Forward Gerrit events to Jenkins via AWS Kinesis

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Gerrit Code Review
Contributor
About GerritForge

- Founded in the UK
- HQ in London with presence in Europe and the USA (GerritForge Inc.)
- Committed to OpenSource and to Gerrit Code Review since 2009
How Gerrit exposes Stream Events: Status Quo

- SSH Connections
  - Native or via Events plugin
- Events RabbitMQ broker
- Events Kafka Broker
- Events Gcloud PubSub Broker
- Events AWS Kinesis Broker
HOW JENKINS TRIGGERS A BUILD: STATUS QUO

• Gerrit Trigger Plugin
  ○ Listening to stream events via SSH
  ○ Consuming stream events from RabbitMQ

• Gerrit Codereview Plugin
  ○ Webhook triggered by Gerrit
JENKINS AWS KINESIS PLUGIN

• Consumes Records from AWS Kinesis
  ○ AWS Kinesis: scalable and durable real-time data streaming service
  ○ Not necessarily Gerrit events
• Trigger build upon message receive
• Exposes an “extension point” and call subscribers
WHY A NEW PLUGIN?

• Effort to make Gerrit Ecosystem Cloudnative
• GerritForge AWS Gerrit project
• Common pattern to have Jenkins workers in AWS
• Is the RabbitMQ plugin still maintained?
  ○ Last commit was 4 years ago
<table>
<thead>
<tr>
<th>Integration Comparison</th>
<th>Durable events</th>
<th>Scalable</th>
<th>Easy Setup</th>
<th>CloudNative</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTP - SSH Stream</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N/A</td>
</tr>
<tr>
<td>GTP - RabbitMQ</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>GCR - Webhook</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N/A</td>
</tr>
<tr>
<td>GCR - Kinesis</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>
## AWS Kinesis Consumer

<table>
<thead>
<tr>
<th>Enable consumer</th>
<th>Region</th>
<th>ApplicationName</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>us-east-1</td>
<td>test-kinesis</td>
</tr>
</tbody>
</table>

### Streams

<table>
<thead>
<tr>
<th>Stream name</th>
<th>Initial position in stream</th>
<th>Trigger SCM Build</th>
<th>Project Name JSON Path query</th>
</tr>
</thead>
<tbody>
<tr>
<td>grit_stream</td>
<td>TRIM_HORIZON</td>
<td></td>
<td>$$.body.projectName$$</td>
</tr>
</tbody>
</table>

- **Add**
- **Test Connection**
- **Delete**
DEMO
Polls and Q&A

Image from: http://cypp.rutgers.edu/ru-voting/political-information/public-opinion-polls/
USEFUL LINKS

- Jenkins AWS Kinesis consumer
- Events RabbitMQ broker
- Events Kafka Broker
- Events Gcloud PubSub Broker
- Events AWS Kinesis Broker
- Gerrit events via RabbitMQ presentation