

LFS242 - Cloud Native Logging with Fluentd

Lab 7 – Using Multiple Fluentd Instances, Configuring High Availability and Testing Failover in Fluentd

- Use **Ctrl C** on the forwarder first, send to an event to it, then restore the forwarder. What happened? What behavior was observed? Was the observed behavior similar or different to what happened when a log aggregator fails?
 - The forwarder did not receive the message since the connection was refused. This is different from the log aggregator, which was able to receive the event after it came back because the forwarder kept trying to send it the buffered chunk. A raw event coming to a downed forwarder cannot do anything.

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2022-06-20 18:23:41 +0000 [info]: Received graceful stop
2022-06-20 18:23:42 +0000 [info]: #0 fluentd worker is now stopping worker=0
2022-06-20 18:23:42 +0000 [info]: #0 shutting down fluentd worker worker=0
2022-06-20 18:23:42 +0000 [info]: #0 shutting down input plugin type=:forward plugin_id="object:758"
2022-06-20 18:23:43 +0000 [info]: #0 shutting down output plugin type=:forward plugin_id="object:730"
2022-06-20 18:23:43 +0000 [info]: Worker 0 finished with status 0

ubuntu@labsys:~/lab7/forwarder$ echo '{"json":"message"}' | fluent-cat aggregate.me --port 32767

connect failed: Connection refused - connect(2) for "127.0.0.1" port 32767
connect failed: Connection refused - connect(2) for "127.0.0.1" port 32767

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Traceback (most recent call last):
  15: from /usr/local/bin/fluent-cat:23:in `<main>'
  14: from /usr/local/bin/fluent-cat:23:in `load'
  13: from /var/lib/gems/2.7.0/gems/fluentd-1.14.6/bin/fluent-cat:5:in `<top (required)>'
  12: from /usr/lib/ruby/2.7.0/rubygems/core_ext/kernel_require.rb:72:in `require'
  11: from /usr/lib/ruby/2.7.0/rubygems/core_ext/kernel_require.rb:72:in `require'
  10: from /var/lib/gems/2.7.0/gems/fluentd-1.14.6/lib/fluent/command/cat.rb:330:in `<top (required)>'
   9: from /var/lib/gems/2.7.0/gems/fluentd-1.14.6/lib/fluent/command/cat.rb:189:in `write'
   8: from /usr/lib/ruby/2.7.0/monitor.rb:202:in `mon_synchronize'
   7: from /usr/lib/ruby/2.7.0/monitor.rb:202:in `synchronize'
   6: from /var/lib/gems/2.7.0/gems/fluentd-1.14.6/lib/fluent/command/cat.rb:190:in `block in write'
   5: from /var/lib/gems/2.7.0/gems/fluentd-1.14.6/lib/fluent/command/cat.rb:239:in `write_impl'
   4: from /var/lib/gems/2.7.0/gems/fluentd-1.14.6/lib/fluent/command/cat.rb:259:in `get_socket'
   3: from /var/lib/gems/2.7.0/gems/fluentd-1.14.6/lib/fluent/command/cat.rb:277:in `try_connect'
   2: from /var/lib/gems/2.7.0/gems/fluentd-1.14.6/lib/fluent/command/cat.rb:277:in `try_connect'
   1: from /var/lib/gems/2.7.0/gems/fluentd-1.14.6/lib/fluent/command/cat.rb:276:in `try_connect'
/var/lib/gems/2.7.0/gems/fluentd-1.14.6/lib/fluent/command/cat.rb:276:in `sleep': Interrupt

ubuntu@labsys:~/lab7/forwarder$ fluentd -c forwarder.conf

2022-06-20 18:24:18 +0000 [info]: parsing config file is succeeded path="forwarder.conf"
2022-06-20 18:24:18 +0000 [info]: gem 'fluentd' version '1.14.6'
2022-06-20 18:24:18 +0000 [info]: adding forwarding server 'aggregator1' host="172.17.0.2"
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port=24500 weight=60 plugin_id="object:730"
2022-06-20 18:24:18 +0000 [warn]: define <match fluent.**> to capture fluentd logs in top level is deprecated. Use <label @FLUENT_LOG> instead
2022-06-20 18:24:18 +0000 [info]: using configuration file: <ROOT>
  <system>
    process_name "forwarder"
  </system>
  <source>
    @type forward
    port 32767
  </source>
  <match>
    @type forward
    <server>
      name "aggregator1"
      host "172.17.0.2"
      port 24500
    </server>
  </match>
</ROOT>
2022-06-20 18:24:18 +0000 [info]: starting fluentd-1.14.6 pid=51991 ruby="2.7.0"
2022-06-20 18:24:18 +0000 [info]: spawn command to main: cmdline=["/usr/bin/ruby2.7", "-Eascii-8bit:ascii-8bit", "/usr/local/bin/fluentd", "-c", "forwarder.conf", "--under-supervisor"]
2022-06-20 18:24:18 +0000 [info]: adding match pattern="*" type="forward"
2022-06-20 18:24:18 +0000 [info]: #0 adding forwarding server 'aggregator1' host="172.17.0.2"
port=24500 weight=60 plugin_id="object:730"
2022-06-20 18:24:18 +0000 [info]: adding source type="forward"
2022-06-20 18:24:18 +0000 [warn]: #0 define <match fluent.**> to capture fluentd logs in top level is deprecated. Use <label @FLUENT_LOG> instead
2022-06-20 18:24:18 +0000 [info]: #0 starting fluentd worker pid=51996 ppid=51991 worker=0
2022-06-20 18:24:18 +0000 [info]: #0 listening port port=32767 bind="0.0.0.0"
2022-06-20 18:24:18 +0000 [info]: #0 fluentd worker is now running worker=0

```

- Send an event to the forwarder, **then** use **Ctrl C** to shut it down before it sends events to the log aggregator. Restore the forwarder after a minute or so. Did the log aggregator ever receive the event?
 - Yes, it did. The forwarder was able to receive the event then store it in its buffer before it went down.
- What weight was assigned to aggregator2?
 - 60
- Remove the **standby true** from the aggregator2 **<server>** subdirective on the forwarder, and send events to it. Does the behavior change? If it does, does the **weight** parameter have any effect?
 - The Fluentd deployment becomes a load balanced deployment, and the weight ratio will now influence how events are distributed between the two Fluentd aggregators.