



Managing Logs and Events

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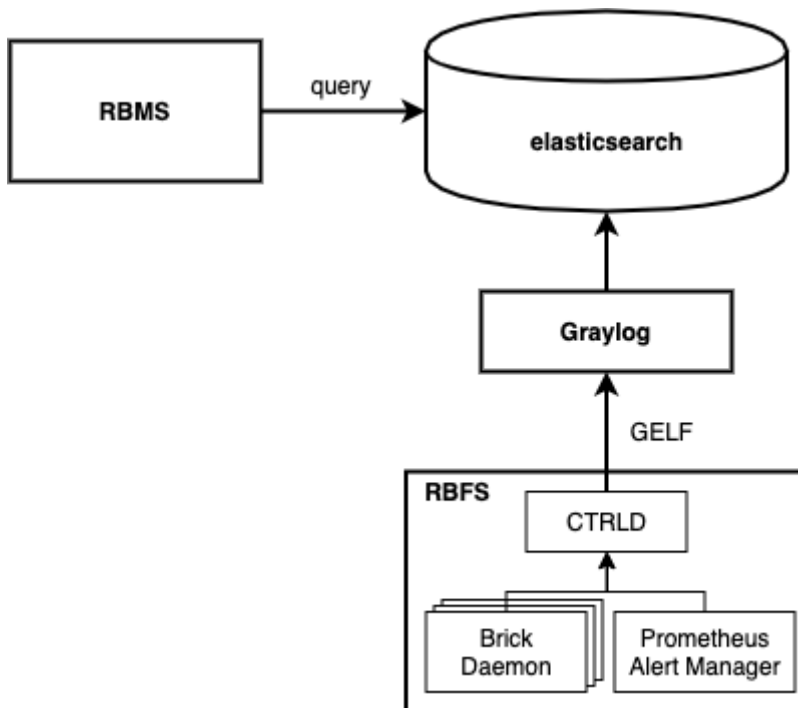
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1. Managing Logs

1.1. Introduction

In order to understand the RBMS log viewer it is key to understand the RBFS logging concept. RBFS stores log information in Brick Data Store (BDS) tables. The BDS is an in-memory database developed by RtBrick and optimized for the networking domain. The BDS log tables contain only the raw data of a log event. Exporters pass the raw data to a template string to create a human friendly log message.

By default RBFS exports log messages in GELF format. The [Graylog Extended Logging Format \(GELF\)](#) is a JSON representation of the Syslog protocol, with the option to add custom fields.



The CTRLD forms the egress node for all GELF messages. CTRLD receives log messages from brick daemons, augments the GELF message with the element name, element role, serial number and pod name and forwards it to the configured GELF endpoint. In addition, CTRLD receives all notification of the Prometheus Alert Manager running on the switch and translates them to GELF messages. Last but not least, CTRLD generates GELF messages to log events.

All messages are send to a configured GELF endpoint. The GELF endpoint stores the data in a central log database. The GELF message is already a structured message. Thus the endpoint does not have to create a log message into a structured record.

RBMS queries log events from the log management system to provide quick access

to log messages. In addition, RBMS links all log messages to the inventory records to quickly inspect the state of an element.

1.2. Viewing log events

The log viewer reads log records from the Elasticsearch database. The query is formed from the resource inventory data and can be amended by the operator to fine-tune the result set. You can inspect the details of a log message in the RBMS UI.

To view the list of logs

1. Click the **Logs** tab. The list of all log events occurred in the network within the last five minutes having at least *WARNING* severity appears.

The screenshot shows the RBMS interface for viewing logs. At the top, there's a navigation bar with tabs for Images, Inventory, Metrics, Jobs, Logs, and Administration. The 'Logs' tab is selected. Below the navigation bar, there's a 'Logs' section with the text 'View logs messages from the switches' and a 'Logout' button. Underneath, there's an 'Events' section with the text 'Query all log events occurred in the network'. A filter form is displayed with the following fields: 'Time Range' (set to 'Search in last 5 minutes'), 'Severity' (set to 'Warning'), 'Filter' (empty), 'Pod Name' (empty), 'Element Name' (empty), 'Module Name' (empty), and 'Limit' (set to '100 events'). A green 'Filter' button is located to the right of the 'Filter' field. Below the filter form, there's a table of log events with the following columns: 'Issued At', 'Pod Element', and 'Module Message'. The first row shows an error event with a red 'ERR' icon, issued at '28-MAY-2020 11:30:48.643', from 'rtbrick-pod rtbrick', with the message 'l1dpv2 LLDP interface ifp-0/0/26: Failed to handle update of l1dp interface object'.

2. Click the timestamp of the event that you want to view.

1.3. Filtering log events

To filter the list of logs

1. Click the **Logs** tab. The list of all log events occurred in the network appear.

Logs

View logs messages from the switches



Images Inventory Metrics Jobs **Logs** Administration

Logout

Filter

Time Range

Search in last 15 minutes ↕

Select time range when the event occurred

Severity

Warning ↕

Select minimum severity

Pod Name

pod1.blr

Filter for log events of the specified pod

Filter

element_name:"li.pod1.blr"

Filter

Enter filter query to search for certain elements only.

2. Specify the filter criteria to filter the log events.