

FuegoBPM Logviewer 5 Documentation

Fuego, Inc.

FuegoBPM Logviewer 5 Documentation

by Fuego, Inc.

Published January, 2005 - Version 5.5. Revision 10 - June, 2006.

Copyright © 2001-2006 Fuego, Inc.

FuegoBPM Logviewer 5 Documentation

Copyright 2001-2006 Fuego, Inc. All rights reserved.

This documentation is subject to change without notice. This documentation and the software described in this document contains proprietary trade secrets and confidential information of Fuego, Inc. and is also protected by U.S. and other copyright laws and applicable international treaties. Use of this documentation and the software is subject to the license agreement between you and Fuego, Inc. If no such license agreement exists, you may not use this documentation and software in any manner whatsoever. Unauthorized use of the documentation or software, or any portion of it, will result in civil liability and/or criminal penalties. U.S. Patent Pending.

Fuego, Fuego 4, Component Manager, Process Designer, Work Portal, Orchestration Engine, Execution Console, Process Analyzer, Organization Administrator are trademarks or registered trademarks of Fuego, Inc.

FuegoBPM 5, FuegoBPM Studio, FuegoBPM Designer, FuegoBPM Enterprise Administration Center, FuegoBPM Work Portal, FuegoBPM Portal Console, FuegoBPM Archive Viewer, FuegoBPM Logviewer, FuegoBPM Express Server, FuegoBPM Enterprise Server, FuegoBPM Application Server Edition, FuegoBPM Web Console, FuegoBPM Process Analyzer, FuegoBPM Data Store, FuegoBPM Dashboard, FuegoBPM BAM, FuegoBPM Portlets, FuegoBPM Suite, FuegoBPM Deployer, FuegoBPM Failover, FuegoBPM VCS, FuegoBPM Ant Tasks, FuegoBPM FDI, FuegoBPM Help Viewer, FuegoBPM Server are trademarks or registered trademarks of Fuego, Inc.

InstallAnywhere is a registered trademark of Zero G Software, Inc. Solaris and Java are trademarks of Sun Microsystems, Inc. Windows is a registered trademark of Microsoft Corporation.

All other trademarks, trade names, and service marks are owned by their respective companies.

Table of Contents

1. FuegoBPM Basics	5
Business Services Orchestration	5
What's FuegoBPM	8
2. Working with the LogViewer	11
The Work Environment	12
The Logged Information	19
Filters	25
Connector Rules	33
Bookmarks	36
Working with Log Files	38

Chapter 1. FuegoBPM Basics

Business Services Orchestration

The FuegoBPM (TM) Suite embraces and extends the concept of Business Process Management (BPM) through its vision of Business Services Orchestration (BSO.)

BPM is a discipline that includes many different types of tools and methodologies. A simple process modeling tool, such as Visio, can be considered a BPM utility. Business Intelligence tools can be considered BPM utilities. True, in today's market more people are starting to see BPM as a new category of software that **automates business processes**. The problem is: what do we really understand by automating business processes?

- For the creators of BPEL, it is the organization in time of web services invocation
- For EAI fans, it is a state server that coordinates messages on a proprietary bus
- For some ERP vendors, it is the business logic embedded in an ERP system
- For traditional workflow vendors, it is the organization of the collaboration between people

FuegoBPM can be used to fit in any of the above visions, but they fall short of what FuegoBPM was meant to do.

For FuegoBPM, automating business processes consists of **managing the behavior of people, systems and organizations to orchestrate a repeatable business service**.

Therefore,

- FuegoBPM sees organizing the invocation of web services as managing the behavior of systems, and not all systems: only those exposed as web services.
- FuegoBPM sees a state server to coordinate messages as managing the behavior of systems, and not all systems: only those that have adapters into a proprietary messaging bus.
- FuegoBPM sees the business logic embedded in an ERP system as a service that manages the behavior of organizations limited by the rules in the ERP system. This service can be reused in the context of a cross application enterprise process.
- FuegoBPM sees the organization of the collaboration between people as managing the behavior of people.

Fuego's vision of BPM includes all the above visions in one single holistic vision: Business Services Orchestration. FuegoBPM sees anything a person, system or organization does within an enterprise as a **Business Service**. FuegoBPM provides all the necessary tools to **Orchestrate** composite business services using existing ones, manages and measures the service levels of those composite business services and continuously improves them.

This is what we call *Full Lifecycle Management of Orchestrated Business Services*.

To be able to do this, FuegoBPM provides the full set of tools that enables companies to:

1. Model Processes.
2. Transform Process Models into executable designs.
3. Simulate the execution of designs to study the feasibility of a service level.

4. Harmonize and catalog business services from existing systems to be able to use them regardless of what technology is used to expose them.
5. Catalog the different services from people that can be rendered by the organization and their availability in time.
6. Expose composite services that orchestrate services from systems people and organizations to be reutilized.
7. Monitor the orchestration in production according to the parameters set forth in the simulation.
8. Measure the performance of the process from a historical perspective.
9. Use statistical data to refine future simulations.

FuegoBPM can be used to manage the full spectrum of business processes, from the mostly automated (like BPEL) to the more collaborative processes like those that involve specialized workers and creative activities.

When designing with FuegoBPM, it is critical to understand that the Server was conceived to manage **behavior** rather than just to pass data. When working with a business service, the invocation of the service provokes behavior, when presenting a user with a work portal, the Work Portal suggests the adequate behavior to the user. Obviously, the user is free to do as he or she wishes, but it is very convenient not to need to remember the adequate behavior in each intervention in each process in which a user is involved. And, whatever gets done in effect by people, systems and organizations is logged into a process log that allows the tracking, tracing and measuring of performance.

Without any doubt, Business Services Orchestration is the most complete way to automate the management of a business process designed, for example, as a result of a six sigma exercise, ISO

compliance exercise or BPR exercise. Why?

Because the FuegoBPM Enterprise Server will elicit behavior that otherwise would have implied months of training and convincing, and eons of application integration.

Moreover, Business Services Orchestration is the easiest way to build composite apps that integrate existing ones and expose them as web apps or web services.

To provide the ideal Orchestration platform FuegoBPM has centralized all the design and development tools in a single environment: FuegoBPM Studio. As well the design can be previously defined in the FuegoBPM Designer and the development can be completed using the FuegoBPM Studio.

The orchestrations created in Studio run on an orchestration server that comes in two categories: Express and Enterprise.

The Express category of servers is designed for quick deployment of departmental and small business orchestrations that will require no administration or for proof of concept projects in their pre-rollout stage.

The Enterprise category of servers is designed for full featured Enterprise security, scalability and failover capabilities as well as to run inner-departmental and inter-enterprise processes.

What's FuegoBPM

FuegoBPM is a full-life cycle development and runtime environment for managing business processes from a Business Services Orchestration (BSO) perspective. This means that FuegoBPM focuses on managing the behavior of people, systems and organizations (through a process metaphor) to fulfill a measurable and repeatable business service that may span departments, divisions and company boundaries.

The full-life cycle development environment is FuegoBPM Studio.

Studio provides all the necessary functionality for a BSO approach towards BPM.

The full-life cycle runtime environment is provided through two runtime server editions:

- FuegoBPM Express - an entry level server that requires zero administration, fit for self-contained business services or for proof-of-concept projects.
- FuegoBPM Enterprise - the full fledged enterprise edition to run processes that span departments, divisions and enterprises with all the scalability, security and flexibility features you would expect from an enterprise grade product.

FuegoBPM caters to the needs of our customers in terms of TCO (Total Cost of Ownership) and ROI (Return on Investment). This is why we can really improve the way businesses run. FuegoBPM helps businesses increase operational efficiencies, reduce costs and increase profitability with an agile BPMS that can adapt to any budget and manpower. FuegoBPM allows companies to take control and tangibly optimize enterprise assets—applications, people and core business functions – and how they work together. With FuegoBPM, companies can quickly fill the gap between business strategy and execution in order to gain immediate payback.

FuegoBPM provides a BMPS software that makes the critical enterprise assets work the way you do and change as you change. By orchestrating applications, people and partners into executable, end-to-end processes that can be exposed as new composite business services, FuegoBPM fills the gap between business strategy and business execution.

FuegoBPM shields the process logic from the differences that arise from location (timezone, holidays, vacations, language), from IT infrastructure (MS, Unix, Legacy), from IT strategy (J2EE, .NET, Websphere, CORBA) and from the applications that contain reusable

services (SAP, Peoplesoft, I2, Siebel, legacy, etc.). Therefore, allowing non-specialized business analysts to model, design and change processes with no need to be domain experts.

FuegoBPM reduces complexity, enhances productivity and makes any company as competitive as its creativity allows (not limiting process automation to that which their enterprise software vendors provide.)

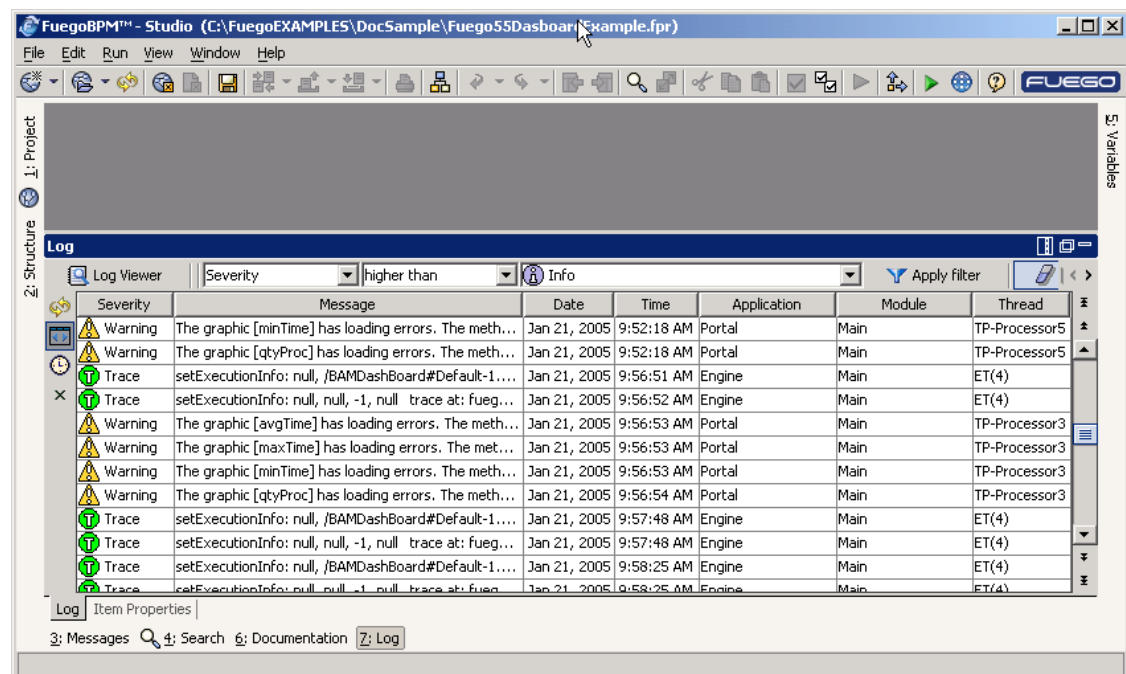
Chapter 2. Working with the LogViewer

FuegoBPM Log Viewer

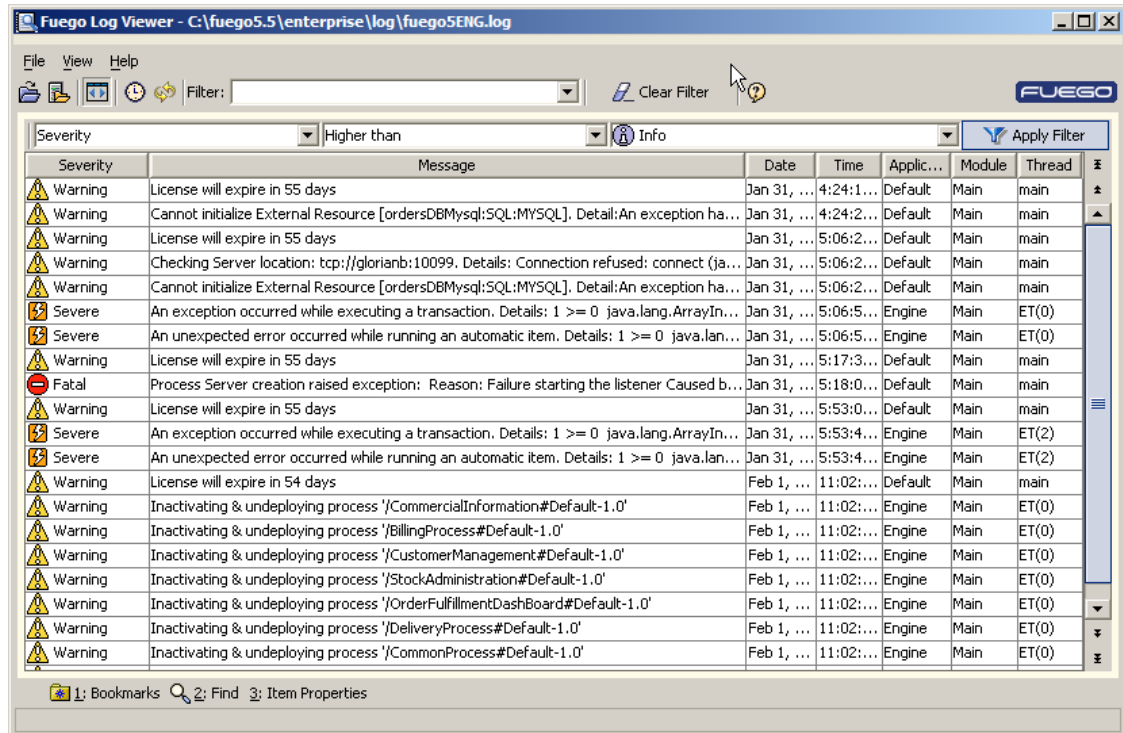
The FuegoBPM Log Viewer enables you to read information logged by the FuegoBPM Server. A set of log files is created for each project you define. FuegoBPM Log Viewer reads the files and displays them to help you monitor and trace Server execution.

To view the log


Click the Log option at the bottom of FuegoBPM Studio. A new panel appears and displays a log viewer with restricted functionality.



Click the **FuegoBPM Log Viewer** button on the top-left corner of the Log Viewer panel to enable complete functionality of the Log Viewer.




Note

 Log files are not generated and, therefore, cannot be read by **Log Viewer** until the project is published or the Server is started for the first time.

The Work Environment

Click **Log** at the bottom of **FuegoBPM Studio** or launch the **FuegoBPM Logviewer stand alone (Enterprise version)** to open the Log Viewer panel. This panel enables you to view the messages logged by the FuegoBPM Server. In FuegoBPM Studio, the panel is a limited version of the Log Viewer.

If you are working with FuegoBPM Studio, click the **FuegoBPM Log Viewer** button  within the Log panel to launch the Log Viewer in a new window.

The work environment changes a little from one version to another. The description of all the functions of **FuegoBPM Studio Log**

Viewer Panel or the **Log Viewer window** are provided below.

Log Viewer Menus

The **File**, **View**, and **Help** menus are only available from the **Log Viewer** window. However, some of the functions included in these menus are available from toolbar icons in the **Process Studio Log Viewer Panel**.

File Menu

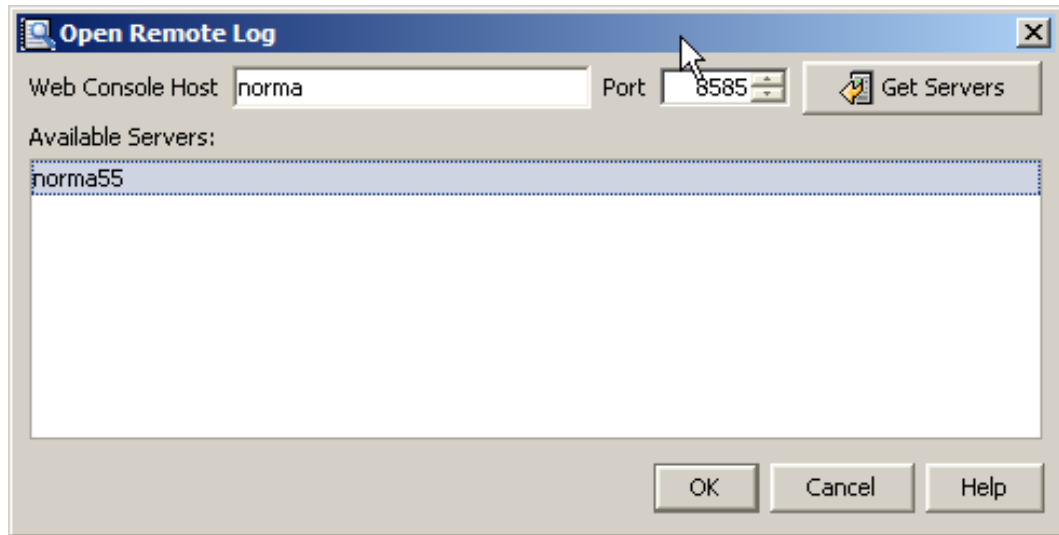
The following table describes the options available from the **File** menu.

Option	Description
Open	Opens a local log file
Open remote log ...	Opens a remote log file. Valid for the FuegoBPM Logviewer Standalone (FuegoBPM Enterprise edition)
Save As	Saves a log file as a .txt file.
Close	Exits the Log Viewer.
Preferences	You can define some preferences when executing the logviewer

Open remote log ...

This option is present when you are working with the FuegoBPM Logviewer Standalone version. It allows to open a log localized in a remote host.

1. When you select this option, the *Open remote log* dialog opens.



2. Write the host name where the FuegoBPM Web Console runs and its port. Then select the **Get Servers** button and type the Fuego Administrator credentials in the *Username* and *Password* of the dialog opened. The list of FuegoBPM Servers is displayed in the *Available Servers* low portion of the dialog.
3. Double click in the server you are interested, and its log will be displayed in the FuegoBPM Logviewer main pane.

PREFERENCES

General:

- **LogViewer Size:** Indicates the number of items to display by page.
- **Update Frequency:** period of time (seconds) to refresh the Lowviewer with new log information.

Time Zone:

The time within each log message from the log file, is represented as

GMT 0. Therefore if you want to view the logs and you belong to a different GMT then you can see the time of each log message in real time by setting the logviewer time zone based on the server that generated that log file.

- **Time Zone:** select the time zone in which the log file was generated
- **Engine Time zone:** it indicates the server's time zone. The server that generated this log file. It will indicate *not available* if there is no opened log file or the log file corresponds to an old version of FuegoBPM.
- **Select the Engine time zone:** the logviewer timezone is set automatically with the server's time zone (the server that created that log file). It is enabled once you have opened a log file .

View menu

The following table describes the options available from the **View** menu.

Option	Description
Language	Set the language to see the FuegoBPM LogViewer
Clear Filter	Clears the currently applied filter.
Automatic adjustment to window	Sets the table to auto-resize mode when a column is resized. This option allows you to see all the columns in the window or panel with no need to scroll through them. If you disable this option, you will need to use the scroll bars to see all the columns. The Log Viewer window

Option	Description
	becomes scrollable from right to left.
Automatic Refresh	Automatically refreshes the Log Viewer main workspace based on the setting of the Update frequency seconds, as defined in the Log Viewer preferences. Every n seconds, the Log Viewer changes focus to the end of the file to show the latest logged items.
Refresh	Shows the latest logged items.





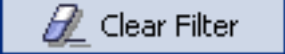



Help Menu

The following table describes the options available from the **Help** menu.

Option	Description
Contents	Launches the Log Viewer online help.
About	Displays information about the Log Viewer version and virtual machine information.



Log Viewer Toolbars

The Log Viewer toolbars display shortcuts for the most frequently used menu options. The following table lists the tools and their functions. The tools are listed in the order they appear on the toolbar from left to right.

Icon	Description	Where It Is Available
	Opens remote log	Log Viewer
	Shows the latest logged items.	FuegoBPM Studio Log Viewer Panel & Log Viewer Window
	Drop-down list containing saved filters.	Log Viewer window
	Applies the defined filter.	FuegoBPM Studio Log Viewer Panel & Log Viewer Window
	Clears currently applied filter.	FuegoBPM Studio Log Viewer Panel & Log Viewer Window
	Sets the logs table to auto-resize mode when a column is resized.	FuegoBPM Studio Log Viewer Panel
	Automatically refreshes the Log Viewer based on the setting of the Update frequency seconds, as defined in the Log Viewer preferences.	FuegoBPM Studio Log Viewer Panel
	Launches the Log Viewer online help.	Log Viewer window

Log Viewer Tabs

The Log Viewer has three tabs that control additional functionality. Tabs can be located on the top, right, bottom, or left of the window depending on your selections.

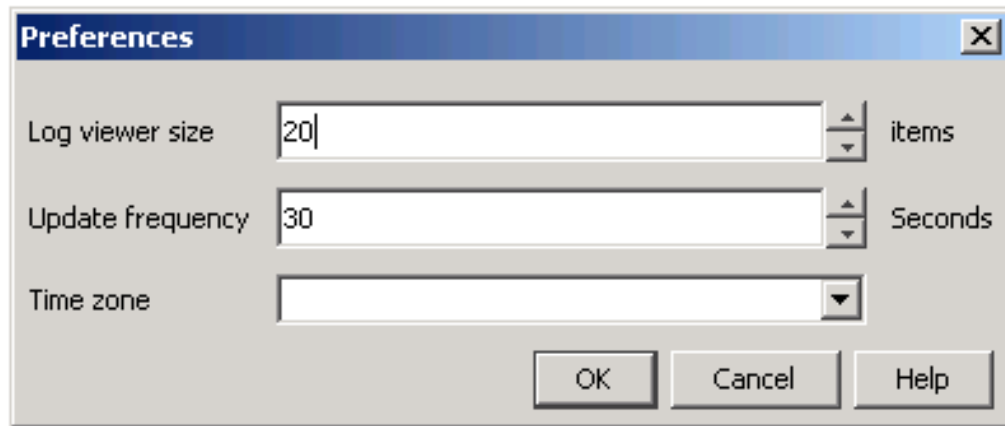
Tab	Description
 2: Find...	Opens the find panel and creates a log file filter or selects a log file filter.
 1: Bookmarks	Opens the Bookmarks panel.
3: Item Properties	Displays complete information for a logged item. Opens a window with the entire logged message and the properties of the log item, such as Severity, Time, Application, and so on.

Setting Preferences

Some preferences can be set when using the **Log Viewer** window.

To set the Log Viewer preferences

1. If the Log Viewer window version is in use, select **File** then **Preferences** from the menu options. If you are using the Log Viewer panel from FuegoBPM Studio, select the FuegoBPM Studio **File** menu option, the **Preferences**, then **Log** in the preferences window. In either case, the following preferences can be configured:



2. In the **Log viewer size** field, type the number of items in the log viewer size field. This indicates the number of items or rows that are displayed in the viewer.
3. Type the **Update frequency** rate. This number indicates the time that must pass before the viewer is updated. The Server is constantly writing information to the log file. The viewer is updated automatically at the interval that is specified in this field.
4. In the **Time zone** field, choose the time zone where you will view the log files. Time zone impacts how you see the date and time of log items. If you don't specify a time zone, Log Viewer gets the default time zone for the host where FuegoBPM Studio is running.

The Logged Information

When the Log Viewer panel is displayed, log items (or log messages) are displayed in date and time order from oldest to newest. The following information is displayed:

Columns	Description
Severity	Indicates the kind of message (FATAL, SEVERE, WARNING, INFO, DEBUG).
Messages	The message that the Server sends to the log.
Time	The time that the message was logged.
Date	The date the message was logged.
Application	Application that sent the message. All FuegoBPM Suite applications can send log messages to the log files.
Module	Module that sent the message.
Thread	Thread that sent the message.

Note



Each column can be resized as needed.

Severity

The severity of the logged messages depends on the FuegoBPM Server properties.

Time and Date

When applying filters to time and date attributes, the time can be matched as *absolute* or as *relative*.


- **Absolute** means a fixed time.
- **Relative** has a value made up of the current date and time plus a value you can set. Relative times are calculated each time the

search is performed and are based on the actual date/time (now). The value for this field is a number of minutes, hours, days, weeks, months, and years to be added to the current date and time. To define a past date or time, select a negative number as the value.

Date Format

The date is saved in the GMT+0 format.

Note

 If the log is generated in a country where GMT+6 format is used and the log is read in a country using the GMT+0 format, the time stamp within the file will not match the actual time the log was saved. For example, if a log item was registered at 8:00 A.M. in Mexico GMT+6, it will be displayed as 2:00 P.M. in a country located at GMT+0.

The date is converted to the local time zone of the computer where the Log Viewer is running.

Selecting the Columns to be Displayed

You can choose to display or hide specific columns in the Log Viewer.

To select columns to display

1. Right-click on a column heading in the Log Viewer. The complete list of columns appears in a menu.
2. Select the check box next to the column headings you wish to see in the Log Viewer. Clear the check boxes next to the column headings that you want to leave out.

Message	Severity	Date
No efect with the new runLe	✓	c 2, 2003
Executing item: IMMEDIATE	✓	c 2, 2003
Executing item: IMMEDIATE	✓	c 2, 2003
- ToDoService switching to ru	✓	c 2, 2003
Executing item: IMMEDIATE	✓	c 2, 2003
- NewsDispatcher switching b	✓	c 2, 2003
Executing item: IMMEDIATE	✓	c 2, 2003
Executing item: IMMEDIATE	✓	c 2, 2003
Executing item: IMMEDIATE	✓	c 2, 2003




Changing the Column Order

You can change the columns' order using drag and drop. Click on a column heading and while holding the mouse button, drag the column to the new location.

Scroll Bar Functions

The number of lines displayed in the Log Viewer window is determined by the number of lines defined in the Log Viewer preferences dialog box. Use the extended scroll bar functions to view all of the logged items.

The extended scroll bar functions are as follows:

-  *Up/down arrow* - moves the page one log item up or down while keeping your selected item highlighted.
-  *Previous/Next page arrow* - moves the main panel to the previous or next page. The page size is defined in the Log Viewer preferences.
-  *Begin/End arrow* - moves to the first or last log item within the log file.

For example, assume that the number of lines defined in the Preferences dialog box is 1,000. The complete log file has 5,000 log items divided into 5 logs. You have selected items from 1001 to 2000.

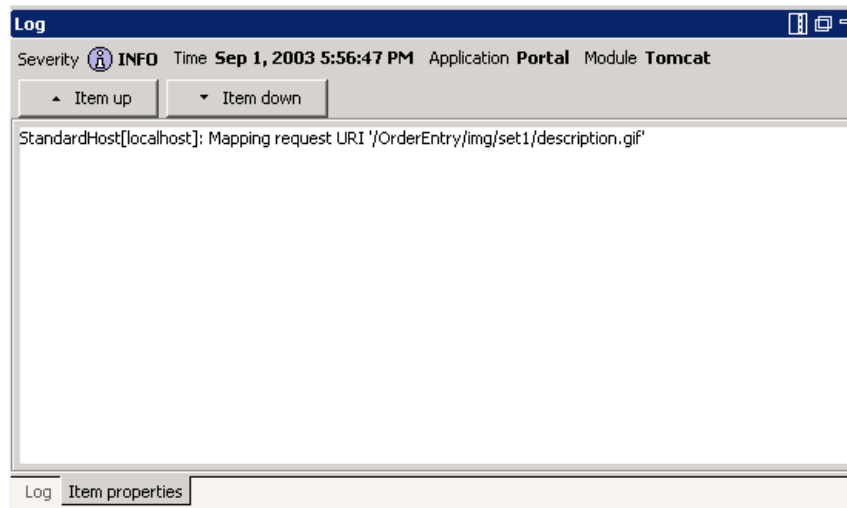
- Item up arrow shows item 1000 (window contains items 1000 to 1999)
- Item down arrow shows item 2001 (window contains items 1002 to 2001)
- Page up/down arrows show items 1 to 1000 or 2001-3000
- Begin/End log arrows show the first log item (1) or the last log item (5000)

Auto-resizing the Log Viewer Window

You can automatically adjust the Log Viewer window to set the table to auto-resize mode when a column is resized. This option enables you to see all of the columns in the main panel with no need to scroll to see columns that do not fit in the window. If you disable this option, you must use the scroll bars in order to see all the columns.

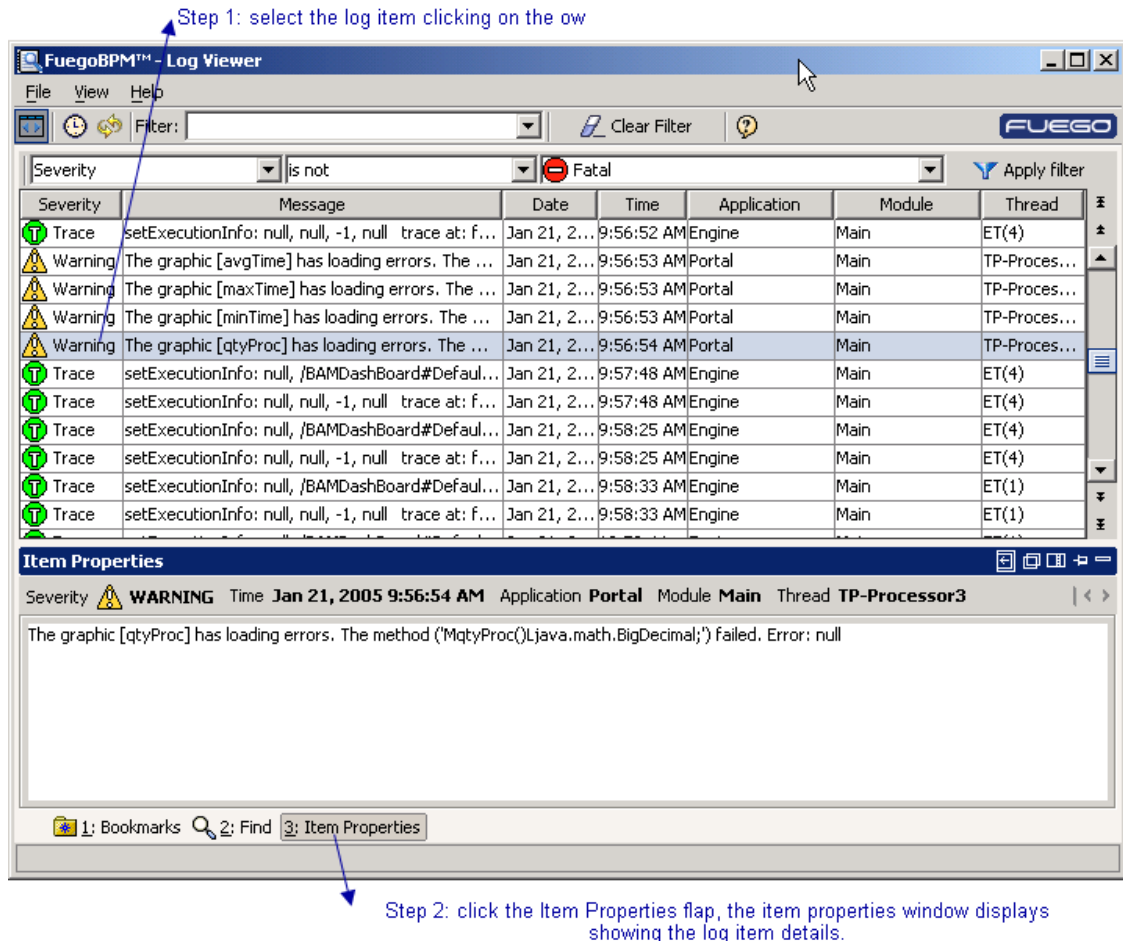
Log Items Window

Double-click on a log item and the item properties window is displayed:



Use the **Item up** and/or **Item down** buttons to see the previous or next item details. Click the **Log** tab at the bottom of the panel to return to the complete list of log items.

From the **Log Viewer** window, select the log item row, then click the **Item Properties** tab. The **Item Properties** panel is displayed:



Automatically Refreshing the Log Viewer

If configured, the Log Viewer will change focus to the end of the log file every *n* seconds to show the latest log items. Disable the auto-refresh option when you are applying filters or watching bookmarked items because the refresh operation changes the view to the end of the log file.

Filters

Log Viewer provides several ways to find log messages in a log file. You can use the **Quick filter toolbar** to filter the log messages matching a single filter condition. This option is available from both the **Process Studio Log Viewer Panel** and the **Log Viewer**

window.

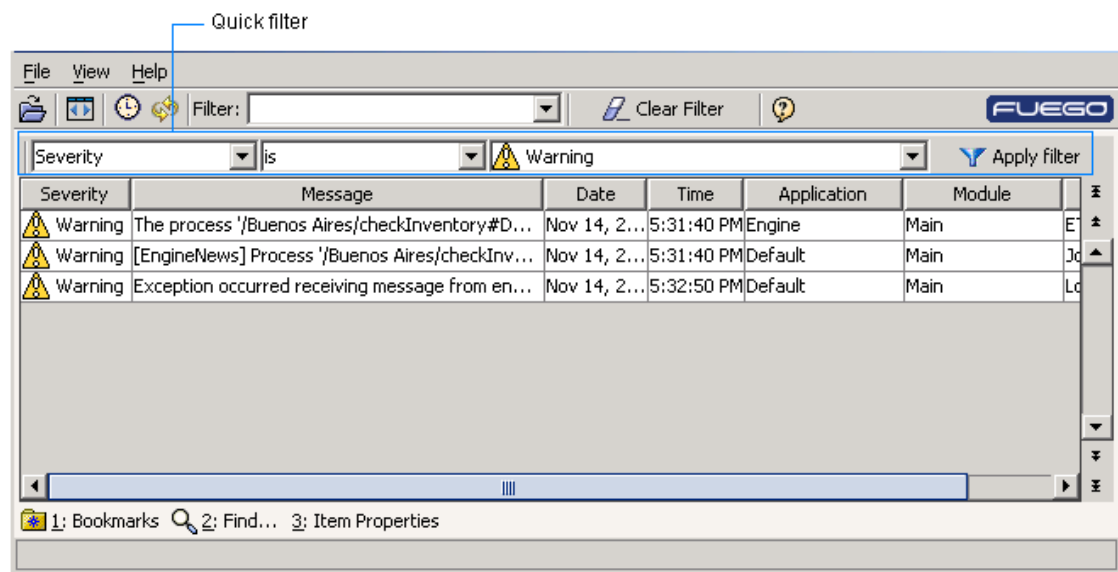
You can also define multi-condition filters to find a specific set of log items. These filters can be saved for use at a later time. There is no limit to the number of filters you can define. Filters are only available from the **Log Viewer window**.

Finding Log Items


If a single condition provides enough information to find the log items, you can use the quick filter toolbar. For example, if you choose the filter condition "Severity is Warning," the Log Viewer displays all logged items with the severity level of *Warning*.

Applying Quick Filters

The **Quick filter** option is available in the **Process Studio Log Viewer** panel and in the Log Viewer window. To apply a quick filter, select the filter condition and click the **Apply filter** button. The results are displayed in the Log Viewer main window:

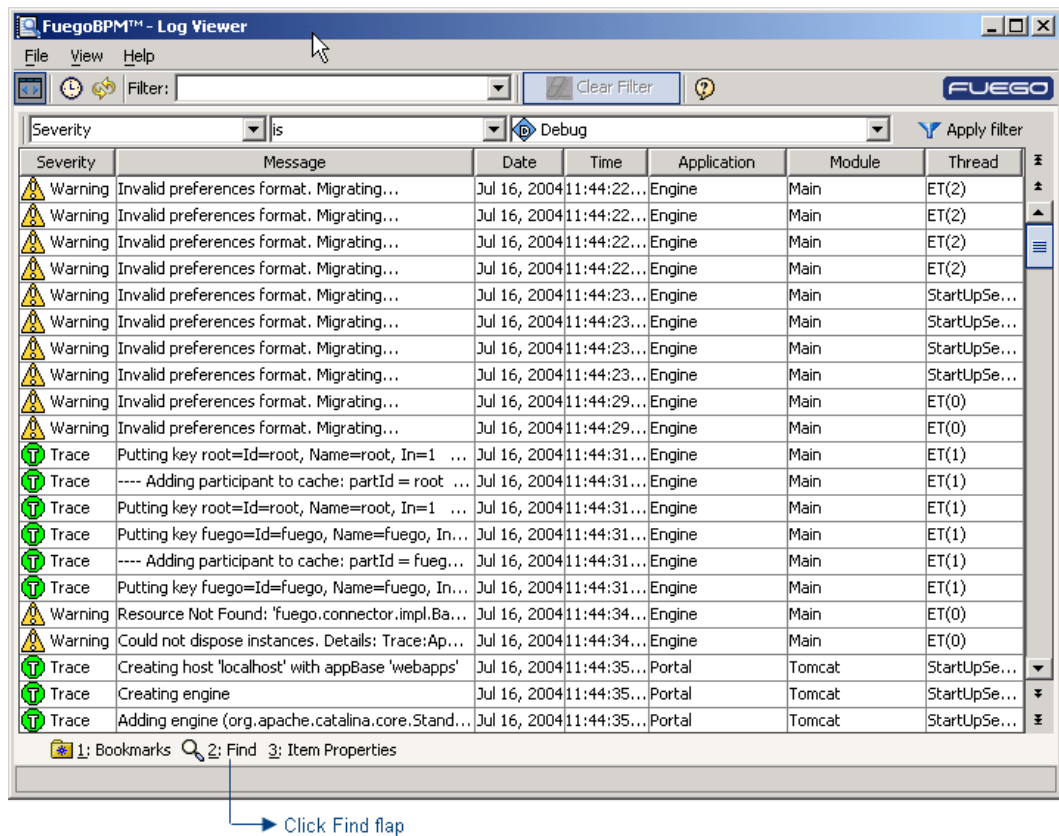


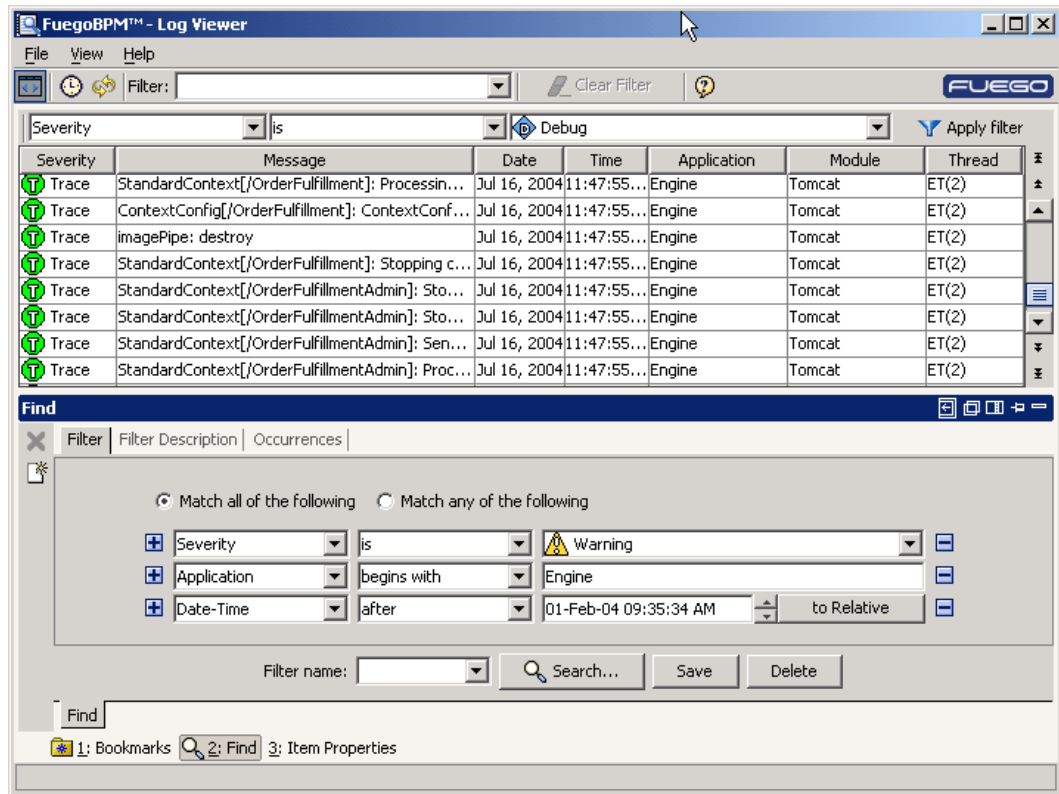
Note

 When using the quick filter, you can apply only one filter condition at a time. If you search for items using a more complex search condition, you need to use the **Filter** button.

Using Multi-condition Filters

1. Click the **Find** tab in the Log Viewer window. The **Find** panel is displayed in the bottom section of the Log Viewer:



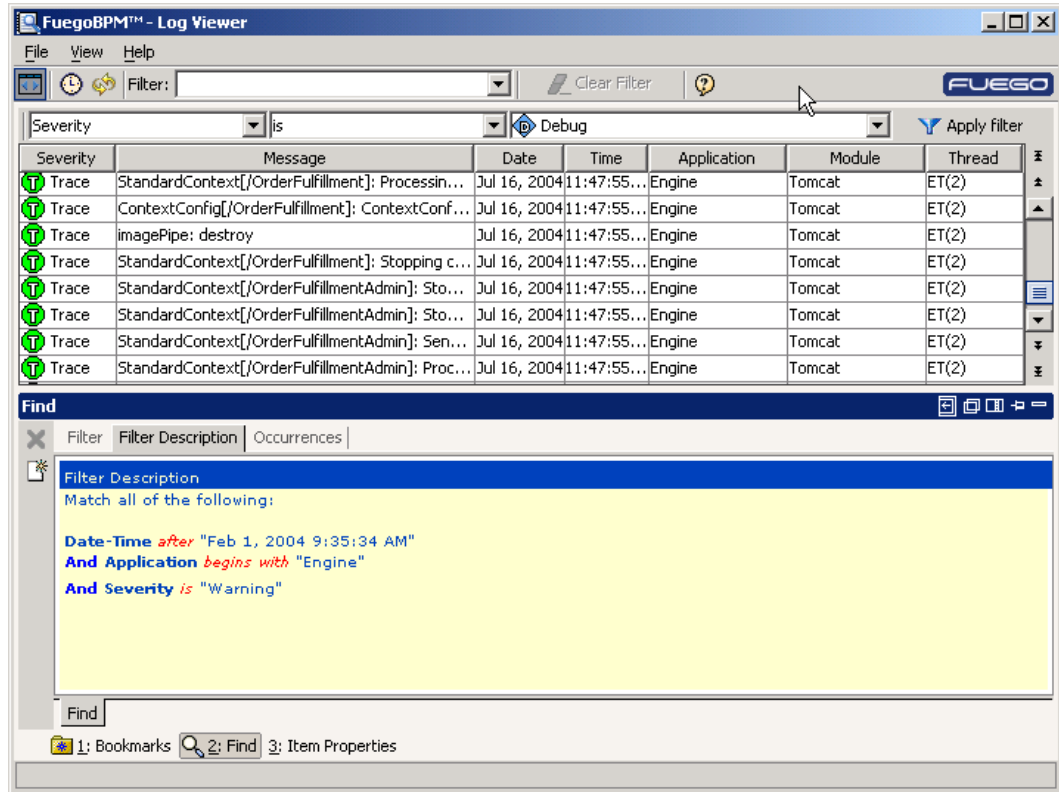


- On the Filter tab of the **Find** panel, enter all of the conditions that the logged items should match using the **plus** sign icon. The **Match all of the following** check box indicates that the log items to recover must match all the defined conditions. The **Match any of the following** check box indicates that the log item to recover must match at least one of the conditions. For further information on how to combine conditions, see Connector Rules. Take into account the following options:

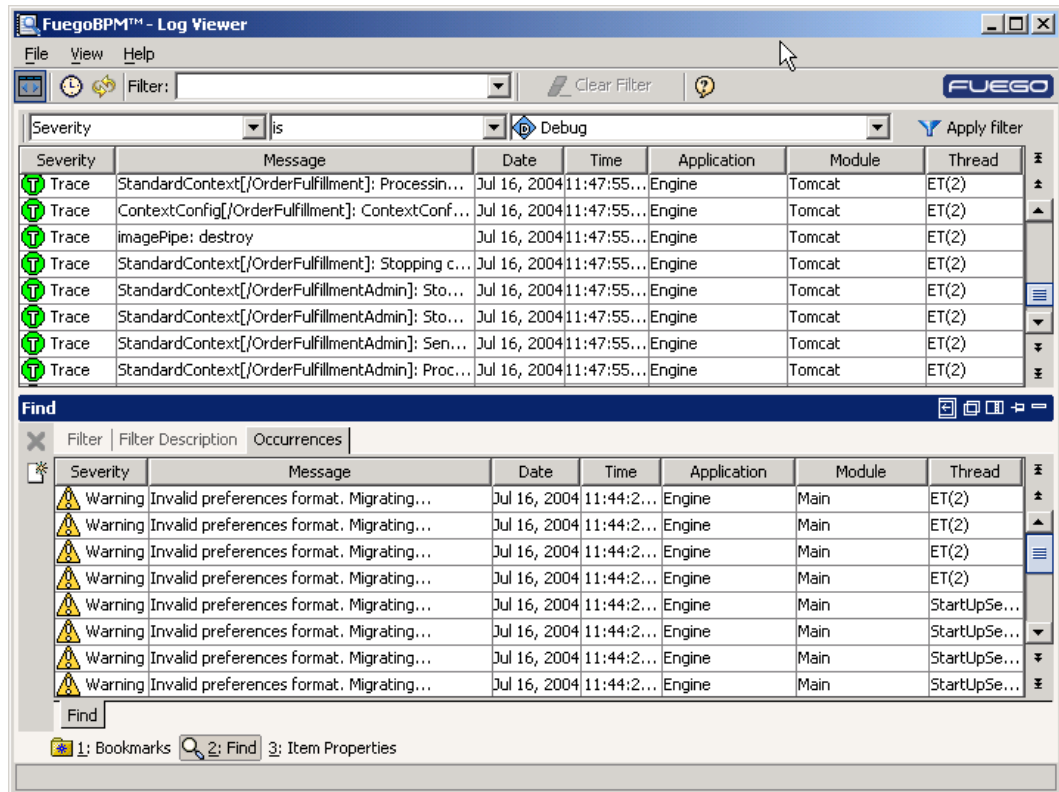
Condition	Connector	Options
Severity	is, is not, higher than, lower than	Debug, Info, Warning, Severe, Fatal
Message	begins with, ends with, is, is not, contains, not contains	Type a search string.

Condition	Connector	Options
Date-Time	is, is not, before, after	Absolute- a fixed date, such as 3/3/2001 23:43:56.Relative- the date is calculated each time the search is performed and is based on the current date and time. The result of the query is a point in time before or after the specified value.
Application	begins with, ends with, is, is not, contains, not contains	Type in a search string.
Module	begins with, ends with, is, is not, contains, not contains	Type in a search string.
Thread	begins with, ends with, is, is not, contains, not contains	Type in a search string.
Level	is, is not, higher than, lower than	Select the level from drop-down list.

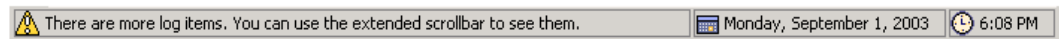
The Filter Description tab displays a detailed description of the search filter and all applicable conditions.



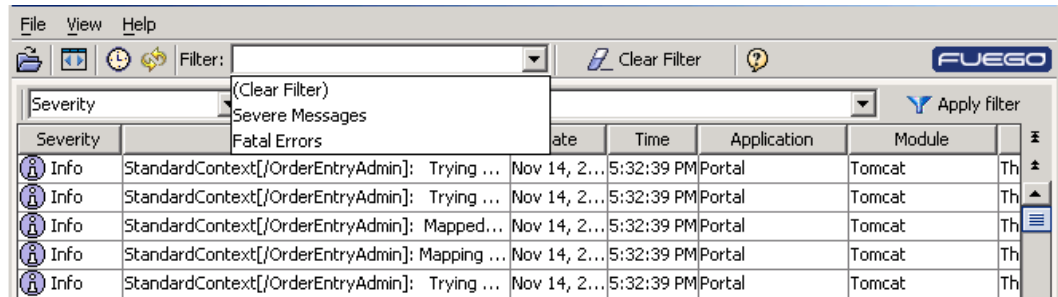
- Click **Search** to search the log for all messages matching your filter conditions. The items matching the criteria are listed in the Occurrences tab on the Find panel.




The number of items displayed here is determined by **Log Viewer preferences** configuration. These items are ordered from the oldest to the newest. If the number of log items exceeds the defined lines to display, a warning message is displayed at the bottom of the **Find** panel.



- To save the filter, type a name in the **Filter name** field (using any combination of alpha or numeric characters) and click **Save**. Once the filter is saved, it is included in the filters drop-down menu in the Log Viewer toolbar. You can select one of the stored filters to find the log items matching the filter conditions at any time while using the Log Viewer.



Note

 When the Find panel is open, you can create new filters by clicking the **New** button. You can have multiple filters open at the same time. Each filter is displayed in a separate Find panel. Also, if you double-click on a log item in the Occurrences tab of the Find panel, it is highlighted and displayed within its context in the main Log Viewer panel.

Deleting Multi-condition Filters

To delete a filter

1. From the Log Viewer menu **Find** tab, select the filter name from the drop-down list.
2. Click **Delete** to delete the filter.

Clearing Filters

After applying a quick filter, the Log Viewer main panel displays only those log items that match the condition of the filter.

To clear the filter from the currently viewed log

- From the Log Viewer Menu, select **View** then **Clear Filter**.

or

- From the **Process Studio Log Viewer Panel**, click the **Clear filter** button.

After clearing the filter, the Log Viewer displays the complete list of all log messages.

Connector Rules

If more than a condition for the same attribute (for example, Severity) is defined within a Filter, they will be connected to resolve the complete condition. This is accomplished using the logical operators OR and AND. Each connector is classified into a type and based on the combination of the same or different type, the **OR** or **AND** applies.

Classification I

Description	Connector
Is	+
Is not	-
Contains	+
Not contains	-

Using the above connectors, the following rules apply:

Connector	Connector	Operator	Description
+	+	OR	The combination of two types of + will be connected by an OR
+	-	AND	The combination

Connector	Connector	Operator	Description
			of one type + and another type - will be connected by an AND
-	+	AND	The combination of one type "-" and another type + will be connected by an AND
-	-	AND	The combination of two types of "-" will be connected by an AND

Examples

Conditions	explanation
Severity is Debug / Severity is Info	Both conditions use the "is" connector, therefore results displayed in the Log Viewer will contain a severity of DebugORInfo
Severity is not Debug/ Severity is not Info	Both conditions use the "is not" connector, therefore results displayed in the Log Viewer will contain a severity of DebugANDInfo

Classification II

- Begin with: B

- End with: **E**
- Before: *lower than* sign.
- After: *greater than* sign.
- Lower than: *lower than* sign.
- Higher than: *greater than* sign.

Using the above connectors, the following rules apply:

- **B, B: OR** - The combination of two types of **B** will be connected by an OR
- **B, E: AND** - The combination of one type **B** and another type **E** will be connected by an AND
- **E, B: AND** - The combination of one type **E** and another type **B** will be connected by an AND
- **E, E: OR** - The combination of two types of **E** will be connected by an OR
- *lower than, lower than: AND* - The combination of two types of *lower than* will be connected by an AND
- *lower than, greater than: OR (OI)* - The combination of one type *lower than* and another type *greater than* will be connected by an OR
- *greater than, lower than: AND (CI)* - The combination of one type *greater than* and another type *lower than* will be connected by an AND
- *greater than, greater than: AND* - The combination of two types of *greater than* will be connected by an AND

Examples

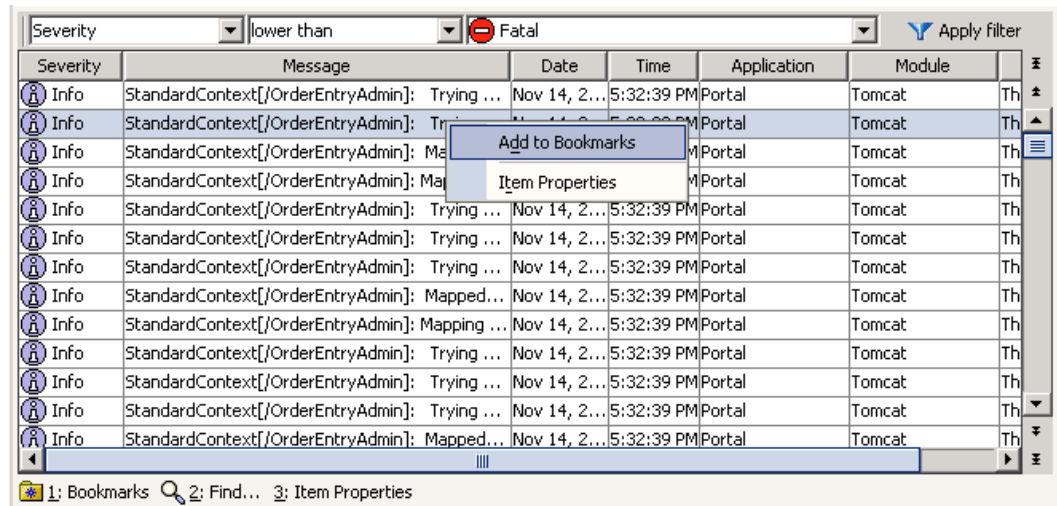
Conditions	explanation
Message Begins with "The server" / Message Ends with "successfully"	The conditions will be combined using AND.
Level Higher than 2 / Level Lower than 5	The conditions will be combined using AND (CI).

Bookmarks

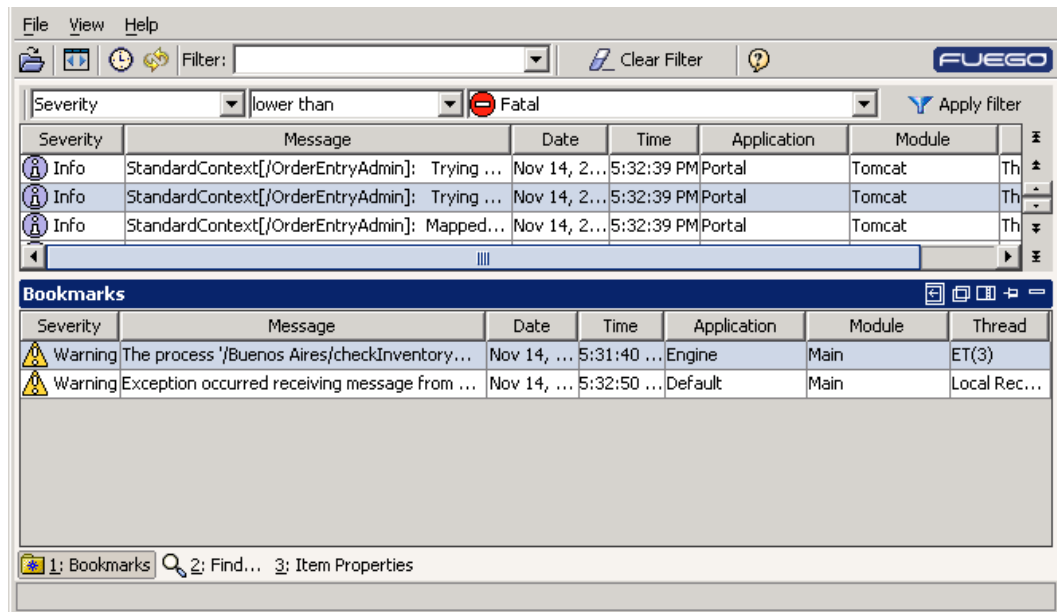
Log Viewer enables you to bookmark a log item so that you can easily find it among all of your logged messages. More than one item can be bookmarked at the same time. In the current Log Viewer session, you can double-click on a bookmarked item to view it within the context in which the logged event occurred. This function is only available in the **Log Viewer window**.

To bookmark a log item

1. Open a log file in the main Log Viewer window.
2. Right-click on a log file item and select **Add Bookmark** from the pop-up menu. The selected item is added to the Bookmarks panel.



- Optionally, click the **Bookmarks** tab to view all your bookmarked items in the **Bookmark panel** at the bottom of the Log Viewer window.



If you double-click a log item in the Bookmark panel, it is displayed in the top panel of the Log Viewer window. Furthermore, if you have applied a quick filter so that the main (top) panel contains ONLY the log items that match the unique condition, then you double-click a log item that you saved as a bookmark, the filter is cleaned and the

bookmarked item is displayed in the main panel.

Warning



Bookmarks are preserved even when the Bookmarks panel is not visible; however, remember that Bookmarks are **temporary** and will disappear when you close the Log Viewer session.

Working with Log Files

When you create a project in FuegoBPM Studio, a directory named for your project is created. The log files are saved in this directory under the sub-directory called *system*. For example, log files for the *YourProject* project are stored in the *YourProject.fpr/system* directory.

You will find up to five log files named **YourProject.log.x**, where x is 0-4.

These log files work in a rotating fashion. When the first file reaches maximum capacity, a new file is created. This continues until all five files reach capacity. Then, the data in the first file is overwritten and the file is reused. The files continue to be reused in a circular manner until the FuegoBPM Server is stopped and no other actions are taken that result in log generation.

Logs are used by all components of FuegoBPM Studio to record actions.