Ganeti
An Open Source (GPLv2+) cluster manager for KVM.

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Google Inc, Ganeti, Debian

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Design principles

- Easy to install, easy to manage
- Based on other open source software
- No specialized hardware needed (eg. SANs)
- Feature-full cluster virtualization (with live migration)

Terminology

- Node: a virtualization host
- Instance: a virtualization guest
- Cluster: a set of nodes, managed as a collective

Underlying technologies

- Linux and its standard networking utils (iproute2, bridge-utils)
- KVM (but we are hypervisor agnostic)
- DRBD, or LVM, or files (but we're planning for more)
- Python (plus a few modules)
- socat
- ssh

The node needs to be set up, follow our installation guide.

```
gnt-cluster init [-s ip] \
  --enabled-hypervisors=kvm cluster
gnt-node add [-s ip] node2
gnt-node add [-s ip] node3
gnt-cluster info
gnt-cluster modify [-B ...] [-H ...] [-N ...]
```

```
gnt-os list
gnt-instance add -t drbd \
  {-n node1:node2 | -I hail } \
  -o debootstrap+default i0
ping i0
ssh i0 # easy with OS hooks
gnt-instance migrate i0
gnt-instance console i0
```

Interoperating with the cluster

- Command line
- RAPI (Rest-full http interface)
  - grnet.gr and osuosl.org have web interfaces for it
- On-cluster *luxi* interface
  - luxi is currently json over http over unix socket
  - there is code for python and haskell

Future roadmap

- Support for SANs (contributed by grnet.gr)
- Support for ceph and perhaps sheepdog
- Scalability to ~1000 nodes through node groups
- Whatever feature *you* want to contribute

People running Ganeti

- Google (Corporate Computing Infrastructure)
- grnet.gr (Greek Research & Technology Network)
- osuosl.org (Oregon State University Open Source Lab)
- fsffrance.org (according to docs on their website and trac)

Conclusion

- Check us out at `http://code.google.com/p/ganeti`.
- Or just Google *Ganeti*.
- Try it. Love it. Improve it. Contribute back (CLA required).

Questions? Feedback? Ideas? Flames?