levels



Log files can use many different log levels. LogViewPlus uses 5 primary levels which cannot be modified. Each primary level may contain a list of secondary levels which inherit behaviour from the primary. Use a Global Log Level for custom log levels that are common across multiple log files and parsers. Use a Local Log Level for parser specific log levels.

	Primary Log Level
✗	FATAL
●	ERROR
●	WARN
●	INFO
●	DEBUG

	Secondary Log Level
✗	ALERT
✗	CRITICAL
✗	EMERGENCY
✗	SEVERE

Log files can use many different logging levels. Some of these log levels like 'FINE' and 'ALERT' may be rarely used. In order to simplify categorization, LogViewPlus uses 5 primary levels which cannot be modified. Each primary level may contain a list of secondary levels which will inherit behavior (such as color coding) from the parent. By default, LogViewPlus supports the following log level hierarchy.

Primary	Secondary

Fatal	Alert Critical Emergency Severe
Error	
Warn	Notice
Info	
Debug	Trace Verbose Fine Finer Finest

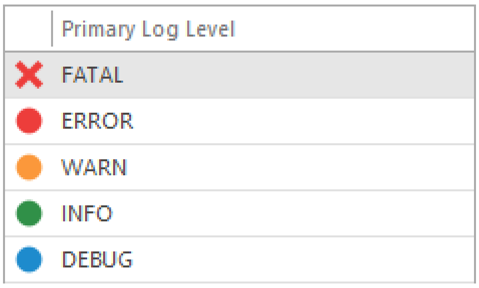
Configuring your log levels globally allows for centralized settings and easier configuration management. However, this approach presents a problem. Imagine the secondary log level "3". Some systems might see "3" as an Error while others see it as Debug. How can we configure LogViewPlus to interpret log level "3" when its meaning can change between systems? In LogViewPlus, this is achieved by configuring parser specific Local Log Levels. Local log levels take precedence over global log levels.

Once your log levels have been configured, you can control filter granularity using the 'Filter By' option in the 'Log Level Filter' dialog.

You can use the Global Log Level configuration settings described here to specify default log levels that will be applied when no local log levels are detected. Global log levels are also available to you in the log level filter dialog.

Changes made to global log levels will require a log file refresh.

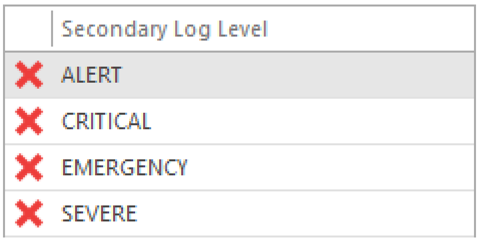
1 Primary List



	Primary Log Level
✗	FATAL
●	ERROR
●	WARN
●	INFO
●	DEBUG

The list of primary log levels. This list cannot be modified.

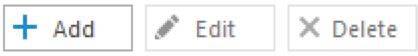
2 Secondary List



	Secondary Log Level
✗	ALERT
✗	CRITICAL
✗	EMERGENCY
✗	SEVERE

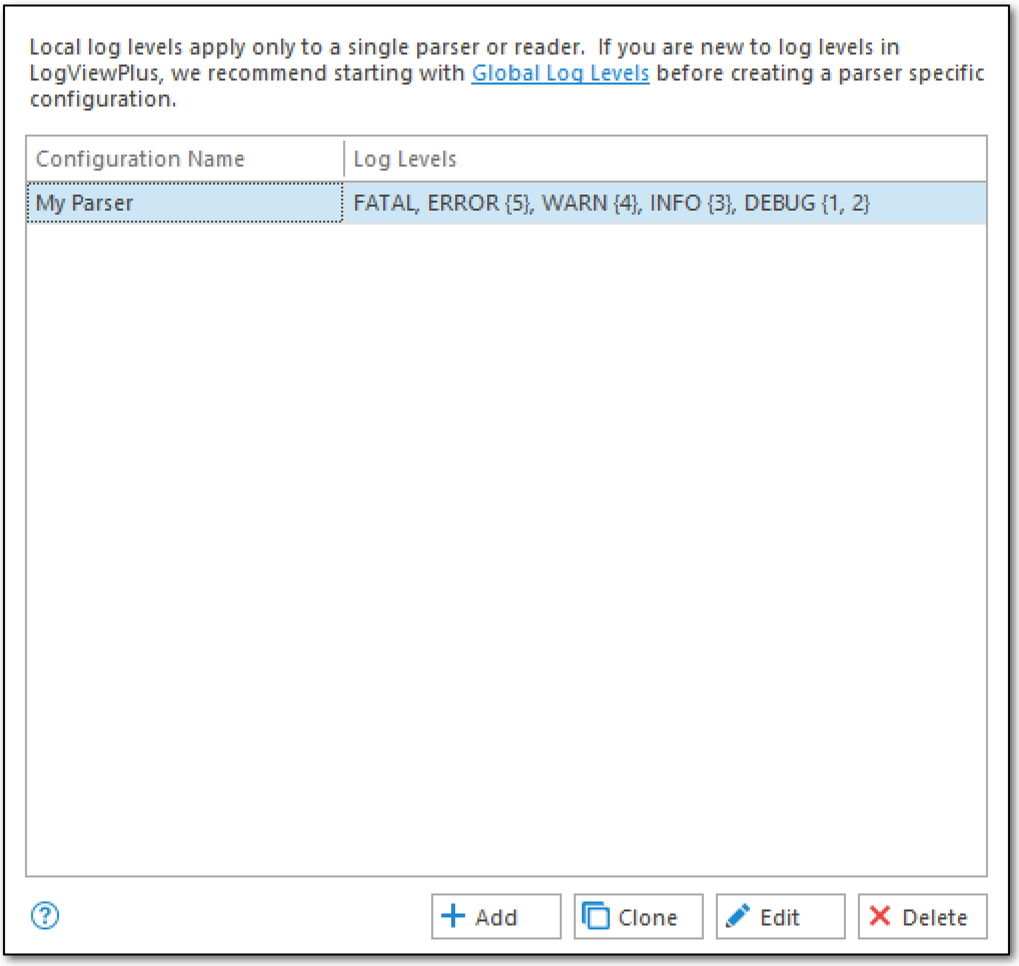
The list of secondary log levels. The contents of this list may change depending on your primary log level selection. You can add new secondary log levels by clicking the 'Add' command located below this list box. Custom secondary log levels can be modified and deleted as well. Please note that the default secondary log levels cannot be modified.

3 List Management



The list management commands used to modify secondary log levels.

Local Log Levels



Local log levels apply only to a single parser or reader. If you are new to log levels in LogViewPlus, we recommend starting with Global Log Levels before creating a parser specific configuration.

Configuration Name	Log Levels
My Parser	FATAL, ERROR {5}, WARN {4}, INFO {3}, DEBUG {1, 2}

Local log level configuration lets you to specify custom log levels for a given parser or reader. This gives you a high degree of control over how log levels should be resolved.

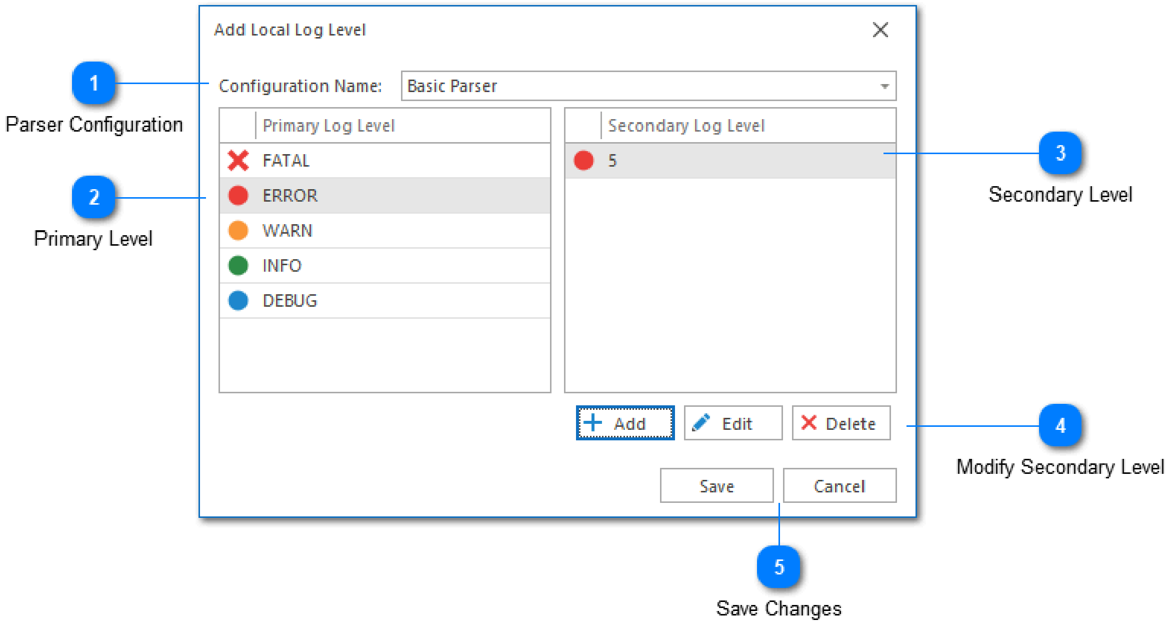
For example, imagine the secondary log level "3". Some systems might see "3" as an Error while others see it as Debug. You can use a local log level to ensure the correct meaning based on the parser type used for the file. Local log levels take precedence over global log levels.

Local log levels are specific to a named parser configuration. If your target parser configuration does not have a reference name defined, it will not be available for local log level configuration. Application settings must be saved after changing or adding a parser configuration reference name.

You can add or modify a Local Log Level by using the Local Level Mapping dialog.

Changes made to local log levels will require a log file refresh.

Local Level Mapping



Add Local Log Level

Configuration Name: Basic Parser

Primary Log Level
FATAL
ERROR
WARN
INFO
DEBUG

Secondary Log Level
5

The log level mapping dialog allows you to add or modify a Local Log Level setting.

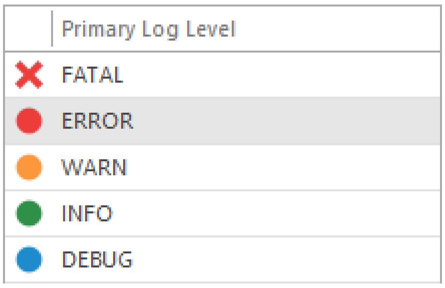
Creating a local log level is similar to creating a Global Log Level. We recommend experimenting with Global Log Levels first to understand concepts. Local log levels are the same, except that the levels will apply only to the given parser configuration. The parser configuration must be named.

1 Parser Configuration

Configuration Name: Basic Parser

The parser configuration associated with this local log level mapping. Only parser configurations with a reference name will be shown here. This allows you to edit the parser configuration in the future without needing to update the local log level mapping (assuming the reference name does not change).

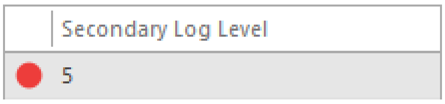
2 Primary Level



Primary Log Level
✗ FATAL
● ERROR
● WARN
● INFO
● DEBUG

The five primary log levels. See Global Log Levels for more information. Primary log levels cannot be modified.

3 Secondary Level



Secondary Log Level
● 5

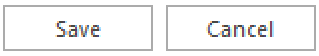
Secondary log levels are used to identify log level and associate it with a primary. The contents of this list may change depending on your primary log level selection. You can add new secondary log levels by clicking the 'Add' command located below this list box.

When creating a local log level mapping, no secondary values will be assumed. All secondary values must be entered manually.

4 Modify Secondary Level

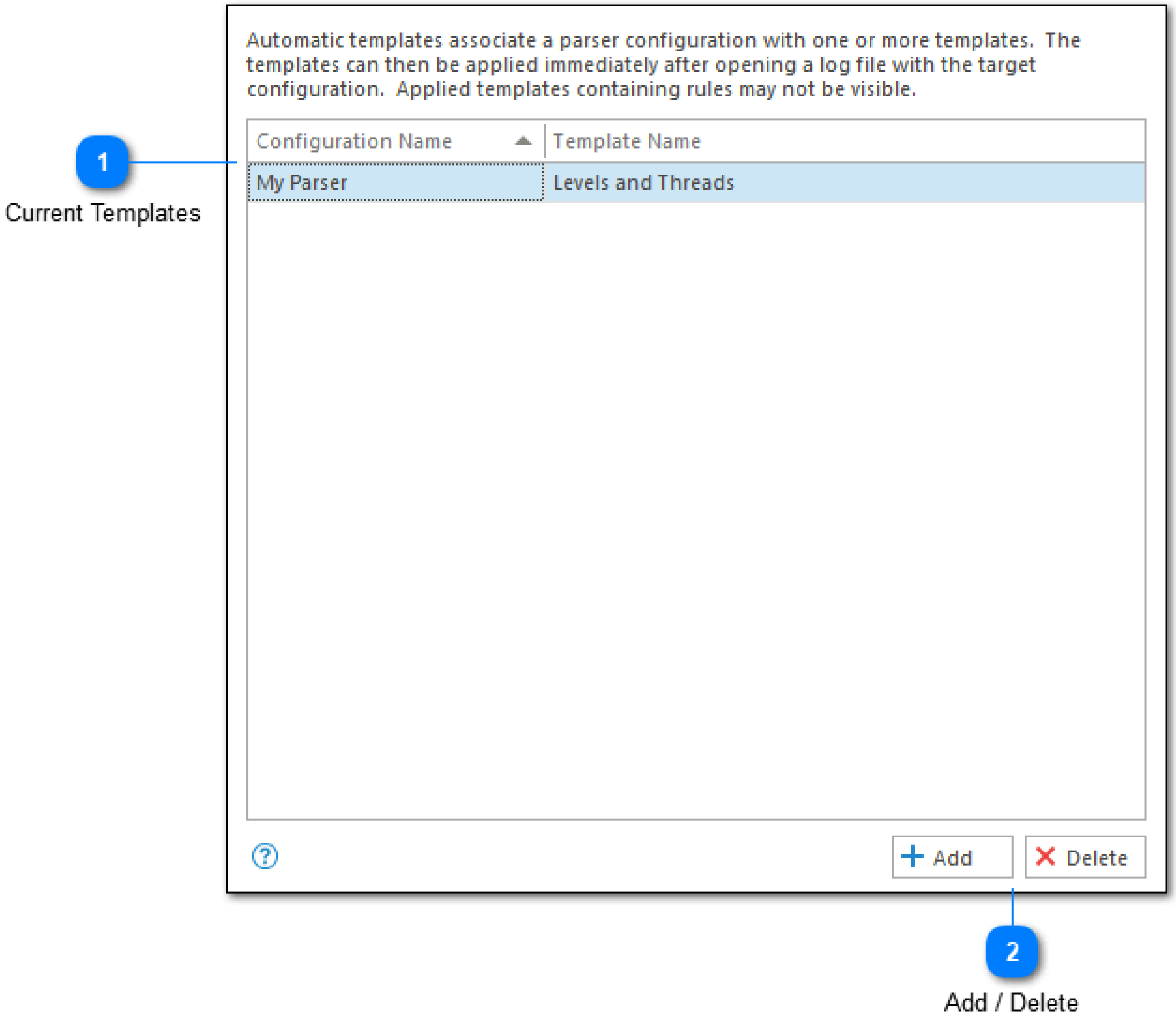
Use the commands located at the bottom of the secondary level list to create, edit or delete a log level.

5 Save Changes



Once you have finished modifying the log level mapping, you will need to save your changes. If you are modifying local log levels from the application settings dialog, you will need to save changes to that dialog as well. Finally, your log files may need to be refreshed to detect the changes.

Automatic Templates



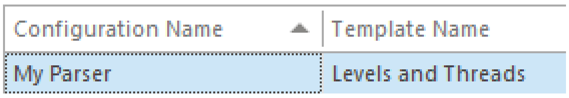
Automatic templates associate a parser configuration with one or more templates. The templates can then be applied immediately after opening a log file with the target configuration. Applied templates containing rules may not be visible.

Configuration Name	Template Name
My Parser	Levels and Threads

Automatic templates can be configured to apply a preconfigured template anytime a certain Parser, Reader, or Data Source configuration is used. This can be useful when you always want to apply a set of filters to a known configuration. For example, LogViewPlus uses automatic templates internally when associating Rules with parser configurations.

Automatic templates are specific to a named parser configuration. If your target parser configuration does not have a reference name defined, it will not be available for Automatic Template configuration. Application settings must be saved after changing or adding a parser configuration reference name.

1 Current Templates

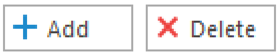


Configuration Name	Template Name
My Parser	Levels and Threads

The grid view shows all known template configurations. The mapping used is simply a named template to a named parser configuration. Only pre-saved templates will be available when creating the mapping. Note that LogViewPlus may create an automatic template behind the scenes if you have associated a Rule with a parser configuration.

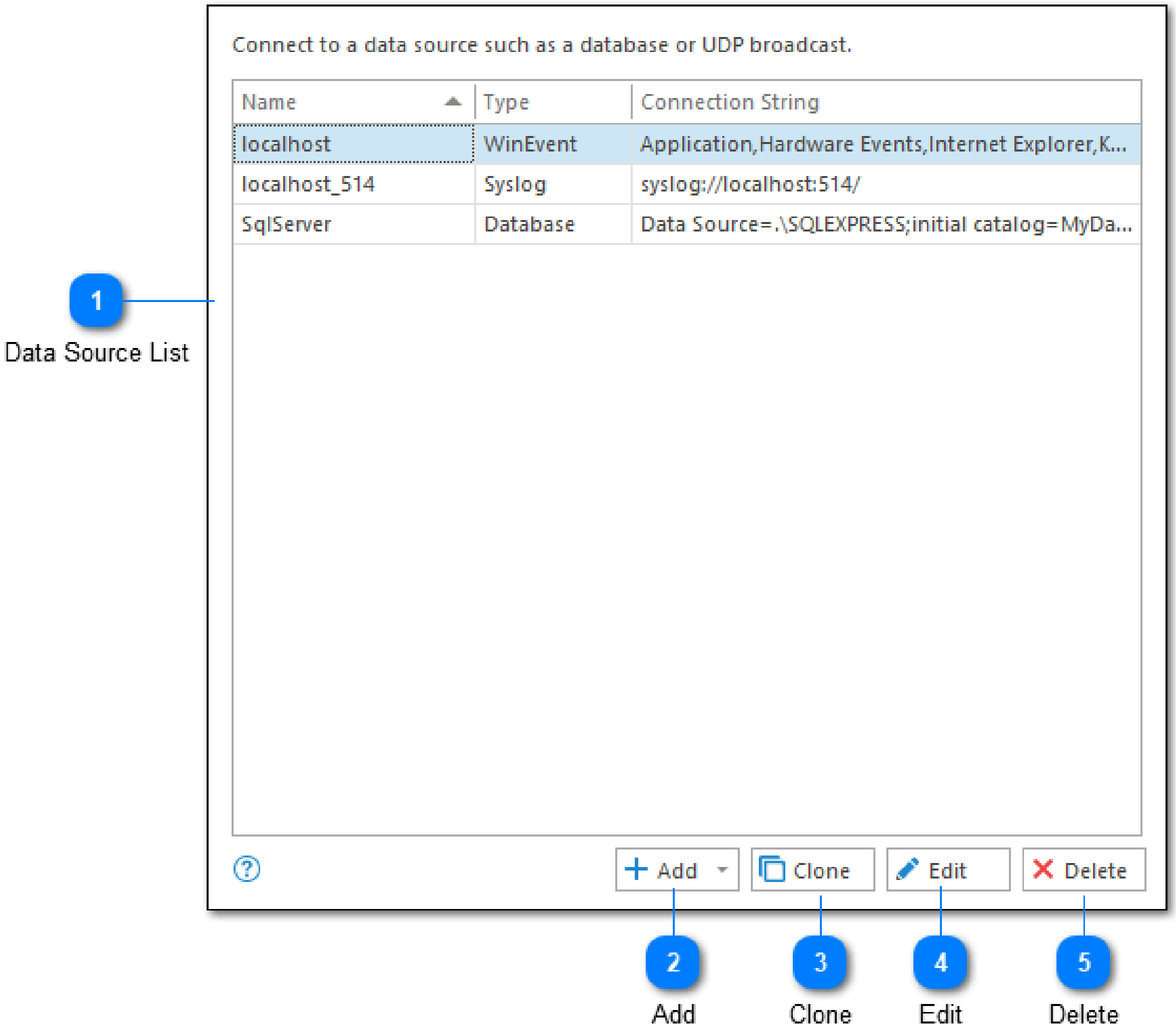
Automatic templates are always stored as copies of the original template. Once added, the original can be removed. Any changes to the template in LogViewPlus will not be reflected in the automatic template. If the changes are required, you will need to recreate the automatic template.

2 Add / Delete



The Add and Delete commands are used to manage the list of current templates.

Data Sources



Connect to a data source such as a database or UDP broadcast.

Name	Type	Connection String
localhost	WinEvent	Application,Hardware Events,Internet Explorer,K...
localhost_514	Syslog	syslog://localhost:514/
SqlServer	Database	Data Source=.\SQLEXPRESS;initial catalog=MyDa...

Beginning in LogViewPlus v2.4, we introduced support for data sources in LogViewPlus. A data source is simply any non-file based source which may contain log entries. Currently, we support the following data sources:

1. Databases - LogViewPlus currently supports SQL Server, Oracle, My SQL, PostgreSql and SqLite databases. If you have an additional database you would like to connect to that has a .Net adapter, please contact support for assistance.

2. Windows Events - Read directly from a local or remote Windows Event Log.

3. Syslog - Reads events from a Syslog server.

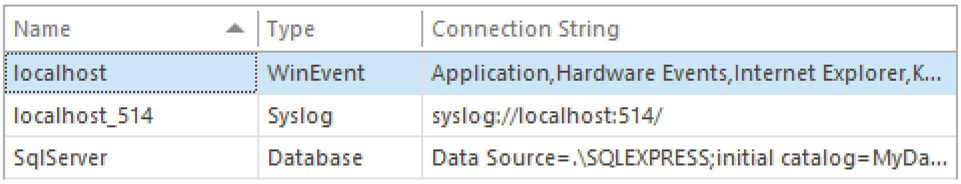
4. ETW Events - Reads an Event Tracing for Windows stream.

5. UDP - Reads events from a UDP broadcast stream.

Once configured, data source log files will be accessible through the Log Explorer.

Do you have an idea for an additional data source? Contact us and let us know. We are always looking for ways to improve LogViewPlus.

1 Data Source List

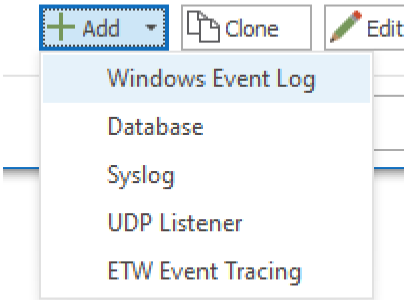


Name	Type	Connection String
localhost	WinEvent	Application,Hardware Events,Internet Explorer,K...
localhost_514	Syslog	syslog://localhost:514/
SqlServer	Database	Data Source=.\SQLEXPRESS;initial catalog=MyDa...

The complete list of all known data sources. Double click on a data source to modify the connection details.

2 Add

The add data source command will display a drop down of all of the data source types currently supported by LogViewPlus.



Selecting one of these data sources will open the appropriate new configuration dialog.

3 Clone

When cloning a data source connection LogViewPlus will open the currently selected configuration. You can then make changes to the data source configuration and save your changes as a new connection.

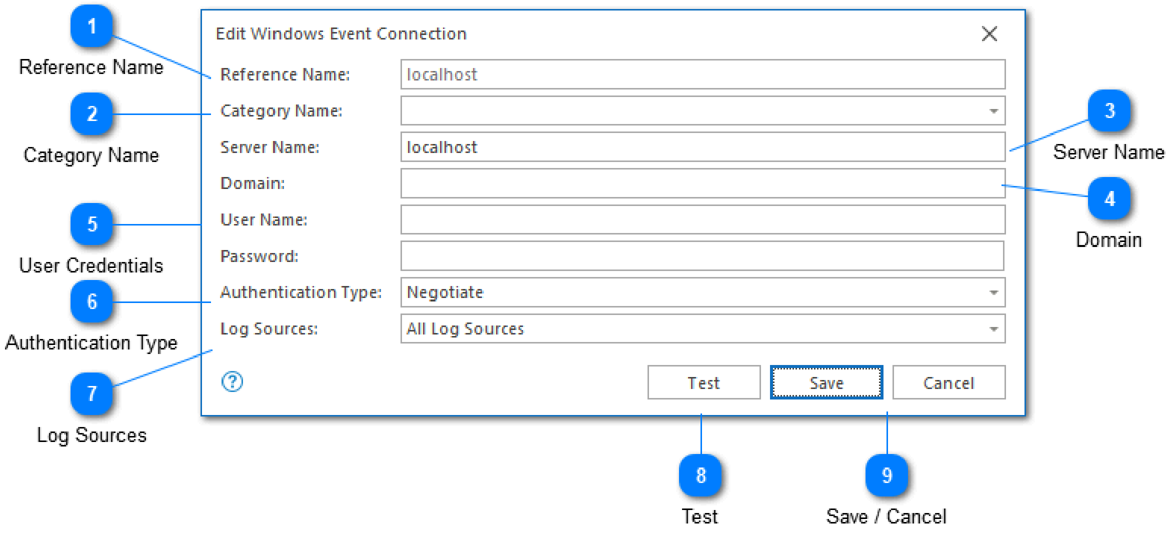
4 Edit

The edit command opens the data source configuration form for the currently selected configuration. Saving changes will overwrite the current data source settings.

5 Delete

The delete command can be used to permanently remove the currently selected data source configuration.

Windows Events



Edit Windows Event Connection

Reference Name: localhost

Category Name:

Server Name: localhost

Domain:

User Name:

Password:

Authentication Type: Negotiate

Log Sources: All Log Sources

LogViewPlus can use a Windows Event connection to read event log entries directly from a local or remote machine.

When reading log entries in Windows, there are two important security settings that you may need to modify.

1. To access the local Security log, LogViewPlus must be running under the administrator account.

2. If you are trying to connect to a remote server make sure that the "Remote Registry" service is running and that the user account you are trying to connect with is a member of the "Event Log Readers" group. The "Administrator" group is not needed and will not work.

1 Reference Name

Reference Name: localhost

A reference name can be set to more easily manage and access this configuration. Reference names should be unique. By default, the reference name will mirror the server name. Reference names are also be used by the local log level and automatic template settings.

The name provided will be used to build a URI which can be used to refer to this server. For this reason, the name provided must be URI friendly - it should not contain characters or symbols which are difficult to represent in URI form.

2 Category Name

Category Name:

A category name is used to group Syslog connections into a folder in the Log Explorer. This field is not required.

If you have previously configured a server with a category name, this name will be available as a drop-down option. Alternatively you can type a new name into the category text box.

3 Server Name

Server Name: localhost

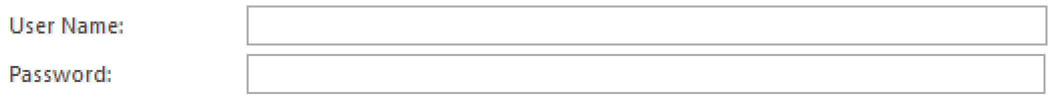
The name of the server which is hosting the Event Logs we want to access. This can either be a host name or an IP address.

4 Domain

Domain:

The domain of the specified user. This field will be used when connecting to remote machines.

5 User Credentials



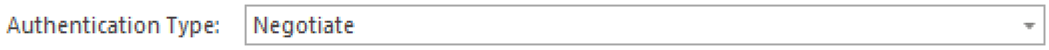
User Name:

Password:

The user credentials which should be used when monitoring the event logs. This field can be left blank to use the current user credentials. Note that the user name should be provided without the domain prefix. The domain prefix will be supplied by the 'domain' field discussed above.

If you want to log in using your current security context instead of a user name and password, please leave the user name field blank.

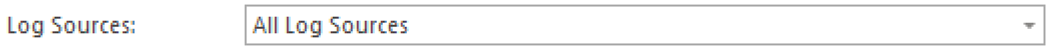
6 Authentication Type



Authentication Type: Negotiate

The type of authentication to use. The values presented are adapted from the SessionAuthentication enumeration.

7 Log Sources

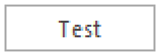


Log Sources: All Log Sources

The log sources you want to monitor.

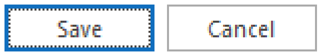
The list of log sources is extracted dynamically from the target machine. If you do not see a log source you are interested in accessing, this may be due to permissioning issues. Make sure that LogViewPlus is running under the correct user account.

8 Test



Validates and tests the provided configuration.

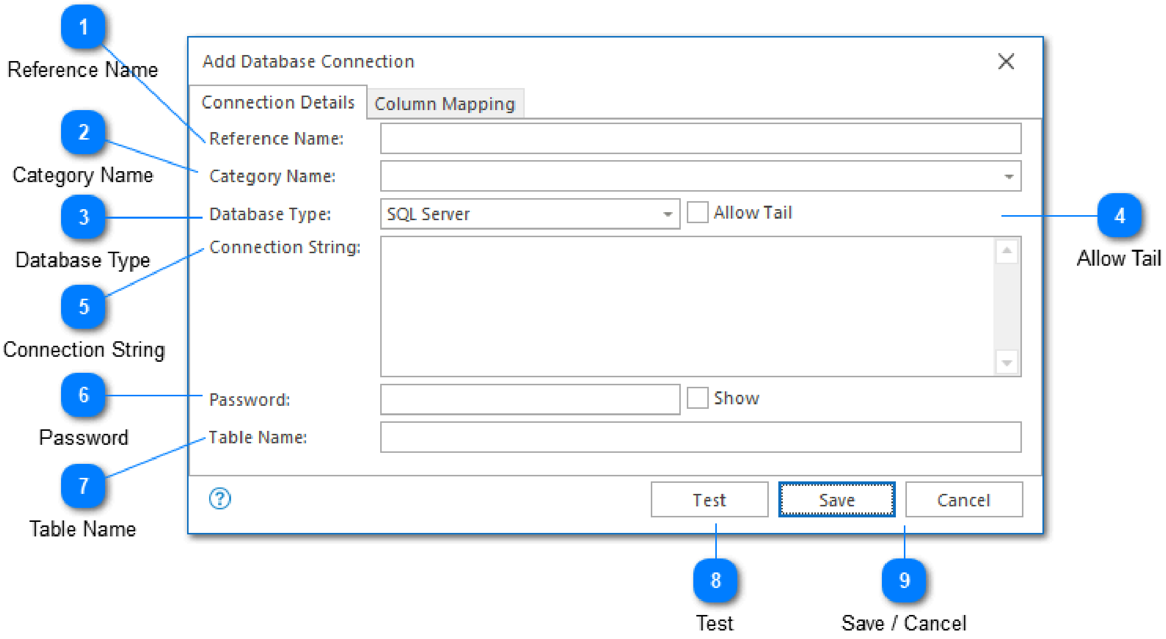
9 Save / Cancel



Once you have configured your server, you can use the save command to persist your changes. Once your changes have been saved the configured server will be immediately available in the folder tree view.

Use the "Cancel" command to return to LogViewPlus without saving your changes.

Databases


Add Database Connection

Connection Details | Column Mapping

Reference Name:

Category Name:

Database Type: SQL Server ☐ Allow Tail

Connection String:

Password: ☐ Show

Table Name:

The database settings dialog helps you add or edit database connection details. LogViewPlus will use the details provided to read and display the log entries contains in the database.

To find out more about how database columns are mapped to LogViewPlus columns, please see Column Mapping.

1 Reference Name

Reference Name:

A reference name can be set to more easily manage and access this configuration. Reference names should be unique. By default, the reference name will mirror the table name. Reference names are also be used by the local log level and automatic template settings.

2 Category Name

Category Name:

A category name is used to group Syslog connections into a folder in the Log Explorer. This field is not required.

If you have previously configured a server with a category name, this name will be available as a drop-down option. Alternatively you can type a new name into the category text box.

3 Database Type

Database Type: SQL Server

The database connection type. LogViewPlus supports SQL Server, Oracle, My SQL, PostgreSql and SqLite databases. If you have an additional database you would like to connect to that has a .Net adapter, please contact support for assistance.

If LogViewPlus cannot find the necessary libraries to load your selected database type, you may receive an error such as: "Unable to find provider to support: {providerName}."

In this scenario, you will need to add the appropriate assemblies to the %AppData%/LogViewPlus/DbProviders directory. Alternatively, the assemblies can also be placed in the %ProgramData%/LogViewPlus/DbProviders directory. If assemblies are placed in either of these directories, they will only be loaded if the 'Allow Plugins' setting is enabled. Dynamic assembly loading should only be necessary if the target libraries cannot be found in the GAC.

Depending on the database type selected, the following libraries may need to be placed into the plugin directory. All libraries should target the .Net Framework 4.8 or lower.

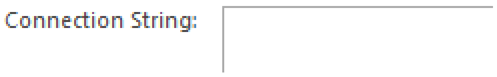
Database Type	Target Assembly
MySql	MySql.Data.dll
Oracle	Oracle.ManagedDataAccess.dll
SqLite	System.Data.SQLite.dll
PostgreSql	Npgsql.dll

4 Allow Tail

□ Allow Tail

By default, tail is disabled for database connections. Tailing a database table is supported, but we do not recommend it. Tailing a database table requires sorting the table by timestamp to find the latest records. This query will need to be executed approximately every second as LogViewPlus continuously checks for new updates. For large database tables, or where the table is not indexed by timestamp, this could lead to a significant performance impact on your database. This performance impact would apply to the entire database which might impact unrelated tables and queries.

5 Connection String



Connection String:

The connection string contains the details needed to communicate with your database. Creating connection strings can be difficult if you are not familiar with the concept and, unfortunately, this is one area where our support will not be very helpful. If you are having trouble creating a valid connection string, we recommend contacting your database administrator. Alternatively, connectionstrings.com is a great resource.

If you need to encrypt aspects of your connection string, please see the Password field below.

6 Password

Password: □ Show

The password field can be used to encrypt any part of your connection string. To do this, you need to do two things:

1. Take the sensitive string out of your connection string and put it into the password field.

2. Where the string used to exist, add the template: ${Password}

The text in the password field will be stored encrypted by LogViewPlus. When needed, it will be automatically decrypted and used to replace the ${Password} template in the connection string.

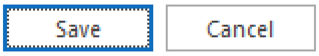
7 Table Name

The name of the table that contains the log entries you want to load.

8 Test

The test command can be used to verify the currently configured database connection. To do this, a connection with the database will be established to access metadata regarding the target table.

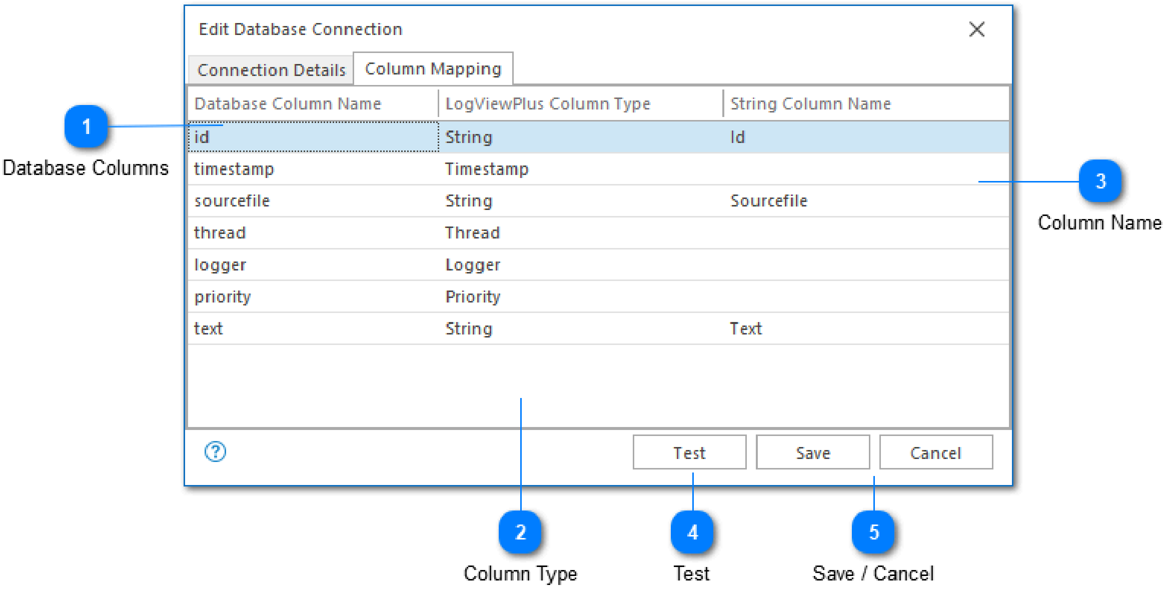
9 Save / Cancel



Once you have configured your database, you can use the save command to persist your changes. Once your changes have been saved the configured database will be immediately available in the folder tree view.

Use the "Cancel" command to return to LogViewPlus without saving your changes.

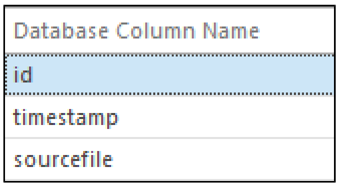
Column Mapping



Database Column Name	LogViewPlus Column Type	String Column Name
id	String	Id
timestamp	Timestamp	
sourcefile	String	Sourcefile
thread	Thread	
logger	Logger	
priority	Priority	
text	String	Text

The column mapping tab is used to convert database columns into LogViewPlus columns. Mapping from a database to LogViewPlus is controlled in three columns: Database Column Name, LogViewPlus Column Type, and String Column Name.

1 Database Columns

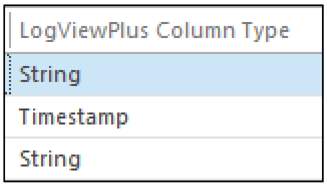


Database Column Name
id
timestamp
sourcefile

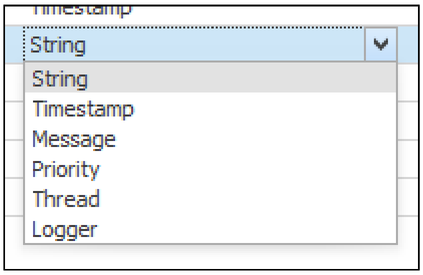
This field is auto-populated by LogViewPlus based on meta-data read from the database.

If the underlying data structure changes, you will need to reload the fields by testing your database connection. Depending on the extent of the changes to the data structure, you may need to recreate the database data source connection.

2 Column Type



The column type field allows you to specify how the database column should be mapped in LogViewPlus. Six different LogViewPlus column types are supported as shown below:



These six column types can be divided into three categories:

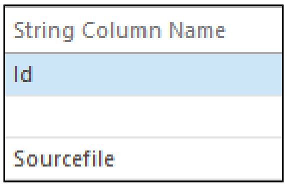
1. Timestamp - This is the most column type as it defines when the log entry was created. Only one timestamp column can be set - regardless of the number of date time fields used by the database table. This field is required.

Several LogViewPlus scenarios will query or order by the Timestamp column. To improve query performance, we recommend adding an index to the Timestamp column.

2. String - This catch all property allows you to map any database field that can be represented as a string. If you specify a string column type, you should provide a string column name. If a name is not provided, the field will not be visible in LogViewPlus.

3. Other - This category includes Thread, Logger, Priority and Message. These types map directly to the LogViewPlus types of the same name.

3 Column Name



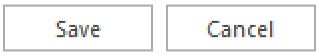
String Column Name
Id
Sourcefile

If you specify that a column should be mapped to a LogViewPlus string, you will need to specify a column name for the field here. If a name is not provided, the field will not be visible in LogViewPlus.

4 Test

The test command can be used to verify the currently configured database connection. To do this, a connection with the database will be established to access metadata regarding the target table.

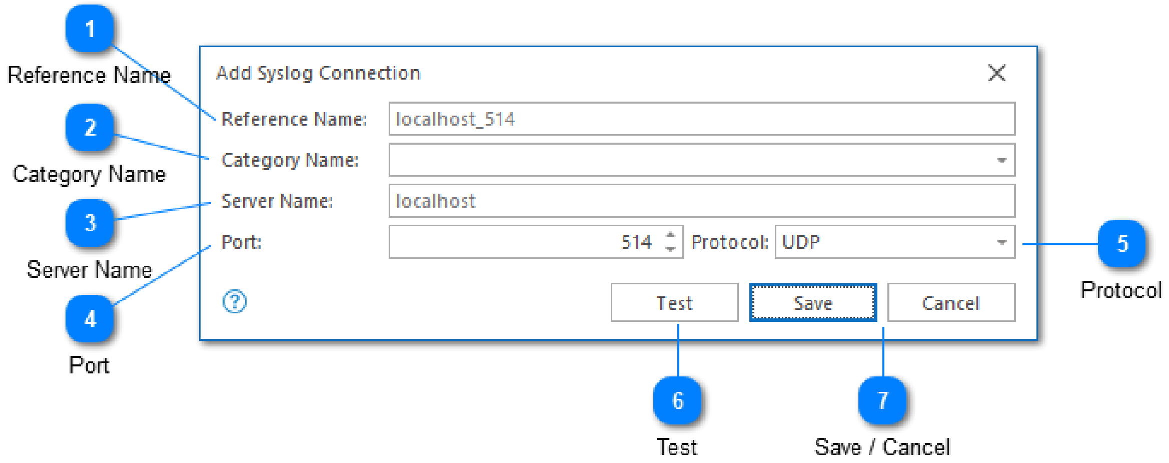
5 Save / Cancel



Once you have configured your database, you can use the save command to persist your changes. Once your changes have been saved the configured database will be immediately available in the folder tree view.

Use the "Cancel" command to return to LogViewPlus without saving your changes.

Syslog



Add Syslog Connection

Reference Name: localhost_514

Category Name:

Server Name: localhost

Port: 514 Protocol: UDP

LogViewPlus can use a read Syslog events from a local or remote machine.

Syslog uses a defined message format. It is not necessary to configure a parser when processing Syslog messages.

1 Reference Name

Reference Name: localhost_514

A reference name can be set to more easily manage and access this configuration. Reference names should be unique. By default, the reference name will mirror the server name and port number. Reference names are also be used by the local log level and automatic template settings.

The name provided will be used to build a URI which can be used to refer to this server. For this reason, the name provided must be URI friendly - it should not contain characters or symbols which are difficult to represent in URI form.

2 Category Name

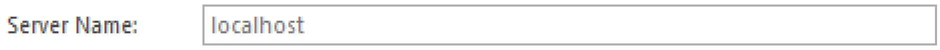
Category Name:

A category name is used to group Syslog connections into a folder in the Log Explorer. This field is not required.

If you have previously configured a server with a category name, this name will be available as a drop-down option. Alternatively you can type a new name into the category text box.

3

Server Name

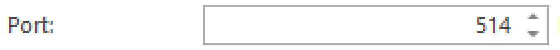


Server Name: localhost

The server that is publishing the Syslog data.

4

Port

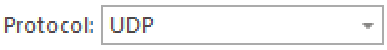


Port: 514

The port where the Syslog data is published.

5

Protocol

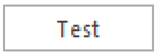


Protocol: UDP

The protocol that should be used when listening for Syslog data. The protocol can be UDP, TCP or both.

6

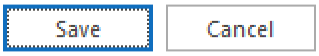
Test



Validates and tests the provided configuration.

7

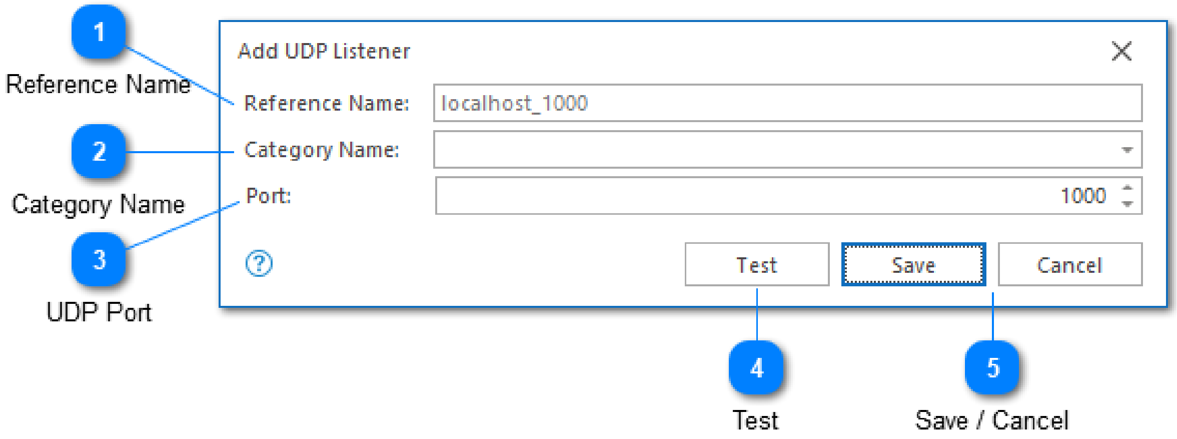
Save / Cancel



Once you have configured your listener, you can use the save command to persist your changes. Once your changes have been saved the configured listener will be immediately available in the folder tree view.

Use the "Cancel" command to return to LogViewPlus without saving your changes.

UDP



Add UDP Listener

Reference Name: localhost_1000

Category Name:

Port: 1000

LogViewPlus processes UDP logs by listening on a port and logging all data received to a local file. The local file can then be opened automatically and parsed as normal.

1 Reference Name

Reference Name: localhost_1000

A reference name can be set to more easily manage and access this configuration. Reference names should be unique. By default, the reference name will mirror the server name and port number. Reference names are also be used by the local log level and automatic template settings.

The name provided will be used to build a URI which can be used to refer to this server. For this reason, the name provided must be URI friendly - it should not contain characters or symbols which are difficult to represent in URI form.

The reference name will also be used in the file name where UDP data is logged. The name used here will therefore also be used to determine the appropriate parser configuration.

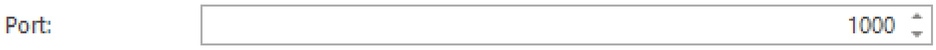
2 Category Name

Category Name:

A category name is used to group UDP connections into a folder in the Log Explorer. This field is not required.

If you have previously configured a server with a category name, this name will be available as a drop-down option. Alternatively you can type a new name into the category text box.

3 UDP Port



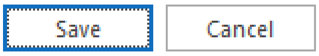
Port: 1000

The UDP port where log data is published.

4 Test

Validates and tests the provided configuration.

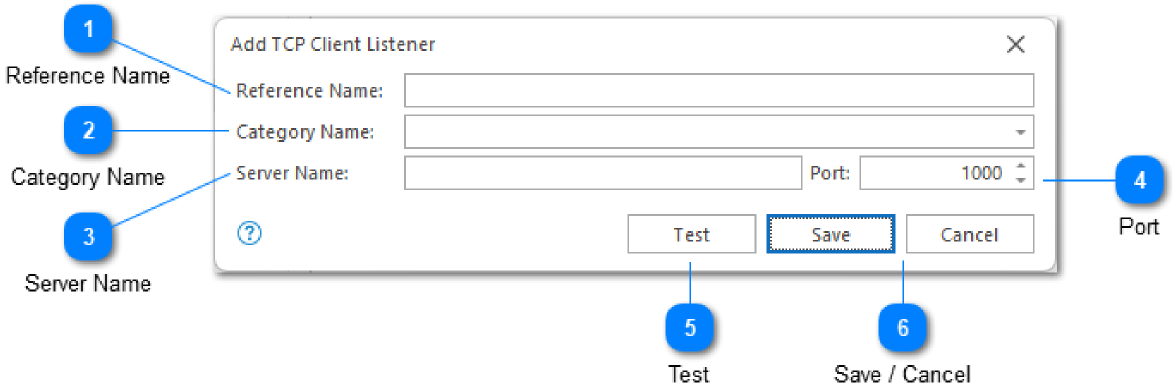
5 Save / Cancel



Once you have configured your listener, you can use the save command to persist your changes. Once your changes have been saved the configured listener will be immediately available in the folder tree view.

Use the "Cancel" command to return to LogViewPlus without saving your changes.

TCP



Port: 1000

LogViewPlus can use TCP to either connect to a server (using a TCP Client), or act as a server for log forwarding (using a TCP Server). Regardless of the connection type, LogViewPlus will use TCP in a "listen-only" mode. In other words, the connection should work without authentication or a handshake. All data received will then be written to a local file where it can then be opened automatically and parsed as normal.

1 Reference Name

A reference name can be set to more easily manage and access this configuration. Reference names should be unique. By default, the reference name will mirror the server name and port number. Reference names are also be used by the local log level and automatic template settings.

The name provided will be used to build a URI which can be used to refer to this server. For this reason, the name provided must be URI friendly - it should not contain characters or symbols which are difficult to represent in URI form.

The reference name will also be used in the file name where TCP data is logged. The name used here will therefore also be used to determine the appropriate parser configuration.

2 Category Name

A category name is used to group TCP connections into a folder in the Log Explorer. This field is not required.

If you have previously configured a service with a category name, this name will be available as a drop-down option. Alternatively you can type a new name into the category text box.

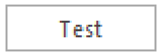
3 Server Name

This should be set to localhost or 127.0.0.1 for TCP Server connections. For a TCP Client, this field should contain the host name of the machine where the streaming TCP data can be found.

4 Port

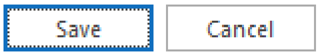
The TCP port where log data is published.

5 Test



Validates and tests the provided configuration.

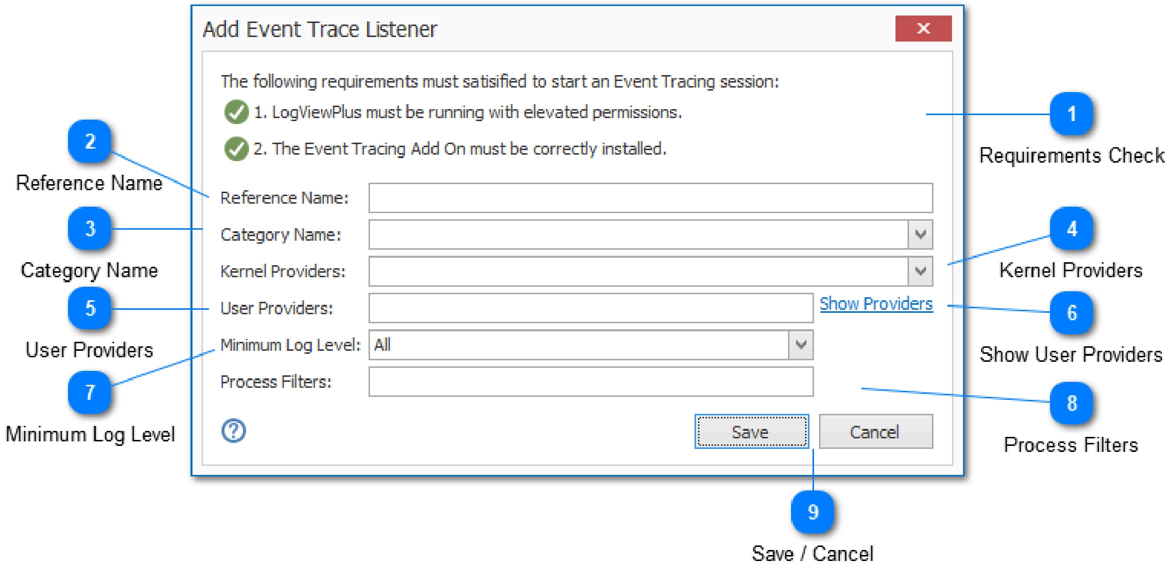
6 Save / Cancel



Once you have configured your listener, you can use the save command to persist your changes. Once your changes have been saved the configured listener will be immediately available in the folder tree view.

Use the "Cancel" command to return to LogViewPlus without saving your changes.

ETW Event Tracing



Add Event Trace Listener

The following requirements must satisified to start an Event Tracing session:

✓ 1. LogViewPlus must be running with elevated permissions.

✓ 2. The Event Tracing Add On must be correctly installed.

Reference Name:

Category Name:

Kernel Providers:

User Providers: Show Providers

Minimum Log Level: All

Process Filters:

ETW event tracing is supported in LogViewPlus as an Add-On and can be used to provide access to Microsoft ETW event streams. The ETW Add-On was introduced in LogViewPlus v2.5 and is not supported in earlier versions.

To install the ETW Add-On:

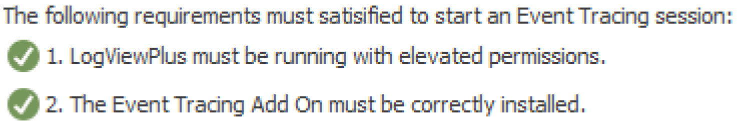
1. Download the ETW Add-On

2. Extract the contents of the zip file to the %AppData%\LogViewPlus\Plugins\Etw directory. After the zip file is extracted, the new ETW directory should contain 24 items (two folders and 22 files).

3. Enable plugins and restart LogViewPlus.

LogViewPlus must be run as an administrator in order to access ETW event streams.

1 Requirements Check



The following requirements must satisified to start an Event Tracing session:

✓ 1. LogViewPlus must be running with elevated permissions.

✓ 2. The Event Tracing Add On must be correctly installed.

When adding a new ETW trace listener, you will be presented with a requirements check that will verify all conditions have been met for ETW trace listener execution.

Currently, there are two requirements to execute a trace listener:

1. LogViewPlus must be running with the elevated permissions. This implies either the user or the process is running as administrator.

2. The ETW Add-On should be correctly installed. Installations instructions for the ETW Add-On are discussed above.

The requirements checks are for listener execution only. The ETW listener can be configured even if no requirements have been met. The requirements check is displayed here for information purposes only.

2 Reference Name

Reference Name:

A reference name can be set to more easily manage and access this configuration. Reference names should be unique. Reference names are also be used by the local log level and automatic template settings.

A reference name is required for ETW Listeners.

The name provided will be used to build a URI which can be used to refer to this listener. For this reason, the name provided must be URI friendly - it should not contain characters or symbols which are difficult to represent in URI form.

3 Category Name

Category Name:

A category name is used to group Syslog connections into a folder in the Log Explorer. This field is not required.

If you have previously configured a server with a category name, this name will be available as a drop-down option. Alternatively you can type a new name into the category text box.

4 Kernel Providers

Kernel Providers:

If you are interested in monitoring kernel events, you can select them here. The list of available events is adapted from the EVENT_TRACE_PROPERTIES structure.

5 User Providers

User Providers:

The list of user mode providers to monitor. A list of user mode providers can be found by executing the 'logman' command. See the 'Show Providers' documentation below.

If you want to monitor multiple providers, the provider names should be comma separated.

6 Show User Providers

Show Providers

Executes the command "logman query providers". The logman command is used to display a list of user providers which are available on the current machine.

7 Minimum Log Level

Minimum Log Level: All

The minimum log level you are interested in monitoring. If an event is detected which exceeds the minimum level, it will be discarded.

8 Process Filters

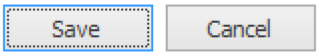
Process Filters:

A comma separated list of process names or task names. If process filters are provided and an event is received with a process or task name that is not in the list of known process filters, the event will be discarded.

This setting allows you to monitor events for a specific process only.

9

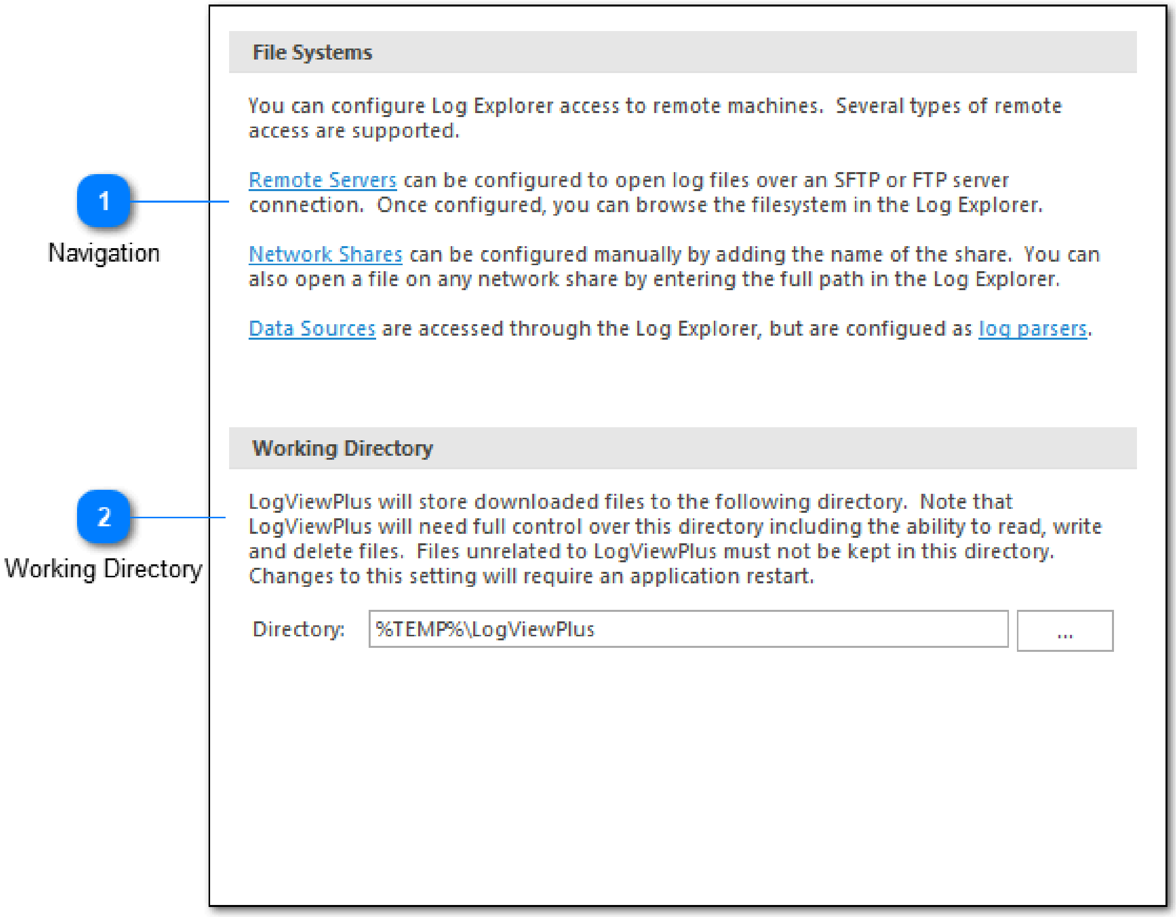
Save / Cancel



Once you have configured your listener, you can use the save command to persist your changes. Once your changes have been saved the configured listener will be immediately available in the folder tree view.

Use the "Cancel" command to return to LogViewPlus without saving your changes.

File Systems



File Systems

You can configure Log Explorer access to remote machines. Several types of remote access are supported.

Remote Servers can be configured to open log files over an SFTP or FTP server connection. Once configured, you can browse the filesystem in the Log Explorer.

Network Shares can be configured manually by adding the name of the share. You can also open a file on any network share by entering the full path in the Log Explorer.

Data Sources are accessed through the Log Explorer, but are configued as log parsers.

Working Directory

LogViewPlus will store downloaded files to the following directory. Note that LogViewPlus will need full control over this directory including the ability to read, write and delete files. Files unrelated to LogViewPlus must not be kept in this directory. Changes to this setting will require an application restart.

Directory: %TEMP%\LogViewPlus

The default file system settings view can be used to navigate to other relevant application settings or set the LogViewPlus working directory.

Please see the File System Settings chapter of the documentation for a detailed description of file system support in LogViewPlus.

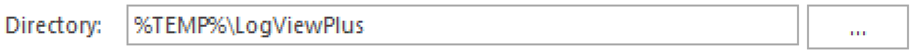
1 Navigation

Remote Servers can
connection. Once

A large area of the default file system settings view has been dedicated to documentation. Hyperlinks in this documentation can be used for settings navigation.

2

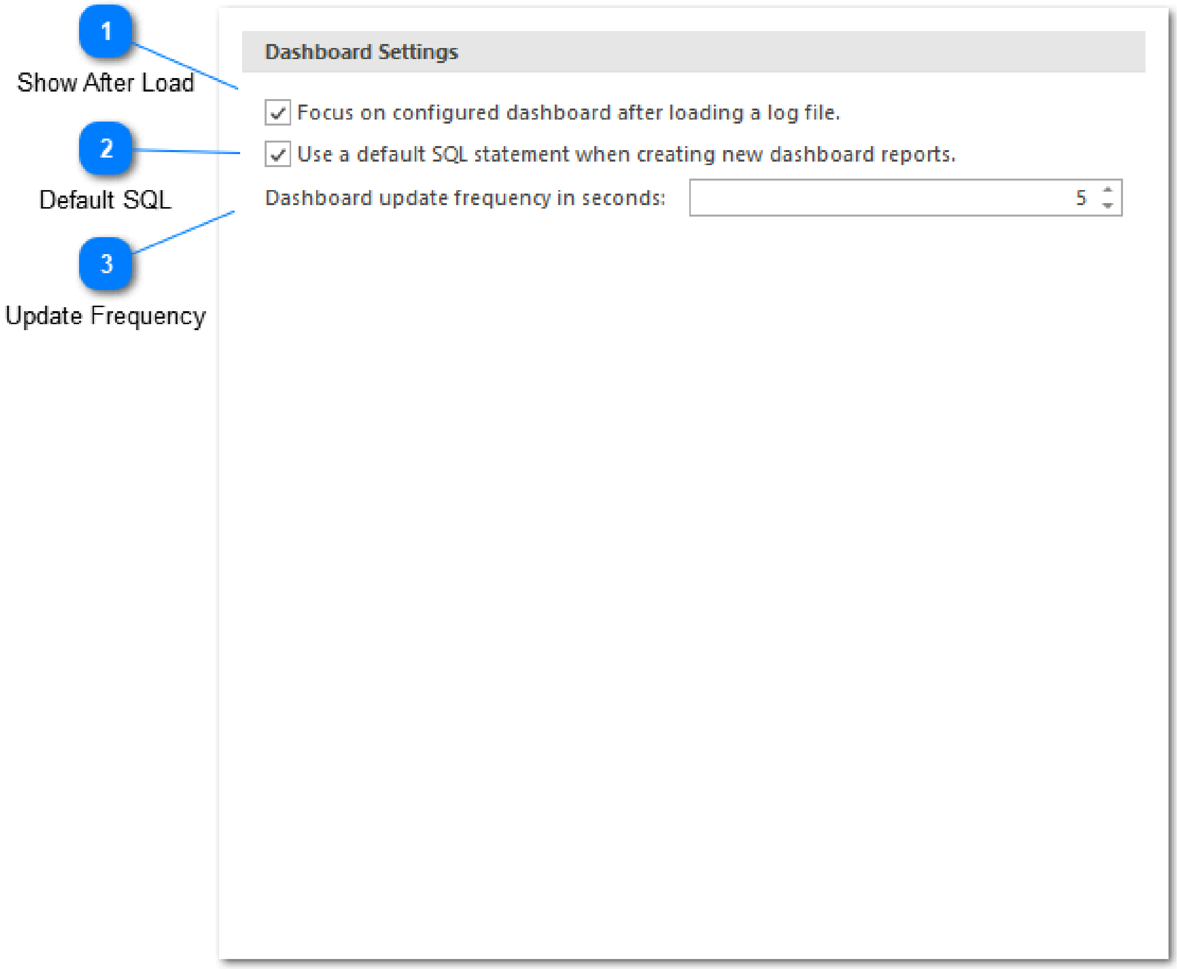
Working Directory


Directory: %TEMP%\LogViewPlus

The working directory is the location LogViewPlus uses for storing remote file system access log files as well as any files downloaded or monitored by LogViewPlus. By default LogViewPlus will store this information in a folder called "LogViewPlus" located in your local temp directory. You can use Windows Explorer to navigate to this directory with the path %TEMP%\LogViewPlus.

LogViewPlus will **PERMANENTLY DELETE** all files and folders from the working directory on application startup. Files unrelated to LogViewPlus must not be kept in this directory.

Dashboards



Dashboard Settings

☑ Focus on configured dashboard after loading a log file.

☑ Use a default SQL statement when creating new dashboard reports.

Dashboard update frequency in seconds: 5

Dashboard settings are used to control how dashboards are managed and displayed.

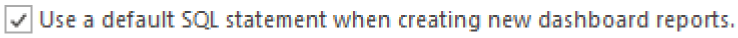
1 Show After Load

☑ Focus on configured dashboard after loading a log file.

Log files with dashboards have two distinct views - the dashboard and the data grid. By default, LogViewPlus will show the dashboard after loading the log file.

If disabled, this setting will hide the dashboard and show the data grid instead.

2 Default SQL

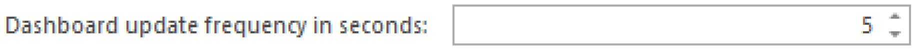


☑ Use a default SQL statement when creating new dashboard reports.

When creating a new report, it can be helpful to start with an existing SQL statement. This can be true even if the provided SQL statement is targeting a different data set.

Use this option to provide a default SQL statement when creating a new report.

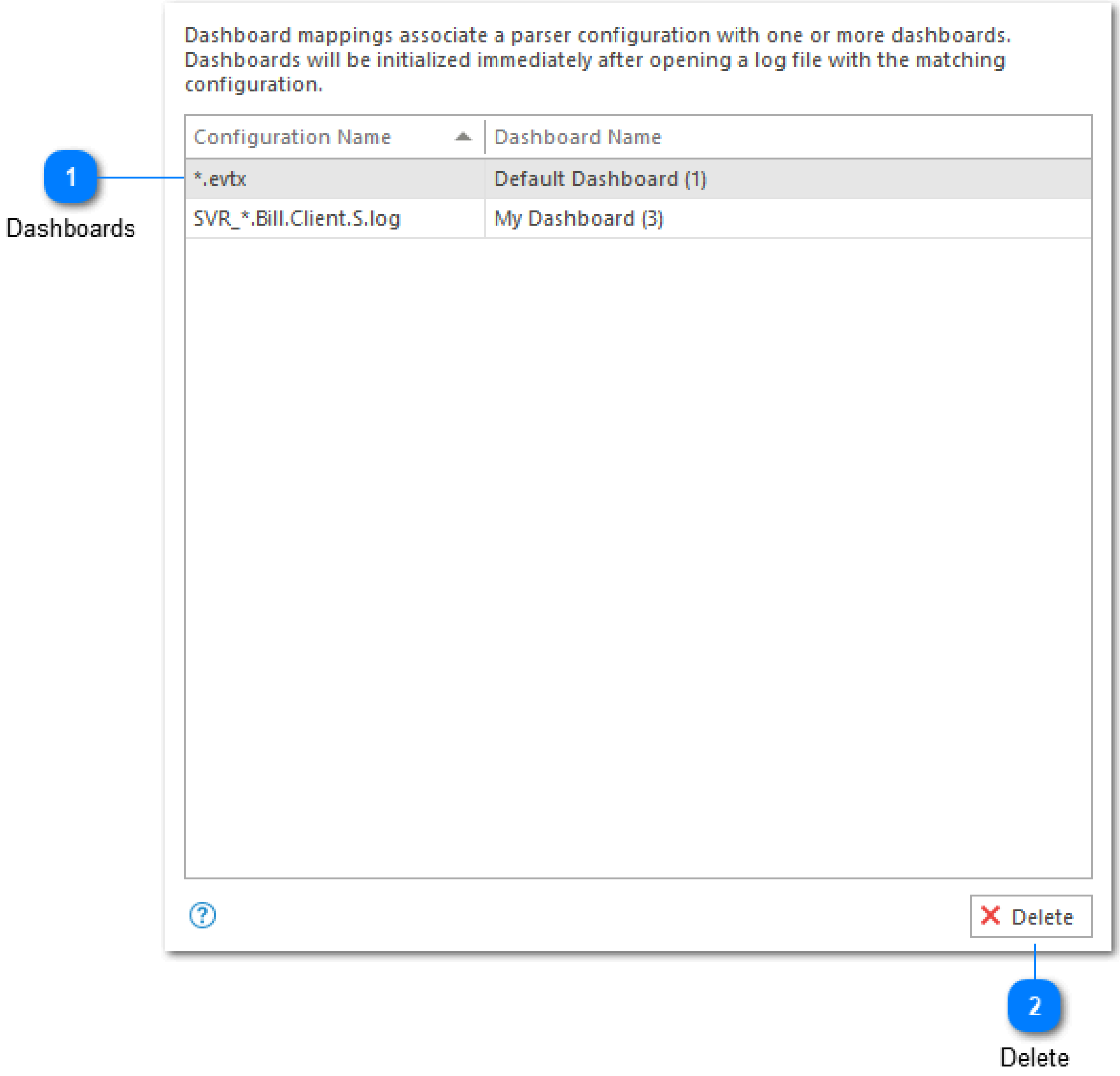
3 Update Frequency



Dashboard update frequency in seconds: 5

LogViewPlus dashboards can be refreshed when new data is detected in the log file. Use this option to determine how frequently dashboards should be refreshed. Frequent refresh intervals may impact application performance.

Dashboard Mappings

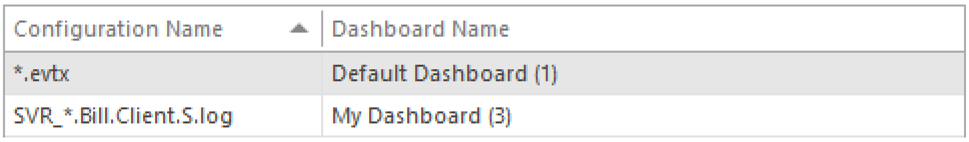


Dashboard mappings associate a parser configuration with one or more dashboards. Dashboards will be initialized immediately after opening a log file with the matching configuration.

Configuration Name	Dashboard Name
*.evtx	Default Dashboard (1)
SVR_*.Bill.Client.S.log	My Dashboard (3)

The Dashboard Mapping settings shows all dashboards currently associated with a log parser configuration. When creating a new dashboard it will automatically be saved with the target log parser configuration.

1 Dashboards



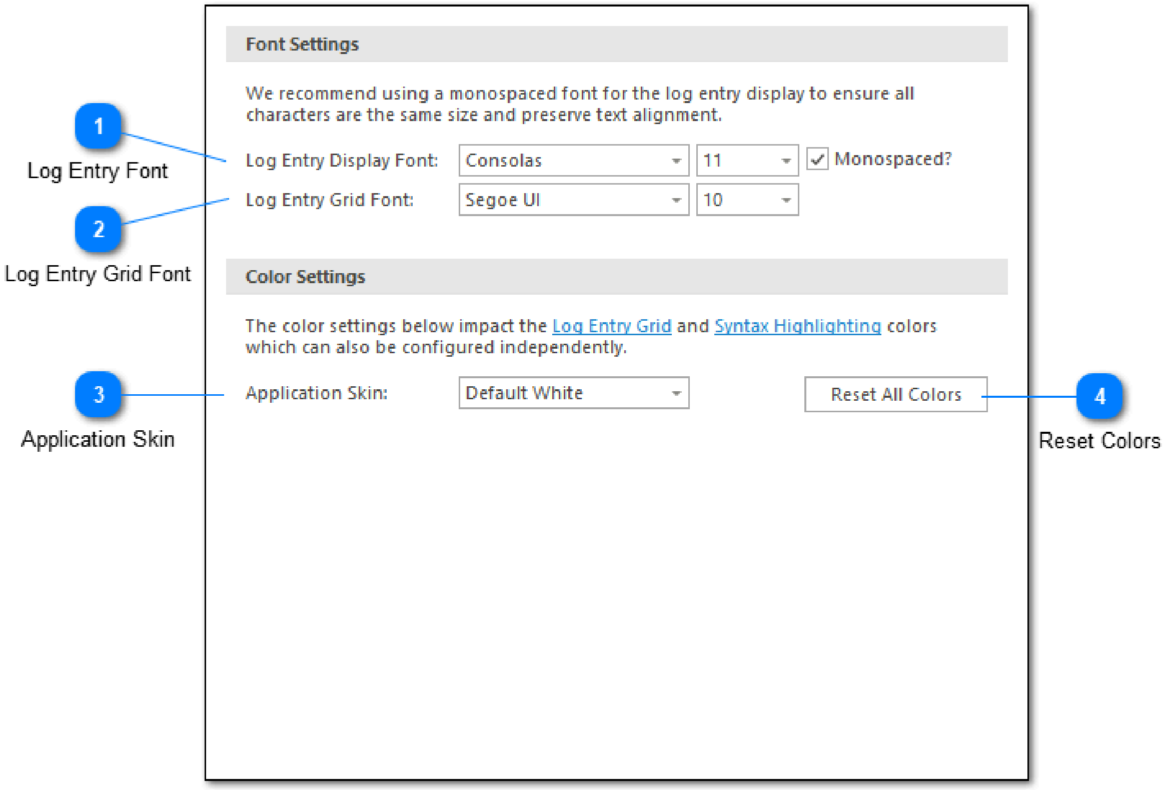
Configuration Name ▲	Dashboard Name
*.evtx	Default Dashboard (1)
SVR_*.Bill.Client.S.log	My Dashboard (3)

Shows all log file configurations currently associated with the dashboard. All dashboards associated with the given log file configuration will be shown. The number displayed next to the dashboard name indicates the number of reports contained within that dashboard.

2 Delete

Permanently deletes the selected dashboard mapping. This will also permanently remove any dashboards associated with the target mapping.

Fonts & Colors



Font Settings

We recommend using a monospaced font for the log entry display to ensure all characters are the same size and preserve text alignment.

Log Entry Display Font: Consolas 11 ☑ Monospaced?

Log Entry Grid Font: Segoe UI 10

Color Settings

The color settings below impact the Log Entry Grid and Syntax Highlighting colors which can also be configured independently.

Application Skin: Default White

The fonts and colors setting dialogue is used primarily to set application fonts as well as the default skin. Additional color configuration options such as specifying custom grid colors and syntax highlighting colors are available.

1 Log Entry Font

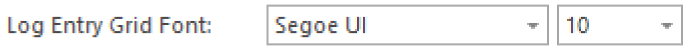
Log Entry Display Font: Consolas 11 ☑ Monospaced?

The Log Entry Box setting configuration allows you to set the behavior and visual style of the Log Entry Box.   The Log Entry Box is the text area shown at the bottom of the Log Entry Grid.

The font chosen here will also be used for Log Entry Grid Grouping.

Monospace fonts are recommended because they print all characters the same size. This is sometimes important when viewing log entries which are formatted according to this expectation. A checkbox is provided to filter the font list to show only the monospaced fonts installed on the local machine.

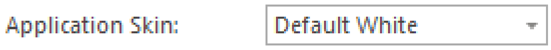
2 Log Entry Grid Font



Log Entry Grid Font: Segoe UI 10

Sets the font used by the Log Entry Grid.

3 Application Skin



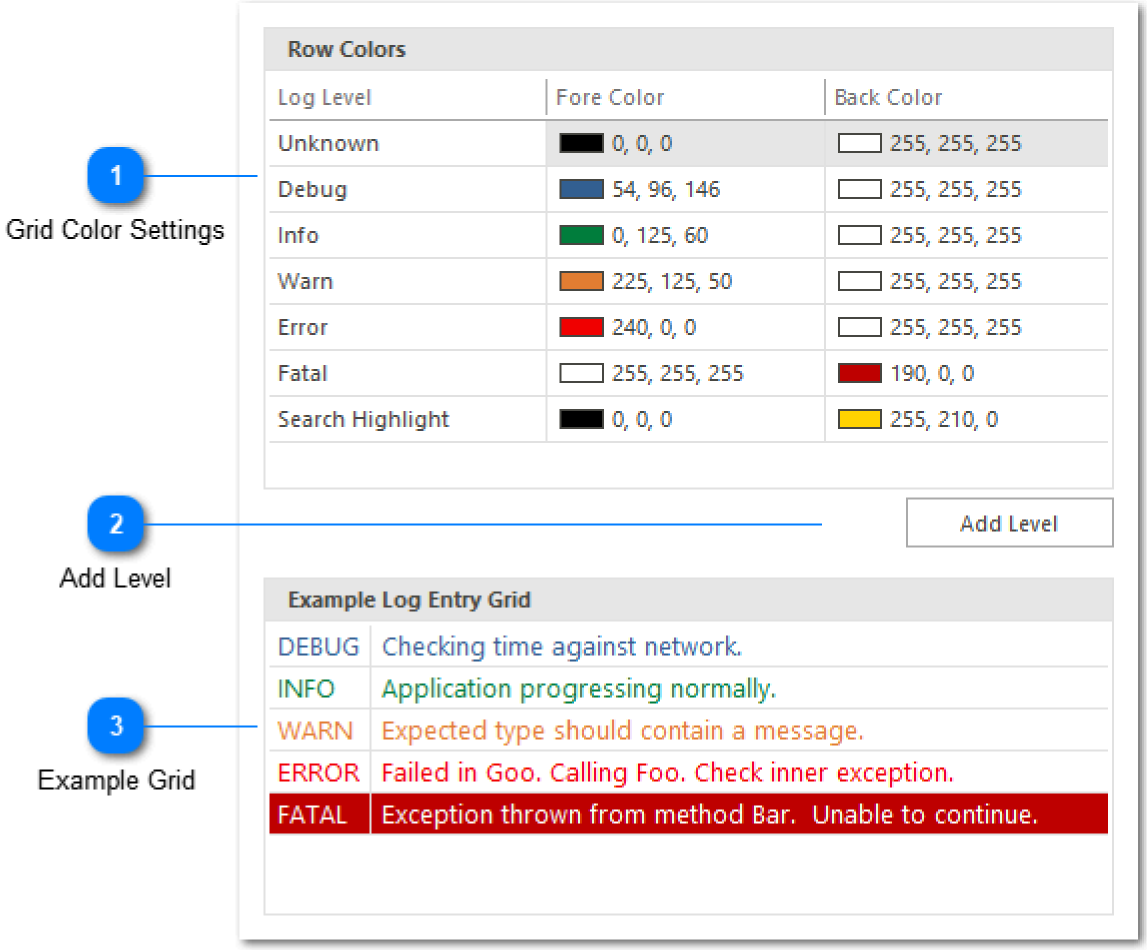
Application Skin: Default White

Sets the default application skin. This can also be set in the Program Toolbar.

4 Reset Colors

Sets all colors used by the application back to installation defaults. This includes the application skin as well as any custom grid or syntax highlighting colors.

Log Entry Grid Color



Row Colors

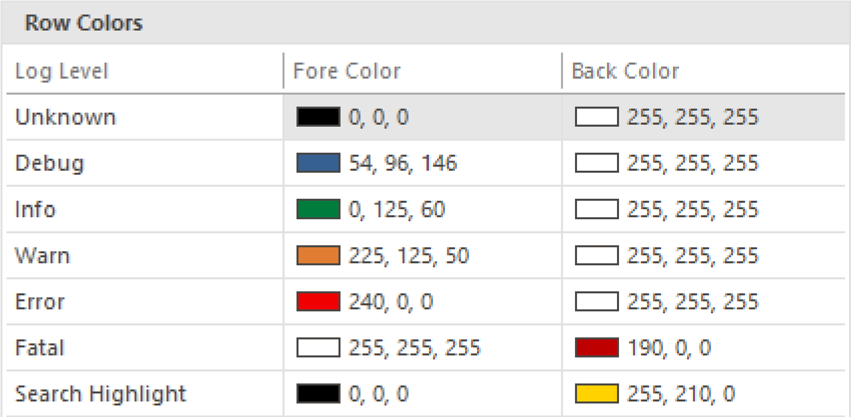
Log Level	Fore Color	Back Color
Unknown	⬛ 0, 0, 0	⬜ 255, 255, 255
Debug	🟦 54, 96, 146	⬜ 255, 255, 255
Info	🟩 0, 125, 60	⬜ 255, 255, 255
Warn	🟧 225, 125, 50	⬜ 255, 255, 255
Error	🟥 240, 0, 0	⬜ 255, 255, 255
Fatal	⬜ 255, 255, 255	🟥 190, 0, 0
Search Highlight	⬛ 0, 0, 0	🟨 255, 210, 0

Example Log Entry Grid

DEBUG	Checking time against network.
INFO	Application progressing normally.
WARN	Expected type should contain a message.
ERROR	Failed in Goo. Calling Foo. Check inner exception.
FATAL	Exception thrown from method Bar. Unable to continue.

The Log Entry Grid Color setting configuration can be used to specify how long entries of a given information level should be displayed in the log entries grid.

1 Grid Color Settings



Row Colors

Log Level	Fore Color	Back Color
Unknown	⬛ 0, 0, 0	⬜ 255, 255, 255
Debug	🟦 54, 96, 146	⬜ 255, 255, 255
Info	🟩 0, 125, 60	⬜ 255, 255, 255
Warn	🟧 225, 125, 50	⬜ 255, 255, 255
Error	🟥 240, 0, 0	⬜ 255, 255, 255
Fatal	⬜ 255, 255, 255	🟥 190, 0, 0
Search Highlight	⬛ 0, 0, 0	🟨 255, 210, 0

The color settings allows you to specify the foreground color and background color for a given log level.

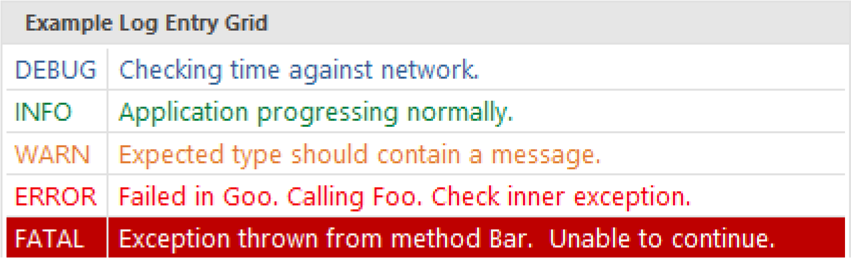
By default, only primary log levels have a custom appearance. Secondary log levels will be color coded based on their primary assignments. To change the appearance of a secondary log level, you must first add it to the Row Colors grid (see Add Level below).

In addition to log levels, the Row Colors grid can also set the search highlight color. This color is used to highlight text within the search filter and does not apply outside of the search filter.

2 Add Level

Allows you to add a secondary log level to the Color Settings grid. Once added, you will be able to define a custom font color and background color.

3 Example Grid

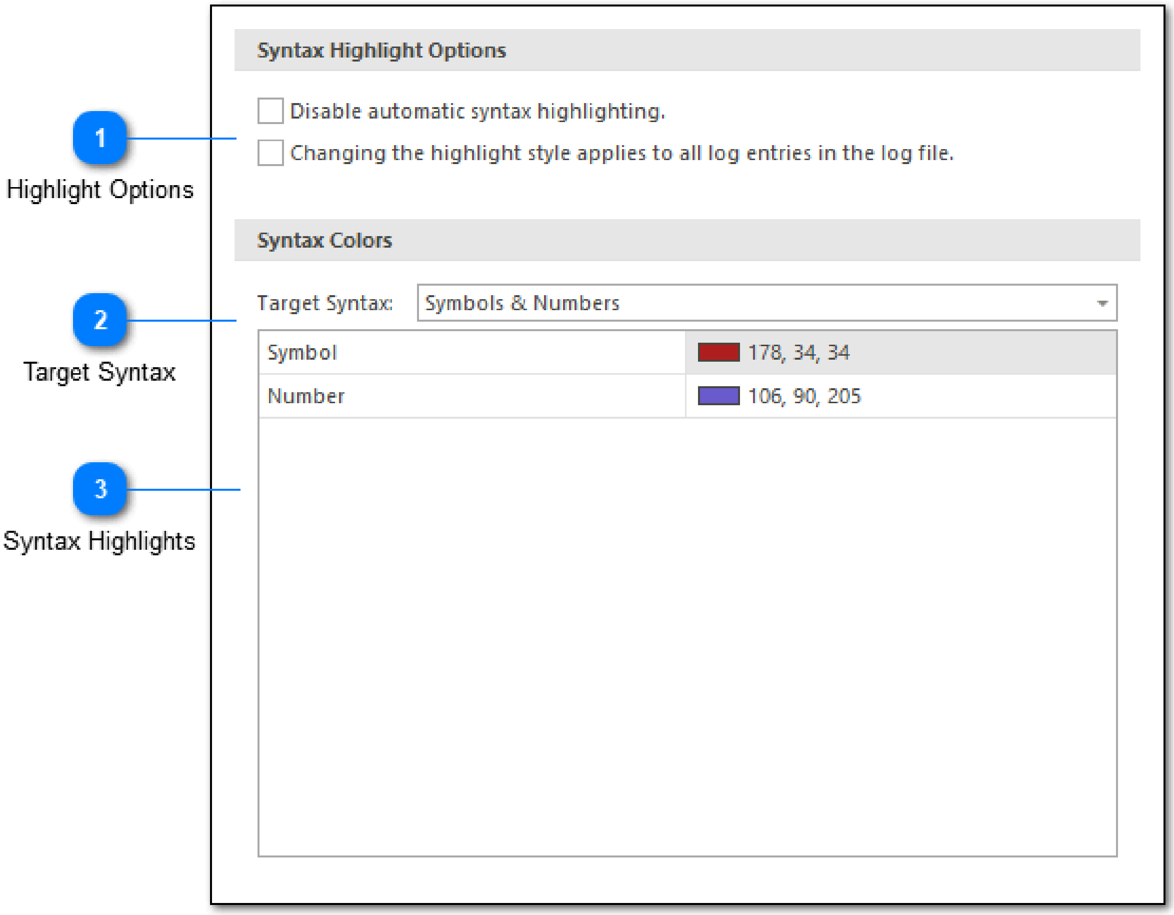


Example Log Entry Grid

DEBUG	Checking time against network.
INFO	Application progressing normally.
WARN	Expected type should contain a message.
ERROR	Failed in Goo. Calling Foo. Check inner exception.
FATAL	Exception thrown from method Bar. Unable to continue.

The example grid gives you a real-time presentation of the current grid configuration settings. This allows you to see what your custom grid will look like without you having to save your changes.

Syntax Highlights



Syntax Highlight Options

□ Disable automatic syntax highlighting.

□ Changing the highlight style applies to all log entries in the log file.

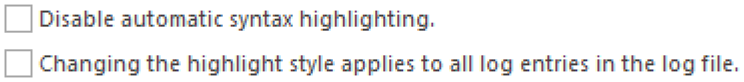
Syntax Colors

Target Syntax: Symbols & Numbers

Symbol	🟥 178, 34, 34
Number	🟪 106, 90, 205

The Syntax Highlighting setting configuration can be used to the colors used when pretty printing a given syntax.

Highlight Options



□ Disable automatic syntax highlighting.

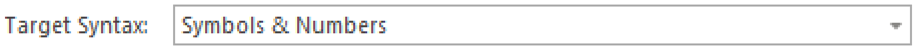
□ Changing the highlight style applies to all log entries in the log file.

Highlighting options allow you to configure:

1. If LogViewPlus should automatically pretty print log entries. This setting can also be turned on or off for a particular log entry in the Log Entry Box context menu.

2. If changing the highlight style in the Log Entry Box context menu should apply to all log entries in the log file, or just the current log entry. By default, only the current log entry will be impacted.

2 Target Syntax



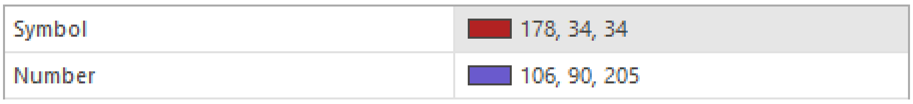
Target Syntax: Symbols & Numbers

The target syntax command can be used the specify which syntax type is currently being configured.

LogViewPlus currently supports three separate syntax types: XML, JSON, and Symbols & Numbers. Symbols & Numbers is the default syntax used when displaying most log entries.

XML and JSON are separate syntax formats. However these formats share a common syntax color configuration and therefore share a common target syntax.

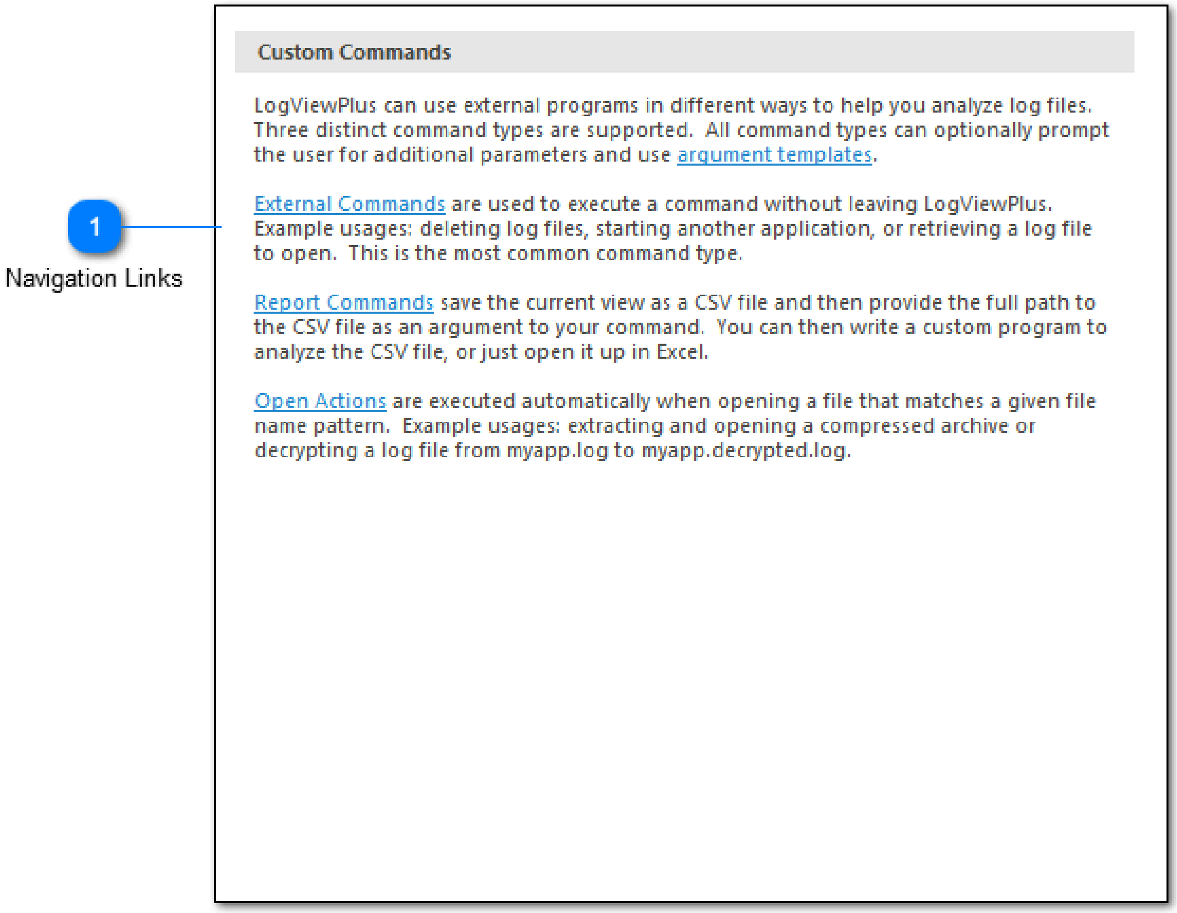
3 Syntax Highlights



Symbol	🟥 178, 34, 34
Number	🟪 106, 90, 205

The syntax highlights grid is used to assign a particular color to a given syntax element. The syntax elements shown will depend on the target syntax.

Commands



Custom Commands

LogViewPlus can use external programs in different ways to help you analyze log files. Three distinct command types are supported. All command types can optionally prompt the user for additional parameters and use argument templates.

External Commands are used to execute a command without leaving LogViewPlus. Example usages: deleting log files, starting another application, or retrieving a log file to open. This is the most common command type.

Report Commands save the current view as a CSV file and then provide the full path to the CSV file as an argument to your command. You can then write a custom program to analyze the CSV file, or just open it up in Excel.

Open Actions are executed automatically when opening a file that matches a given file name pattern. Example usages: extracting and opening a compressed archive or decrypting a log file from myapp.log to myapp.decrypted.log.

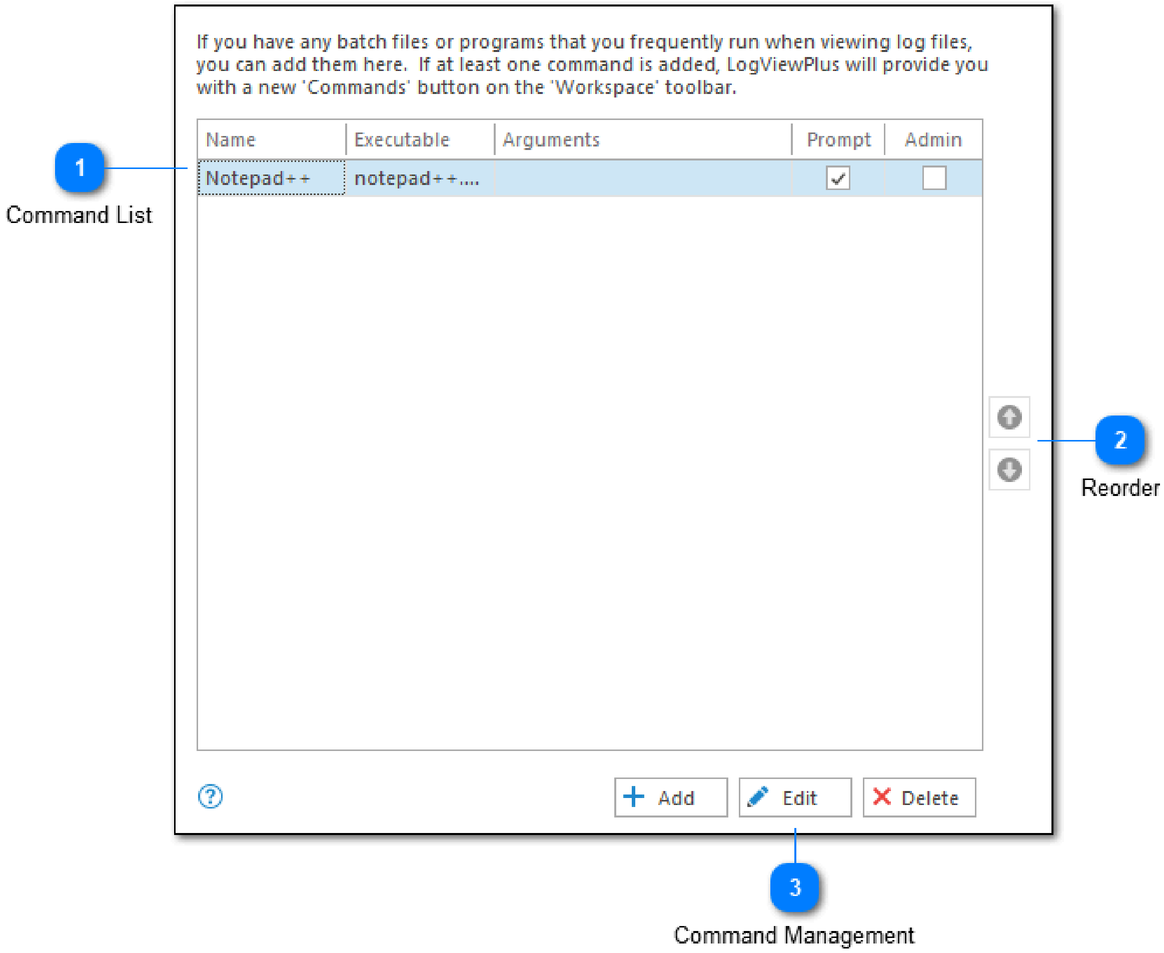
Commands allows you to tell LogViewPlus about a batch file or program you would like to execute from within LogViewPlus. LogViewPlus supports several different types of commands which can execute in a number of different scenarios depending on the use case.

1 Navigation Links

External Commands are
Example usages: deletii

Navigation links are provided for your convenience when selecting the appropriate command type. The command types are also available from the settings tree when you expand the 'Commands' node.

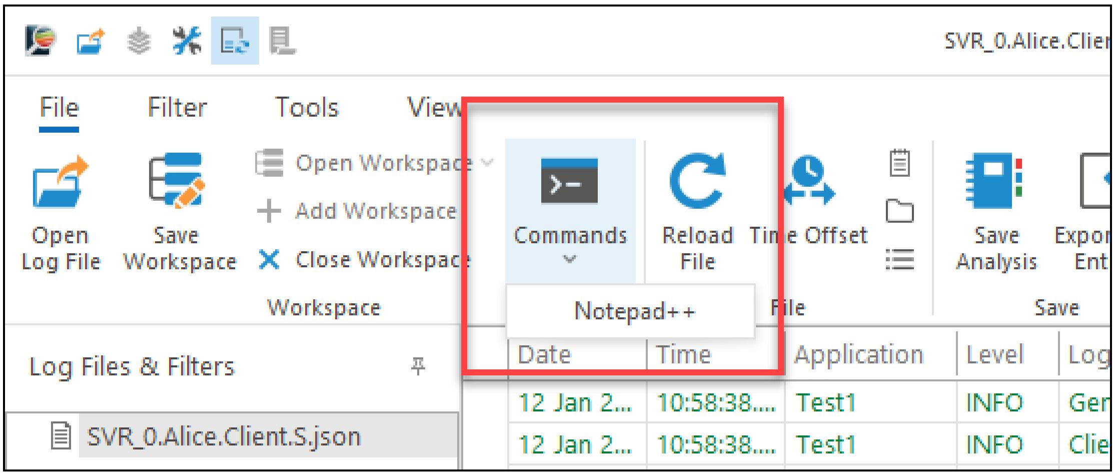
External Commands



If you have any batch files or programs that you frequently run when viewing log files, you can add them here. If at least one command is added, LogViewPlus will provide you with a new 'Commands' button on the 'Workspace' toolbar.

Name	Executable	Arguments	Prompt	Admin
Notepad++	notepad++....		☑	□

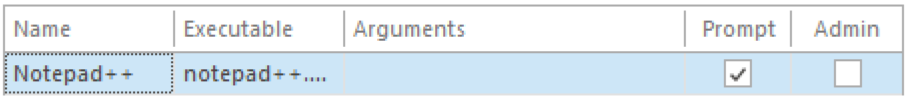
Once at least one external command has been configured, you will see a 'Commands' button listed on the toolbar under the file menu. This command will list all configured commands. Selecting a configured command triggers command execution. External commands can optionally be configured to prompt for arguments before execution.



Date	Time	Application	Level	Log
12 Jan 2...	10:58:38....	Test1	INFO	Ger
12 Jan 2...	10:58:38....	Test1	INFO	Clie

External commands can be used for tasks like stopping and starting an external process or cleaning up an external directory. External commands allow you to execute a batch file without leaving LogViewPlus.

1 Command List



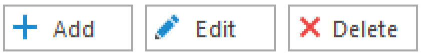
Name	Executable	Arguments	Prompt	Admin
Notepad++	notepad++....		☑	☐

The commands grid shows the list of currently configured external commands. This grid is read-only.

2 Reorder

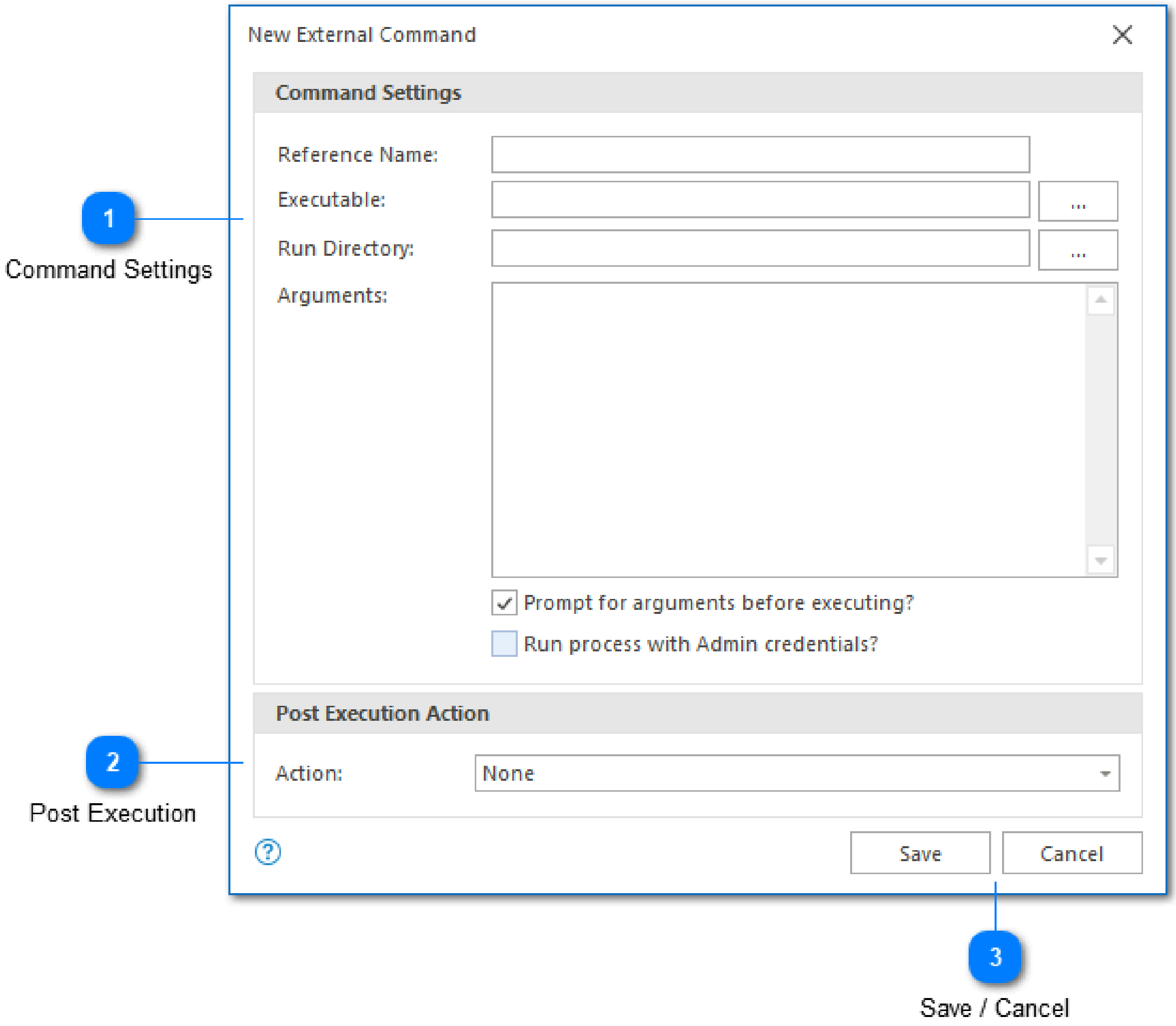
The ordering command can be used to change the display order of the external commands.

3 Command Management



The command management buttons located at the bottom of the view can be used to add, edit and delete external command configurations.

External Settings



New External Command

Command Settings

Reference Name:

Executable:

Run Directory:

Arguments:

☑ Prompt for arguments before executing?

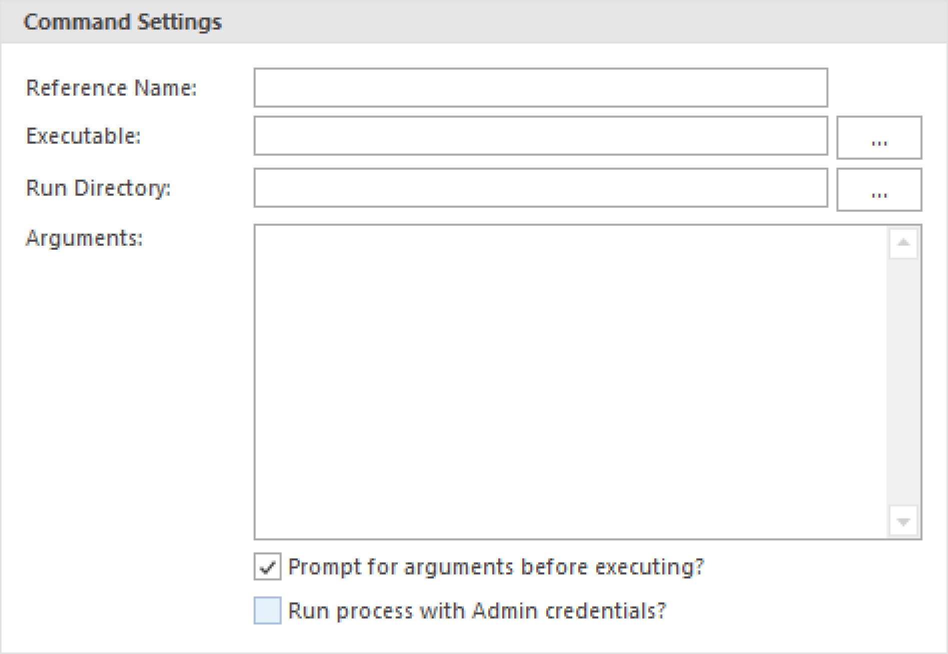
□ Run process with Admin credentials?

Post Execution Action

Action: None

External commands allow you to execute a batch file without leaving LogViewPlus. External commands can be configured in the external settings dialog discussed below.

1 Command Settings



Command Settings

Reference Name:

Executable: ...

Run Directory: ...

Arguments:

☑ Prompt for arguments before executing?

□ Run process with Admin credentials?

The basic command settings are:

1. **Reference Name**: The reference name is a display name that can be associated with this command configuration. The reference name helps you easily identify the command.

2. **Executable**: The full path to the target executable or batch file to be run.

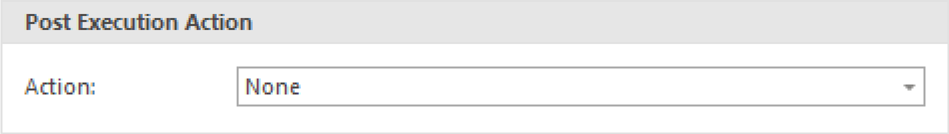
3. **Run Directory**: If the process you are trying to start needs to be started from a specific directory, you can optionally configure the run directory.

4. **Arguments**: Arguments are the parameters used when starting the target application. LogViewPlus also supports a small set of optional argument templates.

5. **Prompt for arguments**: If the arguments used to start your target application change frequently you can optionally configure LogViewPlus to prompt you. This will give you the opportunity to change the arguments before the target application is executed. This option is selected by default.

6. **Run as Admin**: If required, you can optionally configure LogViewPlus to run the target application as Admin.

2 Post Execution

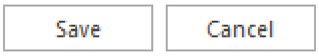


Post Execution Action

Action: None

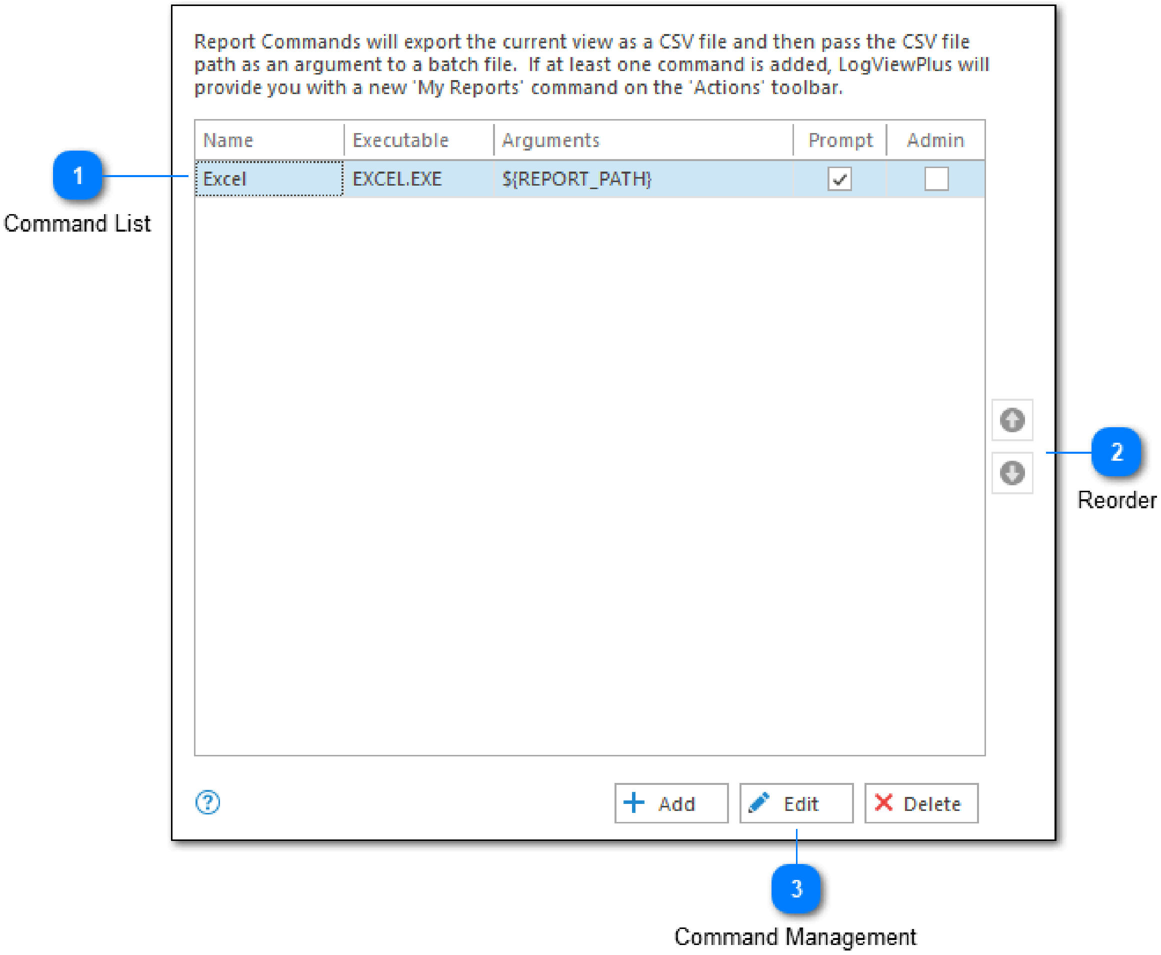
Post execution settings allow you to configure an action which should occur once the external command has completed. For example, opening a file or a pre-saved workspace. If an action is selected, you may need to provide additional detail such as the name of the target file. Target file names may use Argument Templates.

3 Save / Cancel



Once you are done configuring your command you will need to save your settings. Alternatively, if you're not happy with your command configuration, you can cancel it.

Report Commands

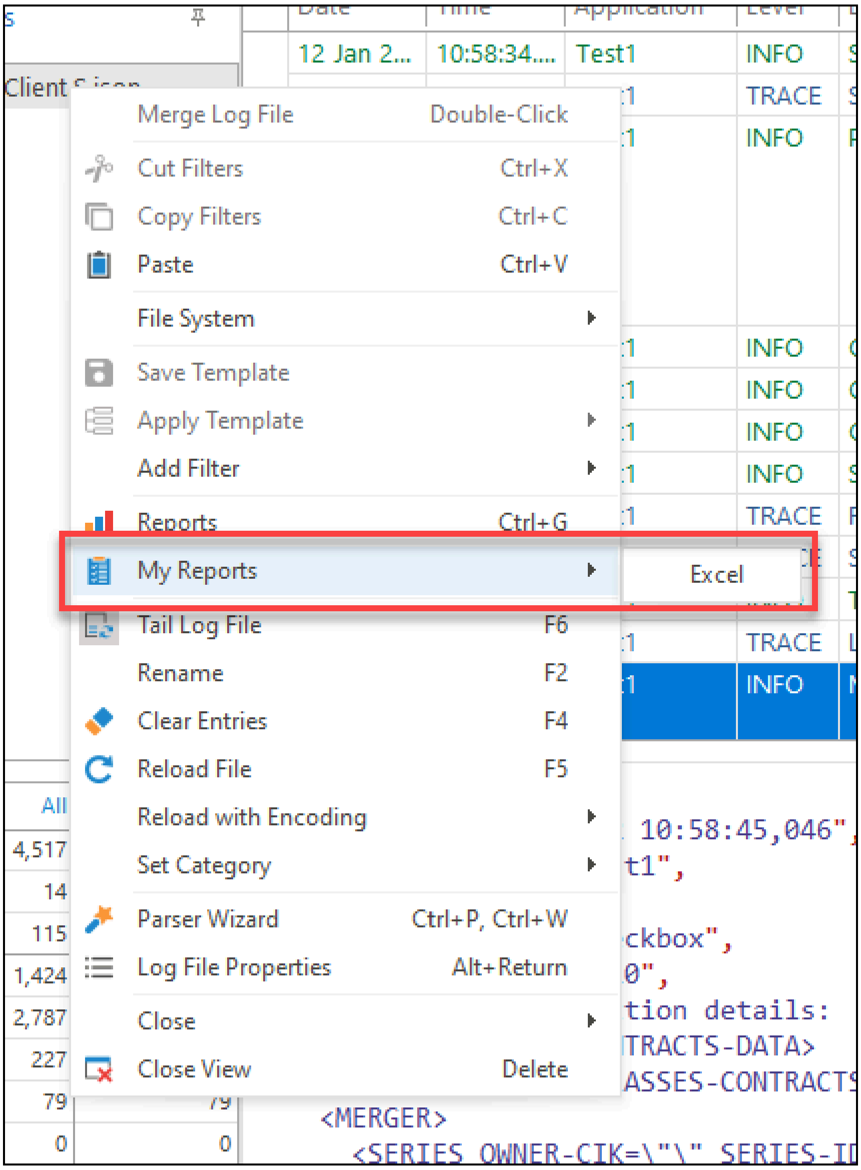


Report Commands will export the current view as a CSV file and then pass the CSV file path as an argument to a batch file. If at least one command is added, LogViewPlus will provide you with a new 'My Reports' command on the 'Actions' toolbar.

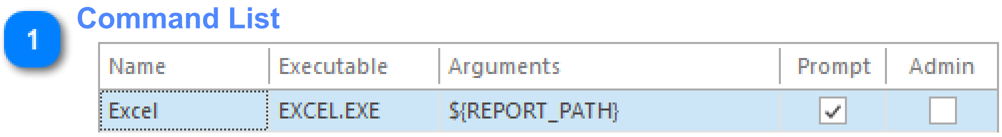
Name	Executable	Arguments	Prompt	Admin
Excel	EXCEL.EXE	${REPORT_PATH}	☑	□

Report commands export the current view to a CSV file and then pass the path of the CSV file to another command.

Once at least one report command has been configured, you will see a 'My Reports' button listed on log file context menu. This command will list all configured report commands. When a report command is selected, it will be executed against the currently selected log file.



Report commands are available from the log file and filter context menu.



1 Command List

Name	Executable	Arguments	Prompt	Admin
Excel	EXCEL.EXE	${REPORT_PATH}	☑	☐

The commands grid shows the list of currently configured report commands. This grid is read-only.

2

Reorder

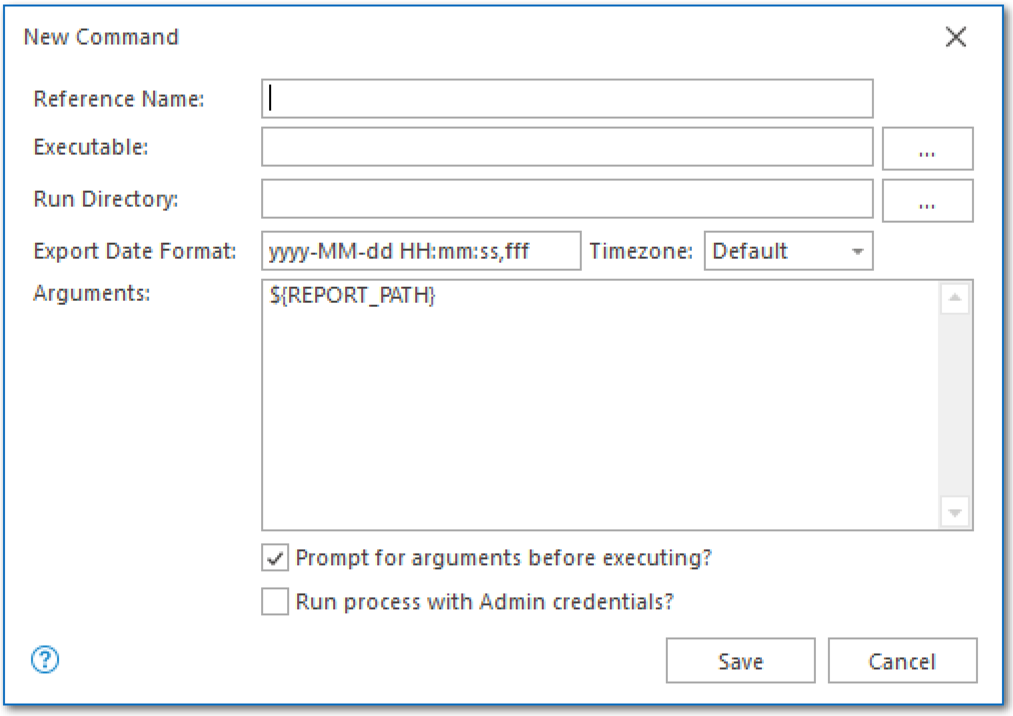
The ordering command can be used to change the display order of the report commands.

3

Command Management

The command management buttons located at the bottom of the view can be used to add, edit and delete report command configurations.

Report Settings



New Command

Reference Name:

Executable:

Run Directory:

Export Date Format: yyyy-MM-dd HH:mm:ss,fff Timezone: Default

Arguments: ${REPORT_PATH}

☑ Prompt for arguments before executing?

□ Run process with Admin credentials?

Before executing a report command, LogViewPlus will export the currently selected log file as a CSV file. The CSV file export will be provided as an argument to the report command.

A report command might be used for tasks like opening a log file in Excel.

The report command settings are:

1. **Reference Name**: The reference name is a display name that can be associated with this command configuration. The reference name helps you easily identify the command.

2. **Executable**: The full path to the target executable or batch file to be run.

3. **Run Directory**: If the process you are trying to start needs to be started from a specific directory, you can optionally configure the run directory.

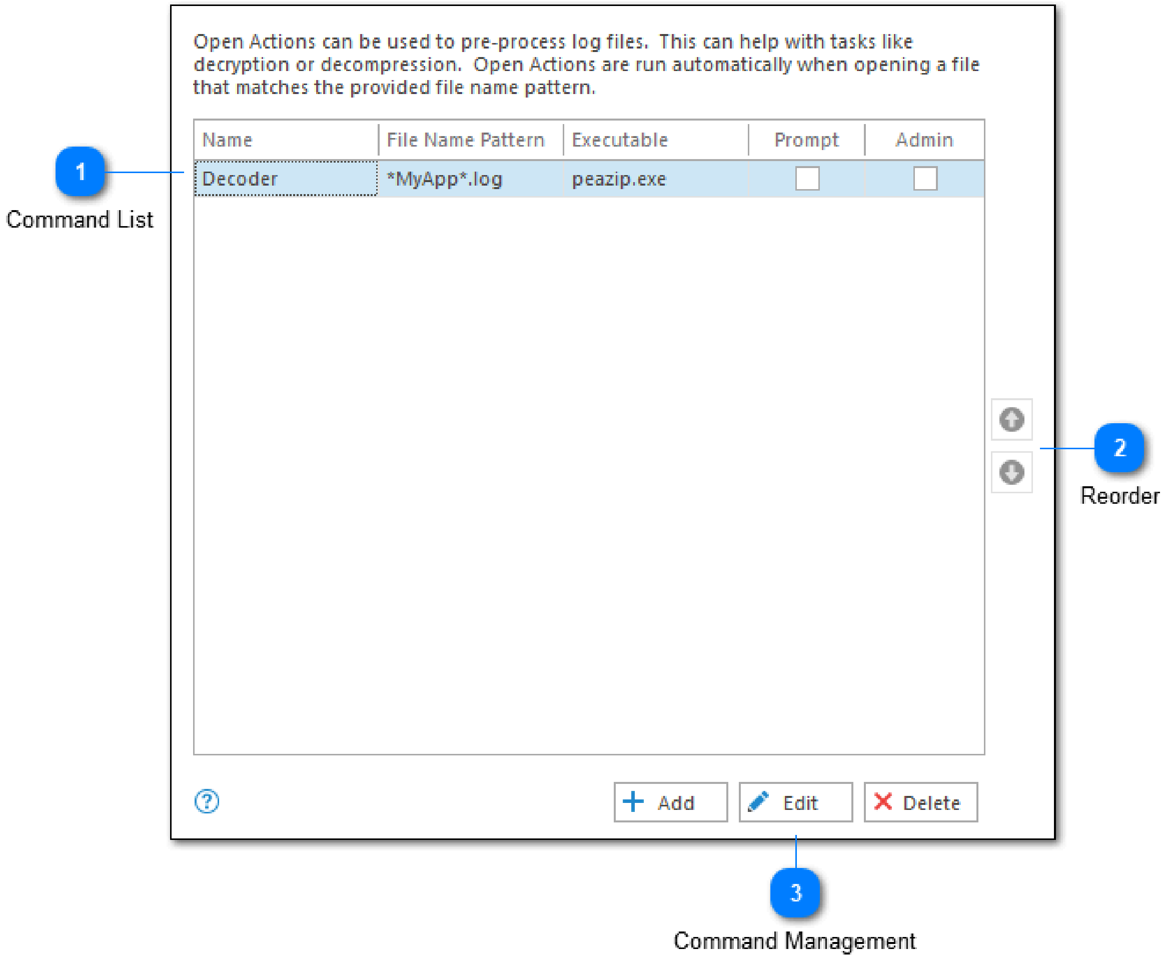
4. **Export Date Format**: Sets the date string format of the resulting export. The timestamp can also be converted into an alternate time zone.

5. **Arguments**: Arguments are the parameters used when starting the target application. LogViewPlus also supports a small set of optional argument templates.

6. **Prompt for arguments**: If the arguments used to start your target application change frequently you can optionally configure LogViewPlus to prompt you. This will give you the opportunity to change the arguments before the target application is executed. This option is selected by default.

7. **Run as Admin**: If required, you can optionally configure LogViewPlus to run the target application as Admin.

Open Actions



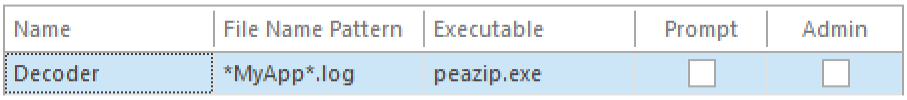
Open Actions can be used to pre-process log files. This can help with tasks like decryption or decompression. Open Actions are run automatically when opening a file that matches the provided file name pattern.

Name	File Name Pattern	Executable	Prompt	Admin
Decoder	*MyApp*.log	peazip.exe	□	□

Open commands are used to override the default LogViewPlus open behavior. If the filename pattern of the open command is matched, then the given command will be executed before LogViewPlus opens a log file. Open commands may instruct LogViewPlus to ignore the file being opened in favor of another file or workspace.

Open commands can be useful for tasks like extracting zip files and opening the contents.

1 Command List



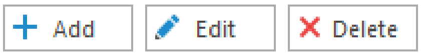
Name	File Name Pattern	Executable	Prompt	Admin
Decoder	*MyApp*.log	peazip.exe	□	□

The commands grid shows the list of currently configured open commands. This grid is read-only.

2 Reorder

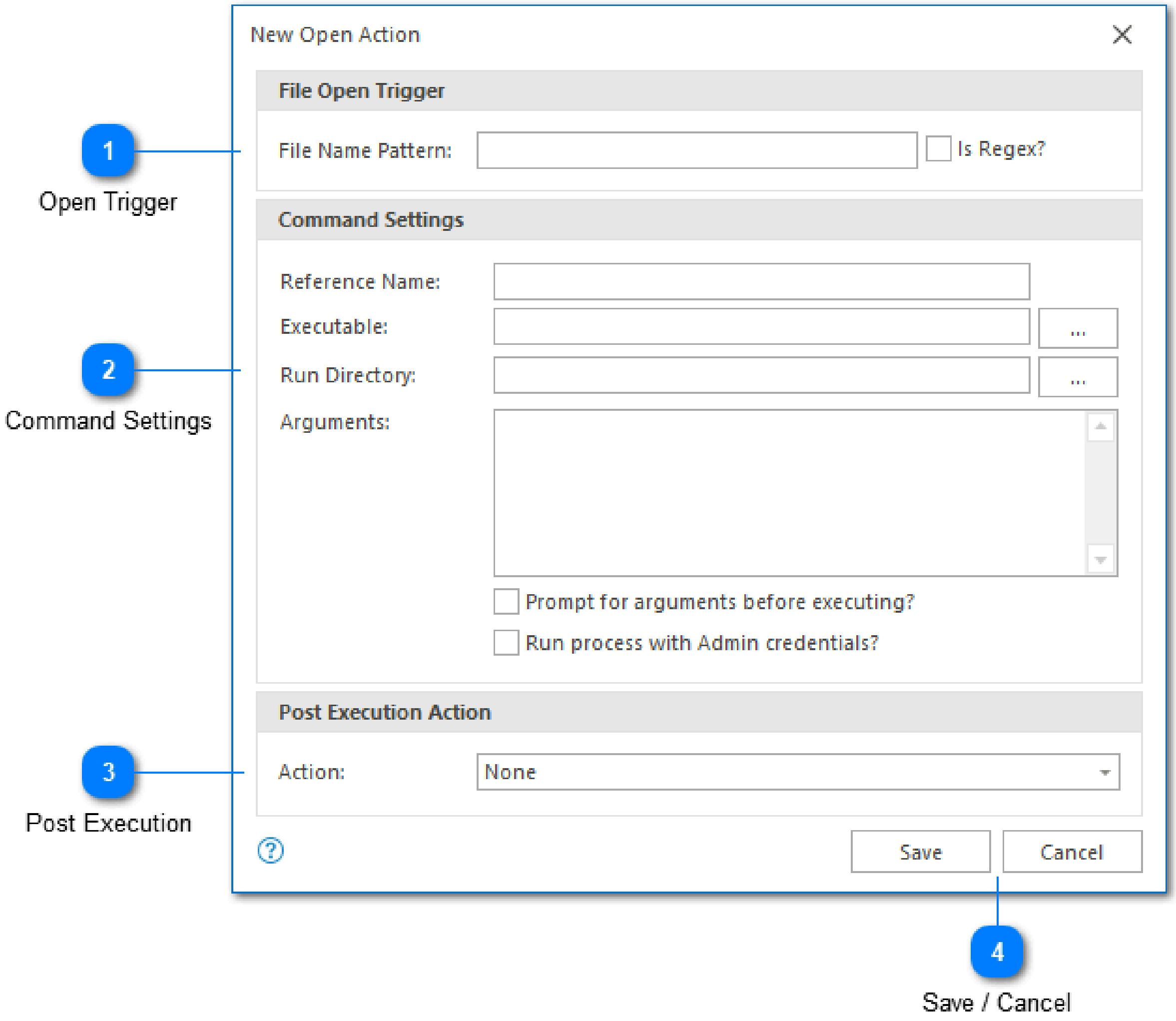
The ordering command can be used to change the order of the open commands. Changing the order of the commands will change the order in which the file name patterns will be scanned. LogViewPlus will execute the first open command with a matching filename pattern.

3 Command Management



The command management buttons located at the bottom of the view can be used to add, edit and delete open command configurations.

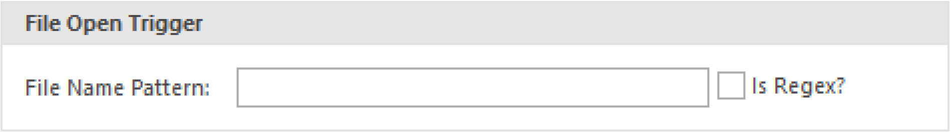
Open Action Settings



Action: None

Open commands are used to override the default LogViewPlus open behavior. Open commands can be configured in the open settings dialog discussed below.

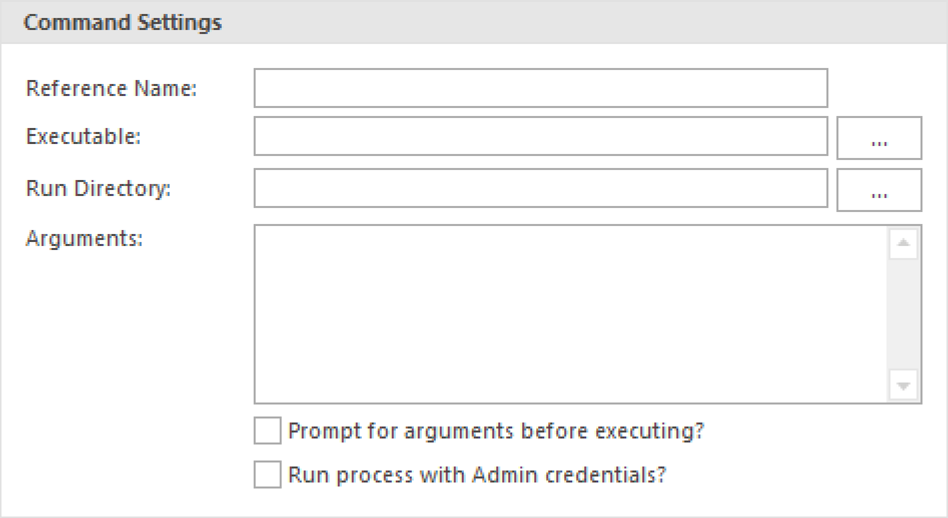
1 Open Trigger



The open trigger is the filename pattern which is used when opening a log file to determine if a given open command should be executed. By default, the file name can contain a wildcard character - an asterisk *. This character will match one or more other characters. For example, say the name of your log file has a date suffix, something like MyApp_12.2.16.log. In this case, you could match the date part of the filename using the asterisk wildcard. Your pattern might be **MyApp_*.log**.

Usually, the asterisk wildcard is sufficient, but if you find you need more power to match your log file name, then you can use a regular expression instead. To do this, check the "Is Regex?" checkbox to let LogViewPlus know the search needs to be performed differently.

2 Command Settings



Command Settings

Reference Name:

Executable:

Run Directory:

Arguments:

□ Prompt for arguments before executing?

□ Run process with Admin credentials?

The basic command settings are:

1. **Reference Name**: The reference name is a display name that can be associated with this command configuration. The reference name helps you easily identify the command.

2. **Executable**: The full path to the target executable or batch file to be run.

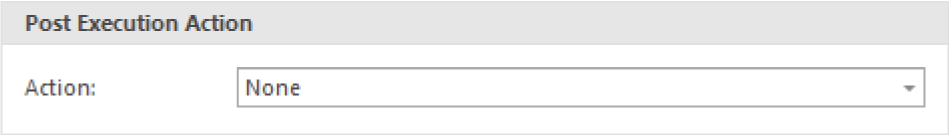
3. **Run Directory**: If the process you are trying to start needs to be started from a specific directory, you can optionally configure the run directory.

4. **Arguments**: Arguments are the parameters used when starting the target application. LogViewPlus also supports a small set of optional argument templates.

5. **Prompt for arguments**: If the arguments used to start your target application change frequently you can optionally configure LogViewPlus to prompt you. This will give you the opportunity to change the arguments before the target application is executed.

6. **Run as Admin**: If required, you can optionally configure LogViewPlus to run the target application as Admin.

3 Post Execution

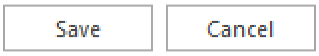


Post Execution Action

Action: None

Post execution settings allow you to configure an action which should occur once the external command has completed. For example, opening a file or a pre-saved workspace. If an action is selected, you may need to provide additional detail such as the name of the target file. Target file names may use Argument Templates.

4 Save / Cancel



Once you are done configuring your command you will need to save your settings. Alternatively, if you're not happy with your command configuration, you can cancel it.

Argument Templates

Argument templates are a set of predefined text substitution commands which can be used when providing arguments to a LogViewPlus command or parser. Argument templates are written with the syntax **${TEMPLATE}**. When an argument template is found, LogViewPlus will replace the template with its in memory value. This allows LogViewPlus to provide arguments such as "the currently selected log file" to the target process.

LogViewPlus supports the following argument templates. Some templates may be dependent on the type of command being executed. For example the ${REPORT_FILE} template is specific to report command execution. For more information, please see the table provided at the bottom of this page.

Argument templates can be divided into four groups: Current, Target, Report and Notification.

Current Templates - Represents the currently selected log file.

${CURRENT_PATH} - The full path to the currently selected log file.
${CURRENT_DIRECTORY} - The full path of the directory containing the currently selected log file.
${CURRENT_NAME} - The file name of the currently selected log file.
${CURRENT_EXTENSION} - The file name extension of the currently selected log file. Note that the extension will not be prefixed with a period. An example extension might be "log" for any *.log file.
${CURRENT_SELECTION} - This argument template will save each selected log entry as a temporary file. The full path to the temporary file will then be inserted into the template. If multiple log entries are selected, then multiple paths will be inserted into the template.
${CURRENT_MESSAGES} - This template is similar to CURRENT_SELECTION, but rather than saving the entire log entry to a temporary file, only the log message (as parsed by LogViewPlus) will be saved to the temporary file.

Target Templates - Represents the file currently being opened.

${TARGET_PATH} - The full path to the target file.
${TARGET_DIRECTORY} - The full path of the directory containing the target file.
${TARGET_NAME} - The file name of the target file.
${TARGET_EXTENSION} - The file name extension of the target file. Note that the extension will not be prefixed with a period. An example extension might be "log" for any *.log file.

Report Templates - Represents the CSV file which was produced prior to the report command execution.

${REPORT_PATH} - The full path to the report file.
${REPORT_DIRECTORY} - The full path of the directory containing the report file.
${REPORT_NAME} - The file name of the report file.
${REPORT_EXTENSION} - The file name extension of the report file. Note that the extension will not be prefixed with a period. An example extension might be "log" for any *.log file.

Notification Templates - Represent data from the log entry which caused the notification to be executed.

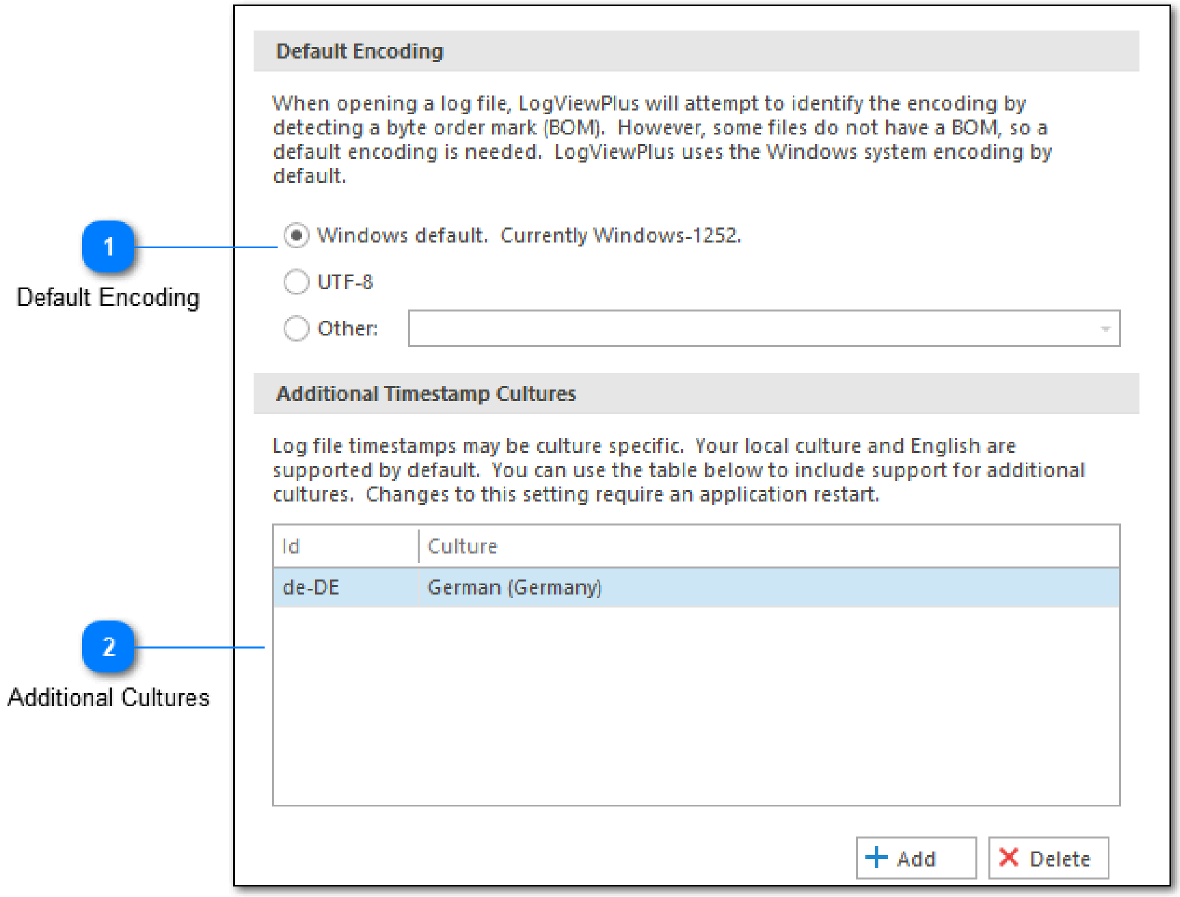
${FILTER_NAME} - The name of the filter which contains the notification.
${FILTER_NOTES} - Any notes which are set on the notification filter.
${LOG_ENTRY_FULL} - The full log entry which triggered the notification.
${LOG_ENTRY_LINE_NUMBER} - The log file line number containing the log entry which triggered the notification.
${LOG_ENTRY_MESSAGE} - The message of the log entry which triggered the notification.
${LOG_ENTRY_PRIORITY} - The priority of the log entry which triggered the notification.
${LOG_FILE_NAME} - The file name of the log file being monitored.
${LOG_FILE_FULL_NAME} - The full path of the log file being monitored.

Template availablilty is determined by the action being executed. The table below shows which templates are available based on command type:

Command Type	Available Templates
External Command	Current
Open Actions	Current, Target
Report Command	Current, Report
Notification	Notification
Custom Parser	Target
Custom Reader	Target

For example, External Commands will only be provided with the templates listed in the 'Current Templates' section.

Encoding & Culture



Default Encoding

When opening a log file, LogViewPlus will attempt to identify the encoding by detecting a byte order mark (BOM). However, some files do not have a BOM, so a default encoding is needed. LogViewPlus uses the Windows system encoding by default.

● Windows default. Currently Windows-1252.

○ UTF-8

○ Other:

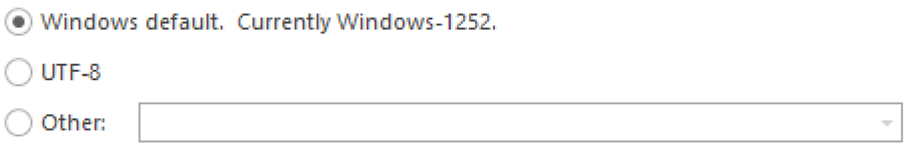
Additional Timestamp Cultures

Log file timestamps may be culture specific. Your local culture and English are supported by default. You can use the table below to include support for additional cultures. Changes to this setting require an application restart.

Id	Culture
de-DE	German (Germany)

When opening a log file, LogViewPlus will attempt to identify the file's encoding by detecting a byte order mark (BOM). However, some files do not have a BOM. In this case a default encoding will be used. LogViewPlus uses the Windows system encoding by default, but you can select a different default encoding.

1 Default Encoding



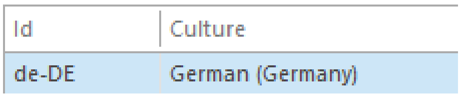
● Windows default. Currently Windows-1252.

○ UTF-8

○ Other:

The default file encoding LogViewPlus should use when opening a log file. Using the Windows default encoding is recommended.

2 Additional Cultures

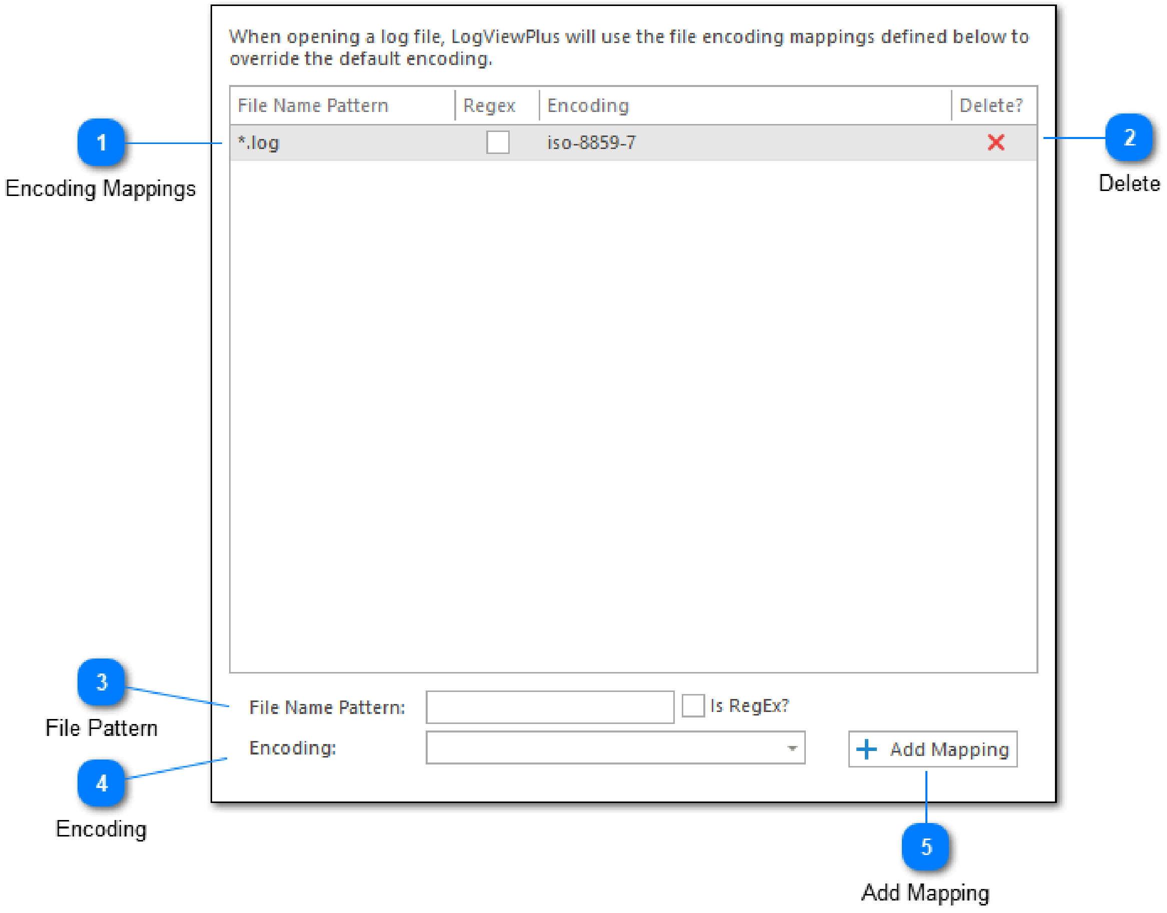


Id	Culture
de-DE	German (Germany)

By default, LogViewPlus will support your current Windows culture as well as English. These cultures can be used when parsing log files. For example, date timestamps are often written in a manner which is culture specific.

The additional cultures list can be used to expand the list of cultures used when parsing log files.

Encoding Mapping



When opening a log file, LogViewPlus will use the file encoding mappings defined below to override the default encoding.

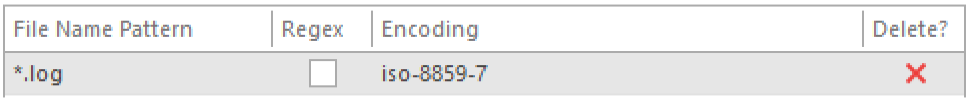
File Name Pattern	Regex	Encoding	Delete?
*.log	☐	iso-8859-7	✕

File Name Pattern: □ Is RegEx?

Encoding:

Sometimes, you may want to open the log file with encoding that is not the default encoding. In this case, you can use the 'Encoding Mapping' settings to create a mapping between a given log file name and the type of encoding should be used when reading that all file.

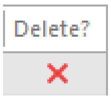
1 Encoding Mappings



File Name Pattern	Regex	Encoding	Delete?
*.log	☐	iso-8859-7	✕

The encoding mapping grid contains a list of all current log file encodings. You can delete an encoding by clicking on the delete command on the far right of the grid.

2 Delete



A delete command is provided for each grid value. Items must be deleted individually.

3 File Pattern

Use the file name pattern text box to specify a pattern which can be used to match the filenames of your application log file. By default, the file name can contain a wildcard character - an asterisk *. This character will match one or more other characters. For example, say the name of your log file has a date suffix, something like MyApp_12.2.16.log. In this case, you could match the date part of the filename using the asterisk wildcard. Your pattern might be **MyApp_*.log**.

Usually, the asterisk wildcard is sufficient, but if you find you need more power to match your log file name, then you can use a regular expression instead. To do this, check the "Is Regex?" checkbox to let LogViewPlus know the search needs to be performed differently.

4 Encoding

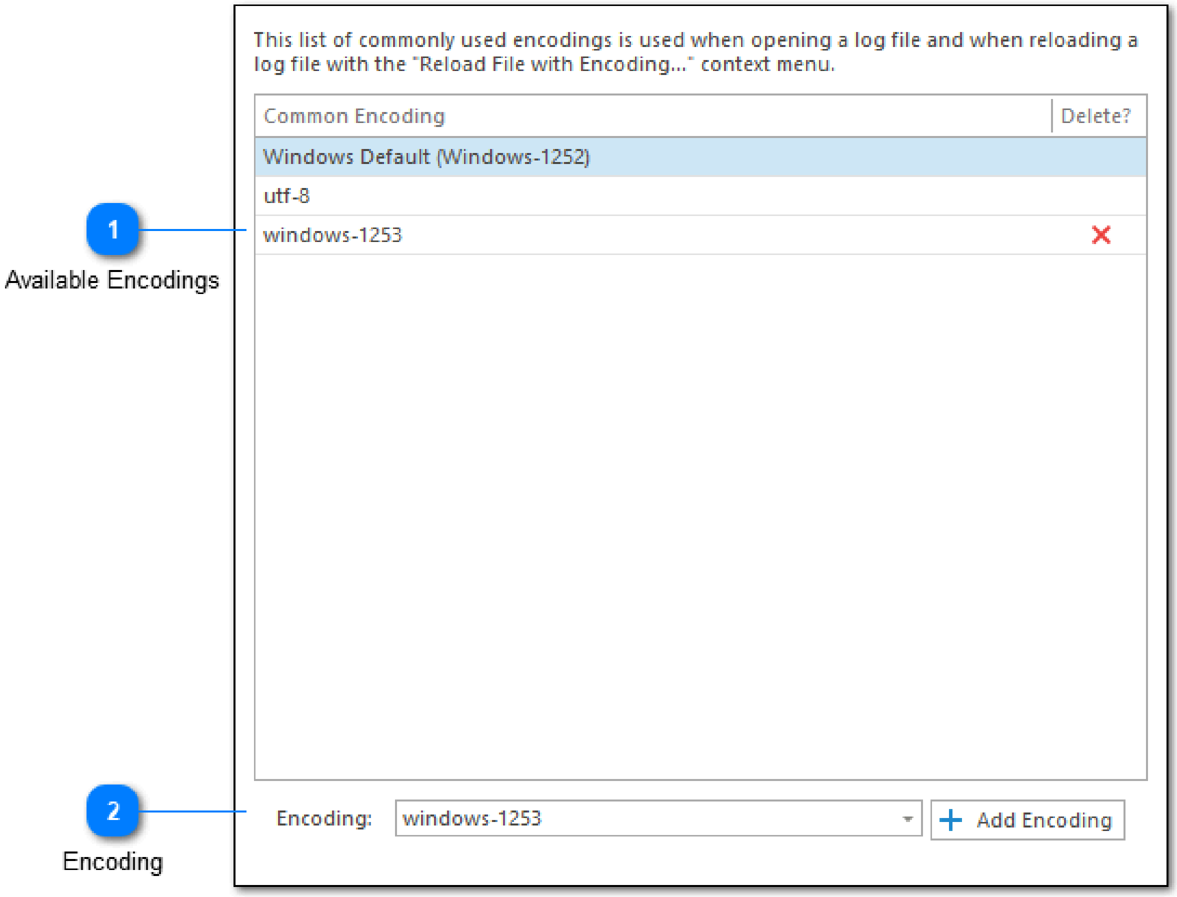
The encoding drop-down box can be used to select the encoding that should be applied to any files which match the given filename pattern. This drop-down box will provide a list of all encodings currently available in Windows.

Once you have selected the encoding that you want to use for your file name pattern, you can click the Add Mapping command to save your changes.

5 Add Mapping

Once a file name pattern and encoding have been provided, you can add the mapping as to the encoding mappings list.

Common Encodings



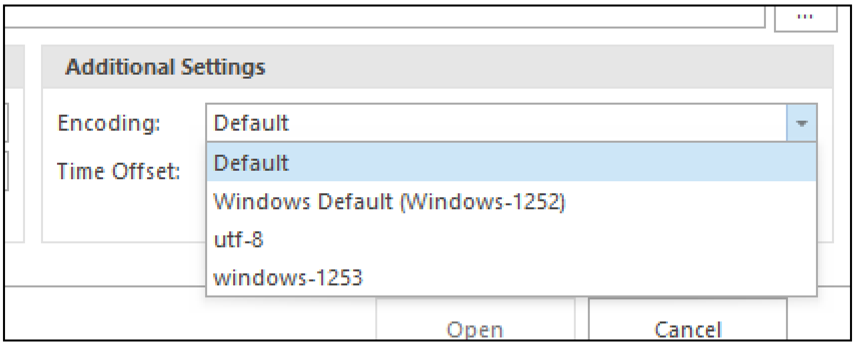
This list of commonly used encodings is used when opening a log file and when reloading a log file with the "Reload File with Encoding..." context menu.

Common Encoding	Delete?
Windows Default (Windows-1252)	
utf-8	
windows-1253	✕

Encoding: windows-1253

Common Encoding settings allows you to quickly set the encoding for a log file without being overloaded with encoding options. In the example screenshots, the encoding 'utf-16' has been added in addition to the defaults. Additional encodings can be removed by clicking the red 'X' icon in the 'Delete' column. Default encodings cannot be deleted.

All common encodings defined here will be listed under the 'Encoding' setting when opening log files.

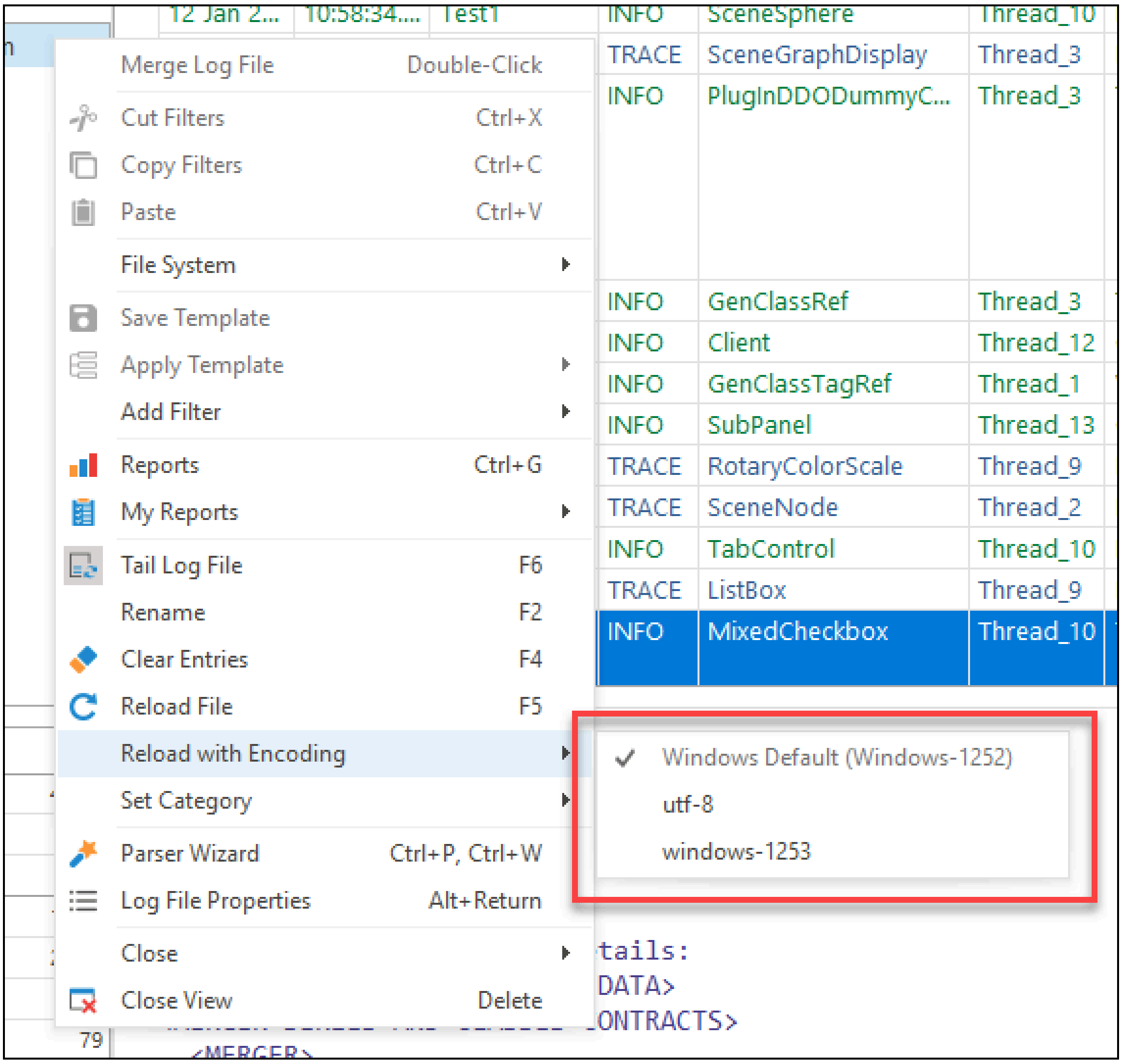


Additional Settings

Encoding: Default

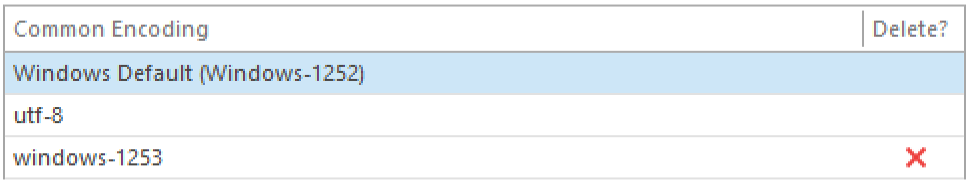
Time Offset:

Also, if you right-click on a log file, you'll notice a command which is called 'Reload with Encoding...'.



This command is useful if you have loaded a log file in the wrong encoding and want to quickly reload the file using a different encoding. The encodings available in this pop-up menu are configured in the 'Reloading Encodings' settings.

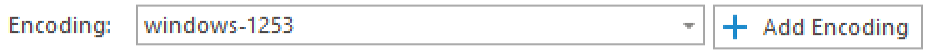
1 Available Encodings



Common Encoding	Delete?
Windows Default (Windows-1252)	
utf-8	
windows-1253	✗

The available encodings grid shows a list of encodings which will currently be displayed in the 'Reload File with Encoding...' pop-up. You can delete an encoding by clicking on the delete command on the far right of the grid.

2 Encoding

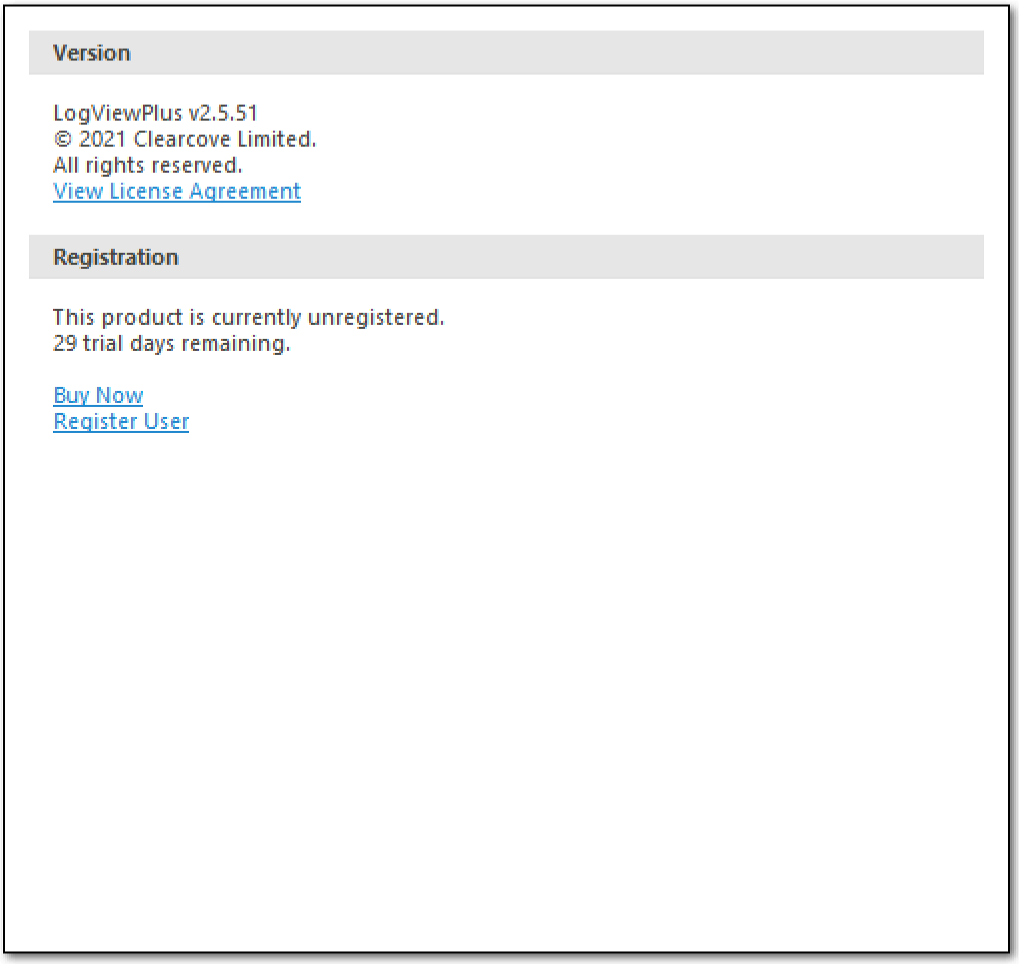


Encoding: windows-1253

The encoding drop-down box can be used to select the encoding that should be displayed in the 'Reload File with Encoding...' pop-up. This drop-down box will provide a list of all encodings currently available in Windows.

Once you have selected the encoding that you want to use for your file name pattern, you can click the Add Encoding command to save your changes.

About



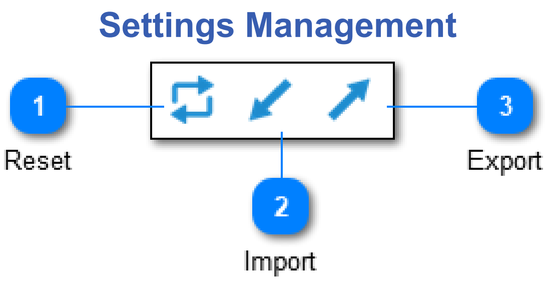
Version

LogViewPlus v2.5.51
© 2021 Clearcove Limited.
All rights reserved.

Registration

This product is currently unregistered.
29 trial days remaining.

The About settings page gives you information about the current version of LogViewPlus as well as your registration status. If you are running a licensed version of LogViewPlus your license key will be shown here.



In the bottom left corner of the LogViewPlus Settings window are three blue commands which can be used to manage your settings: Reset, Import and Export.

1 Reset

The Reset command will delete all of your application settings and revert LogViewPlus back to the installation default settings. We recommend exporting all of your existing settings before using this command.

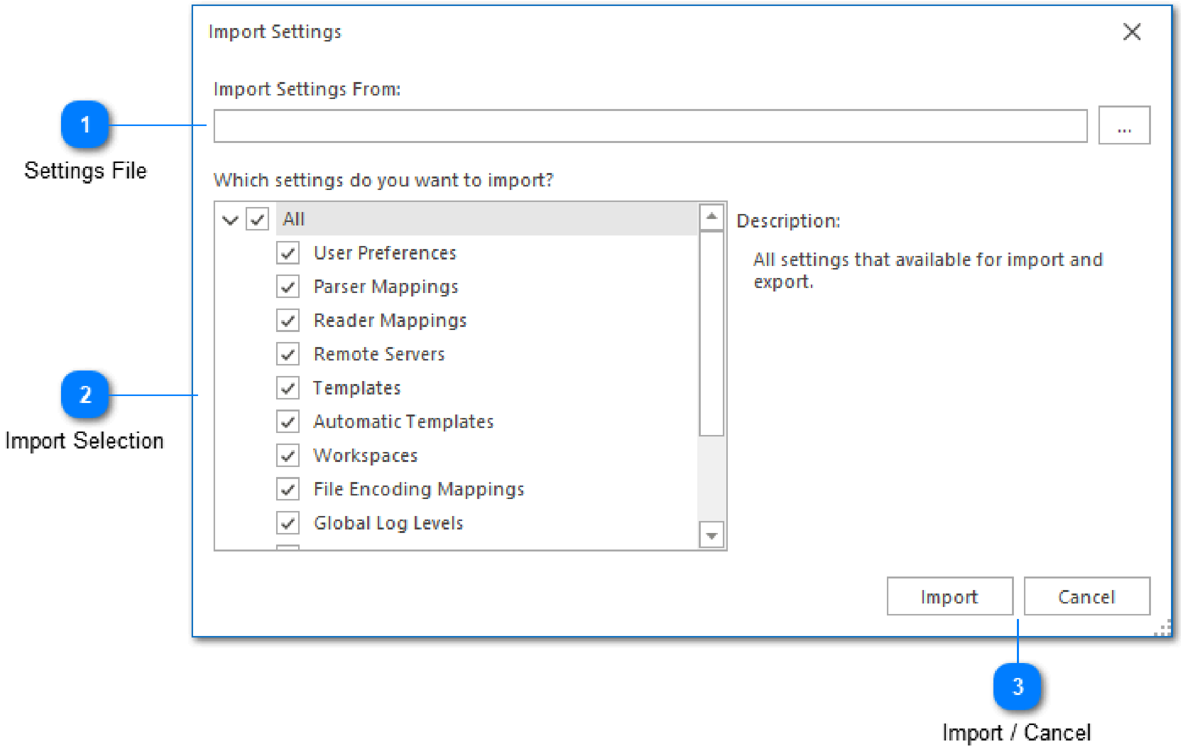
2 Import

The Import command can be used to import settings that have been previously saved with the 'Export' command.

3 Export

The Export command can be used to save your current settings to an XML file. Some elements in this XML file can be modified manually (such as parser configurations) while others are base64 encoded and should not be edited.

Import Settings



Import Settings

Import Settings From:

Which settings do you want to import?

- ☑ All
  - ☑ User Preferences
  - ☑ Parser Mappings
  - ☑ Reader Mappings
  - ☑ Remote Servers
  - ☑ Templates
  - ☑ Automatic Templates
  - ☑ Workspaces
  - ☑ File Encoding Mappings
  - ☑ Global Log Levels

Description:

All settings that available for import and export.

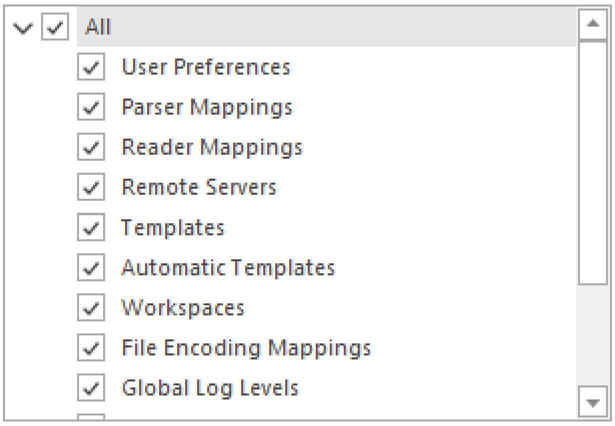
The Import Settings dialog can be used to import previously exported LogViewPlus settings. The dialog provides the ability to import settings on a granular level. This gives you more flexibility when managing your settings.

Settings File

Import Settings From:

The full path to the previously exported settings file. There is a command button on the far right of the window which can be used to browse for the file.

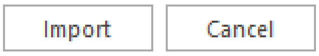
2 Import Selection


☑ All
- ☑ User Preferences
- ☑ Parser Mappings
- ☑ Reader Mappings
- ☑ Remote Servers
- ☑ Templates
- ☑ Automatic Templates
- ☑ Workspaces
- ☑ File Encoding Mappings
- ☑ Global Log Levels

The import selection check boxes allow you to choose which settings to import. Checked categories will be completely replaced by imported settings. Categories which are unchecked will not be modified.

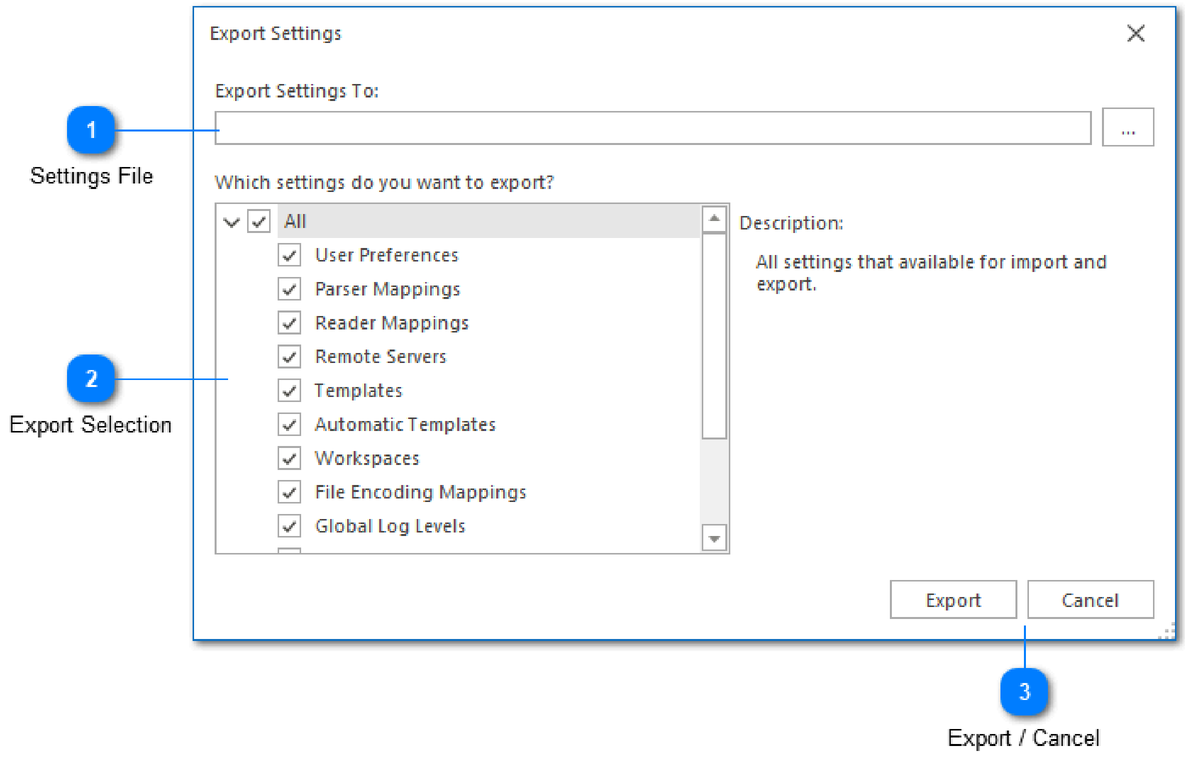
If the exported file you are trying to import does not have a particular category, then that category check box will have no impact on the import process.

3 Import / Cancel



The Import command can be used to commit the operation. Use the cancel command if you do not want to execute the import.

Export Settings



Export Settings

Export Settings To:

Which settings do you want to export?

- ☑ All
  - ☑ User Preferences
  - ☑ Parser Mappings
  - ☑ Reader Mappings
  - ☑ Remote Servers
  - ☑ Templates
  - ☑ Automatic Templates
  - ☑ Workspaces
  - ☑ File Encoding Mappings
  - ☑ Global Log Levels

Description:

All settings that available for import and export.

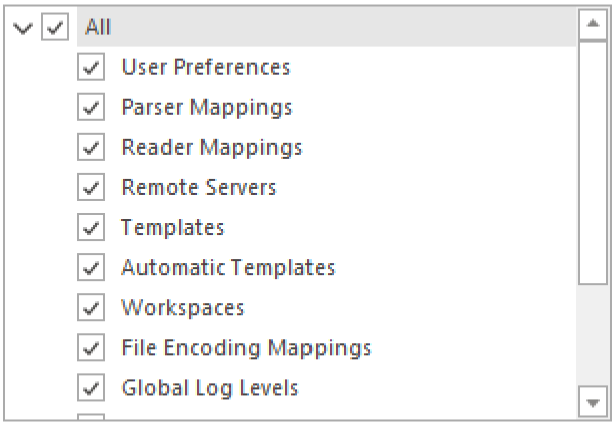
The Export Settings dialog can be used to save your LogViewPlus settings. The dialog provides the ability to export settings on a granular level. This gives you more flexibility when managing your settings or sharing settings with other users.

1 Settings File

Export Settings To:

The full path to the settings file you want to create. If this file already exists, it will be replaced on export. There is a command button on the far right of the window which can be used to browse for the file.

2 Export Selection

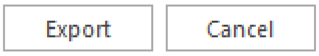


☑ All

- ☑ User Preferences
- ☑ Parser Mappings
- ☑ Reader Mappings
- ☑ Remote Servers
- ☑ Templates
- ☑ Automatic Templates
- ☑ Workspaces
- ☑ File Encoding Mappings
- ☑ Global Log Levels

The export selection check boxes allow you to choose which settings to export. Categories which are unchecked will not be exported. This is helpful when you want to share some settings with other users, but keep other settings private.

3 Export / Cancel



The Export command can be used to save your new settings file. If the file already exists, it will be replaced. Use the cancel command if you do not want to export your settings.

Admin Actions

LogViewPlus supports three advanced commands which may be useful for system administrators. These commands are only available from the command line.

Command	Purpose	Syntax
register	Registers a new user from the command line. This command requires a network connection.	**logviewplus.exe -register -username:{User} -key:{K** To execute with output, use: start /wait logviewplus.exe -register -username:{User} - Show the return value with: echo %ErrorLevel%
addsetting	Adds a Admin Setting to the appropriate location.	**logviewplus.exe -addsetting -key:{Key} -value:{Valu** Examples: start /wait logviewplus.exe -addsetting -key:HideLicens
removesetting	Removes a Admin Setting from the appropriate location.	**logviewplus.exe -removesetting -key:{Key}** Examples: start /wait logviewplus.exe -removesetting -key:HideLic

Admin Settings are discussed in the next section.

Admin Settings

Admin settings are additional application settings which cannot be configured by the application directly.

Admin settings can be stored in one of three locations. The locations are listed below in load order. If a property is found in a parent location, it will override subsequent values.

Location	Order	Description
%ProgramData%\LogViewPlus\ machinesettings.ini	1	The machine configuration applies to all users on the machin privileges may be required.
[Install Directory] LogViewPlus.exe.config	2	This file must be edited by an administrator directly. Values r overridden on reinstall or repair.
%AppData%\LogViewPlus\ usersettings.ini	3	The user configuration applies only to a single user.

Admin settings can be applied by editing the target file directly. However, the recommended approach is to use the addsetting / removesetting Admin Actions. Note that admin actions commands cannot edit the installation configuration at LogViewPlus.exe.config.

The following admin settings are available.

Property	Default	Description
AllowPlugins	true	Used to control whether plugins can be loaded. If plugins are will still need to manually opt-in to running plugins in Plugin S
DisableParserConfiguration	false	Do not allow users to view or modify parser settings.
DebugTransferLogging	false	Controls the verbosity of data transfer logging.
ThrowExceptions	false	In rare instances, LogViewPlus exception handling may be hi need to be resolved. This settings can be used to cause exc thrown more frequently in order to improve error reporting.
HideLicenseKey	false	Hides the application license key from the about menu.
OfflineMode	false	Used to control reporting and automatic update checks.

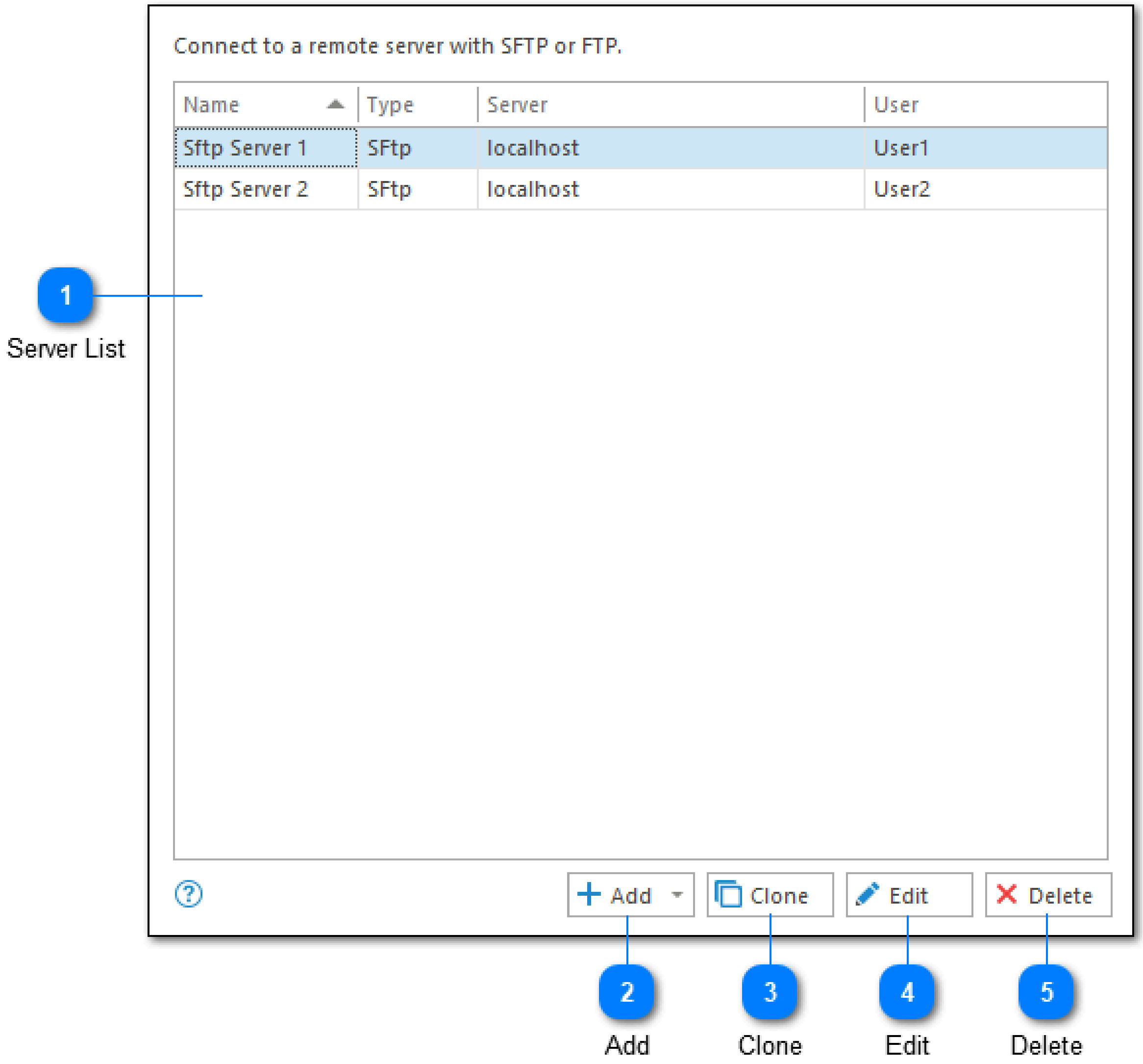
File System Settings

File system settings are used to manage the Log Explorer. This controls how you interact with file systems when using LogViewPlus.

LogViewPlus can access remote file systems in one of four ways. SFTP, FTP, and SCP access are all managed in the remote server's configuration. Windows or SMB shares are managed in the network shares configuration.

In addition, LogViewPlus can manage a number of different data sources. These data sources are not file systems, but they appear in the Log Explorer.

Remote Servers

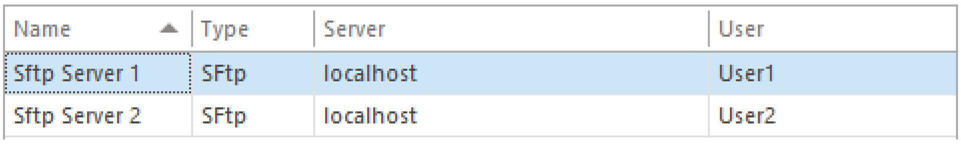


Connect to a remote server with SFTP or FTP.

Name	Type	Server	User
Sftp Server 1	SFtp	localhost	User1
Sftp Server 2	SFtp	localhost	User2

The remote server's configuration settings displays a list of all configured SFTP, FTP, SCP and HTTPS servers.

1 Server List

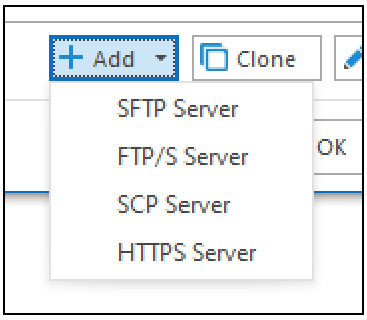


Name	Type	Server	User
Sftp Server 1	SFtp	localhost	User1
Sftp Server 2	SFtp	localhost	User2

The server list shows all of the currently configured SFTP, FTP, and SCP servers in the order in which they will be displayed by the Log Explorer.

2 Add

When you click to add a server you will be presented with the drop-down menu displayed below.



The add server drop-down is used to determine the type of server that you want to configure. Based on the server type selected you will be presented with either the SFTP, FTP, SCP or HTTPS configuration screen.

3 Clone

When cloning a server LogViewPlus will open the currently selected server configuration. You can then make changes to the server configuration and save your changes as a new server.

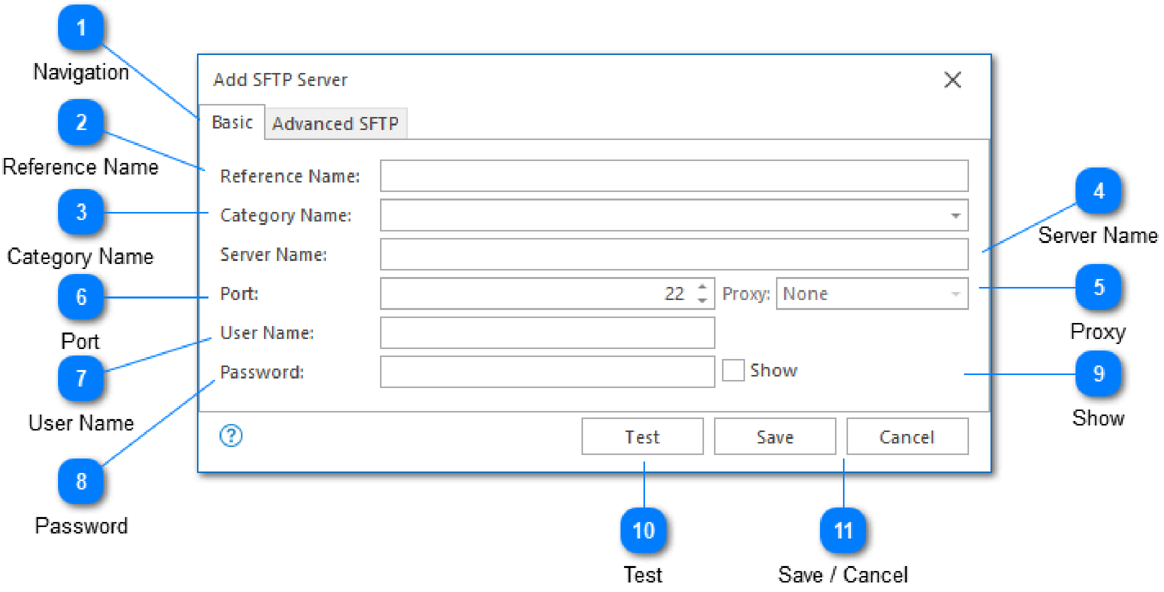
4 Edit

The edit command opens the appropriate server configuration form for the currently selected server configuration. Saving changes will overwrite the current server settings.

5 Delete

The delete command can be used to remove the currently selected server configuration.

SFTP Servers

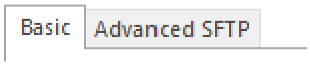


Port: 22 Proxy: None

Configuring an SFTP server allows LogViewPlus to browse open and monitor remote log files. The remote server must have SFTP installed and running.

When connecting to an SFTP server for the first time, LogViewPlus will assume that the server's certificate fingerprint is valid and you will not be prompted to accept the certificate. If the certificate fingerprint changes on future connection attempts, you will be prompted to accept the change before your username and password is sent to the server.

1 Navigation



Navigating between basic and advanced settings is controlled by the tabs at the top of the screen. For most configuration scenarios advanced settings will not be needed.

2 Reference Name

A reference name can be set to more easily manage and access this configuration. Reference names should be unique. By default, the reference name will mirror the server name. Reference names are also be used by the local log level and automatic template settings.

3 Category Name

Category Name:

A category name is used to group SFTP connections into a folder in the Log Explorer. This field is not required.

If you have previously configured a server with a category name, this name will be available as a drop-down option. Alternatively you can type a new name into the category text box.

4 Server Name

Server Name:

The name of the server which is hosting the SFTP process. This can either be a host name or an IP address.

5 Proxy

Proxy: None

If you connect to this server through proxy, you will need to select the proxy. This option will only be available if you have preconfigured your proxy server.

6 Port

Port: 22

The port number where the service is listening.

7 User Name

User Name:

The username that should be used to authenticate with the service.

8

Password

The password associated with the given username.

9

Show

Selecting the show text box will display the password in plain text. This option will only be available when adding a new server.

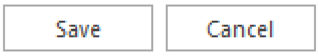
10

Test

The test command can be used to verify the currently configured server. To do this, a connection with the server will be established. No other actions will be executed.

11

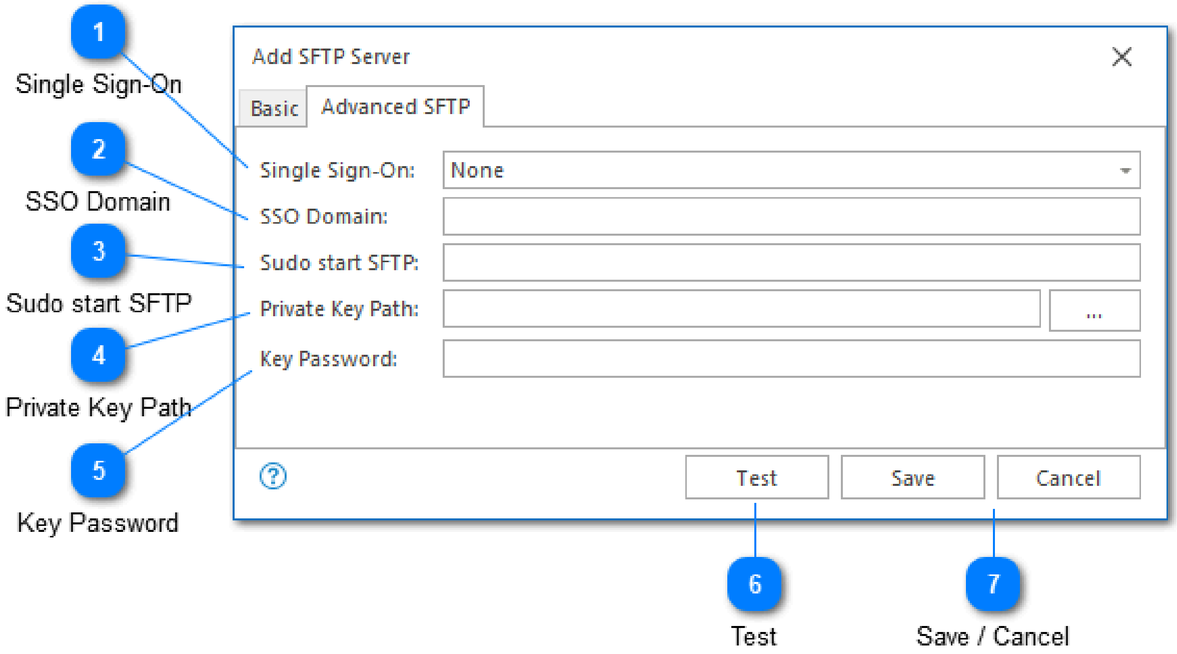
Save / Cancel



Once you have configured your server, you can use the save command to persist your changes. Once your changes have been saved the configured server will be immediately available in the folder tree view.

Use the "Cancel" command to return to LogViewPlus without saving your changes.

Advanced SFTP



Add SFTP Server

Single Sign-On: None

SSO Domain:

Sudo start SFTP:

Private Key Path:

Key Password:

The advanced SFTP configuration options provide alternative authentication mechanisms. This may be helpful if you are SFTP server requires advanced authentication.

1 Single Sign-On

Single Sign-On: None

Single sign-on allows you to use Kerberos or NTLM authentication when connecting to the remote server. This option may be helpful if both the client and server or configured for domain trust.

2 SSO Domain

SSO Domain:

The domain used for single sign-on. This option is needed if you are using single sign-on with a username and password. In this case, you need to provide the domain associated with the user.

3 Sudo start SFTP

A single command that can be executed post login.

The purpose of this command is to allow you to change user before the file transfer session starts. This allows you to login to the server with one account and use another account for file access. For example: sudo su USER -c /usr/lib/sftp-server

You will need to provide a path that is specific to your sftp-server. Common examples include: /bin/sftp-server, /usr/lib/sftp-server and /usr/libexec/openssh/sftp-server.

Behind the scenes, this command works with an SSH session to initialize it before binding into a full SFTP connection. The command provided is the initialization command executed.

4 Private Key Path

You can use public private key authentication for communication with the server. To do this, you must provide the full path to your private key.

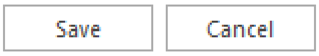
5 Key Password

The password for the private key provided.

6 Test

The test command can be used to verify the currently configured server. To do this, a connection with the server will be established. No other actions will be executed.

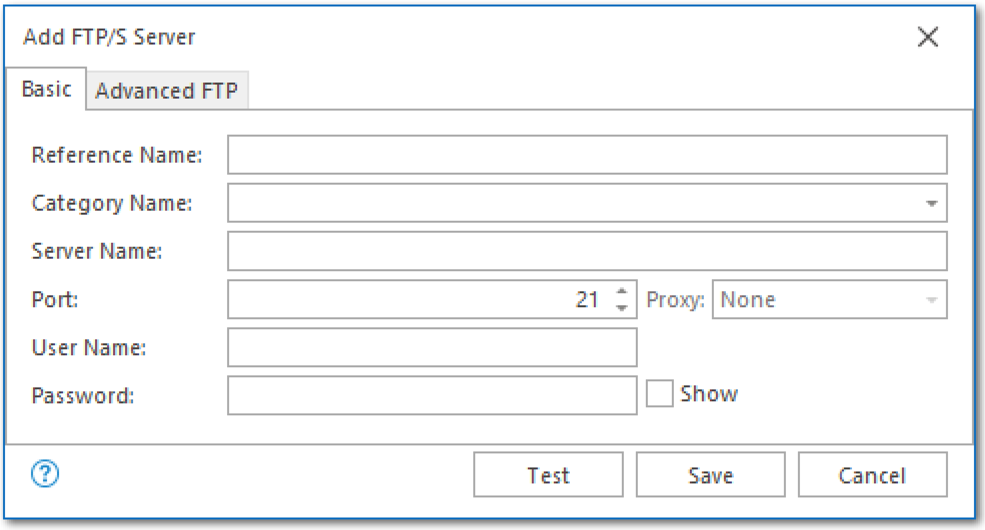
7 Save / Cancel



Once you have configured your server, you can use the save command to persist your changes. Once your changes have been saved the configured server should be immediately available in the folder tree view.

Use the "Cancel" command to return to LogViewPlus without saving your changes.

FTP Servers



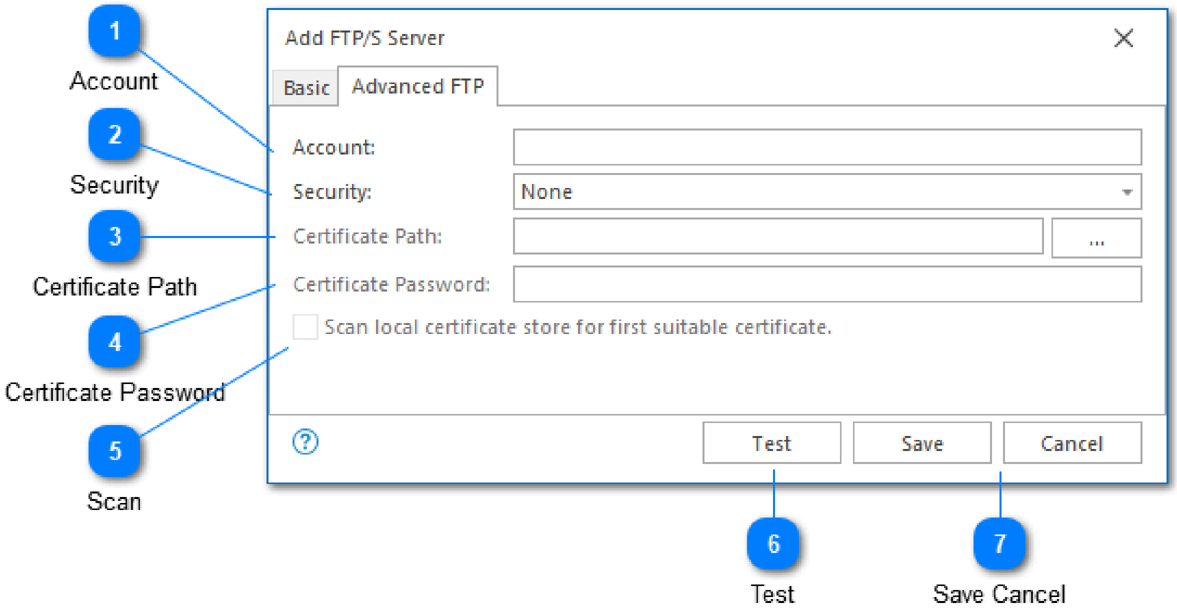
Port: 21

Proxy: None

Configuring an FTP server allows LogViewPlus to browse open and monitor remote log files. The remote server must have FTP installed and running.

For description of the basic fields used to configure an FTP server, please see the SFTP server documentation. For a basic configuration, there is no difference between the fields used to configure SFTP vs FTP.

Advanced FTP



Add FTP/S Server

Basic | Advanced FTP

Account:

Security: None

Certificate Path: ...

Certificate Password:

□ Scan local certificate store for first suitable certificate.

The advanced FTP configuration options provide alternative authentication mechanisms. This may be helpful if you are FTP server requires advanced authentication.

1 Account

Account:

If your FTP servers may requires an account name in addition to the username and password it can be provided as an advanced setting.

2 Security

Security: None

Determines whether implicit or explicit security should be used in your FTPS connection. Selecting either implicit or explicit security will enable the certificate options discussed below.

3 Certificate Path

The certificate to be used for client certificate authentication.

4 Certificate Password

The password for the certificate provided.

5 Scan

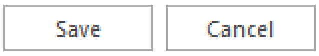
□ Scan local certificate store for first suitable certificat

If you are using FTPS you may choose to scan the client's certificate store to find an appropriate certificate rather than using a file system certificate.

6 Test

The test command can be used to verify the currently configured server. To do this, a connection with the server will be established. No other actions will be executed.

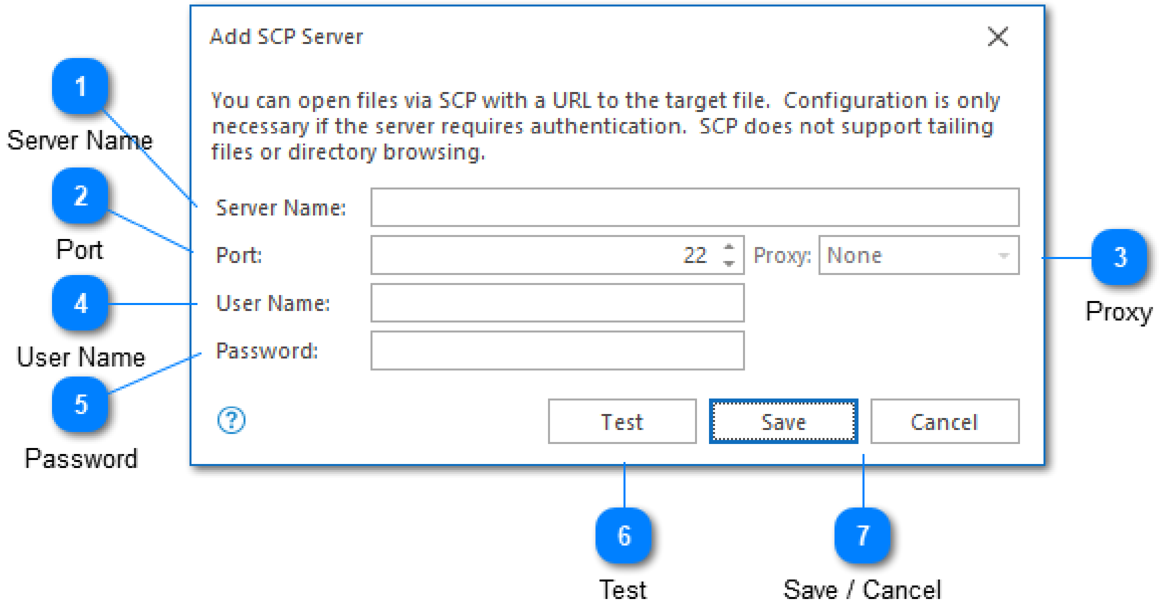
7 Save Cancel



Once you have configured your server, you can use the save command to persist your changes. Once your changes have been saved the configured server should be immediately available in the folder tree view.

Use the "Cancel" command to return to LogViewPlus without saving your changes.

SCP Access



Add SCP Server

You can open files via SCP with a URL to the target file. Configuration is only necessary if the server requires authentication. SCP does not support tailing files or directory browsing.

Server Name:

Port: 22 Proxy: None

User Name:

Password:

If your remote server does not provide as SFTP or FTP access, you may still be able to access your log files via SCP. The SCP protocol is not recommended because it does not provide the ability to browse directories or tail log files. However, in some situations it may still be a useful option.

In order to download a log file via SCP you will need to provide the full URL to the target file. For example: scp://server:port/path/file.log.

Configuring an SCP server in advance gives you the ability to protect the server authentication credentials. When you provide the URL to download a log file via SCP, LogViewPlus will look at the server and determine if SCP access for that server has been preconfigured. If so LogViewPlus will use the username and password provided when connecting to the remote server.

When connecting to an SCP server for the first time, LogViewPlus will assume that the server's certificate fingerprint is valid and you will not be prompted to accept the certificate. If the certificate fingerprint changes on future connection attempts, you will be prompted to accept the change before your username and password is sent to the server.

1 Server Name

Server Name:

The target SCP server.

2 Port

Port: 22

The port used for SSH access on the target server. The default port is usually 22.

3 Proxy

Proxy: None

If you connect to this server through proxy, you will need to select the proxy. This option will only be available if you have preconfigured your proxy server.

4 User Name

User Name:

The username that should be used to authenticate with the service.

5 Password

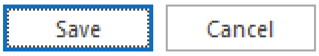
Password:

The password associated with the given username.

6 Test

The test command can be used to verify the currently configured server. To do this, a connection to the server will be established. No other actions will be executed.

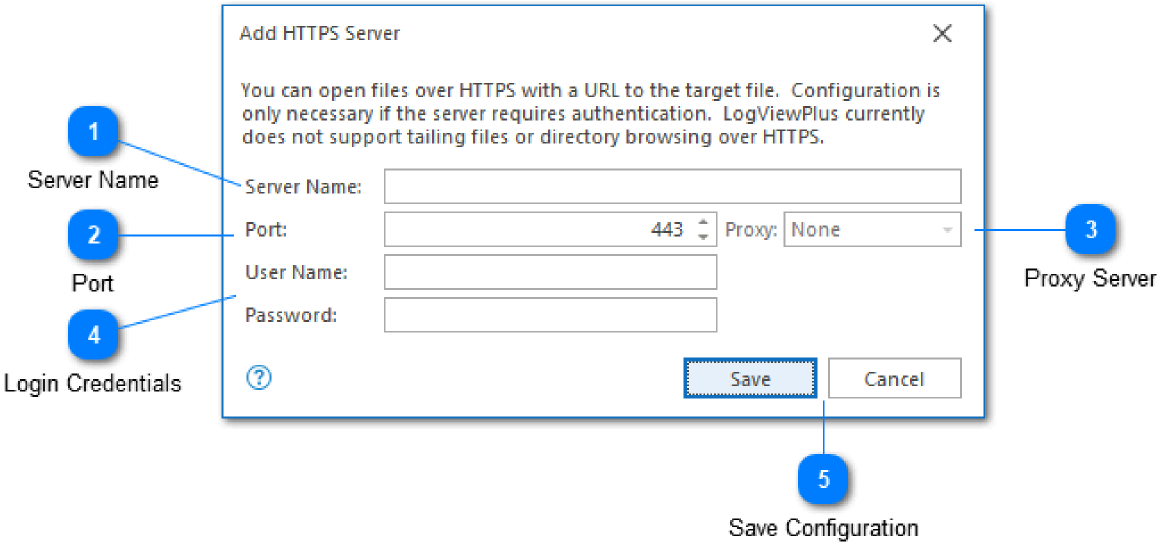
7 Save / Cancel



Once you have configured your server, you can use the save command to persist your changes. Once your changes have been saved the configured server should be immediately available in the folder tree view.

Use the "Cancel" command to return to LogViewPlus without saving your changes.

HTTPS Servers



Add HTTPS Server

You can open files over HTTPS with a URL to the target file. Configuration is only necessary if the server requires authentication. LogViewPlus currently does not support tailing files or directory browsing over HTTPS.

Server Name:

Port: 443 Proxy: None

User Name:

Password:

LogViewPlus can open log files using HTTP or HTTPS. To open a file over HTTP/S simply paste the URL into the Open File settings. Configuration is only necessary if your HTTPS server requires authentication or if a proxy server should be used.

The authentication method is chosen automatically based on the server response. Possible options include: NTLM, Kerberos, Negotiate, Digest, and Basic.

Refreshing a log file in LogViewPlus will cause the file to be re-downloaded from the server.

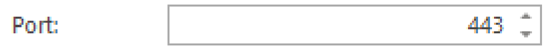
Authentication over HTTP is insecure and not supported. Directory browsing and tail are not currently supported over HTTP/S.

1 Server Name

Server Name:

The name of the target HTTPS server without the protocol. For example: mycompany.com or www.mycompany.com.

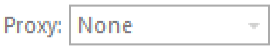
2 Port



Port: 443

The port which will be used by the HTTPS server.

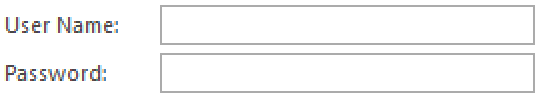
3 Proxy Server



Proxy: None

The proxy server configuration to use. This property will be disabled if the proxy server has not been configured. The options available are None and Default.

4 Login Credentials

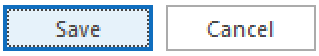


User Name:

Password:

The login credentials to use if credentials are requested by the server.

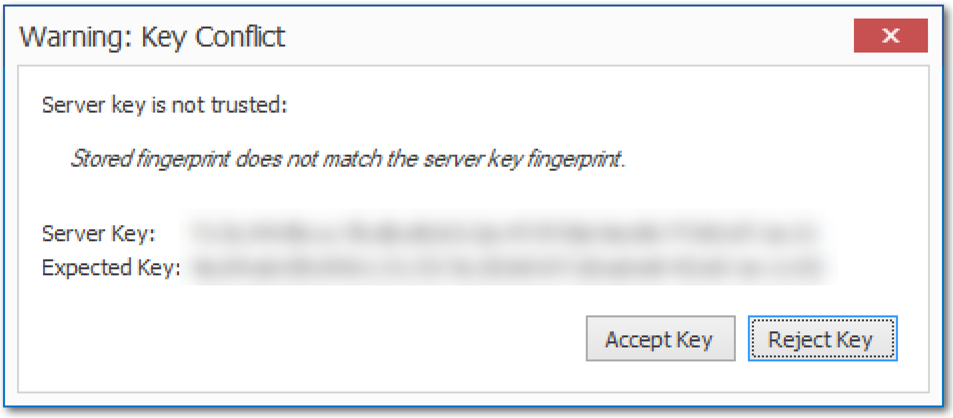
5 Save Configuration



Once you have configured your server, you can use the save command to persist your changes.

Use the "Cancel" command to return to LogViewPlus without saving your changes.

Server Fingerprints



Warning: Key Conflict

Server key is not trusted:

Stored fingerprint does not match the server key fingerprint.

Server Key:

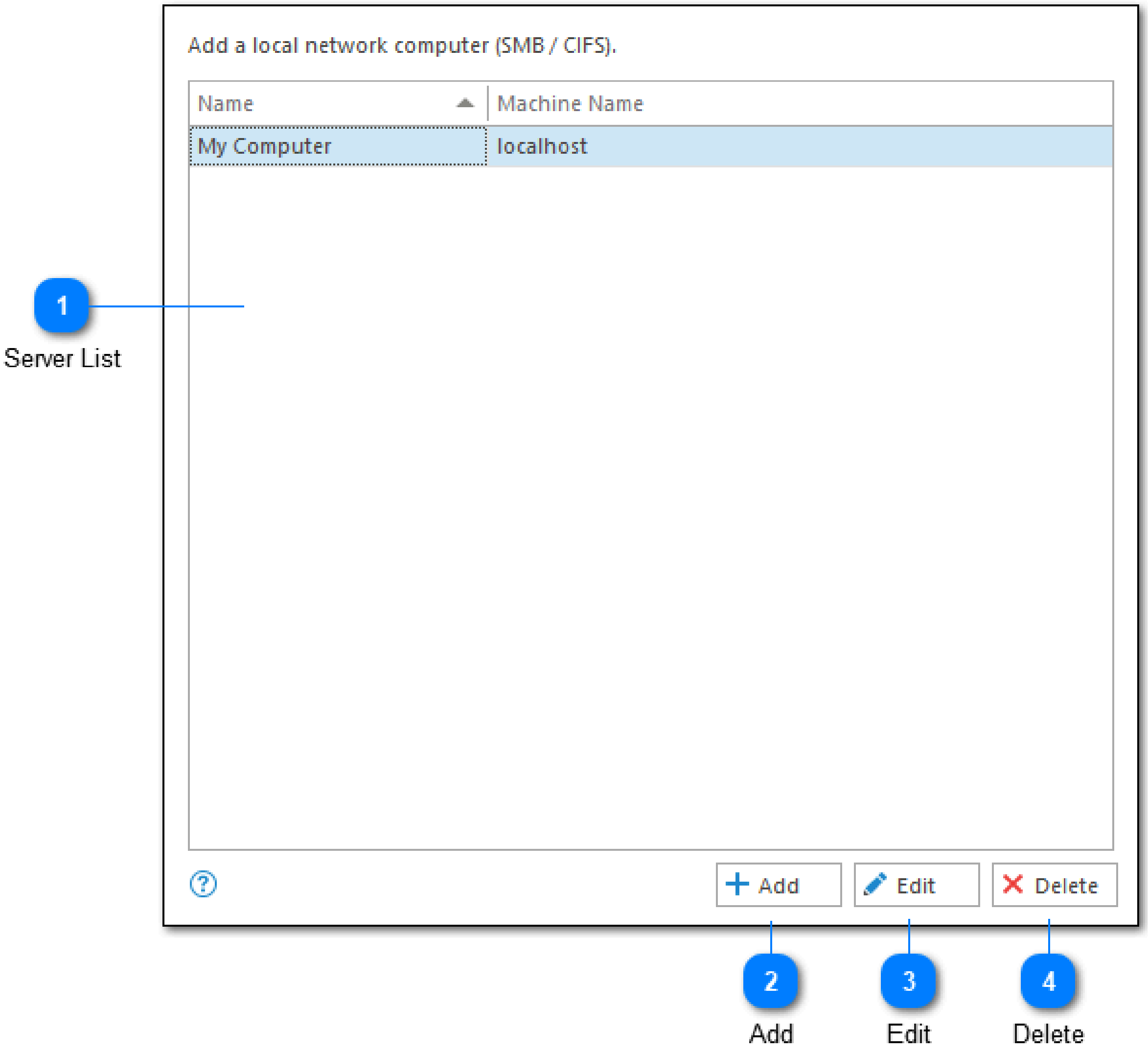
Expected Key:

Secure servers will frequently use security fingerprints to identify themselves. When a client connects, the server presents a fingerprint and this gives the client a chance to disconnect before sending through more sensitive details like username and password.

When LogViewPlus first connects to a secure server, it has nothing to compare the fingerprint against. The default behavior in this scenario is that LogViewPlus will assume the fingerprint is valid. We take a slightly less secure approach here in favor of usability because we believe that most connections will be made behind a firewall where the initial connection can be trusted. If you would like to verify the fingerprint before connecting, we recommend using a 3rd party tool (such as Putty) immediately before the initial connection attempt. Alternatively, you can set the Lockdown property to true in %ProgramFiles%\LogViewPlus\LogViewPlus.exe.config.

Regardless of the security model used, once the initial connection has been made the fingerprint of the server will be permanently cached. On future connection attempts, the cached fingerprint will be compared against the fingerprint presented. If a discrepancy is found, the user will be presented with a dialog giving the option to accept or reject the key. If the key is rejected, then the connection will be terminated and no credentials will be sent.

Network Shares

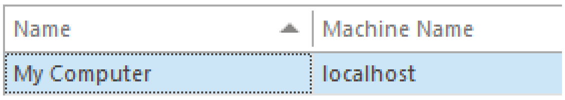


Add a local network computer (SMB / CIFS).

Name	Machine Name
My Computer	localhost

Network Shares will always be unpopulated when you first install LogViewPlus. This is because some networks may contain a large number of machines and quickly scanning the network to find the machine you want to access may not be possible. Instead, LogViewPlus uses an approach that requires you to know the name of the machine you want to connect to an advance. You can either explicitly add this machine name in the file system settings, or you can paste the full path to the file you want to open into the open file text box. Once a local network file has been opened by LogViewPlus, the network node will be available for future access.

1 Server List



Name	Machine Name
My Computer	localhost

The server list contains all of the network shares which have been previously configured.

2 Add

Creates a new network share and adds it to the configured server list.

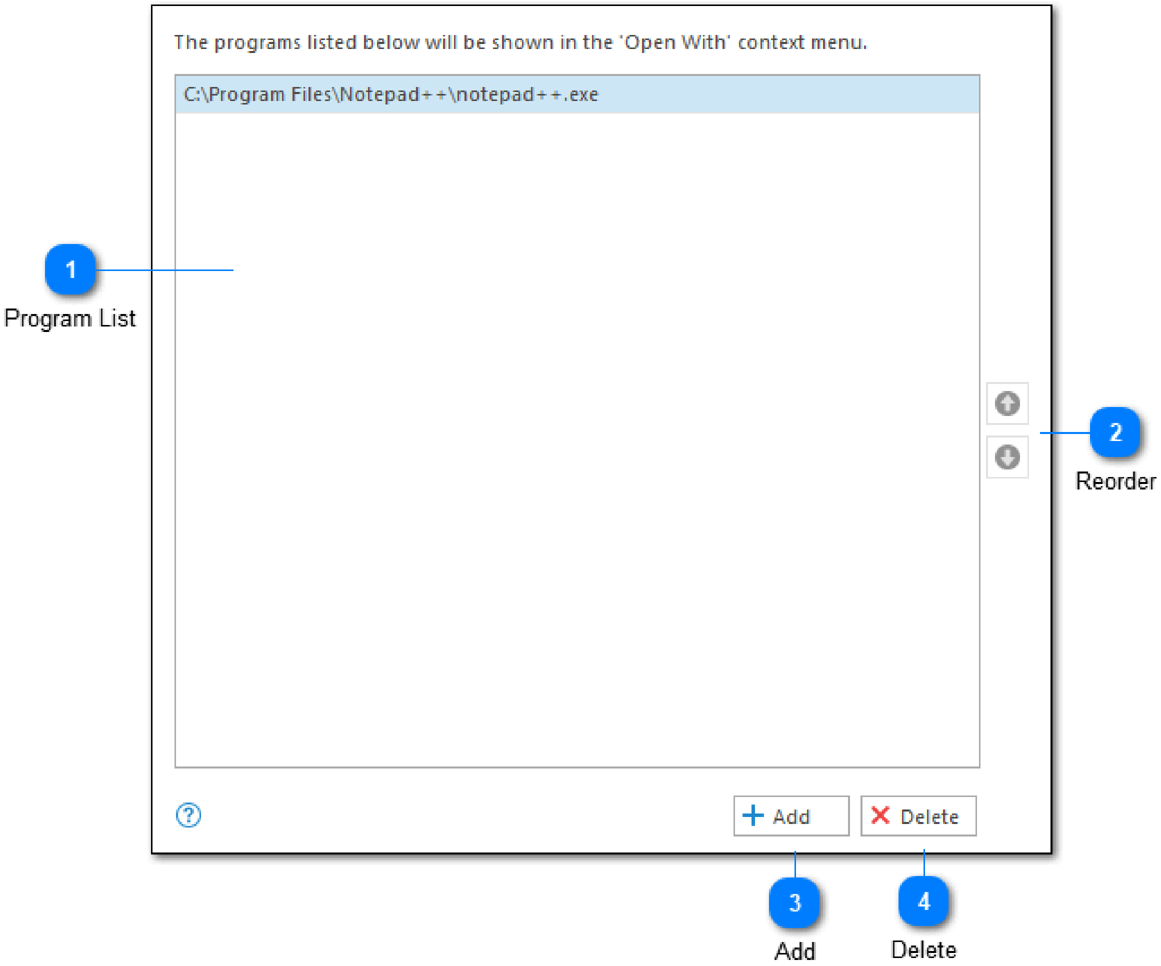
3 Edit

Allows you to edit the currently selected network share.

4 Delete

Permanently deletes the currently selected network share.

Open With Applications



The programs listed below will be shown in the 'Open With' context menu.

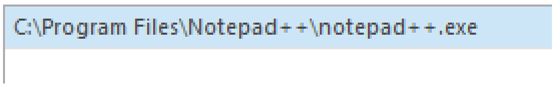
C:\Program Files\Notepad++\notepad++.exe

The open applications settings allow you to add or remove the full path to applications which are installed on your local machine. Once an application has been added it will be visible in the "Open With" context menu. Please see the file context menu documentation for more information.

The Open With Applications configuration setting is only available from the File System Settings.

1

Program List



C:\Program Files\Notepad++\notepad++.exe

The program list contains all of the target open applications which have been previously configured.

2

Reorder

The reorder commands on the right of the screen can be used to move the target open applications up or down in the configured server list. This controls the display order in the Log Explorer context menu.

3

Add

Allows you to browse to a new target open application and add it to the program list.

4

Delete

Permanently removes the selected target open application from the program list.

Static File System Settings

It is possible to configure LogViewPlus with server or data source configurations that cannot be modified by the end user. This option can be helpful when:

1. You need to keep access credentials protected from end users.

2. You have complex or shared environment settings and you would like to decrease the time needed for configuration.

Static file system settings cannot be exported or reset. You also will not be able to change the user credentials without replacing the static configuration file.

Having a static file system will not prevent the end user from creating or modifying new server configurations. From the end users perspective - LogViewPlus will work normally. Pre-configured servers will simply appear in the Log Explorer as though there were part of the standard file system.

Creating and implementing static file system settings is straightforward. All that we need to do is create a file systems settings file with our desired configuration and then copy that file to %ProgramData%\LogViewPlus\filesystem.default.dat.

You can create a static file system by following the instructions below:

1. Open LogViewPlus and reset your application settings. You can back up your settings first if necessary.

2. Modify your configuration to add any needed Remote Servers, Data Sources or Network Shares.

3. Test your configuration. Once the settings have been made static, they may be difficult to change.

4. Move the file %AppData%\LogViewPlus\filesystem.dat to %ProgramData%\LogViewPlus \filesystem.default.dat. Notice that the file name is changed as part of this process.

If the configuration needs to be implemented for multiple users, simply copy file %ProgramData%\LogViewPlus\filesystem.default.dat to all of the target machines.

Custom Extensions

LogViewPlus currently supports several different kinds of custom plug-ins including: filters, parsers, post-processors, readers, configuration, and analyzers. We aim to make LogViewPlus as extensible as we can because we know that some of the best feature ideas are too niche to be widely applicable. Have an idea for an extension idea but not sure how to implement it? Please feel free to contact us.

If you are new to LogViewPlus extensions, we recommend getting started with our sample code.

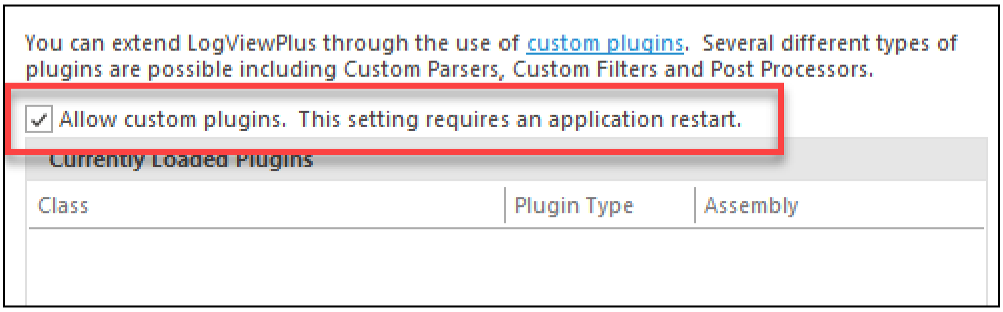
Running the Samples

When learning to create custom filters and parsers for LogViewPlus it is helpful to begin with the sample code projects. There are four projects included in the sample code - a custom filter, custom parser, custom post processor and a custom reader. All of these implementations are kept intentionally simple. They serve an instructive rather than functional purpose.

The purpose of this tutorial is to get you up and running with the sample projects using Visual Studio.

To get started please download the sample projects and extract the zip file into a working directory. Open LogViewPlus_Samples.sln in Visual Studio. Once the solution is opened you should notice two projects: CustomFilter and CustomParser.

Before we build projects there's a few things we need to do. First open LogViewPlus and go to Settings -> Application -> Plugins and ensure that the "allow custom plugins" option is enabled.



You can extend LogViewPlus through the use of custom plugins. Several different types of plugins are possible including Custom Parsers, Custom Filters and Post Processors.

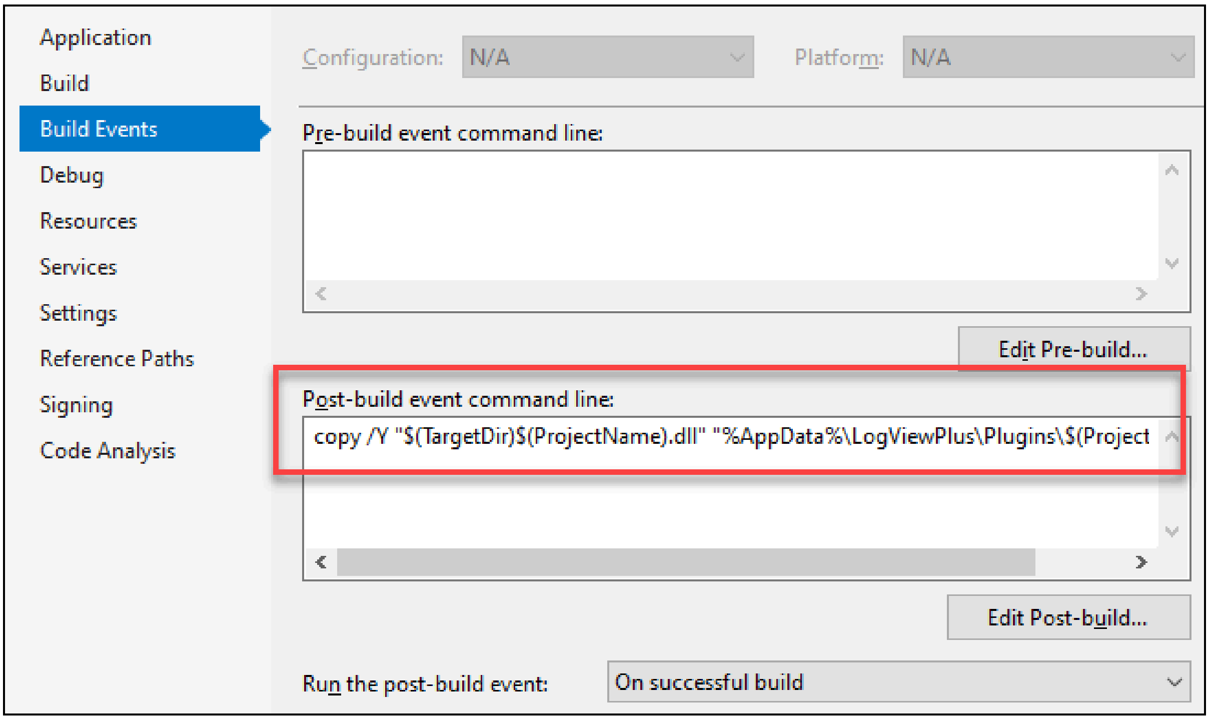
☑ Allow custom plugins. This setting requires an application restart.

This is a security feature. LogViewPlus will only check for extensions if the above configuration is applied. Once enabled please close all running instances of LogViewPlus.

Returning to Visual Studio there are a few things we need to check before we build our project.

First, we recommend replacing Clearcove.LogViewer.Common.dll and Clearcove.LogViewer.Common.xml with the file included with your LogViewPlus installation. A version of these files is included with the sample code to ensure the samples build correctly, but this version may be out of date. These files can be found in the installation directory %ProgramFiles%\LogViewPlus. They should replace the files in the "Libs" directory of the extracted sample code.

Next, for each project go to Properties -> Build Events. Both projects should have build events that copy the output of the build to the %AppData%\LogViewPlus\Plugins directory.



Configuration: N/A

Platform: N/A

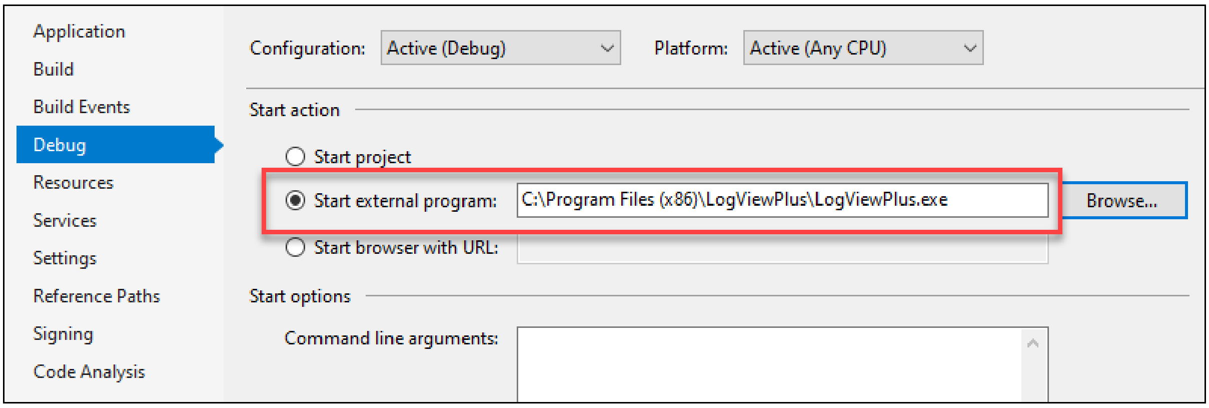
Pre-build event command line:

Post-build event command line:

```
copy /Y "$(TargetDir)$(ProjectName).dll" "%AppData%\LogViewPlus\Plugins\$(Project
```

Run the post-build event: On successful build

We also need to check that Properties -> Debug -> Start Action is set to run an external program. The plug-ins need to run inside of a LogViewPlus instance, so this should point to your LogViewPlus install directory.



Configuration: Active (Debug)

Platform: Active (Any CPU)

○ Start project

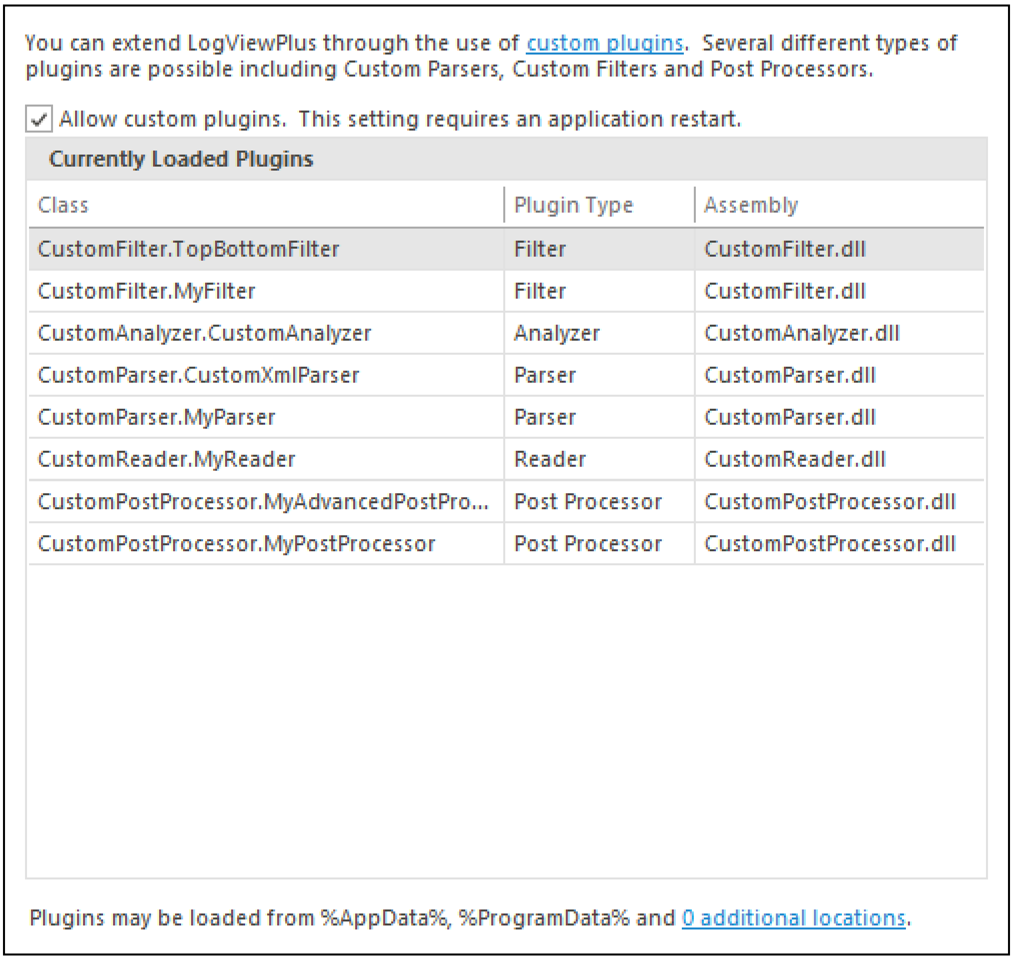
● Start external program: C:\Program Files (x86)\LogViewPlus\LogViewPlus.exe

○ Start browser with URL:

Command line arguments:

Were now ready to build our solution. When you build the solution both of these projects will be built and the output would be saved to %AppData%\LogViewPlus\Plugins. This is the default directory where LogViewPlus expects plug-ins to be installed. When you run your project, Visual Studio will automatically start LogViewPlus in a debugger and you will be able to debug your plug-ins as expected.

Once LogViewPlus starts you will be able to confirm that your plug-ins are loaded successfully by going to Settings -> Application -> Plugins. Eight plug-ins should be listed similar to the screenshot below.



You can extend LogViewPlus through the use of custom plugins. Several different types of plugins are possible including Custom Parsers, Custom Filters and Post Processors.

☑ Allow custom plugins. This setting requires an application restart.

Currently Loaded Plugins

Class	Plugin Type	Assembly
CustomFilter.TopBottomFilter	Filter	CustomFilter.dll
CustomFilter.MyFilter	Filter	CustomFilter.dll
CustomAnalyzer.CustomAnalyzer	Analyzer	CustomAnalyzer.dll
CustomParser.CustomXmlParser	Parser	CustomParser.dll
CustomParser.MyParser	Parser	CustomParser.dll
CustomReader.MyReader	Reader	CustomReader.dll
CustomPostProcessor.MyAdvancedPostPro...	Post Processor	CustomPostProcessor.dll
CustomPostProcessor.MyPostProcessor	Post Processor	CustomPostProcessor.dll

Plugins may be loaded from %AppData%, %ProgramData% and 0 additional locations.

Please see the following sections for more information on creating custom filters and custom parsers.

Microsoft .Net Versioning

Finally, note that LogViewPlus 3.1 and greater target the .Net Framework 4.8. LogViewPlus 2.5 to 3.0.22 and greater target the .Net Framework 4.7.2. Earlier versions target .Net 4.5.2.

The LogViewPlus Common library is required for all LogViewPlus plugins types. This library targets .Net 4.7.2. across all LogViewPlus versions prior to 2.6.3 for backward compatibility. As discussed above, we always recommend using the Clearcove.LogViewer.Common.dll library that installs with LogViewPlus when building plugins.

The sample code referenced here was updated with the 3.1 release to target .Net 4.8. If you are targeting an earlier version of LogViewPlus, you will need to change the target framework.

Custom Filters

When learning to create custom filters for LogViewPlus it is helpful to begin with the sample code projects. This tutorial will assume that you have downloaded and run the sample projects successfully. Please see running the samples for more information.

Custom filters are useful when you need to filter your log file in a way that is not inherently supported by LogViewPlus.

Our custom filter implementation will be responsible for enhancing the LogViewPlus text search functionality. The existing LogViewPlus text search functionality works by matching the whole term. For example, if you search for "hello world" the search will not match "hello my world". Our custom filter implementation will work slightly differently. Any spaces in the search term will be interpreted as a separator for multiple search terms. Using this approach, "hello world" will match any string with the words "hello" and "world" anywhere in the string. Both search terms will be required.

If we look at the code included in the CustomFilter project and remove of the comments, we can see the custom filter implementation is very straightforward.

```
public class MyFilter : ILogFilter
{
    private string[] _searchTerms = null;
    public string Arguments { get; private set; }
    public string Name { get { return Arguments.Replace(" ", " & "); } }
    public void Initialize(string arguments)
    {
        Arguments = arguments;
        _searchTerms = arguments.Split(' ');
    }
    public bool Show(LogEntry logEntry)
    {
        foreach(var term in _searchTerms)
        {
            if (logEntry.Message.IndexOf(term, StringComparison.OrdinalIgnoreCase) < 0)
                return false;
        }
        return true;
    }
}
```

Note that *MyFilter* is a sample implementation of the *ILogFilter* interface:

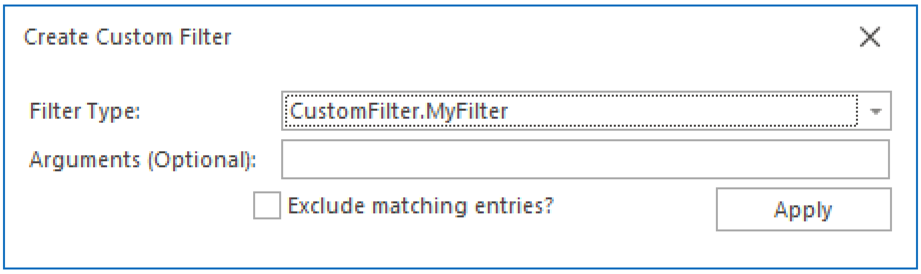
```
public interface ILogFilter
{
    string Arguments { get; }
    string Name { get; }
    void Initialize(string arguments);
    bool Show(LogEntry logEntry);
}
```

This interface has four parts:

Arguments - This getter provides access to the arguments used to initialize the filter. This is important when persisting the filter as the arguments will be needed later to reinitialize a new filter.

Name - This is the name of the filter. This name will be displayed to the user in the file management list tree. In our example filter we are replacing spaces with ampersands. This is an attempt to give the user a better understanding of how our filter works.

Initialize - A custom filter is initialized with a string that is provided by the user when creating the filter. Providing an initialization string to a custom filter is optional as some filters may not need initialization. Initialization arguments can use Argument Templates.



Create Custom Filter

Filter Type: CustomFilter.MyFilter

Arguments (Optional):

☐ Exclude matching entries?

Show - The Show method is responsible for showing or hiding a given log entry. It is responsible for answering a simple question: should this log entry be displayed to the user? Custom filters may be include or exclude type filters. This functionality is implemented outside of your custom filter. The show method will always assume that your filter is written as an include filter.

As shown above, creating a custom filter for LogViewPlus is relatively simple. If you have any questions or comments please feel free to contact us.

Custom Parsers

When learning to create custom parsers for LogViewPlus it is helpful to begin with the sample code projects. This tutorial will assume that you have downloaded and run the sample projects successfully. Please see running the samples for more information.

Custom parsers are helpful when your log files are stored as text data, but the text data cannot be parsed easily by one of the installed LogViewPlus parsers. For example, if your log files used a proprietary text-based data format.

Our custom parser implementation will be responsible for parsing a very simple log file which should be written in the format %d{yyyy-MM-dd HH:mm:ss,fff} - %m%n. Note that LogViewPlus is already capable of parsing log files in this format. Therefore our custom parser will provide no functional benefit. However, it would likely have a performance benefit - although this is not been tested.

If we look at the code included in the CustomParser project there is a class called MyParser. Looking at the implementation, we can see the custom parser is straightforward.

```
public class MyParser : ILogParser
{
    public string Arguments { get; private set; }
    public bool AcceptsConfiguration()
    {
        return true;
    }
    public void Initialize(string arguments)
    {
        Arguments = arguments;
    }
    public List<string> GetWarnings()
    {
        return new List<string>();
    }
    public bool IsLogEntry(string logLine)
    {
        if (string.IsNullOrEmpty(logLine))
            return false;
        return logLine.IndexOf(" - ", StringComparison.Ordinal) >= 0;
    }
    public ParseResult Parse(string logLine, LogEntry newEntry)
    {
        int pos = logLine.IndexOf(" - ", StringComparison.Ordinal);
        if(pos <= 0)
            return ParseResult.Fail;
        var date = logLine.Substring(0, pos);
        var msg = logLine.Substring(pos + 3);
        newEntry.Date = DateTime.ParseExact(date, "yyyy-MM-dd HH:mm:ss,fff",
CultureInfo.CurrentCulture);
        newEntry.Message = msg;
        return ParseResult.Success;
    }
}
```

Note that *MyParser* is a sample implementation of the *ILogParser* interface:

```
public interface ILogParser
{
    string Arguments { get; }
    bool AcceptsConfiguration();
    void Initialize(string arguments);
    List<string> GetWarnings();
    bool IsLogEntry(string logLine);
    ParseResult Parse(string logLine, LogEntry newEntry);
}
public enum ParseResult
{
    Success,
    Fail,
    ContinueRead,
    EndRead
}
```

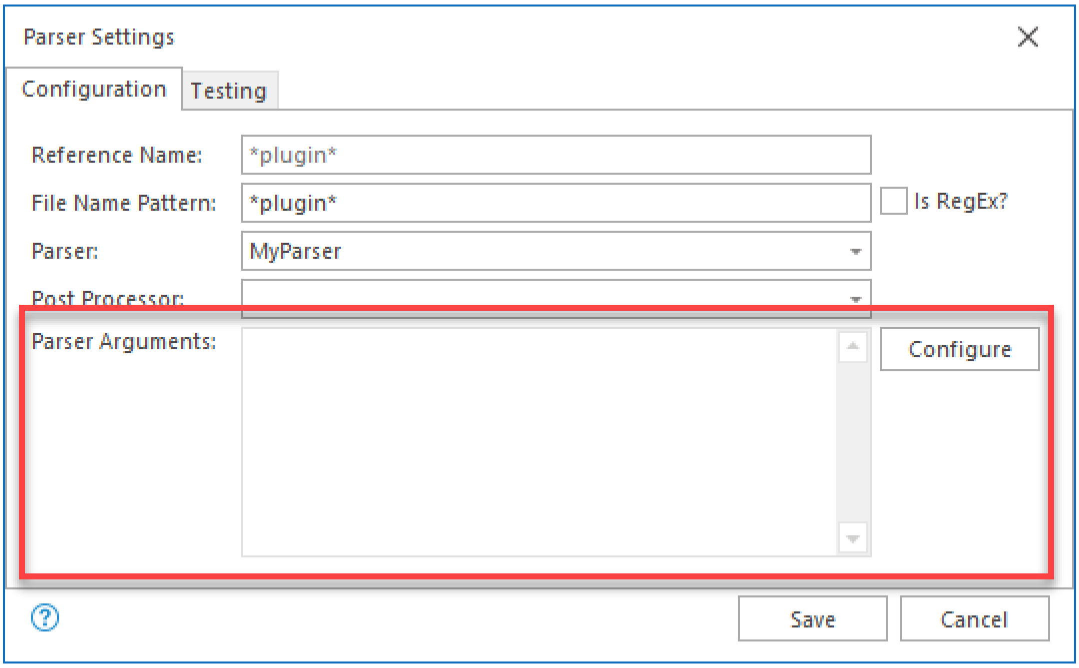
This interface has four parts:

GetDescription - This method will return a description for our parser. This description will be displayed to the user in the tooltip that is displayed when the user hovers over a log file.

Initialize - A custom parser is initialized with a string that is provided by the user when creating the parser. Providing a initialization string to a custom filter is optional as some parsers may not need initialization. Initialization arguments can use Argument Templates.

If your log parser needs to look at the target log file during initialization, consider implementing the ISupportsLogFileInitialization interface.

If your parser implements ICustomConfiguration, the Parser Arguments will be shown with a configuration command which calls back into your code to display a configuration dialog. Please see Custom Configuration for more information.


Parser Settings

Reference Name: *plugin*

File Name Pattern: *plugin*

Parser: MyParser

Post Processor:

Parser Arguments:

IsLogEntry - Given a line of text, this method is responsible for determining whether or not the line is the beginning of a new log entry. Our (overly simplistic) example simply checks whether the line has the text " - " in it. While this is fine for our example it probably wouldn't work in a production system because a long line may have the text " - " unexpectedly as part of its log message. It would be better to check both the date and the static text.

Parse - This method is responsible for parsing the given log line and saving the result into the provided log entry. Note the log entry may span multiple lines. You can control the way the log entry is parsed by managing your parse result. A parse result could have one of four values:

Parse Result	Description

Success	Success is a signal to the parser controller that you have been able to identify the start of a new log entry. The next few lines in the log file may be part of the same entry. In order to determine whether the next line in the log file is part of the same log entry, LogViewPlus will call the IsLogEntry method previously discussed. If the IsLogEntry method returns false, the line will be appended to the message field of this log entry. If IsLogEntry returns true, the parse method will be called again for the same log line. This is the basic processing loop for parsing a log file.
Fail	Fail is a signal to the parser controller that the given log file line does not represent the beginning of a log entry. This may be the case, for example, if you are partially opening a log file and have started reading from the middle of the file. LogViewPlus may try to recover by ignoring the failure for a period of time and attempting to continue processing the file.
ContinueRead	ContinueRead is a signal to the parser controller that we do not yet have enough information to process this log entry and will need (at a minimum) the next log line. This field is used, for example, by the XML parser because XML log entries may span multiple lines before the entry can be parsed.
EndRead	EndRead is a signal to the parser controller to terminate processing of this log entry and start over with the next entry. It is helpful when reading from the middle of a log file when you know where your log entry begins and ends. This field is used, for example, by the Log4XmlParser to signal that the current entry should be discarded and we should start fresh on the next line.
An exception is thrown	The result of throwing an exception from within the Parse method is dependent on what LogViewPlus is trying to do. If LogViewPlus is trying to do something complicated like a partial read - exceptions may be expected. In this case parsing may continue. However, generally speaking, the exception will be raised and the application will crash. You should therefore try to catch and handle exceptions internally.

As you can see, creating a custom parser for LogViewPlus is relatively simple. If you have any questions or comments please feel free to contact us.

Custom Message Parsers

When learning to create custom parsers for LogViewPlus it is helpful to begin with the sample code projects. This tutorial will assume that you have downloaded and run the sample projects successfully. Please see running the samples for more information.

Custom message parsers are helpful when want to extract data from a log entry message in a way that is not supported by the standard Message Parser configuration. Creating custom message parsers is probably the most advanced LogViewPlus extension type because you must correctly implement three interfaces:
1. ILogParser - This interface is described in Custom Parsers.
2. ILogParserWithCustomMessageTemplates - Enhances your ILogParser implementation to return a ICustomMessageTemplate.
3. ICustomMessageTemplate - The implementation for your custom message parser.

Our custom parser implementation will be responsible for parsing a very simple log file which will contain XML log entries. The custom message parser will analyze the attributes in the XML selectively to determine possible extracted values.

If we look at the code included in the CustomParser project, there is a class called CustomXmlParserWithCustomTemplates. and remove of the comments, we can see the custom parser implementation is straightforward.

```
public class CustomXmlParserWithCustomTemplates : CustomXmlParser,
ILogParserWithCustomMessageTemplates
{
   public int MessageTemplateFormat => 0;
   public string MessageTemplateInputPrompt => "Please supply a list of attribute names.";
   public ICustomMessageTemplate CreateMessageTemplate(LogEntry entry, string
messageTemplate, out string errorMessage)
   {
      errorMessage = null;
      if (string.IsNullOrEmpty(messageTemplate))
      {
         errorMessage = "Message template cannot be null.";
         return null;
      }
```

```
        var template = TemplateFromString(messageTemplate);
        using (var reader = new XmlTextReader(new StringReader(entry.OriginalLogEntry)))
        {
            reader.Namespaces = false;
            reader.ReadToFollowing("MESSAGE"); // Initialize read to get to the target attributes.
            reader.MoveToNextAttribute(); // Timestamp is always the first attribute.  Not needed
here.
            var attributes = GetAttributes(reader);
            return MyCustomMessageTemplate.Create(template, attributes, entry.Message);
        }
    }
    public void SetCustomMessageTemplates(string[] templates)
    {
        _savedMessageTemplates.Clear();
        if (templates == null)
            return;
        foreach (var template in templates)
        {
            var set = TemplateFromString(template);
            _savedMessageTemplates.Add(set); // Save all received templates for future use.
        }
    }
}
```

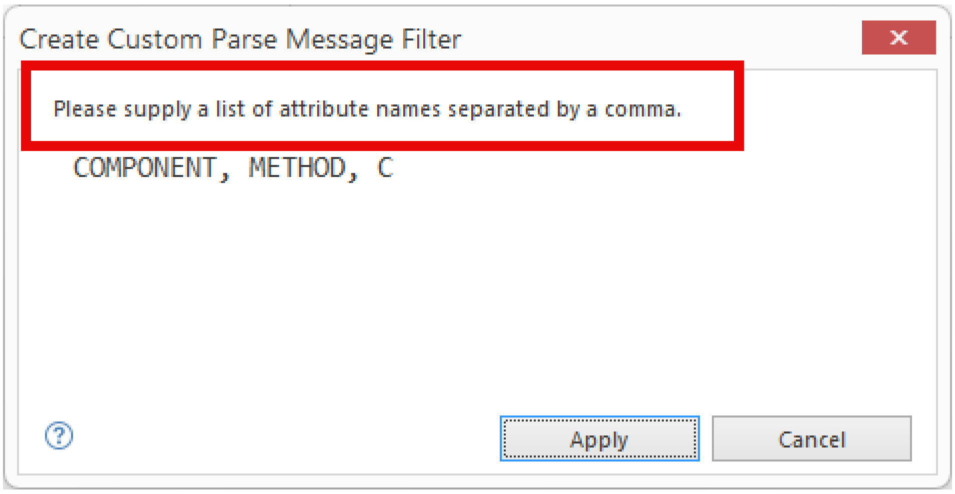
Note that *CustomXmlParserWithCustomTemplates* is a sample implementation of the *ILogParserWithCustomMessageTemplates* interface:

```
public interface ILogParserWithCustomMessageTemplates
{
     int MessageTemplateFormat { get; }
     string MessageTemplateInputPrompt { get; }
     void SetCustomMessageTemplates(string[] templates);
     ICustomMessageTemplate CreateMessageTemplate(LogEntry logMessage,
           string messageTemplate, out string errorMessage);
}
```

This interface has four parts:

MessageTemplateFormat - used to control syntax highlighting when providing a custom message template implementation. One of three values will be expected: 0 = Text, 1 = XML, 2 = JSON. All other values will result in default syntax highlighting.

MessageTemplateInputPrompt - The user prompt to be shown on the Custom Parse Message Filter dialog.



Please supply a list of attribute names separated by a comma.

COMPONENT, METHOD, C

SetCustomMessageTemplates - called during parser initialization to provide the configured message templates. Only configured message templates will be provided. Default implementations are expected to be known internally by the parser implementation..

CreateMessageTemplate - used by the Custom Parse Message Filter dialog to validate and create new ICustomMessageTemplate implementations.

ICustomMessageTemplate implementations are used to represent custom message templates in LogViewPlus. Message templates consist of a series of key value pairs which are used to display information in the grid. In addition to this, the message template is also responsible for providing LogViewPlus with the log entry message. Using this approach, the log entry message can either be cached or generated on demand.

The *ICustomMessageTemplate* interface is straight forward to implement. Please see MyCustomMessageTemplate in the provided sample code for more information. If you have any questions or comments please feel free to contact us.

Custom Readers

When learning to create custom readers for LogViewPlus it is helpful to begin with the sample code projects. This tutorial will assume that you have downloaded and run the sample projects successfully. Please see running the samples for more information.

Custom readers are the most advanced LogViewPlus extension type. Custom readers can be used when you need to import data into LogViewPlus from a data source that is not a text file. A custom reader might be used to access the database, read information off the network, or decode the data stored in a custom binary format (for example, a Protobuf log file).

Most custom readers will be environment specific. In an effort to simplify the deployment of our custom reader, we have decided to simply create a new log entry on a timer tick. This example is not very helpful in a real-world scenario but it does effectively show how to create a custom reader while simplifying the deployment and learning curve.

If we look at the code included in the CustomReader project and remove all of the comments, we can see the custom reader implementation is divided into three parts. First, there is the code which generates the log entries. This code is relatively straight forward.

```
private volatile int _entriesProcessed;
private readonly Timer _timer;
private readonly List<LogEntry> _cache = new List<LogEntry>();
private ILogMem _memoryManager = null;
public MyReader()
{
    _timer = new Timer(OnTimerTick);
}
private void OnTimerTick(object state)
{
    if (!_tailEnabled)
        return;
    lock (_cache)
    {
        var entry = new LogEntry(_memoryManager);
        entry.Date = DateTime.Now;
        entry.Priority = "INFO";
        entry.Logger = "MyLogger";
        entry.LogFileLineNumber = ++_logLineNumber;  // Sequential line number.
        entry.Message = ++_entriesProcessed + ": " +
                (string.IsNullOrWhiteSpace(Arguments) ? "No arguments." : Arguments);
        _cache.Add(entry);
    }
}
```

These methods form the core of our log reader which will manage four private variables:

_entriesProcessed - This integer will keep track of the number of log entries which have been created. This number may be useful in certain debugging scenarios.

_timer - The timer is used to simulate new log entries coming into the system. Note that in the above example our timer has not yet been started.

_cache - Our cache is a list of log entries that have been created. We will need to manage our cache as part of our ILogReader implementation. Some aspects of our ILogReader implementation may be called on a separate thread. Therefore we need to control access to the cache with a lock.

_memoryManager - The *ILogMem* reference is new in LogViewPlus 3.0 and required when creating a new log entries. This property received in the InitializeRead method (see below) where it is cached for future reference. This object should only be used as a pass-through to initialize new log entries.

The main method in our custom log reader implementation is the OnTimerTick event. This is the event that will generate our new log entries. We can see from the example above that our log entries should have the columns date, priority, logger, and message. Our custom log reader implementation is creating a simple log entry which echoes the reader configuration back to the user.

The next method in our custom log reader implementation is the GetSupportedTypes method.

```
public List<FieldColumnInfo> GetSupportedTypes()
{
    var retval = new List<FieldColumnInfo>();
    retval.Add(new FieldColumnInfo(ElementType.Date, true));
    retval.Add(new FieldColumnInfo(ElementType.Priority, true));
    retval.Add(new FieldColumnInfo(ElementType.Logger, true));
    retval.Add(new FieldColumnInfo(ElementType.Message, true));
    return retval;
}
```

The GetSupportedTypes method is required when we are implementing the IColumnManagement interface. This method is responsible for returning the column definitions for our data set. Implementation of this interface is not strictly required, however if we do not implement this interface we will not be able to see any columns for our parsed log entries. Therefore, most real-world examples will require an implementation.

The remaining methods in our CustomReader implement the ILogReader interface. It is important to note that the ILogReader interface is optimized for the scenario where we are reading log files in batches to allow for improved performance.

```
public bool AllowProgressTracking { get { return false; } }
public long ProgressPosition { get { return 0; } }
public int LineNumber { get { return _entriesProcessed; } }
public bool AllowTail { get { return true; } }
public string Arguments { get; private set; }
public bool AcceptsConfiguration()
{
    return true;
}
public void Initialize(string arguments)
{
    Arguments = arguments;
    return;
}
public List<string> GetWarnings()
{
    return null;
}
public bool HasNextBatch(long fileSize)
{
    return false;
}
public List<LogEntry> NextBatch()
{
    lock (_cache)
    {
        var list = _cache.ToList();
        _cache.Clear();
        return list;
    }
}
```

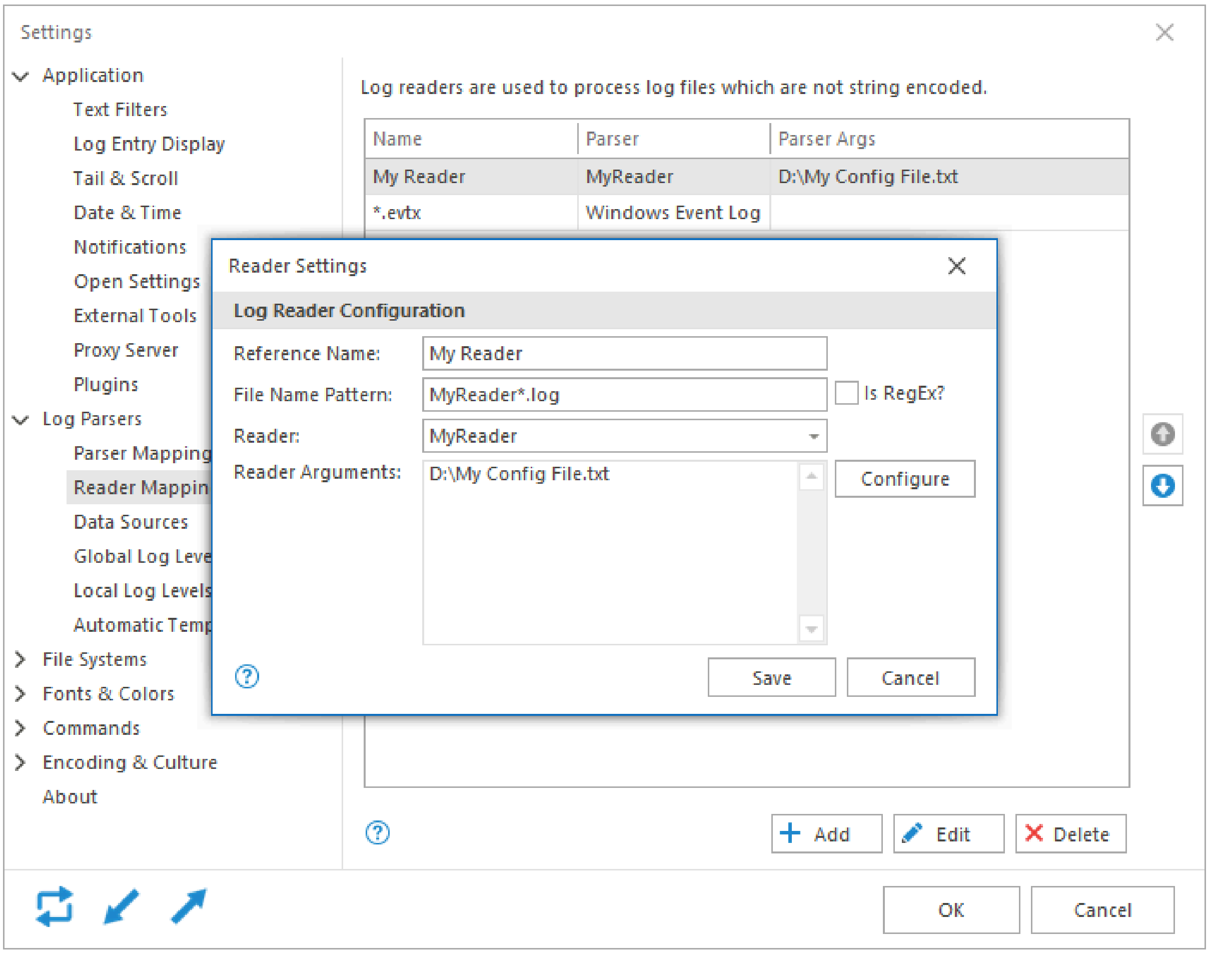
```
public bool AtEndOfFile(long fileSize)
{
    lock (_cache)
    {
        return _cache.Count == 0;
    }
}
public List<LogEntry> InitializeRead(ILogMem memoryManager, FileInfo file, long start, long
stop)
{
    _memoryManager = memoryManager; // We will need this for any new LogEntries.
    var txt = File.ReadAllText(file.FullName);
    int tickInterval = int.Parse(txt);
    _timer.Change(0, tickInterval);
    return null;
}
```

There are four features that the ILogReader interface will allow us to control.

Feature	Methods	Notes
Progress bars	AllowProgressTracking ProgressPosition LineNumber	LogViewPlus can use either a normal progress bar or a marquee progress bar when loading a new log file. Use a marquee progress bar when the total number of log entries is unknown. To use a marquee progress bar set the AllowProgressTracking field to false. The LogViewPlus progress bar will only be shown when opening our log file.
Argument initialization	AcceptsConfiguration Initialize GetWarnings Arguments	If our custom reader needs to be configured (AcceptsConfiguration), we can call Initialize with a list of arguments followed by GetWarnings to get a list of messages to be displayed to the user. Initialization arguments can use Argument Templates. If your log reader needs to look at the target log file before initialization, consider implementing the ISupportsLogFileInitialization interface.
Batch processing	AtEndOfFile NextBatch HasNextBatch	When a tail file event occurs in LogViewPlus we will check if we are at the end of the log file. If not we will get the next batch of log entries and immediately check if further entries are pending with

		HasNextBatch. If HasNextBatch returns false we will wait for the next tail file event in LogViewPlus.
Reader Initialization	InitializeRead	The InitializeRead method is responsible for initializing our log reader based on the given file. In our case, the given file contains configuration that we need to execute our log reader. Note that this configuration file will be the file selected by the end user when trying to run our log reader. Using a configuration file as the target "log file" when opening a non-file based log reader is the recommended approach. Using this approach our log file access history will be managed automatically.

Once we have built our custom log reader and copied the resulting binaries into the LogViewPlus Plugins directory, we are ready to test. To do this start LogViewPlus, open Application Settings -> Reader Mappings and add the configuration shown.



Log readers are used to process log files which are not string encoded.

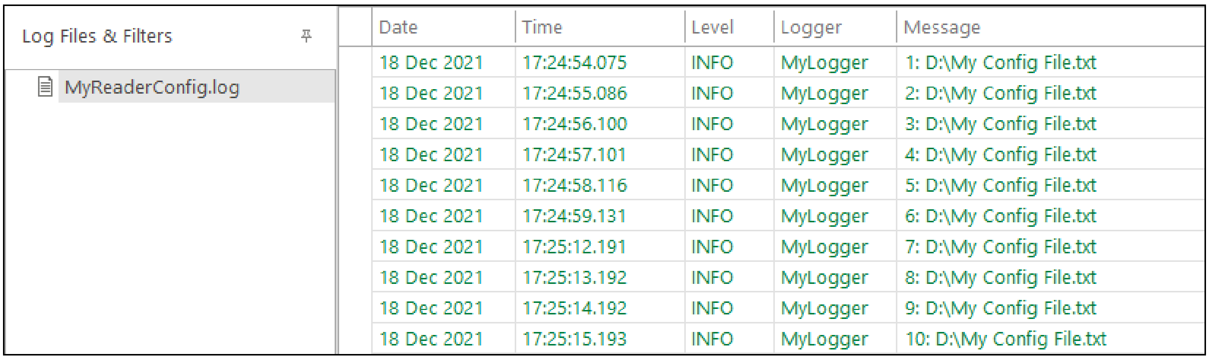
Name	Parser	Parser Args
My Reader	MyReader	D:\My Config File.txt
*.evtx	Windows Event Log	

Reader Settings

Log Reader Configuration

Reference Name:	My Reader	
File Name Pattern:	MyReader*.log	□ Is RegEx?
Reader:	MyReader	
Reader Arguments:	D:\My Config File.txt	Configure

After you have saved your settings, open the MyReaderConfig.log file which is included in the sample code distribution. Assuming tail is enabled you should see a new log entry appear approximately every second.



Date	Time	Level	Logger	Message
18 Dec 2021	17:24:54.075	INFO	MyLogger	1: D:\My Config File.txt
18 Dec 2021	17:24:55.086	INFO	MyLogger	2: D:\My Config File.txt
18 Dec 2021	17:24:56.100	INFO	MyLogger	3: D:\My Config File.txt
18 Dec 2021	17:24:57.101	INFO	MyLogger	4: D:\My Config File.txt
18 Dec 2021	17:24:58.116	INFO	MyLogger	5: D:\My Config File.txt
18 Dec 2021	17:24:59.131	INFO	MyLogger	6: D:\My Config File.txt
18 Dec 2021	17:25:12.191	INFO	MyLogger	7: D:\My Config File.txt
18 Dec 2021	17:25:13.192	INFO	MyLogger	8: D:\My Config File.txt
18 Dec 2021	17:25:14.192	INFO	MyLogger	9: D:\My Config File.txt
18 Dec 2021	17:25:15.193	INFO	MyLogger	10: D:\My Config File.txt

If you were to temporarily disable tail and then re-enable it, all of the log entries missed during the time interval will be shown.

Post Processors

When learning to create custom post processors for LogViewPlus it is helpful to begin with the sample code projects. This tutorial will assume that you have downloaded and run the sample projects successfully. Please see running the samples for more information.

The existing parsers in LogViewPlus are very powerful, but in some scenarios, you may find you want to modify the output slightly. That's where custom post processors can help. A custom post processor can be used to modify a parser's output before it is sent to LogViewPlus for display and analysis.

Let's say, for example, that we have a log file that uses custom priority levels. For example, consider the following log entries:

```
09:58:11,704 [75] DEBUG SyncEventService - Successfully created Event
09:58:11,704 [73] DEBUG SyncEventService - Successfully created Event
09:58:11,736 [75] Performance PerformanceWriter - Started Process entries
09:58:11,751 [81] Progress PerformanceWriter - Setting work completed
09:58:11,704 [73] DEBUG SyncEventService - Successfully created Event
```

Looking at these five log entries we can see three distinct log message priorities: debug, performance, and progress. The "performance" and "progress" priorities are non-standard and will not be understood by LogViewPlus. So, we are going to write custom post processor which transforms these invalid priorities into loggers which can be filtered by LogViewPlus.

Note that LogViewPlus now supports custom Log Levels. Custom log levels would be a better way to implement this functionality, but this discussion is still valid as an example.

If we look at the code included in the CustomPostProcessor project and remove the comments, we can see the custom post processor implementation is straightforward.

```
public class MyPostProcessor : ILogPostProcessor
{
    public void Modify(LogEntry newEntry)
    {
        var level = newEntry.Priority;
        switch (level.ToLower())
        {
            case "progress":
            case "performance":
            {
                newEntry.Logger = level;
                newEntry.Priority = "INFO";
                break;
            }
        }
    }
}
```

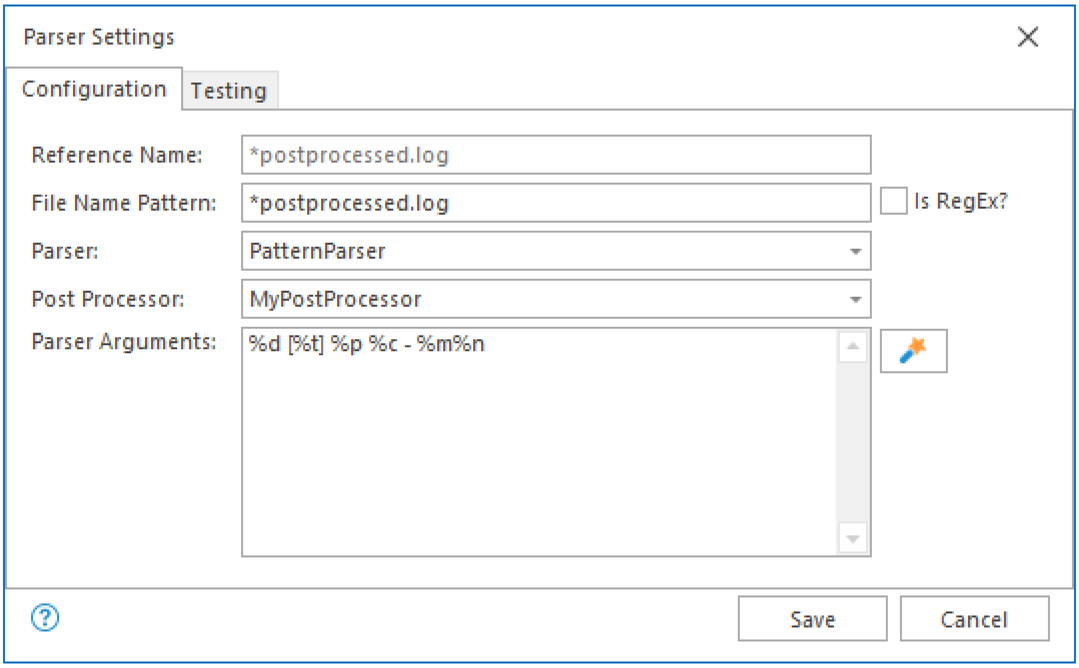
Note that *MyPostProcessor* is a sample implementation of the *ILogPostProcessor* interface. This interface defines one method *Modify(LogEntry entry)*.

```
public interface ILogPostProcessor
{
    void Modify(LogEntry newEntry);
}
```

The Modify method can be used to modify the parsed log entry in any way you see fit. This method is called immediately after the entry is parsed, but before the log entry is given to LogViewPlus for display.

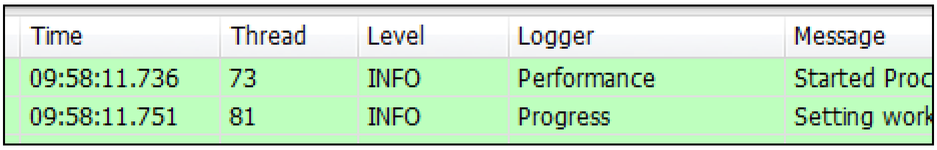
Post processors are reused across multiple new log entries. Therefore your custom post processor should not maintain any state.

Once we have compiled our custom post processor and added it into the LogViewPlus process (following the instructions outlined in running the samples), we still need to associate our post processor with a given log file. To do this, we can use the parser settings dialog. If LogViewPlus detects the possibility of a custom post processor, it will add a new field into the parser settings dialog. The new "post processor" field will allow you to associate a post processor with a parser and log file as shown below.



Reference Name: *postprocessed.log
File Name Pattern: *postprocessed.log
□ Is RegEx?
Parser: PatternParser
Post Processor: MyPostProcessor
Parser Arguments: %d [%t] %p %c - %m%n

Once we have associated the post processor with a log file parser all we need to do is refresh the log file to see that our custom post processor is performing as expected.



Time	Thread	Level	Logger	Message
09:58:11.736	73	INFO	Performance	Started Proc
09:58:11.751	81	INFO	Progress	Setting work

As you can see, creating a custom post processor for LogViewPlus is relatively simple. If you have any questions or comments please feel free to contact us.

Custom Analyzers

When learning to create custom analyzers for LogViewPlus it is helpful to begin with the sample code projects. This tutorial will assume that you have downloaded and run the sample projects successfully. Please see running the samples for more information.

Beginning in LogViewPlus 2.3.5, we introduced the ILogAnalyzer interface. This interface is both really simple and incredibly powerful. It takes an IWin32Window parent object as well as a list of all of the LogEntries found in the current view. This lets you execute a custom analysis on a set of log entries and potentially display your analysis in a custom reporting window.

```
public interface ILogAnalyzer
{
    void Analyze(object ownerWindow, IReadOnlyList<LogEntry> logEntries);
}
```

As discussed, the API has two parts:

OwnerWindow - An IWin32Window object which can be used to display a child form. The type is set as object for simplicity, but the object can be safely cast if needed.

IReadOnlyList<LogEntry> - The full list of all log entries shown in the current view. The data received by your implementation will be dependent on which view is used to execute the analyzer.

This interface will always be called from the UI thread. This allows you freely create UI components and control the user experience by blocking if necessary.

Our sample projects contain several examples of using the ICustomConfiguration interface. For our discussion, we will focus on the implementation contained in MyParser.cs. This implementation simply calls into a new OpenFileDialog instance - this keeps the GUI aspects of this configuration simple.

MyParser implements the following ICustomConfiguration.Configure method:

```
public void Analyze(object ownerWindow, IReadOnlyList<LogEntry> logEntries)
{
    var owner = (IWin32Window)ownerWindow;
    if (logEntries == null || logEntries.Count == 0)
    {
        MessageBox.Show(owner, "No log entries found.", "No Entries",
                        MessageBoxButtons.OK, MessageBoxIcon.Information);
        return;
    }
    var first = logEntries.First();
    var last = logEntries.Last();
    LogEntry largest;
    var a1 = CalculateAverageElapsed(logEntries, out largest);
    var a2 = CalculateAverageElapsed(first, first.FindNext(LookupSource.CurrentFilter, null));
    var a3 = CalculateAverageElapsed(last, last.FindPrevious(LookupSource.CurrentFilter,
null));
    var result = MessageBox.Show(owner, $"Average time between log entries:" +
                   "\r\n({a1})\r\n({a2})\r\n({a3})\r\n\r\n" +
                    "Would you like to show the largest value?",
                   "Average Elapsed", MessageBoxButtons.YesNo,
                    MessageBoxIcon.Question, MessageBoxDefaultButton.Button1);
    if (result == DialogResult.Yes)
    {
        ((ILogViewer)owner).FindLogEntry(largest);
    }
}
```

Here we cast our ownerWindow to an IWin32Window and use this as the parent for a MessageBox which just displays some basic statistics.

One interesting thing to note about the code sample above is that it uses the FindNext / FindPrevious methods to navigate the current view. These methods could also be used to navigate the parent filter, or the source log file. As this is just an example, all three calculation methods produce the same result.

Beginning with LogViewPlus 2.4.30, you can also cast the IWin32Window owner object into an ILogViewer for additional functionality. For example, in the latest sample code, we use the ILogViewer interface to optionally find and select a given log entry. This functionality is currently only available in ILogAnalyzer implementations. Other custom extension types are not supported.

Implementing custom configuration in LogViewPlus is relatively simple. If you have any questions or comments please feel free to contact us.

Custom Configuration

When learning to create custom configuration in LogViewPlus it is helpful to begin with the sample code projects. This tutorial will assume that you have downloaded and run the sample projects successfully. Please see running the samples for more information.

Occasionally, when you are developing custom plugins for LogViewPlus you may find that the built in configuration options are insufficient. Beginning in LogViewPlus 2.3.8, we introduced the ICustomConfiguration interface. Implementing this interface on your custom filter, parser or reader will allow you to execute your own configuration code on the LogViewPlus UI thread.

The ICustomConfiguration interface is very simple. It takes an IWin32Window parent object as well as a string representing the existing configuration. Using this, you can show a WinForms dialog to modify or create the desired configuration. Once the necessary changes have been made, the new configuration should be returned from the method as a string. LogViewPlus will then manage configuration persistence in exactly the same way as any other filter, parser or reader. Your custom object will receive the configuration string as a parameter to the Initialize method.

```
public interface ICustomConfiguration
{
    string Configure(object parentWindow, string configuration);
}
```

The API has three parts:

ParentWindow - An IWin32Window object which can be used to display a child form. The type is set as object for simplicity, but the object can be safely cast if needed.

Configuration - The string used to represent the target configuration or Null if a new configuration is requested.

Return String - The configuration string that should ultimately be passed to your target filter, parser or reader. We recommend a base64 string for advanced configuration.

This interface will always be called from the UI thread. This allows you freely create UI components and control the user experience by blocking if necessary.

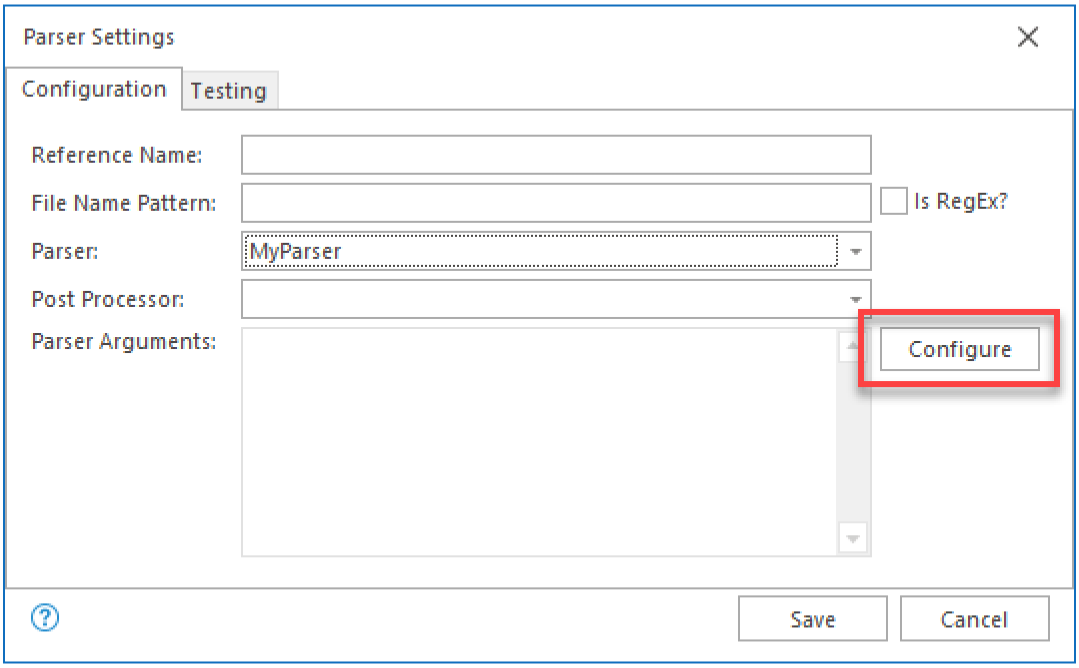
Our sample projects contain several examples of using the ICustomConfiguration interface. For our discussion, we will focus on the implementation contained in MyParser.cs. This implementation simply calls into a new OpenFileDialog instance - this keeps the GUI aspects of this configuration simple.

MyParser implements the following ICustomConfiguration.Configure method:

```
public string Configure(object parentWindow, string configuration)
{
    var parent = (IWin32Window) parentWindow;
    var fileBrowser = new OpenFileDialog();
    var rslt = fileBrowser.ShowDialog(parent);
    if (rslt != DialogResult.OK)
        return configuration ?? "Default Configuration";
    return fileBrowser.FileName;
}
```

Here, we cast our parentWindow to an IWin32Window and use this as the parent for a new OpenFileDialog. The file name selected by the dialog is passed back as a configuration result. Alternatively, if the configuration dialog is cancelled, we can return the received configuration or a default value.

When our ICustomConfiguration interface is detected on a custom parser or reader you will find a new configuration command in the standard parser configuration dialog:



Reference Name:

File Name Pattern: □ Is RegEx?

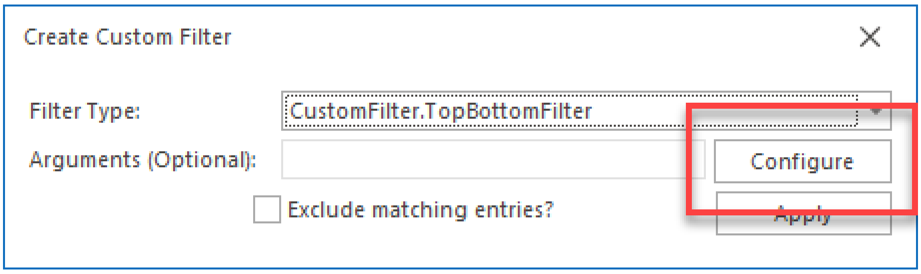
Parser: MyParser

Post Processor:

Parser Arguments: Configure

Clicking on this command will execute the custom configuration. When custom configuration is set, the target must be configured using the configuration provided. The parser arguments box will remain disabled. This area will only be used for argument display.

If the ICustomConfiguration interface is detected on a custom filter then you will find a new configuration command in the custom filter configuration dialog:



Filter Type: CustomFilter.TopBottomFilter

Arguments (Optional): Configure

□ Exclude matching entries?

When custom configuration is set, the target must be configured using the configuration provided. The filter arguments box will remain disabled. This area will only be used for argument display.

Implementing custom configuration in LogViewPlus is relatively straight forward. If you have any questions or comments please feel free to contact us.

Custom SQL Functions

When learning to create custom configuration in LogViewPlus it is helpful to begin with the sample code projects. This tutorial will assume that you have downloaded and run the sample projects successfully. Please see running the samples for more information.

Starting with LogViewPlus 3.0.16, our SQL engine gives you the ability to write your own SQL functions. When used in conjunction with Dashboard Reports this can be an extremely powerful for custom log file analysis.

To write a custom SQL function, you must extend the ISqlFunction interface which provides a function definition as well as the underlying execution method.

```
public interface ISqlFunction
{
    string Name { get; }
    Type[] ParameterTypes { get; }
    Type ReturnType { get; }
    object Execute(object[] parameters);
    bool CacheResult { get; }
}
```

If we look at the code included in the CustomSqlFunction there is a file called IndexOf.cs which provides a simple INDEXOF function implementation which enhances the standard CHARINDEX function by adding case sensitivity. The implementation provided here is very similar to the IndexOf implementation found in the .Net framework. If we remove all of the comments, we can see the code is relatively straight forward.

```
public class IndexOf : ISqlFunction
{
    public string Name => "INDEXOF";
    public Type[] ParameterTypes => new[] {typeof(string), typeof(string), typeof(int),
typeof(bool)};
    public Type ReturnType => typeof(int);
    public bool CacheResult => false;
    public object Execute(object[] parameters)
    {
        // The number and type of parameters will have already been verified.  So we can just
do...
        //
        var source = (string)parameters[0];
        var find = (string)parameters[1];
        var startPos = (int)parameters[2];
        var caseSensitivity = ((bool) parameters[3]) ?
                              StringComparison.Ordinal : StringComparison.OrdinalIgnoreCase;
        return source.IndexOf(find, startPos, caseSensitivity); // The SQL engine will assume
an integer.
    }
}
```

Our implementation consists of four properties and one 'Execute' method. Let's start by looking at the properties.

Property	**Description**
Name	The name of the function. This will be the named used in the SQL statement.
ParameterTypes	The data types used by the function input. This property will be responsible for data validation to ensure that the data received by the Execute method always valid. Data type validation within the Execute method is therefore unnecessary.
ReturnType	The type of data returned by the function. This is the same as the underlying type of data returned by the Execute method.
CacheResult	If your custom function is deterministic and slow, you may want to cache the data. Rather than writing your own caching implementation, you can use the one provided by the SQL engine by setting this flag to true. Caches will be keyed on all parameters provided into the function.

The Execute method is then responsible for method execution. It receives an array of parameters where the data types have already been validated using the definition provided by the ParameterTypes property. The underlying data returned by the Execute method should match the type defined in the ReturnType property.

This light weight function implementation makes it easy to extend the SQL engine to meet your needs. If you have any questions or comments please feel free to contact us.

LogViewPlus Add-Ons

Add-Ons are a special class of custom extension developed exclusively by Clearcove. Add-Ons extend LogViewPlus to provide functionality beyond what is available in the standard install.

Unlike other plugin types, LogViewPlus Add-Ons are often specific to a particular task in LogViewPlus. Often the task will be half-implemented in LogViewPlus by default. This gives LogViewPlus the ability to prompt for an add-on if required.

Add-Ons may be used to implement features when one or more of the following criteria are met:

1. The feature is not widely needed.

2. The feature requries additional third-party libraries.

3. The feature adds additional licensing requirements which must be agreed to by the end user.

When an Add-On has been correctly installed, it will be shown in the list of currently loaded plugins with a plugin type of 'Add-On'.

LogViewPlus currently supports four add-ons: IP Address, 7-Zip, ETW and ECC.

IP Address

The IP Address Add-On wraps the free DB-IP database into two custom SQL functions which provide IP geolocation capabilities. Please see LVP SQL for the definition and example usage of the functions provided.

IP geolocation can be helpful when generating reports based on IP address. The IP Address Add-On was introduced in LogViewPlus v3.0.16 and is not supported in earlier versions.

To install the IP Address Add-On:

1. Download the IP Address Add-On

2. Extract the contents of the zip file to the %AppData%\LogViewPlus\Plugins\Sql directory. After the zip file is extracted, the Plugins\Sql directory should contain one folder and five files.

3. Enable plugins and restart LogViewPlus.

7-Zip

The LogViewPlus 7-Zip Add-On adds support for decompression of 7Zip (*.7z) archives.

To install the 7-Zip Add-On:

1. Download the 7-Zip Add-On

2. Extract the contents of the zip file to the %AppData%\LogViewPlus\Plugins\7z directory. After the zip file is extracted, the Plugins\7z directory should contain two folders and five files.

3. Enable plugins and restart LogViewPlus.

ETW

The ETW Add-On can be used to provide access to provide access to Microsoft ETW event streams. The ETW Add-On was introduced in LogViewPlus v2.5 and is not supported in earlier versions.

To install the ETW Add-On:

1. Download the ETW Add-On

2. Extract the contents of the zip file to the %AppData%\LogViewPlus\Plugins\Etw directory. After the zip file is extracted, the Plugins\Etw directory should contain 24 items (two folders and 22 files).

3. Enable plugins and restart LogViewPlus.

The ETW Add-On requires additional configuration after install. LogViewPlus must be run as an administrator in order to access ETW event streams.

Elliptic Curve Cryptography (ECC)

This add-on is now deprecated as this functionality is built into LogViewPlus v2.5.15 and greater.

The ECC Add-On can be used to provide access to an ECC encryption algorithm (aka, EdDSA or Ed25519) when processing certificates on certain platforms. The ECC Add-On was introduced in LogViewPlus v2.5.7 and is not supported in earlier versions.

To install the ECC Add-On:

1. Download the ECC Add-On

2. Extract the contents of the zip file to the %AppData%\LogViewPlus\Plugins\Ecc directory. After the zip file is extracted, the Plugins\Ecc directory should contain 12 files and no folders.

3. Enable plugins and restart LogViewPlus.

The ECC Add-On does not require any additional configuration after installation.

F.A.Q

LogViewPlus is not installing correctly.

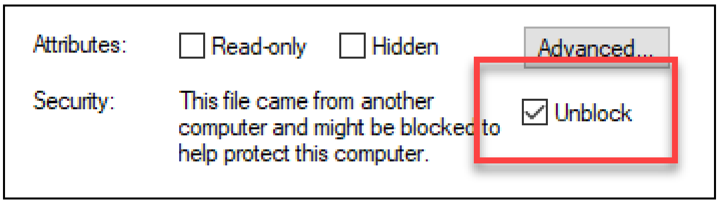
There are a few things you can try here:

1. It is possible that the LogViewPlus installer is running into permission issues on your local machine. Right click on the installer and select "Run as Administrator".

2. Maybe your antivirus is interfering with the LogViewPlus installation? Consider disabling it before running the installer.

3. If you have recently uninstalled LogViewPlus and you are now trying to reinstall the program, it is possible a file us in use and this is preventing the installation. Restart Windows and try running the installer again.

4. You may need to unblock the setup file for it to run correctly. Right click on the setup.exe file and go to Properties -> General. There may be a security section with an 'Unblock' option as shown in the screenshot below.



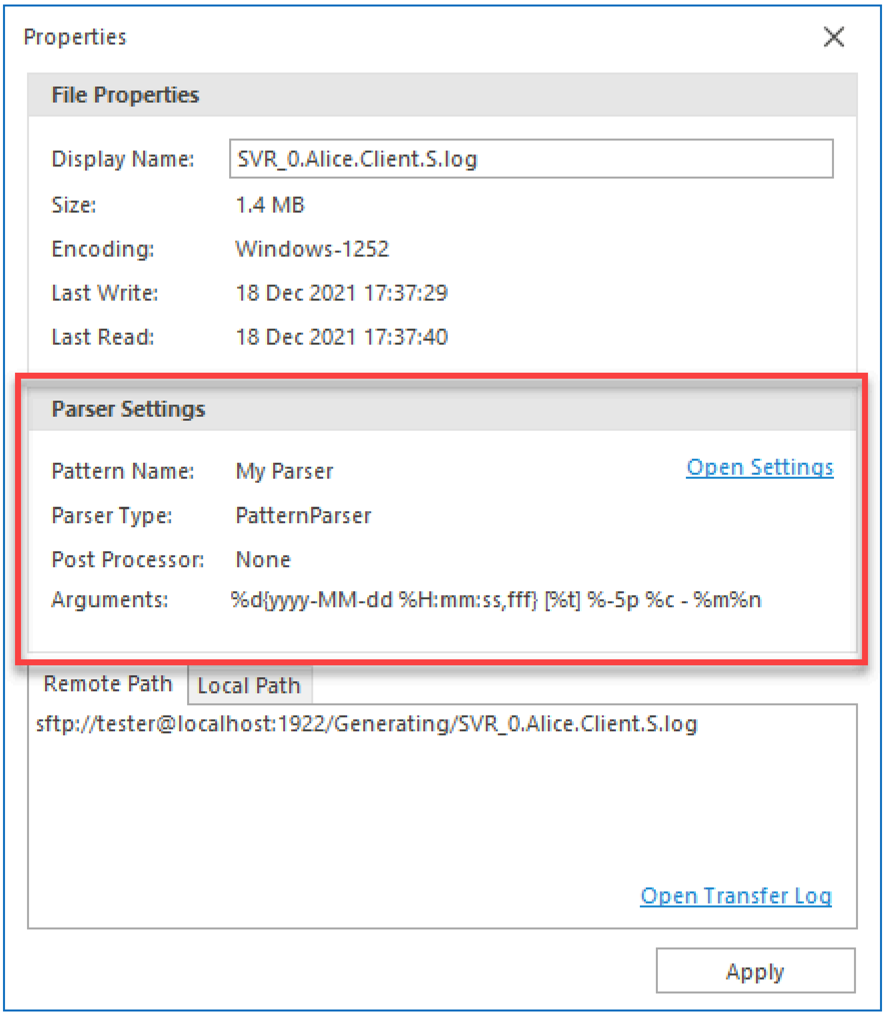
Attributes: □ Read-only □ Hidden Advanced...

Security: This file came from another computer and might be blocked to help protect this computer. ☑ Unblock

If you continue to have problems, please don't hesitate to contact us.

My log file is not being parsed correctly, what can I do?

The first thing to try is to right click on the file and go to "Log File Properties". This will open a dialog which tells you how the file was parsed.



File Properties

Display Name: SVR_0.Alice.Client.S.log

Size: 1.4 MB

Encoding: Windows-1252

Last Write: 18 Dec 2021 17:37:29

Last Read: 18 Dec 2021 17:37:40

Parser Settings

Pattern Name: My Parser

Parser Type: PatternParser

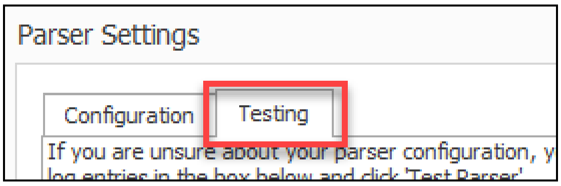
Post Processor: None

Arguments: %d{yyyy-MM-dd %H:mm:ss,fff} [%t] %-5p %c - %m%n

sftp://tester@localhost:1922/Generating/SVR_0.Alice.Client.S.log

Are you using the correct parser? Are the arguments correct? If the parser settings are not what you expected, it may be because there is a problem with the order of your parsers. See parser mappings for more information.

If you are using the parser you expected, the problem may be with the parser itself. Did you try testing the parser?



Parser Settings

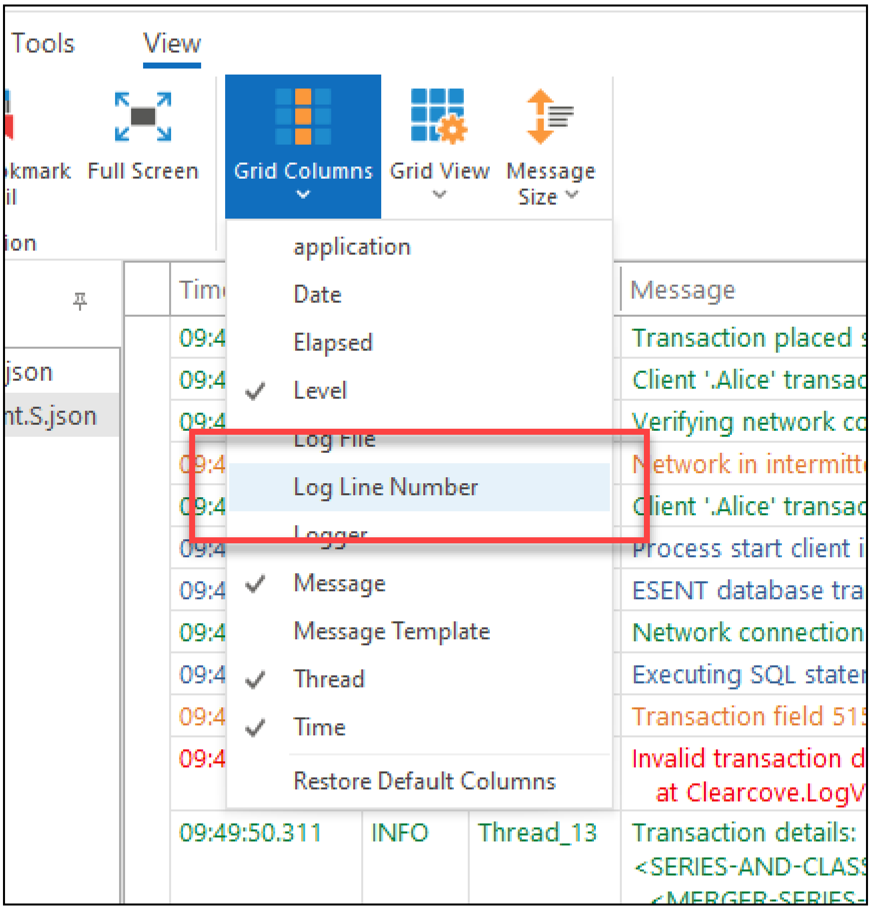
If you are unsure about your parser configuration, y
log entries in the box below and click 'Test Parser'

In the parser settings window, there is a tab you can use to enter sample entries. Paste the sample entries and use the 'Test' button provided. This allows you to quickly test your parser configuration settings. For more information, check out the documentation on configuring parsers.

If you are still unable to configure your parser, please contact us. It would be helpful if you could provide a few sample log entries as well as any details on how you were attempting to configure the parser.

How do I know if LogViewPlus is parsing all of the log entries in my log file?

If you are worried about this, there is an easy way to double check. Click on the 'Grid Columns' command and select the 'Log Line Numbers' command to add log file line numbers to your log file grid.



This will add a line number to each log entry. The line number represents the position where the log entry was found in the log file. You can now open the log file in a text editor which supports line numbers (like Notepad++) and verify the entry has been read correctly.

An error is occurring in LogViewPlus and I am unable to submit the details automatically.

The automatic error submission feature of LogViewPlus requires a working Internet connection. If LogViewPlus is unable to acquire an Internet connection, for example because of a proxy server requesting authentication, it will be unable to automatically submit the error details.

Instead, please send us the error.report file located in %AppData%\LogViewPlus.

I recently changed my settings and now LogViewPlus won't start.

You may have accidentally corrupted your settings. You can reset your settings by deleting the settings.dat file from %AppData%\LogViewPlus. Unfortunately, this will delete all of your settings. Any configuration you have saved such as parser mappings will need to be re-entered.

If you have not already reported this error to us, please send us the error.report file located in %AppData%\LogViewPlus so we can correct the underlying error. It would also be helpful if you could send us the corrupted settings.dat file so we can take a closer look.

I opened a log file successfully, but the log entries don't look right.

Which parser did you use when opening the file? You can find out by hovering over the log file.

If you used the Pattern Parser, please double check your conversion pattern. If you think your conversion pattern is correct, this is may be a bug. Please send us your log file along with the pattern you used to parse the file.

If you used the Basic Parser, this is expected behavior. The Basic Parser is a best effort parser and may not be able to parse the file correctly. Consider using the Pattern Parser instead. Also, please send us your log file. The more test data we have the more we can tweak the Basic Parser to better suit your needs.

When I check for updates automatically, the new version is not detected.

There are two reasons why checking for updates with in LogViewPlus might fail to return the latest version. The first reason is that you may be behind a proxy server which is preventing LogViewPlus from accessing the Internet. If you believe this is the problem, you can configure your proxy server.

The other reason LogViewPlus may be failing to detect the latest version is because we have not yet made the latest version available for automatic download. We frequently release the latest version to new users only in order to improve quality and application stability before a release is pushed to everyone.

Authorized Resellers

Please note that ComponentSource is an authorized reseller of LogViewPlus. You can find more information on the ComponentSource LogViewPlus home page.