
IBM Tivoli Monitoring V6.2.3

Validating log file adapter format (fmt) files

© 2014 IBM Corporation



This presentation teaches you how to validate log file adapter format files, which are files with the extension fmt, for IBM Tivoli® Monitoring V6.2.3.

Assumptions

Before you proceed, you need these skills and knowledge:

- Know what the Tivoli Monitoring V6.2.3 log file agent format (fmt) file is used for
- Have IBM Tivoli Enterprise Console® installed

This presentation assumes that you know what the Tivoli Monitoring V6.2.3 log file agent format file is being used for. It also assumes that you have access to an installed IBM Tivoli Enterprise Console. This console does not have to be running.

Objectives

When you complete this module, you can perform these tasks:

- Differentiate between the two types of pattern matching that are used in the fmt file
- Validate that your generated fmt file matches selected entries

When you complete this presentation, you can differentiate between the two types of pattern matching that are used in the format file. And you can validate that your generated format file matches selected entries.

Types of pattern matching

The fmt file supports two methods of pattern matching:

- Tivoli Enterprise Console log file adapter style (legacy)
 - Uses simple text pattern style
 - Not recommended for new customizations
- Tivoli Monitoring V6.2.3 log file agent style (new)
 - Uses a regular expression

The Tivoli Monitoring V6.2.3 log file agent requires a format file in order to work correctly. You must customize the format file to match the log files that you want to monitor. Since the log file agent is the successor to the Tivoli Enterprise Console log file adapter, it is compatible with the legacy Tivoli Enterprise Console style. It also supports regular expressions as an alternative method for matching entries in a log file. You can use both styles of pattern matching within the same format file. Subsequent slides show you the difference between the two styles and describe how to test your pattern matching expression.

Tivoli Enterprise Console log file adapter style

- To match this entry: *Error: disk failure on device /dev/sd0: bad sector*

- Format file

```
FORMAT DiskFailure
Error: disk failure on device %s: %s*
hostname DEFAULT
fqhostname DEFAULT
origin DEFAULT
category $1
msg $2
END
```

- Result:

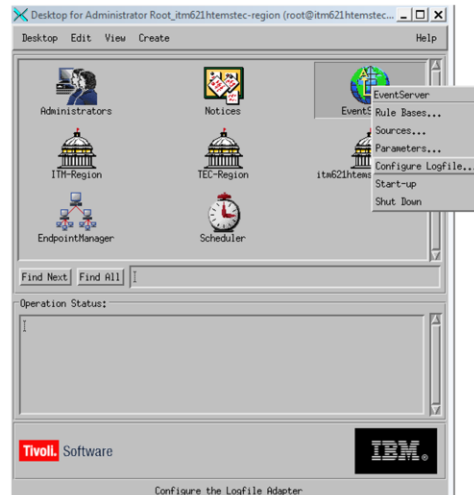
```
EVENT DiskFailure
hostname=default
fqhostname=default
origin=default
category=/dev/sd0
msg=bad sector
```

- Documentation: <http://pic.dhe.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.itecadapters.doc/ecoamst283.htm>

In this example, you want to match the line: *Error: disk failure on device /dev/sd0: bad sector*. A sample format file that uses the legacy pattern matching style is shown here, along with the result of the match. Notice that, in the format file, the entries for hostname, fully-qualified hostname, and origin have the value DEFAULT. In the result, this value is replaced with the appropriate value from the agent. This functionality allows you to use the same format file on different machines. To learn more about the legacy Tivoli Enterprise Console pattern matching style, see the link at the bottom of this slide.

Testing Tivoli Enterprise Console log file adapter-style format file

- Start Tivoli Desktop
- Right-click the **EventServer** icon
- Choose **Configure Logfile**



6

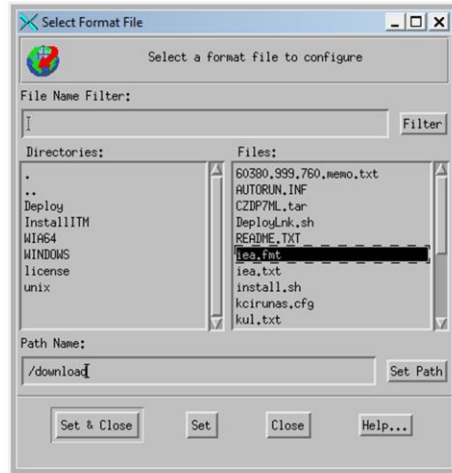
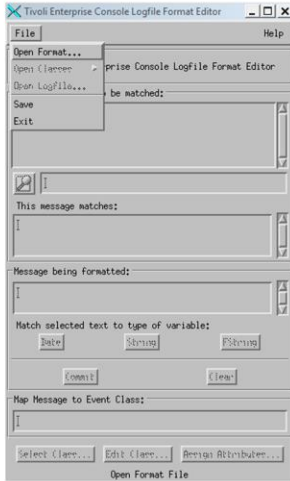
Validating log file adapter format (fmt) files

© 2014 IBM Corporation

The next few slides show you how to validate your legacy Tivoli Enterprise Console-style format file. These steps require that you have Tivoli Enterprise Console installed in your Tivoli Framework. Without it, you cannot test your Tivoli Enterprise Console-style format file.

Start Tivoli Desktop, right-click the EventServer icon, and choose the **Configure Logfile** menu item.

Step 1: Choose the format file



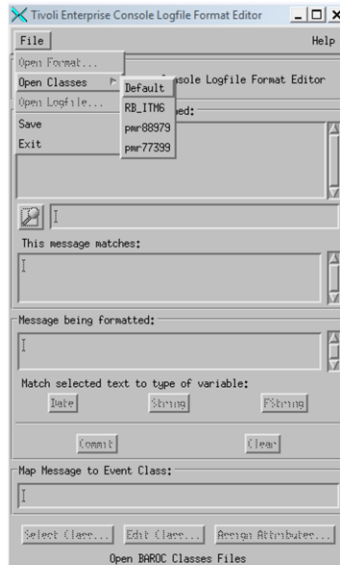
7

Validating log file adapter format (fmt) files

© 2014 IBM Corporation

In the new window that opens, go to the **File** menu and choose **Open Format** to select the format file that you want to test.

Step 2: Choose the rule base to use for the test



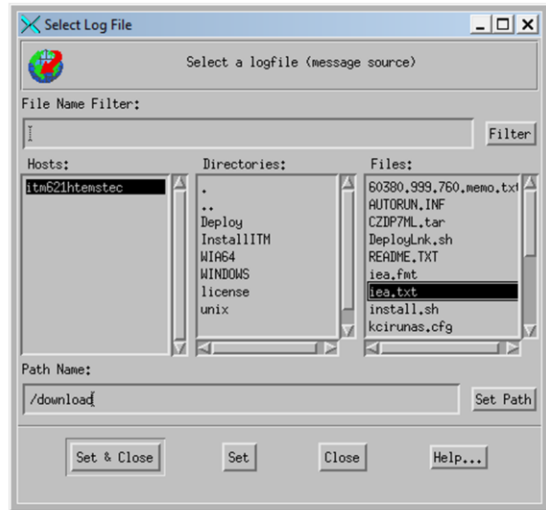
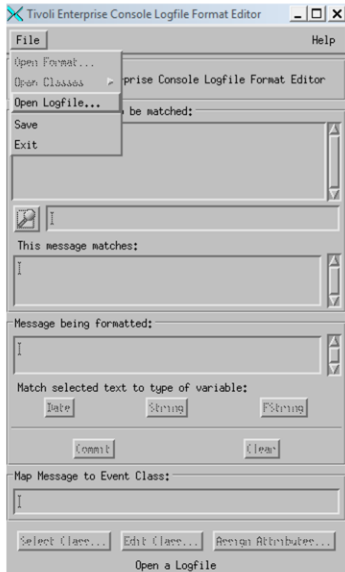
8

Validating log file adapter format (fmt) files

© 2014 IBM Corporation

Next, choose a rule base. From the **File** menu, choose **Open Classes**. You can choose any of the displayed rule bases. It does not matter which one you use.

Step 3: Choose the log file to test with your selected format file



The last step is to choose the log file that your agent modifies that you want to use to test your format file.

Successful test of format file with Tivoli Enterprise Console log file adapter

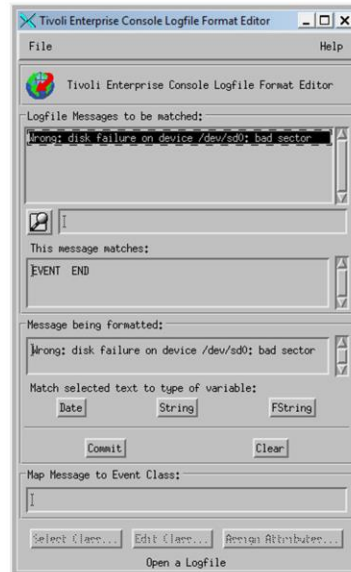


This screen capture shows a successful test. The entry in the log file matches a rule in the format file. The field named “This message matches” show the format file entry that matched the selected log file message.

Failed test of format file with Tivoli Enterprise Console logfile adapter

Test failed:

- See the field **This message matches**
- It does not find a string in the format file that matches the log file



This screen capture shows an unsuccessful test. None of the format file entries matched the selected log file message. The “This message matches” field does not show any values. You will have to check and edit your format file. The Logfile Format Editor does not help you to edit the format file. Its purpose is to help you to test your format file.

Tivoli Monitoring V6.2.3 log file agent style

- Example of entry of fmt file:

```
REGEX DiskFailure
Error: disk failure on device (/dev/sd[0-9]):(.*)
hostname DEFAULT
fqhostname DEFAULT
origin DEFAULT
category $1
msg $2
END
```

- Result:

```
EVENT DiskFailure
hostname=default
fqhostname=default
origin=default
category=/dev/sd0
msg=bad sector
```

- Documentation: http://pic.dhe.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.itm.doc_6.2.3fp1/logfile/klo_fileformat_specs.htm

Here is an example of a format file in the new style that uses a regular expression. Just as in the old style, the values for hostname, fully-qualified hostname, and origin are replaced later with appropriate values from the IBM Tivoli Monitoring V6.2.3 agent. For detailed information about the new regular expression log file agent style, see the link at the bottom of this slide.

Testing Tivoli Monitoring V6.2.3 log file agent-style format file

- IBM does not provide a tool to test the regular expressions
- See this website: <http://www.regular-expressions.info/javascriptexample.html>
- Perform these tasks:
 - Put the regular expression pattern in the **Regexp** field
 - Put the log file entry that must be checked in the **Subject String** field



The screenshot shows a web-based interface for testing regular expressions. It features two input fields: the first is labeled 'Regexp:' and contains the text '\b[a-z]+\b'; the second is labeled 'Subject string:' and contains the text 'This is a test of the JavaScript RegExp object'. Below these fields are two buttons: 'Test Match' and 'Show Match'.

IBM does not provide a tool to test the regular expressions. The linked page is useful because it accepts the regular expression format and it is easy to understand. However, be aware that this is not an official IBM website.

Successful test of format file with Tivoli Monitoring V6.2.3 log file agent

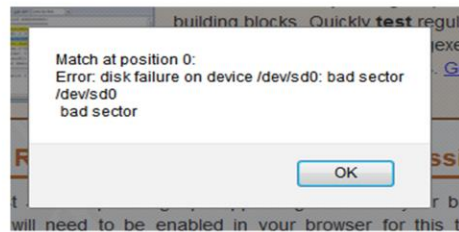
Successful match:

- Additionally you can see content of matched regular expression:
 - (/dev/sd[0-9]) matches **/dev/sd0**
 - (.*?) matches **bad sector**
- Remember the used fmt file:
 - **category \$1** means first regular expression is put to slot **category**
 - **msg \$2** means second regular expression is put to slot **msg**

Regexp: Error: disk failure on device (/dev/sd[0-9]):(.*)
 Subject string: Error: disk failure on device /dev/sd0: bad sector

Test Match

Show Match



Here are two screen captures that describe the usage of this website. Fill in the two fields; then, press **Show Match**. A new window opens and gives you the results.

To interpret the results, make sure that the first line is always “Match at position 0.” The second line shows the used subject string. The remaining lines show the matches of the used regular expression in the order they occur. It means that the first regular expression match is displayed in Line 3, second regular expression match is displayed in Line 4, and so on. It tells you exactly which value is matched in which slot.

Failed test of format file with Tivoli Monitoring V6.2.3 log file agent

Unsuccessful match:



Here is an example of no match. When you press the button **Show Match**, a new window opens and shows the message “No match.” In this case, you must check your regular expressions.

Summary

Now that you completed this module, you can perform these tasks:

- Differentiate between the two types of pattern matching that are used in the fmt file
- Validate whether your generated fmt file matches selected entries

This presentation gave a short overview of the two different styles of the format file that the IBM Tivoli Monitoring V6.2.3 log file agent supports. Additionally, it showed how to validate the format file.



Trademarks, disclaimer, and copyright information

IBM, the IBM logo, ibm.com, Tivoli, and Tivoli Enterprise Console are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of other IBM trademarks is available on the web at "[Copyright and trademark information](http://www.ibm.com/legal/copytrade.shtml)" at <http://www.ibm.com/legal/copytrade.shtml>

Other company, product, or service names may be trademarks or service marks of others.

THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EFFORTS WERE MADE TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION CONTAINED IN THIS PRESENTATION, IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IN ADDITION, THIS INFORMATION IS BASED ON IBM'S CURRENT PRODUCT PLANS AND STRATEGY, WHICH ARE SUBJECT TO CHANGE BY IBM WITHOUT NOTICE. IBM SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING OUT OF THE USE OF, OR OTHERWISE RELATED TO, THIS PRESENTATION OR ANY OTHER DOCUMENTATION. NOTHING CONTAINED IN THIS PRESENTATION IS INTENDED TO, NOR SHALL HAVE THE EFFECT OF, CREATING ANY WARRANTIES OR REPRESENTATIONS FROM IBM (OR ITS SUPPLIERS OR LICENSORS), OR ALTERING THE TERMS AND CONDITIONS OF ANY AGREEMENT OR LICENSE GOVERNING THE USE OF IBM PRODUCTS OR SOFTWARE.

© Copyright International Business Machines Corporation 2014. All rights reserved.