Gluster Storage Management

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Introduction

- Management console for Gluster Storage
- Based on oVirt platform
- Create and Manage Storage Clusters
  - Create / expand / shrink / delete Clusters
  - Create / expand / shrink / manage Volumes
- Advanced Search capabilities
- Audit and Alerts
- Gluster plugin for VDSM
Architecture

- CLI
- Python SDK
- Browser
- Directory Services
- Engine
- Storage Server 1

Connections:
- CLI to Python SDK: REST over https
- Python SDK to Engine: REST
- Engine to Storage Server 1: xmlrpc
- Storage Server 1 to Engine: xmlrpc
- Browser to Engine: gwtrpc over https
Features

- Cluster Management
  - Create Cluster
  - Add / Remove Storage Servers
  - Delete Cluster
  - Import existing Clusters

- Volume Management
  - Create Volume
  - Add / Remove bricks
  - Start / Stop volume
  - Delete Volume
Features contd...

- Optimizing the Volume for Virt Store
- Event Notifications and Alerts
- Gluster Mode & Customized Web UI
- REST api
- Python CLI & SDK support
Creating Cluster
Adding Host to Cluster
Creating Volume
Adding Bricks to Volume
Searching Volumes
Expanding/Shrinking Volume
### Events

<table>
<thead>
<tr>
<th>Time</th>
<th>Message</th>
<th>Event ID</th>
<th>User</th>
<th>Host</th>
<th>Cluster</th>
<th>Cluster Volume</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-Oct-15, 23:07:27</td>
<td>Volume Option set on videos.</td>
<td>4002</td>
<td>admin@internal</td>
<td>Host</td>
<td>data</td>
<td>videos</td>
<td></td>
</tr>
<tr>
<td>2012-Oct-15, 23:06:46</td>
<td>Gluster Volume music created.</td>
<td>4000</td>
<td>admin@internal</td>
<td>Host</td>
<td>data</td>
<td>music</td>
<td></td>
</tr>
<tr>
<td>2012-Oct-15, 23:06:46</td>
<td>Volume Option set on music.</td>
<td>4002</td>
<td>admin@internal</td>
<td>Host</td>
<td>data</td>
<td>music</td>
<td></td>
</tr>
<tr>
<td>2012-Oct-15, 23:06:44</td>
<td>Volume Option set on music.</td>
<td>4002</td>
<td>admin@internal</td>
<td>Host</td>
<td>data</td>
<td>music</td>
<td></td>
</tr>
<tr>
<td>2012-Oct-15, 23:06:41</td>
<td>Volume Option set on music.</td>
<td>4002</td>
<td>admin@internal</td>
<td>Host</td>
<td>data</td>
<td>music</td>
<td></td>
</tr>
<tr>
<td>2012-Oct-15, 22:57:08</td>
<td>Gluster Volume videos started.</td>
<td>4004</td>
<td>admin@internal</td>
<td>Host</td>
<td>data</td>
<td>videos</td>
<td></td>
</tr>
<tr>
<td>2012-Oct-15, 22:56:33</td>
<td>Gluster Volume videos created.</td>
<td>4000</td>
<td>admin@internal</td>
<td>Host</td>
<td>data</td>
<td>videos</td>
<td></td>
</tr>
<tr>
<td>2012-Oct-15, 22:56:33</td>
<td>Volume Option set on videos.</td>
<td>4002</td>
<td>admin@internal</td>
<td>Host</td>
<td>data</td>
<td>videos</td>
<td>3c73a24180</td>
</tr>
<tr>
<td>2012-Oct-15, 22:56:31</td>
<td>Volume Option set on videos.</td>
<td>4002</td>
<td>admin@internal</td>
<td>Host</td>
<td>data</td>
<td>videos</td>
<td>316767f0ec</td>
</tr>
<tr>
<td>2012-Oct-15, 22:56:29</td>
<td>Volume Option set on videos.</td>
<td>4002</td>
<td>admin@internal</td>
<td>Host</td>
<td>data</td>
<td>videos</td>
<td>31533c6751</td>
</tr>
<tr>
<td>2012-Oct-15, 22:54:47</td>
<td>Warning, Low disk space. Host server2 has less than 1000 MB of free spa 23</td>
<td>3006</td>
<td>server2</td>
<td>data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012-Oct-15, 22:54:22</td>
<td>Detected new Host server2. Host state was set to Up.</td>
<td>13</td>
<td>server2</td>
<td>data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012-Oct-15, 22:54:18</td>
<td>Host server2 was added by admin@internal.</td>
<td>42</td>
<td>admin@internal</td>
<td>Host</td>
<td>data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012-Oct-15, 22:53:14</td>
<td>Host server2 was removed by admin@internal.</td>
<td>44</td>
<td>admin@internal</td>
<td>Host</td>
<td>server2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012-Oct-15, 22:53:00</td>
<td>Available memory of host server2 [608 MB] is under defined threshold [102531]</td>
<td>3006</td>
<td>server2</td>
<td>data</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
<gluster_volumes>
  <gluster_volume id="50074353-0090-4978-96a0-0296f7c4b62c" href="/api/clusters/5d39c1ca-16ec-11e2-b7b5-cb9c378d098b/glustervolumes",
  
  --<actions>
    <link rel="start" href="/api/clusters/5d39c1ca-16ec-11e2-b7b5-cb9c378d098b/glustervolumes/50074353-0090-4978-96a0-0296f7c4b62c/start"/>
    <link rel="stop" href="/api/clusters/5d39c1ca-16ec-11e2-b7b5-cb9c378d098b/glustervolumes/50074353-0090-4978-96a0-0296f7c4b62c/stop"/>
    <link rel="setoption" href="/api/clusters/5d39c1ca-16ec-11e2-b7b5-cb9c378d098b/glustervolumes/50074353-0090-4978-96a0-0296f7c4b62c/setoption"/>
    <link rel="resetalloptions" href="/api/clusters/5d39c1ca-16ec-11e2-b7b5-cb9c378d098b/glustervolumes/50074353-0090-4978-96a0-0296f7c4b62c/resetalloptions"/>
    <link rel="resetoption" href="/api/clusters/5d39c1ca-16ec-11e2-b7b5-cb9c378d098b/glustervolumes/50074353-0090-4978-96a0-0296f7c4b62c/resetoption"/>
    <link rel="rebalance" href="/api/clusters/5d39c1ca-16ec-11e2-b7b5-cb9c378d098b/glustervolumes/50074353-0090-4978-96a0-0296f7c4b62c/rebalance"/>
  </actions>
  <name>music</name>
  <link rel="bricks" href="/api/clusters/5d39c1ca-16ec-11e2-b7b5-cb9c378d098b/glustervolumes/50074353-0090-4978-96a0-0296f7c4b62c/bricks"/>
  <cluster id="5d39c1ca-16ec-11e2-b7b5-cb9c378d098b" href="/api/clusters/5d39c1ca-16ec-11e2-b7b5-cb9c378d098b"/>
  <volume_type>distribute</volume_type>
  -<transport_types>
    <transport_type>tcp</transport_type>
  </transport_types>
  <replica_count>0</replica_count>
  <stripe_count>0</stripe_count>
  -<options>
    <option value="***" name="auth.allow"/>
    <option value="off" name="nfs.disable"/>
    <option value="on" name="user.cifs"/>
  </options>
  </gluster_volume>
Demo
Upcoming

- Sync with Gluster command line
- Support for creating geo-replicated volumes
- Top and Profiling
- Managing Gluster hooks
- Async Tasks
- UFO
- And lot more...
How To Contribute

- Git repository
  
  git://gerrit.ovirt.org/ovirt-engine

- IRC Channel
  - #ovirt on oftc
Q & A
THANK YOU!

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