IBM Operations Analytics - Log Analysis
Version 1.3.1

Troubleshooting Guide

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Note
Before using this information and the product it supports, read the information in "Notices" on page 27.

Edition notice

This edition applies to IBM Operations Analytics - Log Analysis and to all subsequent releases and modifications until otherwise indicated in new editions.

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Contents

About this publication

This guide contains information about how to use IBM® Operations Analytics - Log Analysis.

Audience

This publication is for users of the IBM Operations Analytics - Log Analysis product.

Publications

This section provides information about the IBM Operations Analytics - Log Analysis publications. It describes how to access and order publications.

Accessing terminology online

The IBM Terminology Web site consolidates the terminology from IBM product libraries in one convenient location. You can access the Terminology Web site at the following Web address:

http://www.ibm.com/software/globalization/terminology.

Accessibility

Accessibility features help users with a physical disability, such as restricted mobility or limited vision, to use software products successfully. In this release, the IBM Operations Analytics - Log Analysis user interface does not meet all accessibility requirements.

Accessibility features

This information center, and its related publications, are accessibility-enabled. To meet this requirement the user documentation in this information center is provided in HTML and PDF format and descriptive text is provided for all documentation images.

Related accessibility information

You can view the publications for IBM Operations Analytics - Log Analysis in Adobe Portable Document Format (PDF) using the Adobe Reader.

IBM and accessibility

For more information about the commitment that IBM has to accessibility, see the IBM Human Ability and Accessibility Center. The IBM Human Ability and Accessibility Center is at the following web address: http://www.ibm.com/able (opens in a new browser window or tab)

Tivoli technical training

For Tivoli® technical training information, refer to the following IBM Tivoli Education Web site at http://www.ibm.com/software/tivoli/education.

Providing feedback

We appreciate your comments and ask you to submit your feedback to the IBM Operations Analytics - Log Analysis community.

Conventions used in this publication

This publication uses several conventions for special terms and actions, operating system-dependent commands and paths, and margin graphics.

Typeface conventions

This publication uses the following typeface conventions:

Bold

- Lowercase commands and mixed case commands that are otherwise difficult to distinguish from surrounding text
- Interface controls (check boxes, push buttons, radio buttons, spin buttons, fields, folders, icons, list boxes, items inside list boxes, multicolumn lists, containers, menu choices, menu names, tabs, property sheets), labels (such as **Tip:**, and **Operating system considerations**:)
- Keywords and parameters in text

Italic

- Citations (examples: titles of publications, diskettes, and CDs
- Words defined in text (example: a nonswitched line is called a *point-to-point line*)
- Emphasis of words and letters (words as words example: "Use the word *that* to introduce a restrictive clause."; letters as letters example: "The LUN address must start with the letter *L*.")
- New terms in text (except in a definition list): a *view* is a frame in a workspace that contains data.
- Variables and values you must provide: ... where *myname* represents....

`Monospace`

- Examples and code examples
- File names, programming keywords, and other elements that are difficult to distinguish from surrounding text
- Message text and prompts addressed to the user
- Text that the user must type
- Values for arguments or command options

Troubleshooting

This document contains information that assists you in troubleshooting problems with IBM Operations Analytics - Log Analysis. Known issues and resolutions are provided for this release of IBM Operations Analytics - Log Analysis.

Techniques for troubleshooting problems

Troubleshooting is a systematic approach to solving a problem. The goal of troubleshooting is to determine why something does not work as expected and how to resolve the problem. Certain common techniques can help with the task of troubleshooting.

The first step in the troubleshooting process is to describe the problem completely. Problem descriptions help you and the IBM technical-support representative know where to start to find the cause of the problem. This step includes asking yourself basic questions:

- What are the symptoms of the problem?
- Where does the problem occur?
- When does the problem occur?
- Under which conditions does the problem occur?
- Can the problem be reproduced?

The answers to these questions typically lead to a good description of the problem, which can then lead you to a problem resolution.

What are the symptoms of the problem?

When starting to describe a problem, the most obvious question is "What is the problem?" This question might seem straightforward; however, you can break it down into several more-focused questions that create a more descriptive picture of the problem. These questions can include:

- Who, or what, is reporting the problem?
- What are the error codes and messages?
- How does the system fail? For example, is it a loop, hang, crash, performance degradation, or incorrect result?

Where does the problem occur?

Determining where the problem originates is not always easy, but it is one of the most important steps in resolving a problem. Many layers of technology can exist between the reporting and failing components. Networks, disks, and drivers are only a few of the components to consider when you are investigating problems.

The following questions help you to focus on where the problem occurs to isolate the problem layer:

- Is the problem specific to one platform or operating system, or is it common across multiple platforms or operating systems?
- Is the current environment and configuration supported?
- Do all users have the problem?

- (For multi-site installations.) Do all sites have the problem?

If one layer reports the problem, the problem does not necessarily originate in that layer. Part of identifying where a problem originates is understanding the environment in which it exists. Take some time to completely describe the problem environment, including the operating system and version, all corresponding software and versions, and hardware information. Confirm that you are running within an environment that is a supported configuration; many problems can be traced back to incompatible levels of software that are not intended to run together or have not been fully tested together.

When does the problem occur?

Develop a detailed timeline of events leading up to a failure, especially for those cases that are one-time occurrences. You can most easily develop a timeline by working backward: Start at the time an error was reported (as precisely as possible, even down to the millisecond), and work backward through the available logs and information. Typically, you need to look only as far as the first suspicious event that you find in a diagnostic log.

To develop a detailed timeline of events, answer these questions:

- Does the problem happen only at a certain time of day or night?
- How often does the problem happen?
- What sequence of events leads up to the time that the problem is reported?
- Does the problem happen after an environment change, such as upgrading or installing software or hardware?

Responding to these types of questions can give you a frame of reference in which to investigate the problem.

Under which conditions does the problem occur?

Knowing which systems and applications are running at the time that a problem occurs is an important part of troubleshooting. These questions about your environment can help you to identify the root cause of the problem:

- Does the problem always occur when the same task is being performed?
- Does a certain sequence of events need to happen for the problem to occur?
- Do any other applications fail at the same time?

Answering these types of questions can help you explain the environment in which the problem occurs and correlate any dependencies. Remember that just because multiple problems might have occurred around the same time, the problems are not necessarily related.

Can the problem be reproduced?

From a troubleshooting standpoint, the ideal problem is one that can be reproduced. Typically, when a problem can be reproduced you have a larger set of tools or procedures at your disposal to help you investigate. Consequently, problems that you can reproduce are often easier to debug and solve.

However, problems that you can reproduce can have a disadvantage: If the problem is of significant business impact, you do not want it to recur. If possible,

re-create the problem in a test or development environment, which typically offers you more flexibility and control during your investigation.

- Can the problem be re-created on a test system?
- Are multiple users or applications encountering the same type of problem?
- Can the problem be re-created by running a single command, a set of commands, or a particular application?

Troubleshooting HTTP Error 503: Service unavailable

Troubleshooting HTTP Error 503 messages.

Symptoms

IBM Operations Analytics - Log Analysis is running but HTTP Error 503 messages similar to the following are logged:

```
2012-11-22 23:30:09,597 [Default Executor-thread-227] ERROR - UnitySearchRuntime :
UNITYVIVISIMO00308E : Error occurred while evaluating search query
com.vivisimo.gelato.velocityapi.VelocityException: Failed to retrieve URL
http://example.com:0000/vivisimo/cgi-bin/velocity?v.app=api-
rest because Server returned HTTP response code: 503 for URL:
http://example.com:0000/vivisimo/cgi-bin/velocity?v.app=api-rest
```

Cause

The server is currently unable to handle the HTTP request. There are many possible causes for this problem.

Resolution

Stop IBM Operations Analytics - Log Analysis and restart it.

Log4j configuration for log files

This topic outlines the log4j configuration details for IBM Operations Analytics - Log Analysis, the Generic Receiver, and the EIF Receiver

Note: All log4j log files for IBM Operations Analytics - Log Analysis are set to a default maximum file size of 50 MB with 20 backup files at this maximum.

EIF Receiver log settings

The IBM Operations Analytics - Log Analysis EIF Receiver has 2 logging components.

Standard EIF component logging

This is provided for the generic piece of the EIF Receiver and is controlled by the `<HOME>/UnityEIFReceiver/config/eif.conf` file. The default log level is `ALL` and the default log file is `$UNITY_HOME/UnityEIFReceiver/logs/eif.log`. For more information, see the *Event Integration Facility Information Center*.

log4j logging

The log4j logging is provided for wrapper code provided by IBM Operations Analytics - Log Analysis. The log4j file for the EIF Receiver is named `UnityEifReceiver.log` and is added to the `<HOME>/logs` directory. The default log level is set to `INFO`. This log level can be changed to

DEBUG by changing the log4j.logger.Unity=INFO property in the <HOME>/UnityEIFReceiver/jars/log4j.properties file to log4j.logger.Unity=DEBUG. At this level, all records read by the EIF Receiver are reported. The TRACE log level produces a higher volume of data and is only used for small files or for a small period of time. Otherwise, very high disk space usage can result. If required, you can also enable console logging. You can configure the logging level to provide detail based on the level you select:

INFO Provides summary information

DEBUG
Provides detailed information

TRACE
Provides the greatest level of details available

Log4j log levels indicate an issue using WARN, ERROR, or FATAL log entries.

IBM Operations Analytics - Log Analysis and Generic receiver log files

The log4j file configuration file for IBM Operations Analytics - Log Analysis and the Generic receiver is named log4j.properties and is located in the <HOME>/wlp/usr/servers/Unity/apps/Unity.war/WEB-INF/classes directory.

The log4j file for IBM Operations Analytics - Log Analysis is named UnityApplication.log and for the Generic receiver it is named GenericReceiver.log. Both files are added to the <HOME>/logs directory. The default log level is set to INFO.

You can change the log level for IBM Operations Analytics - Log Analysis or the Generic Receiver to ERROR, DEBUG, or WARN by changing the appropriate property in the log4j.properties configuration file. To change the IBM Operations Analytics - Log Analysis log level, amend thelog4j.logger.Unity=INFO property. To change the log level for the Generic receiver log to ERROR, DEBUG, or WARN, change the log4j.logger.UnityGenericReceiver=INFO property.

Enabling console logging and changing the log level for the EIF receiver

By default, the Event Integration Facility (EIF) receiver logging is contained in the UnityEifReceiver.log file located in <HOME>/IBM/LogAnalysis/logs directory. This topic outlines how enable and configure the console logging for IBM Operations Analytics - Log Analysis.

About this task

You can configure console logging by updating the log4j.properties file in the <HOME>/IBM/LogAnalysis/UnityEIFReceiver/jars directory. The default logging level is set to INFO. To configure console logging:

Procedure

1. Use the following command to stop IBM Operations Analytics - Log Analysis processes:

   ```
   <HOME>/IBM/LogAnalysis/utilities/unity.sh -stop
   ```

2. Open the `log4j.properties` file.
3. To enable console logging, locate the line:
   `log4j.logger.Unity=INFO,UNITY_FILE`
4. Edit this line to read:
   `log4j.logger.Unity=INFO,UNITY_FILE,UNITY_CONSOLE`
5. (Optional) Update the logging level to ERROR, DEBUG, TRACE, or WARN as required.
6. Save the file.
7. Use the following command to restart IBM Operations Analytics - Log Analysis:
   `<HOME>/IBM/LogAnalysis/utilities/unity.sh -restart`

Enabling console logging and changing the log level for IBM Operations Analytics - Log Analysis and the Generic receiver

By default, the IBM Operations Analytics - Log Analysis logging is contained in the `UnityApplication.log` file and Generic receiver logging is contained in the `GenericReceiver.log`. Both of these files are located in the located in the `<HOME>/IBM/LogAnalysis/logs` directory. This topic outlines how enable and configure the console logging for IBM Operations Analytics - Log Analysis and the Generic receiver.

About this task

You can configure console logging by updating the `log4j.properties` file in the `<HOME>/wlp/usr/servers/Unity/apps/Unity.war/WEB-INF/classes` directory. The default logging level is set to `INFO`. To configure console logging:

Procedure

1. Stop IBM Operations Analytics - Log Analysis processes.
2. Open the `log4j.properties` file.
3. To enable console logging for the IBM Operations Analytics - Log Analysis application:
   a. Locate the line:
      `log4j.logger.Unity=INFO,UNITY_FILE`
   b. Edit this line to read:
      `log4j.logger.Unity=INFO,UNITY_FILE,UNITY_CONSOLE`
   c. (Optional) Update the logging level to ERROR, DEBUG, or WARN as required.
4. To enable console logging for the Generic receiver:
   a. Locate the line:
      `log4j.logger.UnityGenericReceiver=INFO,UNITY_GR_FILE`
   b. Edit this line to read:
      `log4j.logger.UnityGenericReceiver=INFO,UNITY_GR_FILE,UNITY_GR_CONSOLE`
   c. (Optional) Update the logging level to ERROR, DEBUG, or WARN as required.
5. Save the file.
6. Restart IBM Operations Analytics - Log Analysis processes.

Data recovery

If you determine that there is a gap in the ingested data, troubleshoot your environment to ensure that all processes are operating correctly and that IBM Operations Analytics - Log Analysis is ingesting data. Complete these steps to determine whether all processes are operating and to ingest lost streamed data again.

About this task

If you determine that data is missing for a specific time period, complete these steps to troubleshoot the issue and recover your data:

Procedure

1. To determine whether all of the IBM Operations Analytics - Log Analysis processes are running, execute the command:

   ```
   unity.sh -status
   ```

   This command displays this output if all processes are running correctly:

   ```
   lin04-tfam:⌂/IBM/LogAnalysis/utilities> ./unity.sh -status
   Wed Mar  4 21:55:50 IST 2015
   IBM Operations Analytics - Log Analysis v1.3.0.0 Application Services Status:
   ------------------------------------------------
   No.  Service                   Status   Process ID
   ------------------------------------------------
   1    Derby Network Server       UP       14082
   2    ZooKeeper                  UP       13928
   3    Websphere Liberty Profile  UP       14559
   4    EIF Receiver               UP       14993
   5    Log File Agent instance    UP       25227
   ------------------------------------------------
   Getting status of Solr on lin04-tfam.in.ibm.com
   Status of Solr Nodes:
   ------------------------------------------------------------------------
   No. Instance Name            Host                   Status  State
   ------------------------------------------------------------------------
   1   SOLR_NODE_LOCAL          lin04-tfam.in.ibm.com  UP      ACTIVE
   ------------------------------------------------------------------------
   All Application Services are in Running State
   Checking server initialization status: Server has initialized!
   ```

2. If you install remote instances of the EIF Receiver or the IBM Tivoli Monitoring Log File Agent, check the status of the remote instances.
   - For remote instances of the EIF Receiver, go to the *<USER_HOME_REMOTE>*/DataForwarders/EIFReceivers/utilities directory. Where *<USER_HOME_REMOTE>* is the directory on the remote host where the EIF Receiver instances are deployed. Run the following command:

     ```
     eifutil.sh -status
     ```

   - For remote instances of the IBM Tivoli Monitoring Log File Agent, go to the *<USER_HOME_REMOTE>*/utilities directory. Where *<USER_HOME_REMOTE>* is the directory on the remote host where the IBM Tivoli Monitoring Log File Agent instances are deployed. Run the following command:

     ```
     lfautil.sh -status
     ```

   Here is an example output by the `eifutil.sh` command:

   ```
   ================================================================================
   COMPONENT            Instance         PID            PORT            STATUS
   ================================================================================
   EIF Receiver         eif_inst_1      13983           6601              UP
   EIF Receiver         eif_inst_2      14475           6602              UP
   ```

```
EIF Receiver          eif_inst_3      14982           6603             UP
EIF Receiver          eif_inst_4      15474           6604             UP
EIF Receiver          eif_inst_5      15966           6605             UP
================================================================================
```

3. If any errors are displayed, restart IBM Operations Analytics - Log Analysis by executing the command:

   ```
   unity.sh -restart
   ```

4. To determine whether any previous errors are resolved, run the `unity.sh -status` command. If no errors occur, the output that is displayed is the same as that outlined previously. If errors persist with the server startup, contact IBM Technical Support.
5. If you determine that all processes are running, allow time after the restart for IBM Operations Analytics - Log Analysis to ingest the data again. If the data is not displayed, you can use the Data Collector client to reingest the section of the data that is missing:
   a. Using a text editor, open the data source that contains the section of excluded data.
   b. Copy the data to a new file and save the file to the same location as the streamed log file.
   c. Update the `javaDatacollector.properties` file in the `<HOME>/IBM/LogAnalysis/utilities/datacollector-client` to reflect the appropriate properties. Ensure that the `logFile` property points to the file name of the new file. Ensure that the `hostname` and `logpath` properties are set to the path set in the data source for the original file that you ingested.
   d. Save the `javaDatacollector.properties` file.
   e. Use the following command to run the Data Collector client with the correct inputs:

      ```
      <HOME>/IBM/LogAnalysis/ibm-java-x86_64-70/bin/java -jar
      datacollector-client.jar
      ```

   f. Allow time for the data to be ingested and then complete a search to determine whether the gap in your data is still present.
   g. If the issue persists, contact IBM Technical Support.

IBM Operations Analytics - Log Analysis logs

IBM Operations Analytics - Log Analysis provides logs to allow you to debug issues.

IBM Operations Analytics - Log Analysis processes adds records to a log file located: `<HOME>/IBM/LogAnalysis/logs`. The log files contained in that directory are:

`UnityApplication.log`
Logs events for the Search and administrative workspaces.

`GenericReceiver.log`
Logs events related to the data collection flow for the Generic Receiver.

`UnityEifReceiver.log`
Logs events related to the data collection flow for the EIF Receiver.

`scloganalytics_install.log`
Logs events related to the installation of IBM Operations Analytics - Log Analysis.

unity_itm_logagent_setup_TIMESTAMP.log
Logs events related to the IBM Tivoli Monitoring Log File Agent where TIMESTAMP is the time at which the log file was created.

If you install a remote instance of the EIF Receiver, the log files are stored in the <*remote_deployment_location*>/LogAnalysis/DataForwarders/EIFReceivers/logs directory. Where <*remote_deployment_location*> is the directory on the remote machine where you deployed the EIF instance. The log file is called UnityEifReceiver_eif_inst_#.log where # is the instance ID. The <*remote_deployment_location*>/LogAnalysis/DataForwarders/EIFReceivers/ folder also contains a log file called console.log. This file contains the log entries for the eifutil.sh command.

If you install a remote instance of IBM Tivoli Monitoring Log File Agent, the log files are stored in the <*remote_deployment_location*>/LogAnalysis/IBM-LFA-6.30/logs directory. Where <*remote_deployment_location*> is the directory on the remote machine where you deployed the remote instance of IBM Tivoli Monitoring Log File Agent. The <*remote_deployment_location*>/LogAnalysis/IBM-LFA-6.30/ folder also contains a file called lfaconsole.logs. This file contains the log entries for the lfautil.sh command.

This examples demonstrate how to use the log files to debug issues:

Data not displaying in the user interface
IBM Operations Analytics - Log Analysis is configured and a log file is located in the logsources directory. However, no results are returned for searches:

1. Open the EIF Receiver logs. If no records are displayed in this log, the IBM Tivoli Monitoring Log File Agent has not detected the log file in the logsources directory or no EIF events are created. The connection from the IBM Tivoli Monitoring Log File Agent to the EIF Receiver might not be correctly configured.
2. If the EIF Receiver has recorded EIF events, and posted them to the Generic Receiver, review the Generic Receiver logs
3. The Generic Receiver logs indicate an ERROR if the Data Source configuration is incorrect. Ensure that you have configured the hostname and log path to be the same as the hostname and log path in the EIF event.
4. If there are no records that indicate an EIF event reported to EIF Receiver, review the unity_itm_logagent_setup_TIMESTAMP.log file to confirm that the IBM Tivoli Monitoring Log File Agent setup is correct.
5. If the unity_itm_logagent_setup_TIMESTAMP.log contains no issues or errors, review the scloganalytics_install.log to determine if any issues were recorded during installation of any of the other modules.
6. If no issues are recorded in the logs mentioned, review the UnityApplication.log file to determine if there is any issue while querying for indexed data, or issues with the user interface request flows, database queries and so on.

Unity UI shows an error message
Review the UnityApplication.log file to determine if the any issues are recorded.

Troubleshooting topics

This section describes troubleshooting topics with this release of IBM Operations Analytics - Log Analysis.

Logs are not available for an incomplete or failed installation

This topic describes how to address a situation where your installation fails and you cannot locate logs in the `<HOME>/logs` directory.

Symptoms

An installation fails with an error message. However, no logs are available in the `<HOME>/logs` directory.

Cause

The IBM Operations Analytics - Log Analysis installer performs a silent installation of other embedded products. If the installation of any component fails, IBM Operations Analytics - Log Analysis does not complete the installation.

Resolution

Where an installation fails, log files are provided in the directory where the IBM Operations Analytics - Log Analysis installation package is saved and not in `<HOME>/logs` directory or in the installation directory.

Installation logs are located here:

```
/<HOME>/USER/var/ibm/installationManager/logs
```

where `USER` is the user ID used to install IBM Operations Analytics - Log Analysis.

Log File Agent fails to post events

This topic addresses an issue where a log file is populated with events but those events are not posted to the IBM Tivoli Monitoring Log File Agent.

Symptom

The events that are listed in the log file do not appear in the IBM Tivoli Monitoring Log File Agent.

Resolution

Complete these steps using a graphical windowing layer to overcome this issue:

1. From the `<HOME>/IBM-LFA-6.23/bin` directory, execute the command:

   ```
   itmcmd manage
   ```

   The Manage Tivoli Enterprise Monitoring utility is displayed.
2. Right-click your IBM Tivoli Monitoring Log File Agent instance and select **Configure**.
3. Select the instance and click **OK** and then click **OK** again in the Tivoli Log File Agent dialog box.
4. Ensure that the **No TEMS** option is selected and click **Save**.
5. When prompted, enter the root password.

6. After this has completed, select the IBM Tivoli Monitoring Log File Agent instance, right-click, and click **Stop Agent**.
7. Select the IBM Tivoli Monitoring Log File Agent instance again, right-click, and click **Start Agent**.
8. To reset the log file, execute the command:
   ```
   > filename
   ```
9. Repopulate the events.

Error displayed when ingesting data using a custom Insight Pack

This topic outlines how to resolve an error that occurs when ingesting data using an Insight Pack that you have created.

Symptoms

When you attempt to ingest data using an Insight Pack that you have created, errors are displayed in the GenericReceiver.log located in the `<HOME>/logs` directory. For example, this error might be displayed:

```
013-04-18 11:40:33,547 [Default Executor-thread-19] ERROR - UnityFlowController :
CTGLA0412E : Error occurred while splitting input batch :
com.ibm.tivoli.unity.splitterannotator.exception.SystemTSplitterException:
at com.ibm.tivoli.unity.splitterannotator.splitter.SystemTSplitterWrapper.
split(SystemTSplitterWrapper.java:219)
at com.ibm.tivoli.unity.splitterannotator.splitter.Splitter.split
(Splitter.java:302)
at com.ibm.tivoli.unity.flowcontroller.UnityFlowController.processBatch
(UnityFlowController.java:1111)
at com.ibm.tivoli.unity.service.DataCollectorRestServlet.doPost
DataCollectorRestServlet.java:293)
at javax.servlet.http.HttpServlet.service(HttpServlet.java:595)
at javax.servlet.http.HttpServlet.service(HttpServlet.java:668)
at com.ibm.ws.webcontainer.servlet.ServletWrapper.service
(ServletWrapper.java:1234)
at com.ibm.ws.webcontainer.servlet.ServletWrapper.handleRequest
(ServletWrapper.java:757)
at com.ibm.ws.webcontainer.servlet.ServletWrapper.handleRequest
(ServletWrapper.java:440)
```

Resolution

Using the Log Analysis Insight Pack Tooling, open the Insight Pack and review your Rule set definitions. Verify that the Rule File Directory for both the splitter and annotator Rule sets contain the correct path and name for all of the AQL modules required for the splitter or annotator. All AQL modules must begin with the path `extractors/ruleset`. If you are specifying multiple AQL modules, they must be separated with a semi-colon (;). For example:

```
extractors/ruleset/common;extractors/ruleset/splitterWAS
```

Insight Pack fails to install

IBM Operations Analytics - Log Analysis fails to install one or more Insight Packs.

Symptoms

An installation error message indicates that one or more Insight Packs failed to install.

Cause

The installation log file, located in the `<HOME>/IBM/LogAnalysis/logs` directory, provides the probable cause of the Insight Pack installation failure.

Resolution

To resolve the problem, use the **pkg_mgmt** commands to manage the installation of Insight Packs.

- First, use the **pkg_mgmt.sh -list** command to determine whether the Insight Pack was previously installed.
- Then, use the **pkg_mgmt.sh -uninstall** command to remove an installed Insight Pack and use the **pkg_mgmt.sh -install** command to install an Insight Pack.
- Or use the **pkg_mgmt.sh -upgrade** command to upgrade an Insight Pack that you previously installed.

For more information about using the **pkg_mgmt** command to manage Insight Packs, see the *Using the pkg mgmt command to manage Insight Packs* in the *Extending IBM Operations Analytics - Log Analysis* guide.

Could not retrieve Oauth access token

When you click on a dashboard or custom app, an error message is displayed and you cannot view the data.

Symptom

When you click on a dashboard or custom app, the following error message is displayed:

```
Failed to launch. Could not retrieve OAuth access token.
```

Cause

This error can occur if you do not verify that the server details are correct. For more information about server details verification see the *Prerequisite tasks* section of the *Installation Guide*.

Solution

To solve the error:

1. For a regular server that uses a static IP address, define the static IP address and the required values in the following format:

   ```
   IP     LONG-HOSTNAME    SHORT-HOSTNAME
   ```

   For example:

   ```
   9.124.111.162     scaserver16.example.com     scaserver16
   ```

2. For a DHCP server that uses a loop back IP address, define the loop back IP address and the required values in the following format:

   ```
   LOOPBACK-IP     LONG-HOSTNAME    SHORT-HOSTNAME
   ```

   For example:

   ```
   127.0.0.1    examplescala.example.com     ibmscala
   ```

3. For both types of server, add the IP address, the local host, and the local domain in the following format:

   ```
   IP ADDRESS     localhost.localdomain localhost
   ```

For example:

```
127.0.0.1      localhost.localdomain localhost
```

Cannot run custom apps after IP address change

The URL that you use to log in to IBM Operations Analytics - Log Analysis contains an IP address and that IP address changes, you cannot run custom apps.

Symptom

For example, this error can occur if you install IBM Operations Analytics - Log Analysis on a server that uses Dynamic Host Configuration Protocol (DHCP).

When you try to display data from a custom app, IBM Operations Analytics - Log Analysis generates the following error message:

```
Failed to launch. Could not retrieve OAuth access token.
```

Cause

This error occurs when you use a fixed IP address to log in. The IP address changes frequently when DHCP is used. In this case, IBM Operations Analytics - Log Analysis is trying to use an old, invalid IP address to log in.

Solution

To prevent this error, use the Fully Qualified Domain Name (FQDN) or host name to log in to IBM Operations Analytics - Log Analysis.

Before you install IBM Operations Analytics - Log Analysis, you must ensure that the details for each host server are maintained correctly in the `etc/hosts` directory on the target system. To solve the error:

1. For a regular server that uses a static IP address, define the static IP address and the required values in the following format:

   ```
   IP     LONG-HOSTNAME    SHORT-HOSTNAME
   ```

   For example:

   ```
   9.124.111.162     scaserver16.example.com     scaserver16
   ```

2. For a DHCP server that uses a loop back IP address, define the loop back IP address and the required values in the following format:

   ```
   LOOPBACK-IP     LONG-HOSTNAME    SHORT-HOSTNAME
   ```

   For example:

   ```
   127.0.0.1    examplescala.example.com     ibmscala
   ```

3. For both types of server, add the IP address, the local host, and the local domain in the following format:

   ```
   IP ADDRESS     localhost.localdomain localhost
   ```

   For example:

   ```
   127.0.0.1      localhost.localdomain localhost
   ```

Cannot install remote EIF instance on SUSE

When you try to use the script to install the remote instance on a server that uses the SUSE Linux Enterprise Server 11 operating system, the script fails.

Symptom

The following error message is displayed when you run the script:

```
ERROR: Remote Session could not be established
Correct SSH configurations OR reconfigure and retry
Installation Aborted....!
```

Cause

Password authentication is not enabled.

Solution

To resolve this issue:

1. Log in to the remote host and edit the `sshd_config` file in the `/etc/ssh/sshd_config` directory.
2. Locate the `PasswordAuthentication` flag and change the value from `no` to `yes`. For example:

   ```
   # To disable tunneled clear text passwords, change to no here!
   PasswordAuthentication yes
   ```
3. Save the file.
4. To restart the SSH daemon on the remote host, run the `sshd restart` command from the `/etc/init.d/` directory.

Search runtime exceptions

Creating a dashboard or running a search on the UI can, in certain circumstances, lead to search runtime exceptions that are displayed on the UI.

Symptom

In addition to the exceptions that can display on the UI, this error can also generate errors in the `UnityApplication.log` file. For example:

```
ERROR - JAXRSUnitySearchQueryServlet :
CTGLA2003E : Error when handling search request: CTGLA5600E : Search runtime error.
See the product log files for additional details
```

Cause

This can occur when the Apache Solr heap size is exceeded.

Resolution

To resolve the issue:

1. Stop the IBM Operations Analytics - Log Analysis services.
2. Open the `unitysetup.properties` file that is located in the `<HOME>/IBM/LogAnalysis/wlp/usr/servers/Unity/apps/Unity.war/WEB-INF` directory.
3. Change the value for the `MAX_SOLR_HEAP_SIZE` from the default value of 2048 to 3072. For example:

   ```
   MAX_SOLR_HEAP_SIZE=3072
   ```

   Save your changes.
4. Restart the IBM Operations Analytics - Log Analysis services.

Custom apps failure

This topic outlines how to address an issue where a custom app fails when you run it.

Symptoms

When you run a custom app, it fails. An error message is added to the <HOME>/logs/UnityApplication.log file:

```
import simplejson as json
ImportError: No module named simplejson
```

Cause

IBM Operations Analytics - Log Analysis requires Python simplejson libraries to execute the post processing script. These libraries are a default component of the Red Hat Enterprise Linux Version 5 and higher installation. However, if you do not have them installed, this issue might occur.

Resolution

To resolve this issue, download the Python simplejson package and install it using the command:

```
rpm -i <simplejson_package>
```

where <simplejson_package> is the Python simplejson package that you want to install. After you have completed the installation, you can rerun the connector.

Silent install fails after repository location is updated

A silent install or uninstall can fail if the IBM Installation Manager repository has changed since the last install or uninstall.

Symptoms

A silent install or uninstall of IBM Operations Analytics - Log Analysis fails after the IBM Installation Manager repository has changed. The problem occurs even after you update the response file with the correct repository location.

Cause

The old repository is still open and connected in IBM Installation Manager.

Resolution

To resolve the problem, remove the old repository from IBM Installation Manager using either the GUI or the console. Then, update the response file with the new repository location and repeat the silent install.

To remove a repository using the IBM Installation Manager GUI:

1. Click **File** > **Preferences** > **Repositories**.
2. Remove or close old repositories.
3. Apply your changes.

To remove a repository using the IBM Installation Manager console:

1. From the *Installation_Manager_install_location*/eclipse/tools directory, use the following command to start the console:

   ```
   ./imcl -c
   ```

2. Choose **Preferences**, then choose **Repositories**.

   In the console, a connected repository is indicated by a check mark:

   ```
   Repositories:
        1. [ ] /home/user_name/smcl_beta2
        2. [ ] /home/user_name/smcl_build
        3. [ ] /home/user_name/smcl_build2
        4. [ ] /home/user_name/smcl_bld
        5. [X] /home/user_name/build_ut/output/repository.config
        6. [X] https://example.ibm.com/projects/s/dev/current/
   ```

3. Remove or close old repositories.
4. Apply your changes.

For more information about managing repositories, see the IBM Installation Manager Help or the IBM Installation Manager information center:

http://www-01.ibm.com/support/knowledgecenter/SSDV2W/im_family_welcome.html

Duplicate artifacts result in errors after tooling upgrade

Upgrading the IBM Operations Analytics - Log Analysis Insight Pack tooling where there are duplicate artifacts results in an error.

Symptom

After an upgrade the Insight Pack tooling, in the Insight Pack editor an error will appear stating that a ruleset already exists

Cause

If you have created duplicate artifacts in an Insight Pack and then upgrade to a newer Insight Pack tooling plugin, errors will appear indicating that the artifact already exists. It is not possible to delete a duplicate artifact if the original is referenced by another artifact.

Resolution

You must rename the duplicate artifact. The error will disappear and the artifact may be deleted.

Note: It is no longer possible to create duplicate artifacts using the latest version of the tooling.

Secure Shell (SSH) configuration does not work

You complete the required configuration for SSH to enable password-less authentication but the installation does not work.

Symptoms

After you configure password-less SSH authentication as described in the documentation, the SSH connection does not work.

Cause

The SSH configuration might not work as described because different versions of SSH are supported by the operating systems, such as Red Hat Enterprise Linux or SUSE, that are used on the remote servers.

Resolution

To resolve the issue, try to complete the procedure again with the following changes:

1. Instead of copying the public keys file to the `id_rsa.pub` file in the `.ssh` directory as described in step 4, add the contents of the same file to the `authorizedkeys2` file in the `.ssh/` directory on the remote host.
2. Change the permissions for the `.ssh/` directory to `700`.
3. Change the permission for the `authorized_keys2` file in the `.ssh/` directory to `640`

For more information about configuring password-less authentication, see the *Setting up Secure Shell to use key-based authentication* topic in the *Configuring IBM Operations Analytics - Log Analysis* section of the documentation.

Data Collector fails with stack overflow error

A command-line utility such as the Data Collector fails due to a stack overflow error.

Symptoms

The command-line utility fails. This problem occurs when the WebSphere® Application Server and IBM Operations Analytics - Log Analysis are installed on the same server.

Cause

When the WebSphere Application Server and IBM Operations Analytics - Log Analysis are installed on the same server you must customize the Lightweight Third Party Authentication (LTPA) cookie name. A stack overflow occurs because the new cookie name does not contain the `LtpaToken` string. The command-line utility cannot find the new cookie without this string.

Resolution

To ensure that the Data Collector can detect the cookie, you must include `LtpaToken` in the cookie name. For example, if the LTPA cookie is named `LogAnalysis`, you must rename it `LogAnalysis_LtpaToken`.

Custom app archive data query is slow

You try to use a custom app to query data in the archive but the search query is slow.

Symptom

When the custom app queries data in the archive, the search query is slow.

Cause

The custom app is delayed in displaying the search results because the data is in the archive.

Resolution

Change the configuration of the custom app so that it searches for data that is not in the archive. By default, data that is more than two days old is moved to the archive. However, the exact setting depends on how IBM Operations Analytics - Log Analysis is configured. For more information, see the *Configuring the data archive* topic in *Postinstallation configuration* section of the *Configuring IBM Operations Analytics - Log Analysis* guide.

Cannot display the UI in Microsoft Internet Explorer 11

You are using Internet Explorer 11 and the user interface (UI) does not render correctly or at all in some cases.

Symptoms

The UI is not rendered correctly in Microsoft Internet Explorer 11. The user interface is not displayed. For example, the **Getting Started** page does not display.

Cause

The compatibility list in the browser stores a number of domains for compatibility. One of these domains causes the issue.

Resolution

To correct the issue, you need to disable the compatibility lists:

1. Open Microsoft Internet Explorer.
2. Click the **Tools** icon and click **Compatibility View Settings**.
3. Remove the check from the **Use Microsoft Compatibility lists** check box.

New IBM Tivoli Monitoring Log File Agent subnode is not detected by IBM Operations Analytics - Log Analysis

You created a subnode of the IBM Tivoli Monitoring Log File Agent. However, IBM Operations Analytics - Log Analysis cannot detect the new subnode.

Symptoms

After you create and configure the new subnode, you notice that the subnode is not streaming any data into IBM Operations Analytics - Log Analysis.

Cause

In most cases, the issue is caused by a conflict in the naming of the subnodes.

Resolution

For more information about how to solve the issue, see Character limits for IBM Tivoli Monitoring Log File Agent subnodes names.

IBM Operations Analytics - Log Analysis ingestion failure post-migration

If you use the `Overlaps ()` function in Annotation Query Language (AQL) for any Insight Pack, you must update your code before data migration.

Symptoms

Ingestion into datasources using Insight Packs fails following migration with the following exception:

```
CTGLA0418E : Collection customaccesslog is not registered with the flow controller
```

Cause

The `Overlaps ()` function in earlier releases used four parameters including two null statements in the Insight Packs. The null statements are no longer required and must be removed.

Resolution

Remove the two null statements. For example, if your code contains a statement such as `where Overlaps(D.OrginalDateSpan, T.nonnormative_time, 0, 0);`, you must remove the null statements, changing it to `where Overlaps(D.OrginalDateSpan, T.nonnormative_time);`.

Custom app execution error

Custom app execution fails due to an inaccessible localhost.

Symptoms

When you run a custom app, it fails with the following exception:

```
CTGLA0630E: Application execution failed due to unknown error
```

Cause

To execute a custom app the localhost must be accessible. If the localhost is inaccessible the custom apps fails with the `CTGLA0630E: Application execution failed due to unknown error` exception.

Resolution

To resolve this problem, ensure that the localhost is accessible.

1. To test the accessibility of the localhost, run the following command:

   ```
   ping -a localhost
   ```

   - If the localhost is not accessible, you see the following error:

     ```
     unknown host localhost
     ```

   - If the localhost is accessible, you see the following output:

     ```
     PING localhost.localdomain (127.0.0.1) 56(84) bytes of data.
     64 bytes from localhost.localdomain (127.0.0.1): icmp_seq=1 ttl=64 time=0.026 ms
     64 bytes from localhost.localdomain (127.0.0.1): icmp_seq=2 ttl=64 time=0.037 ms
     64 bytes from localhost.localdomain (127.0.0.1): icmp_seq=3 ttl=64 time=0.033 ms
     64 bytes from localhost.localdomain (127.0.0.1): icmp_seq=4 ttl=64 time=0.046 ms
     64 bytes from localhost.localdomain (127.0.0.1): icmp_seq=5 ttl=64 time=0.031 ms
     ```

2. To enable localhost accessibility, modify the localhost details in the `/etc/hosts` directory or contact your network administrator.

Sample dashboards and custom apps do not work

After you configure LDAP user authentication, you cannot run the sample dashboards or a custom app.

Symptoms

You are using LDAP user authentication. When you try to run a sample dashboard or a custom app, the following message is displayed:

```
Failed to launch application. Could not retrieve OAuth access token
```

Causes

This error occurs because the `OAuth` role is not assigned to a custom user group in the `<HOME>/IBM/LogAnalysis/wlp/usr/servers/Unity/UnityConfig.xml` file.

Resolution

Add the custom groups to `OAuth` role in the `<HOME>/IBM/LogAnalysis/wlp/usr/servers/Unity/UnityConfig.xml` file:

```
<oauth-roles>
    <authenticated>
      <group name="UnityUsers"/>
      <group name="<Group_name1>/>"
      <group name="<Group_name2>/>"
    </authenticated>
</oauth-roles>
```

where *<Group_name>* are the names of the custom groups.

Cannot load saved dashboard after an upgrade

After you install an interim fix or fix pack, an error occurs when you try to use a saved dashboard.

Symptoms

You install a fix pack or interim fix and try to open a saved dashboard. When you do this, the following message is displayed:

```
version: Value of '7.2' does not exist in the enumeration '1.2', '1.3', '2.0'...
```

Causes

This issue can occur if the browser cache has stored files from before the installation.

Solutions

To fix this issue, close the current browser window, clear the cache and log in to Log Analysis in a new browser session.

Incorrect timezone

An incorrect timezone is used by IBM Operations Analytics - Log Analysis after you change the default timezone.

Symptoms

IBM Operations Analytics - Log Analysis uses Coordinated Universal Time as the default timezone. An incorrect timezone is used after you change the default timezone property.

Cause

An abbreviated term for the new timezone name was used to populate the **UNITY_TIME_ZONE** parameter. The use of an abbreviated timezone term can lead to the use of an incorrect timezone. For example, `IST` can be interpreted as Indian Standard Time or Ireland Standard Time.

Resolution

Use the full timezone name rather than the timezone abbreviation in the timezone parameter. For a list of supported timezone names, see the Supported timezone names topic in the *Configuring* reference section.

Note: To change the timezone setting after data is ingested, you must delete the existing data, change the timezone and restart IBM Operations Analytics - Log Analysis. The new timezone setting is applied. Ingested data uses the new timezone.

Invalid timezone error

An invalid timezone error is received after you change the default timezone.

Symptoms

IBM Operations Analytics - Log Analysis uses Coordinated Universal Time as the default timezone. An invalid timezone error in the `UnityApplication.log` file is received after you change the timezone property.

Cause

The **UNITY_TIME_ZONE** parameter value is incorrect. For example, the following error is received if the parameter value is incorrect:

```
CTGLA5013E : Invalid time zone "2UTC"
```

Where `2UTC` is an incorrect parameter value.

Resolution

Ensure that the parameter value is correct. Use the full timezone name rather than the timezone abbreviation in the timezone parameter. For a list of supported timezone names, see the Supported timezone names topic in the *Configuring* reference section.

Note: To change the timezone setting after data is ingested, you must delete the existing data, change the timezone and restart IBM Operations Analytics - Log Analysis. The new timezone setting is applied. Ingested data uses the new timezone.

Known issues

This section describes known issues with this release of IBM Operations Analytics - Log Analysis.

Blank administrative settings in IBM Operations Analytics - Log Analysis

This topic describes how to address a situation where the properties in the Administrative Settings page do not display.

Symptoms

The properties in the Administrative Settings page do not display.

Cause

This page might not display if IBM Operations Analytics - Log Analysis has failed to connect.

Resolution

Restart IBM Operations Analytics - Log Analysis.

Difference between records in a log file and the generic receiver or search results

This topic describes how to address a situation where there is a difference between the number of records in a log file and the list of records in the generic receiver or IBM Operations Analytics - Log Analysis search results.

Symptoms

For a selected time period, there is a discrepancy between the number of records in a log file and the log file for the generic receiver or the search results returned by IBM Operations Analytics - Log Analysis.

Cause

This page might not display if IBM Operations Analytics - Log Analysis failed to connect.

Resolution

Restart IBM Operations Analytics - Log Analysis.

Cannot search, filter, or facet the _datasource field

You cannot search, filter, or facet the **_datasource** field on the Search UI.

If you migrated the records from a previous version of IBM Operations Analytics - Log Analysis to IBM Operations Analytics - Log Analysis 1.2, the records cannot be searched, filtered, or faceted.

After the migration is complete, you can search, filter, and facet the **_datasource** field for any records that are subsequently ingested by the migrated data source.

Cannot start IBM Operations Analytics - Log Analysis after migration to 1.2

If your Insight Packs use any of the Java™ Archive files that are in the <HOME>/DataCollector/annotators/jars directory and you migrate data from a version of IBM Operations Analytics - Log Analysis that is previous to 1.2, the flow controller fails to initialize and IBM Operations Analytics - Log Analysis does not start.

Symptoms

When you log in to IBM Operations Analytics - Log Analysis, the flow controller fails to initialize and IBM Operations Analytics - Log Analysis does not start. An error message is output in the UnityApplication.log file.

This issue occurs if your Insight Packs use any of the Java Archive files that are in the <HOME>/DataCollector/annotators/jars directory.

For example, if the version that you migrated from uses the JavacoreInsightPack_v1.1.0.0-JavacoreExtractor_v1.1.0.0.jar, the following error message is output to the UnityApplication.log file:

```
/home/unity/IBM/LogAnalysisTest/DataCollector/annotators/jars/
JavacoreInsightPack_v1.1.0.0-JavacoreExtractor_v1.1.0.0.jar
Caused by: com.ibm.tivoli.unity.splitterannotator.exception.
JavaSplitterException:java.io.FileNotFoundException:
/home/unity/IBM/LogAnalysisTest/DataCollector/annotators/jars/
JavacoreInsightPack_v1.1.0.0-JavacoreExtractor_v1.1.0.0.jar
```

Cause

The issue is due to a renaming of the Java Archive files. If you use any of the files in the <HOME>/DataCollector/annotators/jars directory, you must modify the file name.

Solution

To solve this problem, change version in the file name of the Java Archive file name to match the equivalent file name from the previous version. For example, change JavacoreInsightPack_v1.1.0.1-JavacoreExtractor_v1.1.0.0.jar file to JavacoreInsightPack_v1.1.0.0-JavacoreExtractor_v1.1.0.0.jar.

Obtaining IBM Software Support

For technical support for IBM Operations Analytics - Log Analysis:

Contacting IBM Software Support

IBM Software Support provides assistance with product defects.

Contacting IBM Software Support

Before contacting IBM Software Support, your company must have an active IBM software maintenance contract, and you must be authorized to submit problems to IBM. The type of software maintenance contract that you need depends on the type of product you have:

- For IBM distributed software products (including, but not limited to, Tivoli, Lotus®, and Rational® products, as well as DB2® and WebSphere products that run on Windows or UNIX operating systems), enroll in Passport Advantage® in one of the following ways:
  - **Online**

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  - **By phone**

    For the phone number to call in your country, go to the IBM Software Support Web site at http://www.ibm.com/support/customercare/sas/f/handbook/home.html and click the name of your geographic region.
- For customers with Subscription and Support (S & S) contracts, go to the Software Service Request Web site at http://www.ibm.com/support/servicerequest.
- For customers with IBMLink, CATIA, Linux, OS/390®, iSeries, pSeries, zSeries, and other support agreements, go to the IBM Support Line Web site at http://www.ibm.com/services/us/en/it-services/gts-it-service-home-page-1.html.
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If you are not sure what type of software maintenance contract you need, call 1-800-IBMSERV (1-800-426-7378) in the United States. From other countries, go to the contacts page of the IBM Software Support Handbook on the Web at http://www.ibm.com/support/customercare/sas/f/handbook/home.html and click the name of your geographic region for phone numbers of people who provide support for your location.

To contact IBM Software support, follow these steps:

1. Determining the business impact
2. Describing problems and gathering information
3. Submitting problems

Determining the business impact

When you report a problem to IBM, you are asked to supply a severity level. Therefore, you need to understand and assess the business impact of the problem that you are reporting.

Use the following criteria to assess the business impact of a problem:

Severity 1
: The problem has a critical business impact. You are unable to use the program, resulting in a critical impact on operations. This condition requires an immediate solution.

Severity 2
: The problem has a significant business impact. The program is usable, but it is severely limited.

Severity 3

The problem has some business impact. The program is usable, but less significant features (not critical to operations) are unavailable.

Severity 4

The problem has minimal business impact. The problem causes little impact on operations, or a reasonable circumvention to the problem was implemented.

Describing problems and gathering information

When describing a problem to IBM, be as specific as possible. Include all relevant background information so that IBM Software Support specialists can help you solve the problem efficiently.

To save time, know the answers to these questions:

- What software versions were you running when the problem occurred?
- Do you have logs, traces, and messages that are related to the problem symptoms? IBM Software Support is likely to ask for this information.
- Can you recreate the problem? If so, what steps were performed to re-create the problem?
- Did you alter the system? For example, did you alter the hardware, operating system, networking software, and so on.
- Are you currently using a workaround for the problem? If so, be prepared to explain the workaround when you report the problem.

Submitting problems

Use this topic to learn how to submit a problem to IBM Software Support.

Submit your problem to IBM Software Support in one of two ways:

- **Online**

  Click **Submit and track problems** on the IBM Software Support site at http://www.ibm.com/software/support/probsub.html. Type your information into the appropriate problem submission form.

- **By phone**

  For the phone number to call in your country, go to the contacts page of the *IBM Software Support Handbook* at http://www.ibm.com/support/customercare/sas/f/handbook/home.html and click the name of your geographic region.

If the problem you submit is for a software defect or for missing or inaccurate documentation, IBM Software Support creates an Authorized Program Analysis Report (APAR). The APAR describes the problem in detail. Whenever possible, IBM Software Support provides a workaround that you can implement until the APAR is resolved and a fix is delivered. IBM publishes resolved APARs on the Software Support Web site daily, so that other users who experience the same problem can benefit from the same resolution.

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