JENKINS ON SPOT

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AWS Certified Solutions Architect - Professional

I have been working as Release Engineer for 10 years.
MURDERED DUE TO PRICE, CAPACITY, CONSTRAINTS.


FREQUENCY OF INTERRUPTION

(spot advisor)
JENKINS MASTER

AMAZON

ELASTIC FILE SYSTEM
## EFS PERFORMANCE

<table>
<thead>
<tr>
<th>Operation Type</th>
<th>MiB/s</th>
<th>Operations/s</th>
<th>AVG latency (ms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequential read</td>
<td>122.96</td>
<td>7869.10</td>
<td>0.126</td>
</tr>
<tr>
<td>Random read</td>
<td>21.13</td>
<td>1352.28</td>
<td>0.737</td>
</tr>
<tr>
<td>Sequential write</td>
<td>1.95</td>
<td>124.72</td>
<td>8.026</td>
</tr>
<tr>
<td>Sequential rewrite</td>
<td>1.99</td>
<td>127.33</td>
<td>7.869</td>
</tr>
<tr>
<td>Random write</td>
<td>1.47</td>
<td>94.14</td>
<td>10.616</td>
</tr>
<tr>
<td>Random rewrite</td>
<td>1.55</td>
<td>98.90</td>
<td>4.044</td>
</tr>
</tbody>
</table>
ENHANCED NETWORKING FOR EC2 INSTANCES
EFS LIMITATIONS

➤ EFS not suitable for many small files and one-thread applications
➤ All artifacts to S3
➤ Tens of jobs/pipelines
➤ Few of builds to keep
➤ Don’t “stash” files (extremely slow)
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AMAZON

ELASTIC BLOCK STORE
2-MINUTE INSTANCE TERMINATION NOTICE
EBS LIMITATIONS

➤ EBS limits to use one AZ
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PIPELINES IN MAX_SURVIVABILITY
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NO EXECUTORS ON MASTER NODE
NO WEB-HOOKS

use pollCSM trigger
ELASTIC IP
JENKINS WORKERS ON SPOT INSTANCES

Artwork author: Ksenia Nenasheva
EC2 FLEET JENKINS PLUGIN

➤ Official AWS plugin
➤ Configuration on AWS side
➤ Spot Fleet can start instances in different AZs
➤ Starts two times more instances than needed (PR#29)
➤ On scale-down AWS terminates instances under load (issues#36)
➤ New Spot Fleet id on changes
Amazon EC2 Plugin

- Most popular plugin
- Configuration on Jenkins side
- Possible to use external ssh process as transport
- Has init script which executed before agent start
- Starts instances one by one
- Instances cannot be started in different AZs
- Instance cap is tied to AMI (PR#274)
- Doesn’t tag spot instances (JENKINS-19058)
## EXPENSES

<table>
<thead>
<tr>
<th>Service</th>
<th>Master USD/month</th>
<th>Worker USD/month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percona Monitoring and Management</td>
<td>5.13 / 43.27</td>
<td>10.87</td>
</tr>
<tr>
<td>Percona Server for MySQL</td>
<td>15.33 / 19.70</td>
<td>288.92</td>
</tr>
<tr>
<td>Percona Server for MongoDB</td>
<td>21.36 / 10.83</td>
<td>70.15</td>
</tr>
<tr>
<td>Percona XtraBackup</td>
<td>20.92 / 12.37</td>
<td>184.18</td>
</tr>
</tbody>
</table>
CLOUDFORMATION CONFIG