

A Quick Start Guide to uploadSample: Uploading Sample Logs and Exploring Log Analytics

Last updated on January 10, 2018

This document provides instructions for using the uploadSample package to populate your Log Analytics Cloud Service trial or subscription with sample logs, and it serves as a guide for exploring Log Analytics features quickly. This document, however, is not intended to be a tutorial on using Log Analytics.

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Deploying uploadSample

This section documents how to ensure that the prerequisites of the uploadSample package are met, what the package contains, and how to install it.

Meeting the Prerequisites

Before using the uploadSample package to load sample logs to Log Analytics, ensure that the following prerequisites are met:

- 1 You have a trial or subscription to Log Analytics cloud service

Note:

During the process of Log Analytics cloud service registration, you should receive an email notification from Oracle Cloud containing the information necessary for using this package including **Service Instance URL** and **Identity Domain**.

- 2 You have access to a Unix variant host with cURL, which supports TLS 1.2 protocol

- o Checking TLS 1.2 support

To check whether your cURL supports TLS 1.2 protocol, run the following command.

```
$ curl --help | grep -i tlsv1.2
--tlsv1.2          Use TLSv1.2 (SSL)
```

If you see `tlsv1.2` in the output, then it indicates that cURL supports TLS1.2 protocol.

Note:

This package cannot be implemented on a Windows platform.

- 3 You have HTTPS connectivity from host to the Oracle Management Cloud (OMC)

Note:

If it is necessary to access Oracle Management Cloud through a proxy server, set the `HTTPS_PROXY` environment variable before running the cURL command.

Example:

```
$ export HTTPS_PROXY=www-proxy.xyz.com:80
```

- o Checking connectivity to OMC


Run the following command:

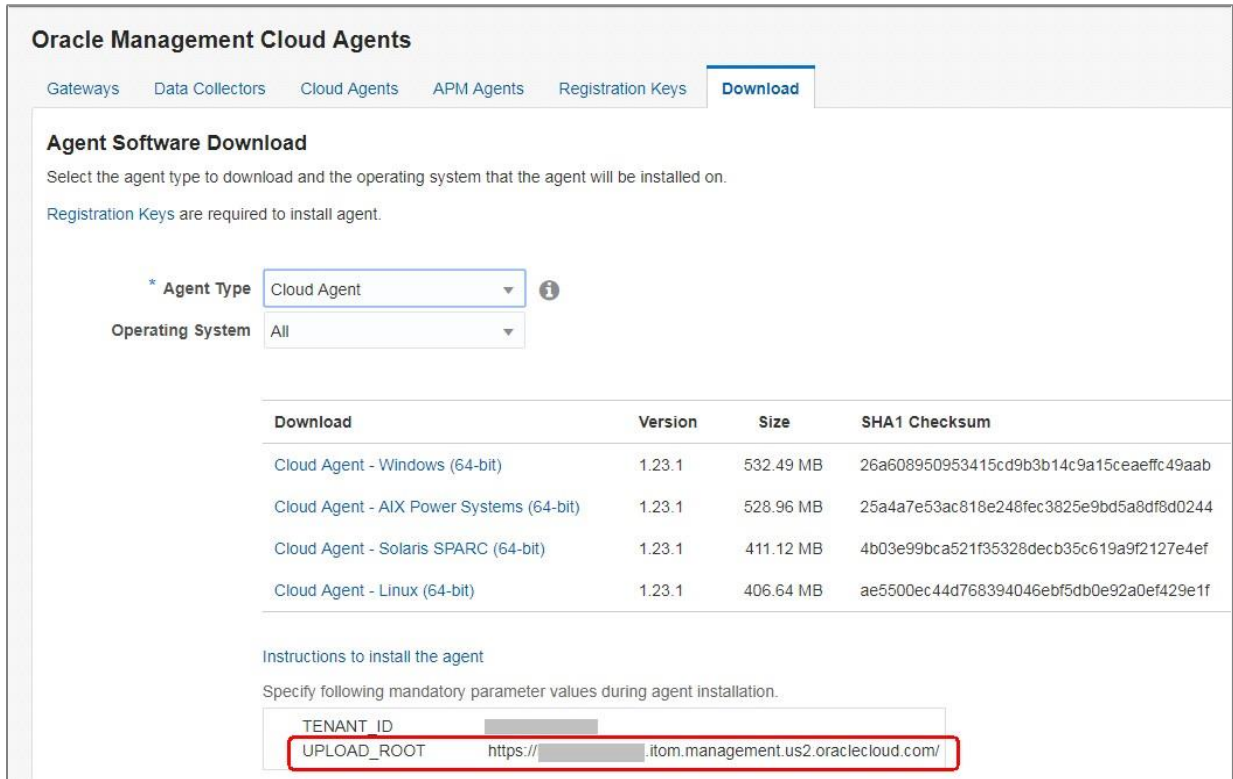
```
$ curl -I --tlsv1.2 <UPLOAD_ROOT>
```

<UPLOAD_ROOT>: URL for uploading logs to OMC

Note:

To obtain the value of the UPLOAD_ROOT parameter, log on to Oracle Management Cloud, navigate to **Administration** * > **Agents** > **Download** tab, and select an agent type from the **Agent Type** drop-down list. You should see the value of UPLOAD_ROOT at the bottom of the page as shown in the screenshot below.

* Click the navigation icon  on the top-left corner to view the Management Cloud navigation pane if it is not already there.



Oracle Management Cloud Agents

Gateways Data Collectors Cloud Agents APM Agents Registration Keys **Download**

Agent Software Download

Select the agent type to download and the operating system that the agent will be installed on.

Registration Keys are required to install agent.

* Agent Type Cloud Agent ⓘ

Operating System All

Download	Version	Size	SHA1 Checksum
Cloud Agent - Windows (64-bit)	1.23.1	532.49 MB	26a608950953415cd9b3b14c9a15ceaeffc49aab
Cloud Agent - AIX Power Systems (64-bit)	1.23.1	528.96 MB	25a4a7e53ac818e248fec3825e9bd5a8df8d0244
Cloud Agent - Solaris SPARC (64-bit)	1.23.1	411.12 MB	4b03e99bca521f35328decb35c619a9f2127e4ef
Cloud Agent - Linux (64-bit)	1.23.1	406.64 MB	ae5500ec44d768394046ebf5db0e92a0ef429e1f

[Instructions to install the agent](#)

Specify following mandatory parameter values during agent installation.

TENANT_ID [redacted]

UPLOAD_ROOT [https://\[redacted\].itom.management.us2.oraclecloud.com/](https://[redacted].itom.management.us2.oraclecloud.com/)

Example:

```
$ curl -I --tlsv1.2 https://inst1-acme.itom.management.us2.oraclecloud.com
```

If the command is successful, you will see an output similar to the one below.

```
HTTP/1.0 200 Connection established

HTTP/1.1 200 OK
Date: Sat, 19 Aug 2017 00:56:42 GMT
Server: Oracle-Application-Server-11g
X-Frame-Options: SAMEORIGIN
Last-Modified: Wed, 09 Dec 2015 23:27:01 GMT
ETag: "2b14-5267f6d5bfb40"
Accept-Ranges: bytes
Content-Length: 11028
Vary: Accept-Encoding
Cache-Control: no-cache,no-store
```

```
Content-Type: text/html
Content-Language: en
```

Contents of Package: uploadSample

The uploadSample package contains the following:

- ❏ uploadSample.sh: The shell script for uploading on demand the sample logs provided with the package
- ❏ uploadSampleTraditional.sh: Same as uploadSample.sh, except it is intended for Oracle Management Cloud tenant accounts using “Traditional Cloud Service” authentication.
- ❏ upload.properties: The file containing the properties used for uploading files
- ❏ Sample log files:
 - alertlog.zip containing sample database alert logs
 - messages.zip containing sample Linux syslog (system logs)
- ❏ uploadSample.pdf: The document you are reading

Installing uploadSample

To install the uploadSample package, follow these steps:

1. Download the uploadSample.zip file.
2. Stage the Zip file in a directory that your OS user account has read and write access. For example, stage the file in the /scratch directory.
3. Go to the stage directory and unzip the file.

Example:

```
$ cd /scratch
$ unzip uploadSample.zip
```

After extracting the Zip file as above, you will see a subdirectory named uploadSample in the current directory. This document refers to the uploadSample directory as SCRIPT_HOME.

Using uploadSample

The section provides the steps for using the uploadSample package to upload sample logs to explore Log Analytics features.

Uploading Sample Logs to Log Analytics

To upload the provided sample logs, follow these steps:

1. Before uploading logs, enter properties' values to be used in uploading logs in file `<SCRIPT_HOME>/config/upload.properties`.

- Go to the `<SCRIPT_HOME>/config` directory.

Note:

If you extracted file `uploadSample.zip` to directory `/scratch`, directory `/scratch/uploadSample` is your `SCRIPT_HOME` directory.

- Use an editor of your choice to edit file `upload.properties` to set appropriate values for the following properties:

Mandatory properties:

`UPLOAD_ROOT=<URL for uploading data to Oracle Management Cloud>`

Examples:

`UPLOAD_ROOT=https://inst1-acme.itom.management.us2.oraclecloud.com`

`UPLOAD_ROOT=https://inst1-xyz.itom.management.europe.oraclecloud.com`

`UPLOAD_ROOT=https://a123456.itom.management.us2.oraclecloud.com`

`IDENTITY_DOMAIN=<Subscription identity domain>`

Example:

`IDENTITY_DOMAIN=acme`

`USERNAME=<OMC user name>`

Example:

`USERNAME=john.doe@xyz.com`

Optional property:

`HTTPS_PROXY=<proxy_host>:<port>`

Example:

`HTTPS_PROXY=www-proxy.xyz.com:80`

Note:

For obtaining the value of property `UPLOAD_ROOT`, see [Meeting the Prerequisites](#).

2. Go to the `SCRIPT_HOME` directory, and run the `uploadSample.sh` script to upload the sample alert logs and syslog, respectively, as shown below. Enter your OMC password when prompted.

```
$ ./uploadSample.sh alertlog
$ ./uploadSample.sh syslog
```

Note:

If your tenant uses Traditional Cloud Account for authentication (most likely because your tenant was created prior to April 2018), use `uploadSampleTraditional.sh` instead.

Take note of the name of the upload at the bottom of each script output. An upload is identified by its name in Log Analytics UI.

Examples of output lines containing upload names are:

Upload name: alertlog.2018-01-07_19:43:25

Upload name: syslog.2018-01-07_19:43:32

Note:

The `uploadSample.sh` will create the following entities, if they do not exist, when uploading logs:

demo_db_instance: when uploading alert logs

demo_host: when uploading syslog

In Log Analytics, you can query log records based on fields such as entity and upload name.

Verifying the Status of Uploads

To verify the status of the uploads, follow these steps:

1. Log on to Oracle Management Cloud

- Go to the Service Instance URL.

Note:

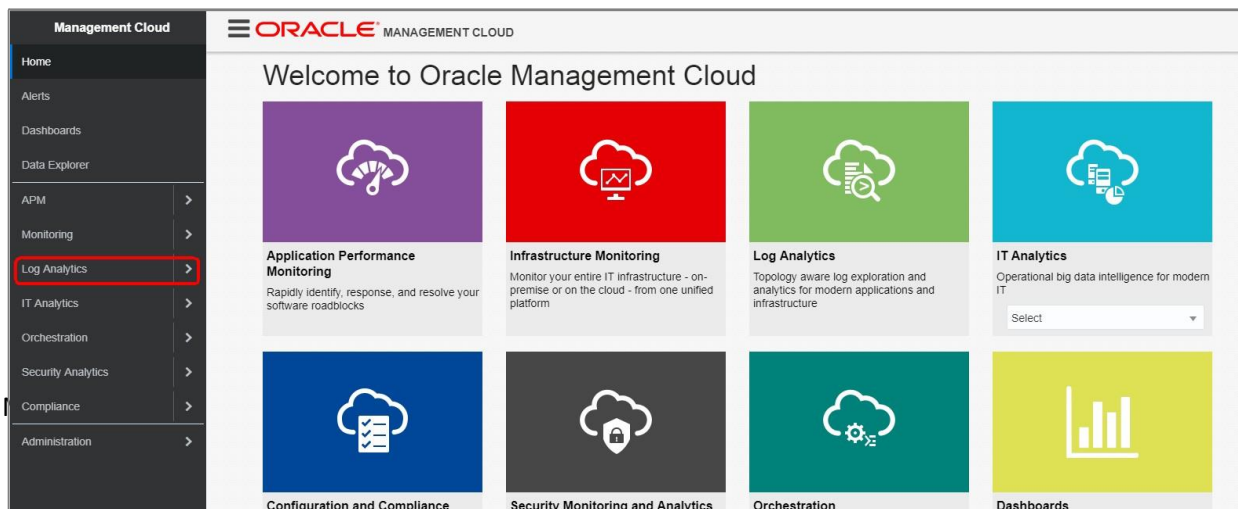
After a user account is created for you, you will receive an email titled “You’re the administrator for Oracle Cloud Services” from Oracle Cloud, which contains the Service Instance URL.


- Enter your identity domain, and click **Go**.
- Enter your username and password, and click **Sign In**.

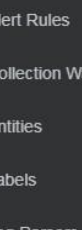
2. Navigate to Log Analytics

From the Welcome to Oracle Management Cloud page, click the navigation icon ☰ on the top-left corner to view the Management Cloud navigation pane if it is not already there. Select **Log Analytics**.

3.



- 
- Log Analytics**
- Log Explorer
 - Alerts
 - Configuration Home
 - Log Admin**

- 
- Alert Rules
 - Collection Warnings
 - Entities
 - Labels
 - Log Parsers
 - Log Sources
 - Lookups
 - Saved Searches
 - Storage
 - Uploads**


- From the Uploads page, you should see the uploads that you performed earlier. If an upload shows 0 in Progress and 0 Failed, it has completed.

Uploads									
				Created By	All	Search Upload Name	Sort	Last Updated	
syslog.2018-01-07_19:43:32	3	0	0		@oracle.com	1/7/2018, 7:43:34 PM			
	Success	In Progress	Failed	Created By		Last Updated			
alertlog.2018-01-07_19:43:25	1	0	0		@oracle.com	1/7/2018, 7:43:26 PM			
	Success	In Progress	Failed	Created By		Last Updated			
OMCodu.20171219-20:10:11-EST	22	0	0		@oracle.com	12/19/2017, 4:58:32 PM			
	Success	In Progress	Failed	Created By		Last Updated			
Page 1 of 1 (1-3 of 3 items)									

If necessary, click an upload name to see the Status of the upload. For example, click **alertlog_<timestamp>**. If the upload has completed successfully, you will see a green stick in the Status field as shown in the screenshot below.

Uploads: Files in alertlog.2018-01-07_19:43:25


Entity Type Status

File Name	Status	Entity Name	Log Source	Upload Time
alertlog.zip/alert_smpint12.log		demo_db_instance	Database Alert Logs	1/7/2018, 7:43:26 PM

Page of 1 (1 of 1 items)




Viewing Uploaded Log Records

To view the records from an upload, follow these steps:

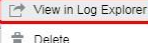

1. Navigate to the Uploads page. If necessary, see [Verifying the Statuses of Uploads](#).
2. From the Uploads page, select an upload, click the menu icon  on the right, and click **View in Log Explorer** to view the records from that upload. Let's perform the steps to view the alert log records in Log Explorer.

Uploads

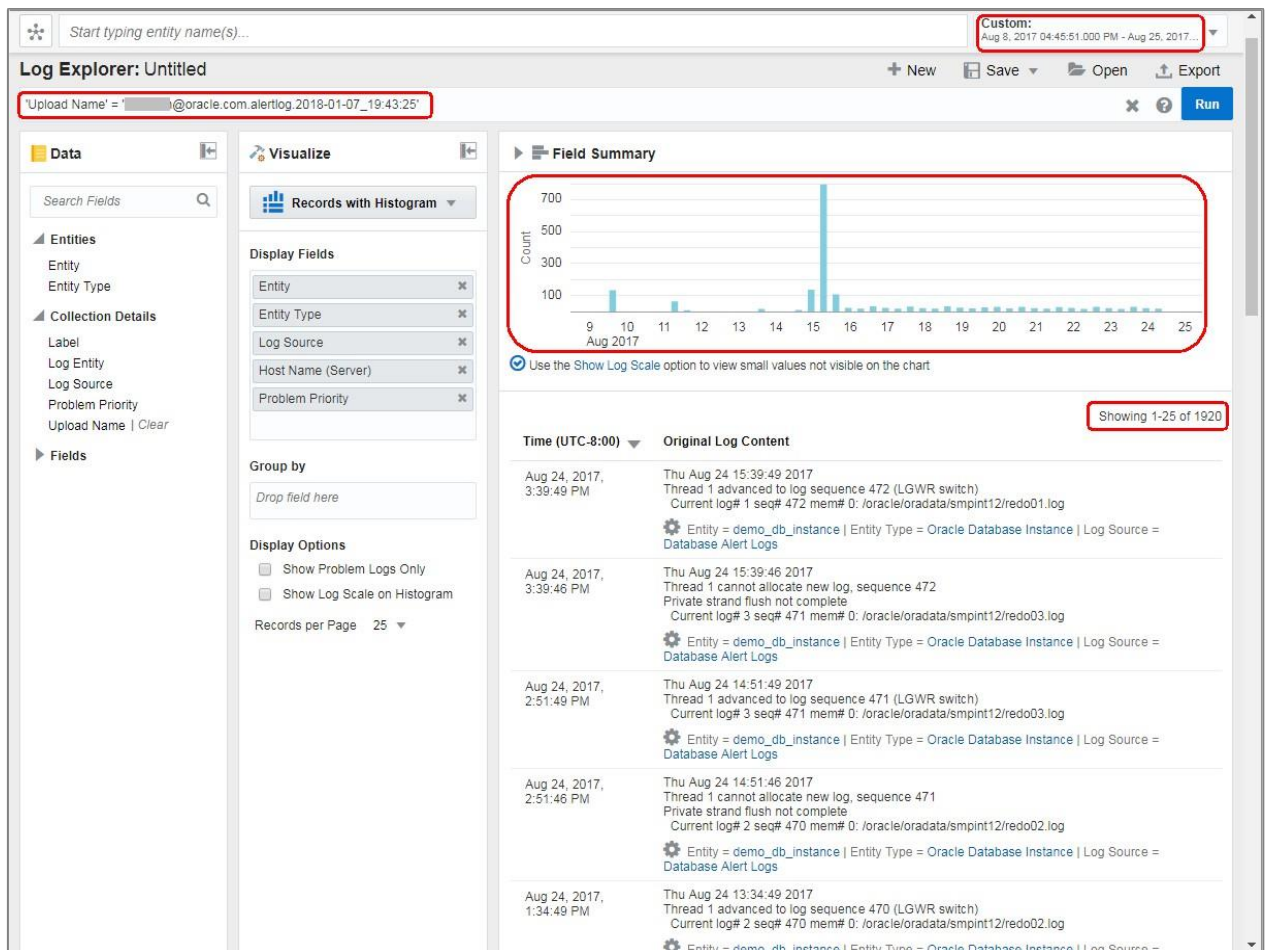
Created By Sort

syslog.2018-01-07_19:43:32	3	0	0	@oracle.com	1/7/2018, 7:43:34 PM	
	Success	In Progress	Failed	Created By	Last Updated	
alertlog.2018-01-07_19:43:25	1	0	0	@oracle.com	1/7/2018, 7:43:26 PM	
	Success	In Progress	Failed	Created By	Last Updated	
OMCodu.20171219-20:10:11-EST	22	0	0	@oracle.com	12/19/2017, 4:58:3	
	Success	In Progress	Failed	Created By	Last Updated	

Page of 1 (1-3 of 3 items)

- From the Log Explorer page, you can view the alert log records from the upload that you selected.



Some of the information shown on the page includes:

- ☐ The uploaded alert log entries are for the period from August 9 to August 24, 2017.
- ☐ The log entries came from the upload whose name is in the Query bar.
- ☐ The histogram shows the daily volumes of log records. This helps identify any abnormality in record volumes at a glance. You can drill down by clicking a bar on the chart.
- ☐ The first 25 of the 1920 records that came with the upload. The records are in date order from newest to oldest. You can reverse the order by clicking the arrowhead in the Time (<time zone>) field.


You can browse the rest of log records by using the pagination at the bottom of the page.

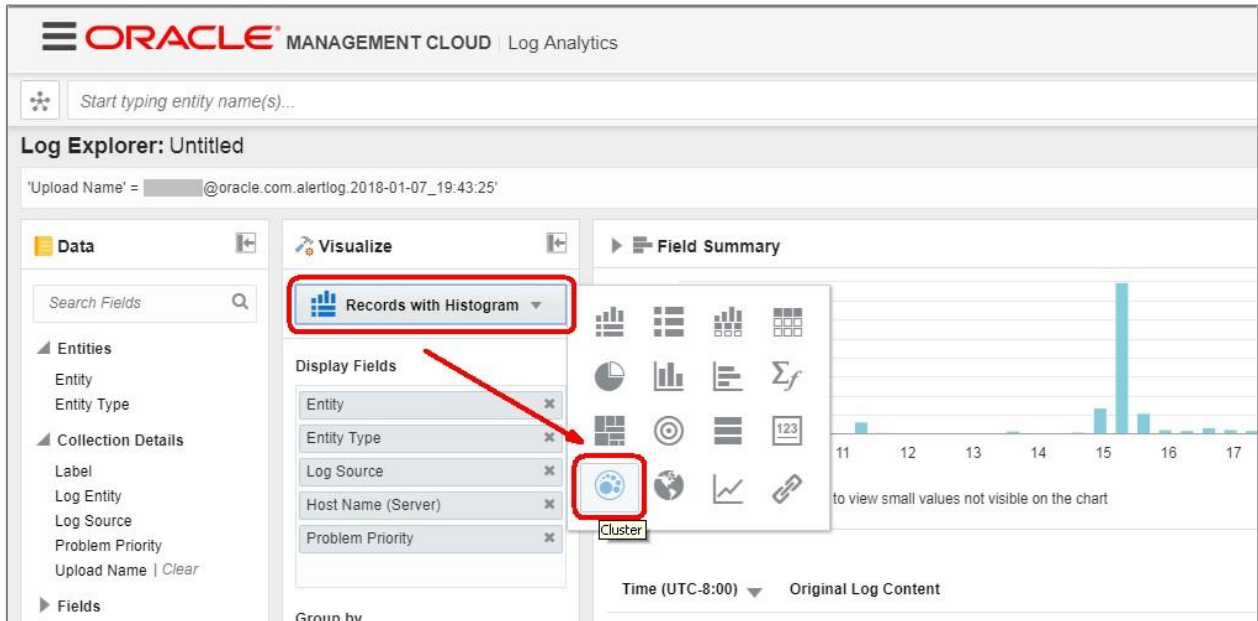
Page 1 of 10 (1-25 of 250 items) < 1 2 3 4 5 ... 10 > X

Detecting Anomalies with Cluster Command

To detect anomalies based on log records, you can use Log Analytics cluster command, which automatically groups log records based on severity, such as error, fault, fatal and warning, and dynamically identified patterns, potential issues, outliers, and trends.

- ☐ Clustering Logs

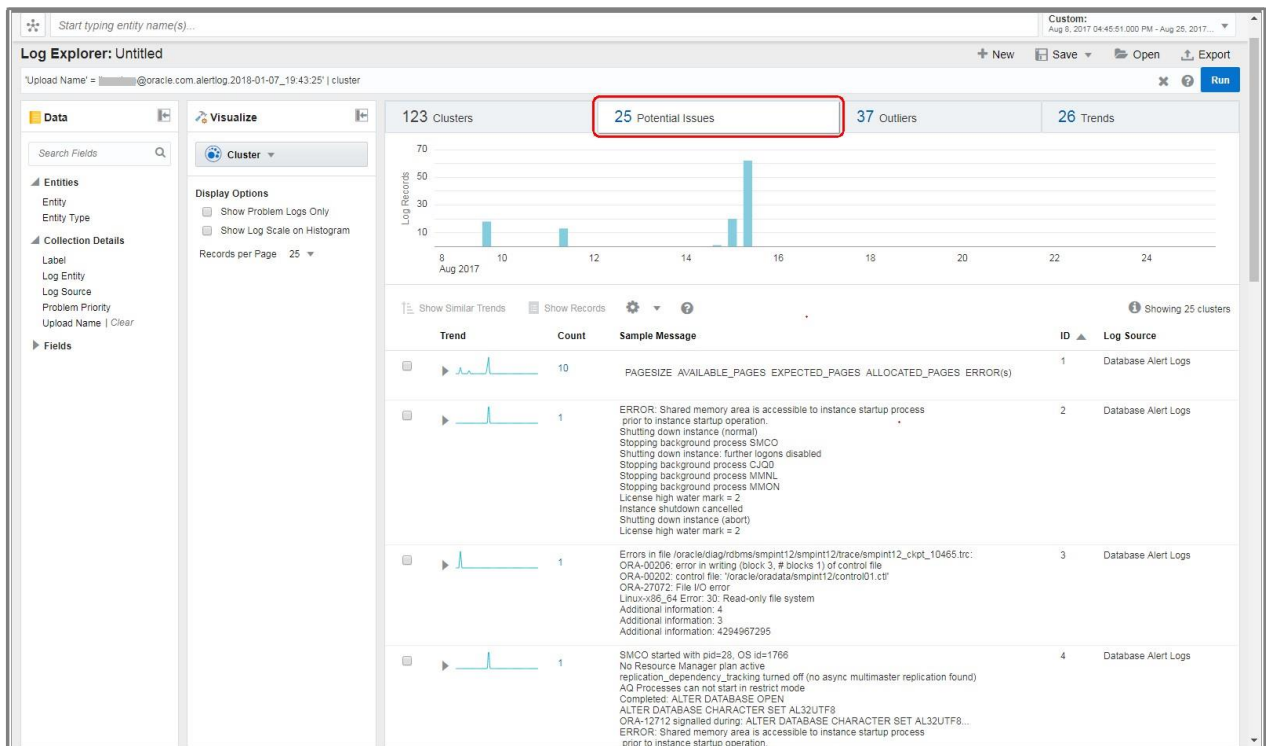
To perform clustering on the log records, from the **Visualize** panel click the currently selected visualization (e.g. **Records with Histogram**), and click **Cluster** icon .



2 Checking the Outcome of the Cluster Operation

The cluster operation reduced 1920 log records to 123 clusters, identified 25 potential issues, 37 outliers, and 26 trends.

Examine the log clusters, and then click **Potential Issues**.



2 Examining Potential Issues

From the **Potential Issues** tab, you can look at the log clusters that Log Analytics identifies as potential issues, if you see a cluster with a sample message that may be pointing to an issue of significance or of interest, click the value in the **Count** column to drill down see the records of the cluster.

For example, the following sample message indicates that the Oracle database instance had problems writing to a control file due to a file I/O error. This kind of problem is critical; it tends to result in an abnormal shutdown of the instance.

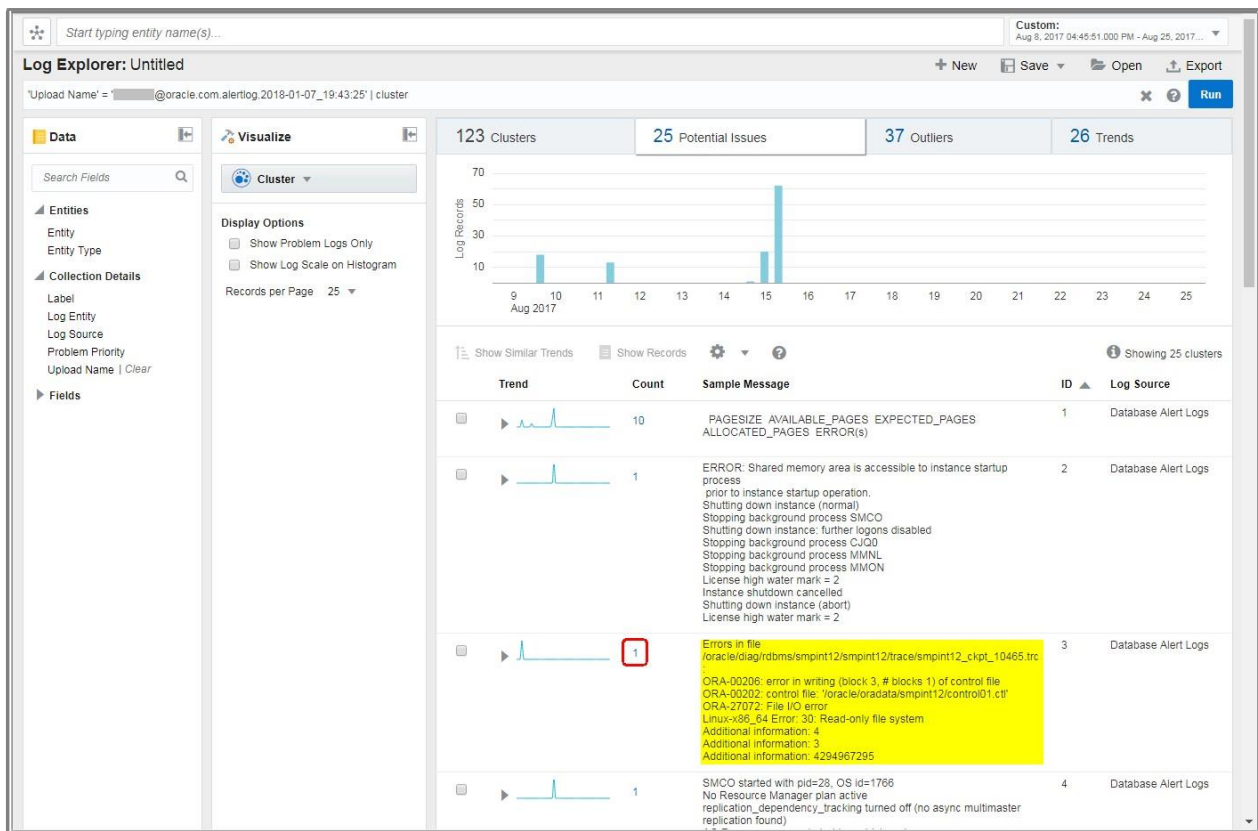


The screenshot shows a log cluster detail view. On the left, there is a small histogram with a single bar and the number '1' next to it. The main area displays the following text:

```
Errors in file
/oracle/diag/rdbms/smpint12/smpint12/trace/smpint12_ckpt_1
0465.trc:
ORA-00206: error in writing (block 3, # blocks 1) of control file
ORA-00202: control file:
'/oracle/oradata/smpint12/control01.ctl'
ORA-27072: File I/O error
Linux-x86_64 Error: 30: Read-only file system
Additional information: 4
Additional information: 3
Additional information: 4294967295
```

On the right side, the text 'Database Alert Logs' is visible.

Let's drill down to the log record by clicking the count value of 1 on the left of the sample message.



The screenshot shows the Log Explorer interface. The top bar includes a search field, a date range selector (Aug 8, 2017 04:45:51 000 PM - Aug 25, 2017...), and buttons for New, Save, Open, and Export. The main area is divided into two sections: a left sidebar and a right main panel.

The left sidebar contains the following sections:

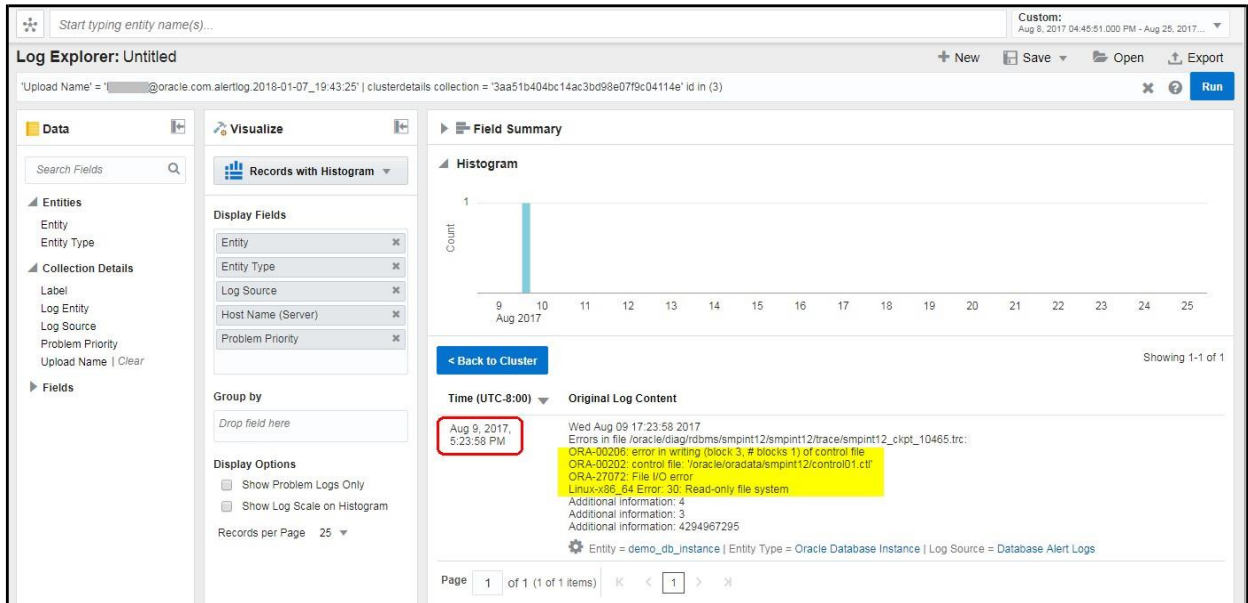
- Data**: Search Fields
- Entities**: Entity, Entity Type
- Collection Details**: Label, Log Entity, Log Source, Problem Priority, Upload Name | Clear
- Fields**

The right main panel displays a summary of log records and a list of clusters. The summary shows 123 Clusters, 25 Potential Issues, 37 Outliers, and 26 Trends. Below this is a histogram showing the distribution of log records over time (Aug 2017). The histogram has a peak around August 15th.

The main panel also displays a table of clusters. The table has columns: Trend, Count, Sample Message, ID, and Log Source. The table shows 25 clusters. The third cluster is highlighted with a red box around the count '1' and a yellow background for the sample message.

Trend	Count	Sample Message	ID	Log Source
	10	PAGESIZE AVAILABLE_PAGES EXPECTED_PAGES ALLOCATED_PAGES ERROR(s)	1	Database Alert Logs
	1	ERROR: Shared memory area is accessible to instance startup process prior to instance startup operation. Shutting down instance (normal) Stopping background process SMCO Shutting down instance: further logons disabled Stopping background process CJO0 Stopping background process MMNL Stopping background process MMON License high water mark = 2 Instance shutdown cancelled Shutting down instance (abort) License high water mark = 2	2	Database Alert Logs
	1	Errors in file /oracle/diag/rdbms/smpint12/smpint12/trace/smpint12_ckpt_10465.trc ORA-00206: error in writing (block 3, # blocks 1) of control file ORA-00202: control file: /oracle/oradata/smpint12/control01.ctl ORA-27072: File I/O error Linux-x86_64 Error: 30: Read-only file system Additional information: 4 Additional information: 3 Additional information: 4294967295	3	Database Alert Logs
	1	SMCO started with pid=28, OS id=1766 No Resource Manager plan active replication_dependency_tracking turned off (no async multimaster replication found)	4	Database Alert Logs

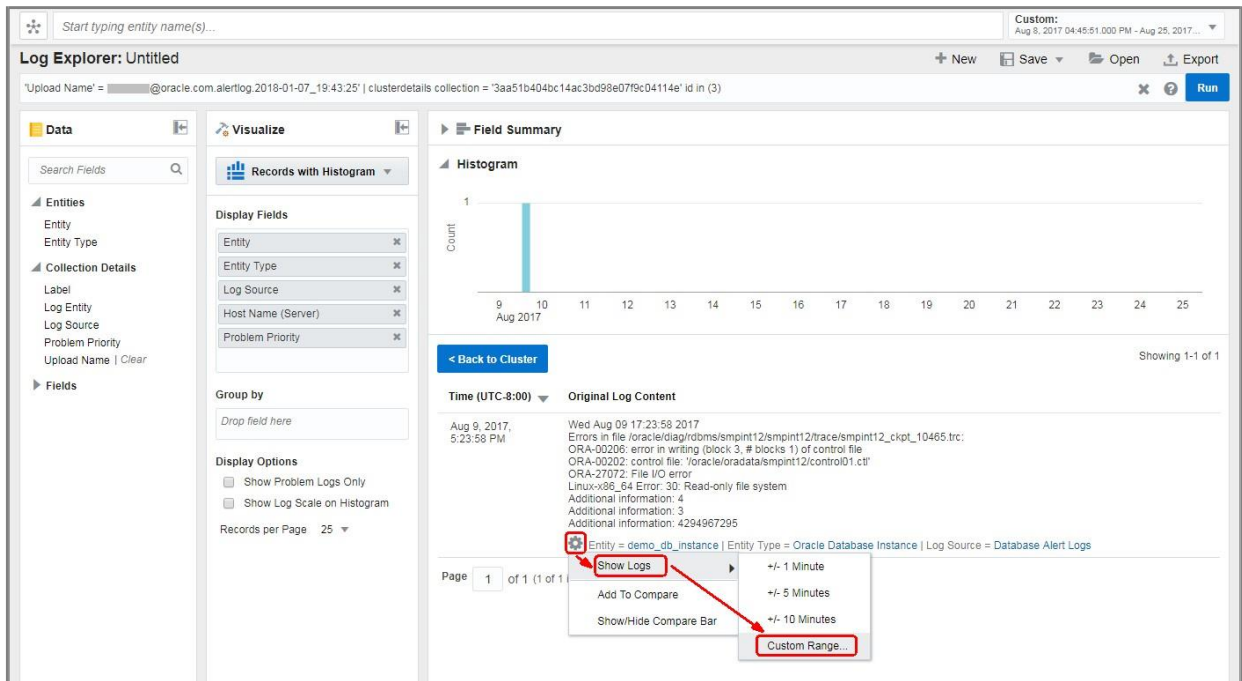
Drilling down on a log cluster allows you to see the log record(s) including the original log entry (or entries) in that cluster. In this case, you will see the record with the timestamp of Aug 9, 2017, 5:23:58PM (UTC-8:00 or PST) showing a file I/O error affecting the writing to a database control file.



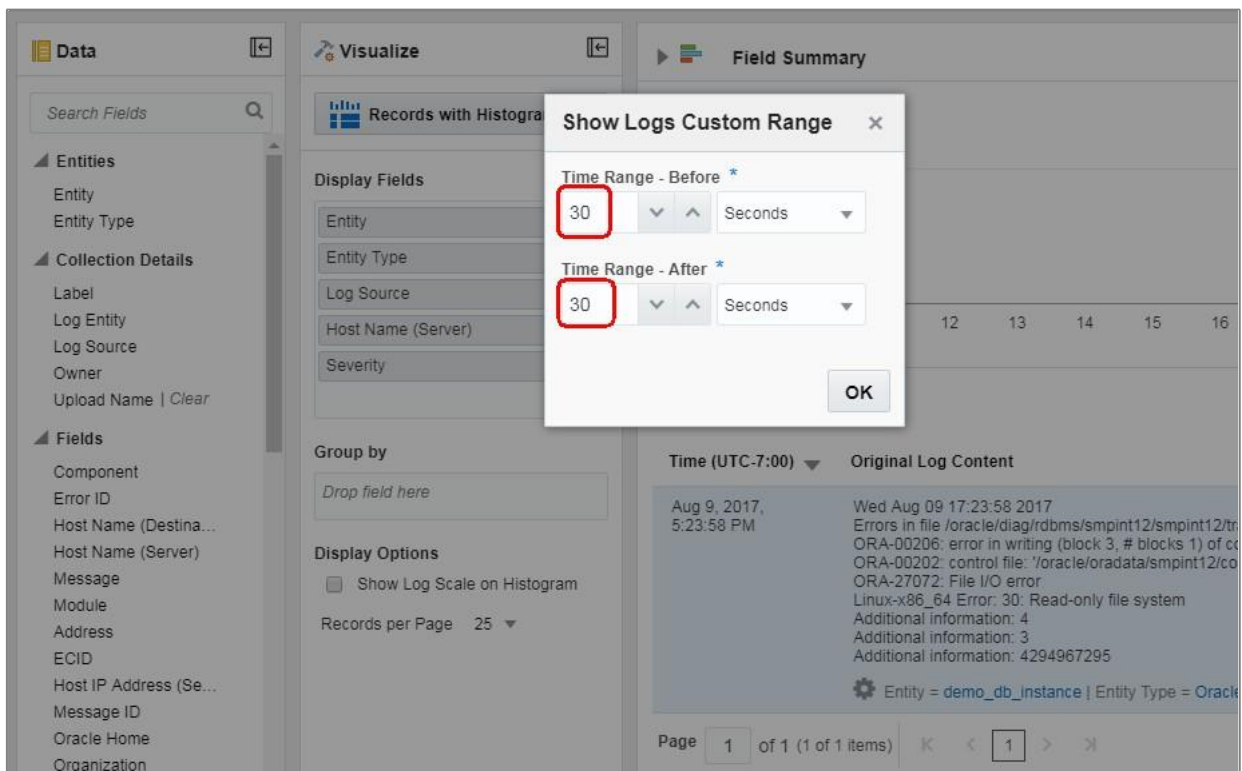
Correlating Logs



Log Analytics allows you to quickly correlate logs from different sources (e.g. database logs and syslog) based on time to determine whether there is a correlation between events captured in log records. Let's query the log records for entities `demo_db_instance` and `demo_host` 30 seconds before 5:23:28 PM (UTC-8:00) and 30 seconds after that by following these steps:

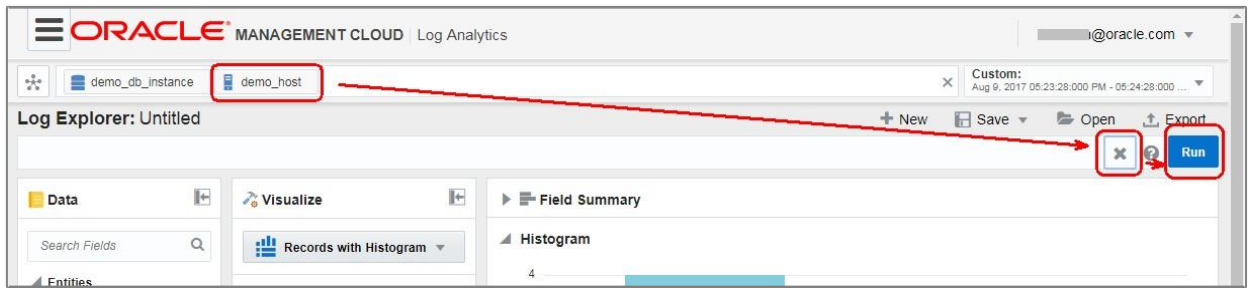
1. Click  at the bottom of the **Original Log Content** field, and then select **Show Logs, Custom Range**.



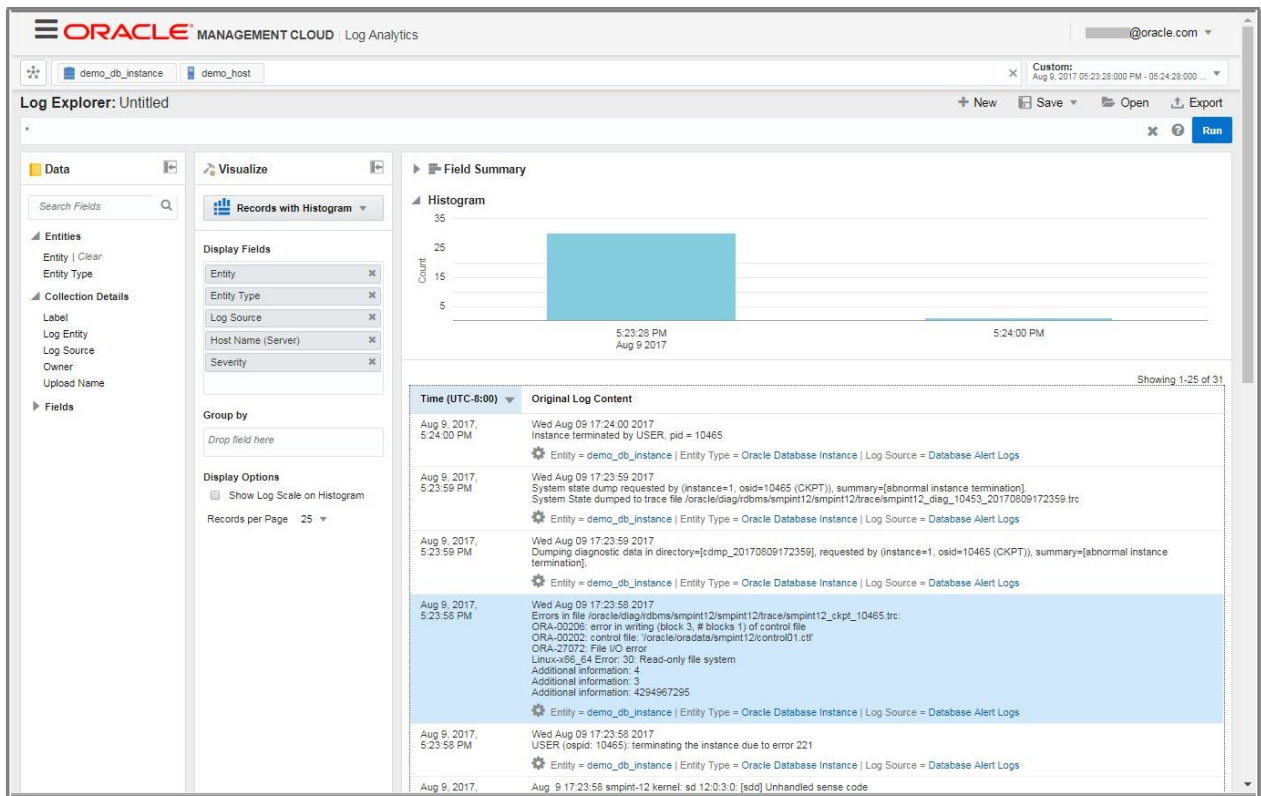
- From the Show Logs Custom Range pop-up window, enter 30 (seconds) for **Time Range - Before**, 30 (seconds) for **Time Range - After**, and click **OK**.

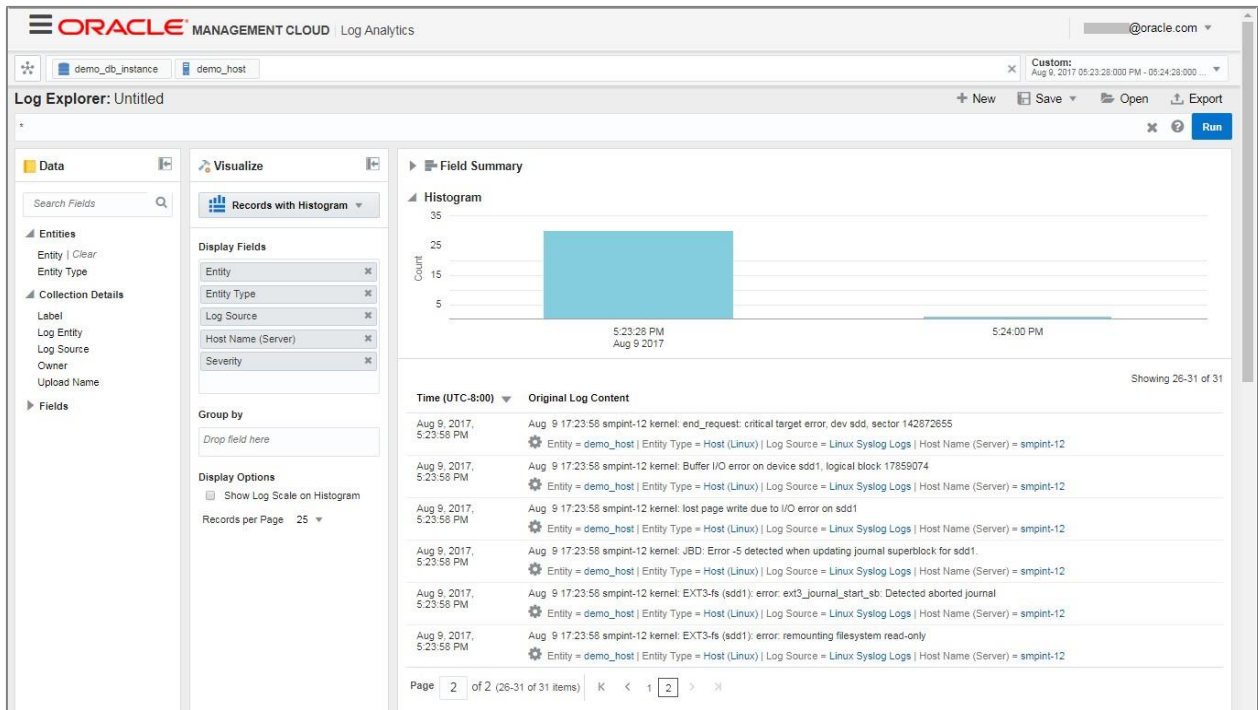


- In the Global Context  bar near the top, enter demo_host next to demo_db_instance, click  in the Query bar to clear any existing filter, and click **Run**.



4. The above query retrieves the log records uploaded for entities demo_db_instance and demo_host for the period of 5:23:28 PM to 5:24:28 PM on August 9. Examine the 31 records in the two-page output to see the sequence of the events that were captured in the logs in the one-minute period, and which of the events may have had an effect on other events.





You may have noticed that at 5:23:58PM, system logs (syslog) recorded that some I/O errors occurred on disk device sdd1 (see page 2), and database alert logs recorded that the database encountered I/O errors (see page 1); then at 5:24:00PM the database was terminated.

Where to Find Log Analytics Documentation

Log Analytics documentation including tutorials is available at the following URL:
<https://docs.oracle.com/en/cloud/paas/management-cloud/log-analytics.html>