IBM Operations Analytics - Predictive Insights 1.3.3

# Troubleshooting Guide

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**Note**
Before using this information and the product it supports, read the information in "Notices" on page 7.

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# Contents



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# Preface

The purpose of this guide is to help you install Operations Analytics - Predictive Insights.

After completing all steps documented in this guide, you will have a set of running Operations Analytics - Predictive Insights components ready to configure into a fully functional system.

## Audience

The audience for this manual is the network administrator or operations specialist responsible for installing Operations Analytics - Predictive Insights.

To install Operations Analytics - Predictive Insights successfully, a basic knowledge of the following is required:

- Administration of the Linux operating system.
- Administration of IBM InfoSphere Streams.
- Administration of the DB2 database management system.
- Administration of OMNIbus and OMNIbus WebGUI.
- Operations Analytics - Predictive Insights

## Components

IBM® Operations Analytics - Predictive Insights consists of four main components.

The IBM Operations Analytics - Predictive Insights components are:

- **The Database component**: is used to store configuration data, metadata and metric data.
- **The Analytic component**: performs data mediation and processes incoming data to discover any anomalies that are present.
- **The UI component**: presents any discovered anomalies through the IBM Dashboard Application Services Hub application or the IBM Tivoli Integrated Portal application.
- **The Mediation tool**: is used to configure a data source and the data model that Operations Analytics - Predictive Insights will monitor.

Operations Analytics - Predictive Insights documentation includes the following guides:

- Release notes
- Installation Guide
- Upgrade Guide
- Administration Guide
- Error Messages Guide

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# Troubleshooting

Troubleshooting the Operations Analytics - Predictive Insights system.

This section contains possible troubleshooting tasks that can be carried out by the Administrator to ensure Operations Analytics - Predictive Insights functions correctly.

## Sending troubleshooting information to IBM

If you encounter a problem that you cannot solve, use the `collect.sh` script to gather all available information before your contact IBM. For more information, see collect.sh. For further information on log files that you can send to IBM, see Log files .

## Troubleshooting issues

### Upgrading to Operations Analytics - Predictive Insights version 1.3.3 results in more alarms

After you upgrade to version 1.3.3, Operations Analytics - Predictive Insights generates an increased number of alarms.

#### Symptoms

After you upgrade to version 1.3.3 from an earlier version, Operations Analytics - Predictive Insights generates more alarms than it did before the upgrade.

#### Causes

The upgrade procedure sets an incorrect value of 0.997 for the `robustBounds.threshold` property. To confirm the value of the `robustBounds.threshold` property, enter the following command

```
$PI_HOME/bin/admin.sh show -t=<topic> -h | grep robustBounds.threshold
```

#### Resolving the problem

As the analytics user, typically scadmin, complete the following steps to update the value of the `robustBounds.threshold` property to 3 and restart Analytics for each topic:

1. Change to the `$PI_HOME/bin` directory.
2. Enter the following command to update the value of the `robustBounds.threshold` property:

   ```
   /admin.sh set -t=<topic> robustBounds.threshold 3 -f
   ```

3. Enter the following commands to stop and restart Analytics for a topic:

   ```
   ./stop.sh -t=<topic>
   ./start.sh -t=<topic>
   ```

4. Repeat steps 1 to 3 for each topic.
5. Enter the following command to start extraction:

   ```
   ./admin.sh run_extractor_instance -l=<latency>
   ```

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## Database connection check failed

An error occurs when you perform an Operations Analytics - Predictive Insights operation.

### Symptoms

When you perform an operation such as launching the User Interface or running a command such as **admin.sh**, **start.sh**, or **run_extractor_instance**, you see the error message: "database connection check failed."

### Resolving the problem

A likely reason for this is that the database user password has changed, and that change has not been reflected in the Operations Analytics - Predictive Insights files.

To reflect the change in database user password in the in Operations Analytics - Predictive Insights files, see Changing the database user password.

## DB2 database crashes

How to resume data processing if the Operations Analytics - Predictive Insights DB2 database crashes.

### Symptoms

The DB2 database crashes when processing data.

### Resolving the problem

If the DB2 database crashes, follow these steps to resume data processing:

1. Start DB2.
2. When DB2 starts, stop Operations Analytics - Predictive Insights:

   ```
   $PI_HOME/bin/stop.sh
   ```
3. Start Operations Analytics - Predictive Insights:

   ```
   $PI_HOME/bin/start.sh -t=<topic name>
   ```

   If you wish to start all available topics, do not specify the `-t` parameter.
4. Start data extraction:

   ```
   ./admin.sh run_extractor_instance -mode=EXTRACT -topic=<topic name> -e=<end time>
   ```

   **Note:** By not specifying a start time, the extraction process resumes processing from the point where it stopped when the database crashed.

## Out of memory error results in Streams process crash

Operations Analytics - Predictive Insights uses several Java Virtual Machines, one of which may crash due to an out of memory error.

### Symptoms

An out of memory error or crash, such as the following:

```
JVMDUMP006I Processing dump event "systhrow", detail "java/lang/OutOfMemoryError" - please wait.
```

### Resolving the problem

If the event of an OutOfMemory exception, refer back to the sizing process in combination with IBM support assistance. To assist Support in diagnosing the problem, send IBM support the output of `$PI_HOME/bin/collect.sh`.

Resolve the problem by performing the following steps:

1. Change memory settings as advised by the sizing process.

2. Stop/start the Operations Analytics - Predictive Insights Analytics. The following example uses the topic name Topic1. Substitute this with the appropriate topic name.

```
$PI_HOME/bin/stop.sh -t=Topic1
$PI_HOME/bin/start.sh -t=Topic1
$PI_HOME/bin/run_extractor_instance -t=Topic1
```

## Mediation is stopped after training failure

How to start mediation if training fails.

### Symptoms

If training does not complete successfully, Mediation is stopped. When extracting data in backlog mode, Mediation is suspended at the start of training and remains suspended if training fails. When extracting data in steady-state mode, Mediation runs during training, except for the first training, but is suspended if training fails. If training fails, an error is displayed in the Active Event List. For example:

```
Granger training failed at 2014-06-05 07:32:27, Last successful training: 1969-12-31 19:00:00".
```

### Diagnosing the problem

Run the collect.sh script to identify the log file with errors:

```
$PI_HOME/bin/collect.sh
```

The log file are in: `$PI_HOME/log/<topic name>/`

Where <topic name> is the name of the topic .

### Resolving the problem

Stop the analytics instance by running `stop.sh -t=<topic name>`. Take the appropriate corrective action. For example, if there was insufficient memory allocated to the training process, see the Performance and Sizing guidelines. After you resolve the problem, start the analytics instance by typing `start.sh -t=<topic name>`. Start mediation by executing `run_extractor_instance [-e=<endtime> -l=<latency>]`.

## Installation log hyperlink fails to open log file

How to open the Installation Manager installation log.

### Symptoms

When you click the installation log hyperlink in Installation Manager, the log file does not open.

### Diagnosing the problem

This problem occurs because an editor is not installed on the server.

### Resolving the problem

Install an editor. For example,

```
yum install emacs
```

## Error displayed when viewing dashboards

This topic describes how to resolve an error that occurs when viewing a dashboard.

### Symptoms

When you attempt to view a dashboard in Dashboard Application Services Hub, an error similar to the following error is displayed:

```
Error Collecting data visualization input data.Failed to create
dataset.ATKRST132E  An error occurred while transferring a request to the following remoteprovider:
provider - Predictive_Insights.default_provider
```

### Resolving the problem

To resolve this problem, clear your browser's cache and open a new browser window.

## Error Messages

Use the message descriptions contained in this guide to correctly respond to any errors occurring in your Operations Analytics - Predictive Insights system.

**GYMVB10001E An error has occurred while trying to retrieve anomaly information for anomaly.**

**Explanation:** The anomaly you are searching for is either: in the system and is corrupt, or you are not able to connect to the database containing the anomaly information.

**User response:** Confirm that the database is working and available when connecting from the server running the UI component. Any further UI error information is available in your TIP or DASH log files.

**GYMVB10002E No anomaly can be found for anomaly id.**

**Explanation:** The anomaly you are searching for does not exist. There is no record of this anomaly in the Predictive Insights database.

**User response:** You may be searching for an anomaly that has been removed from the Predictive Insights database. Confirm if your system has recently undergone cleanup, or if the anomaly you are searching for is older than the maximum retention period for anomaly information. The metric retention period is set using the configuration property metric.retention.days.

**GYMVB10003E The list of metrics could not be retrieved.**

**Explanation:** The database is no longer available or the metric information is incorrectly formatted.

**User response:** Confirm that the database is available. If the database is available, then you have encountered an issue with metric information format. Contact your system administrator.

**GYMVB10004E The selected anomaly is invalid**

**Explanation:** The anomaly you are searching for is either: in the system and is corrupt, or you are not able to connect to the database containing the anomaly information.

**User response:** Confirm that the database is working and available when connecting from the server running the UI component. Any further UI error information is available in your TIP or DASH log files.

**GYMVB10005E Properties for the visualization cannot be retrieved.**

**Explanation:** You cannot connect to the database.

**User response:** Check if your database is up and running, if a network path exists between the UI server and the database, and make sure you have the correct database credentials. The password may have expired and have been reset.

**GYMVB10007E The start and end times of a tag need to be within those of the chart.**

**Explanation:** You have attempted to create a tag containing times that are not within the visualization period.

**User response:** Limit the tag to the times that are available within the visualization period.

**GYMVB10009E The chart is showing only the target metrics from the top {0} child alarms, ordered by Last Occurrence and Severity, of this consolidated alarm. Use the 'Related Metrics' tab in the bottom pane to modify the metrics that are displayed.**

**Explanation:** You have opened a consolidated alarm that has more than six child alarms. By default Predictive Insights only displays the first six child alarms.

**User response:** Use the Related Metrics tab to include those metrics you want to display.

**GYMVB9010E KPI Count did not find any matching data.**

**Explanation:** The KPI count is output after the model

is deployed and is displayed with a breakdown of metrics, resources, and time period the estimate was based upon. The file system data you used as a data source may not have had sufficient data to allow for an accurate KPI count.

**User response:** The Mediation Tool calculates the KPI Count from a sample of the source data. When using a file system data source, ensure that this sample is representative of the complete data set by having at least one full day of data available to the Mediation Tool. If the Mediation Tool is running on a separate server to the Analytics component, you must copy the sample data to the Mediation Tool server.

After KPI Count has completed the eclipse workspace logs contain details of KPI Count, such as, periods searched, resources matching and not matching filtering. Search these logs for the text "Group ". This logging information will give detailed information on the KPI Count.

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