A Step-by-Step Guide to Installing OpenStack on CentOS Using the KVM Hypervisor and GlusterFS Distributed File System

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[1] Http://devstack.org/.
[2] Http://docs.openstack.org/trunk/openstack-compute/admin/content/openstack-compute-deployment-tool-with-puppet.html.

5 Step-by-Step OpenStack Installation

5.1 Hardware Setup

- Servers
- Network setup
- 4 x IBM System x3200 M3
  - Intel(R) Xeon(R) CPU (4 cores, 8 threads), X3460 @ 2.80GHz
  - 4GB DDR3-1333
  - Western Digital 250 GB, 7200 RPM SATA II (WD2502ABYS-23B7A)
  - Dual Gigabit Ethernet (2 x Intel 82574L Ethernet Controller)
- 1 x Dell Optiplex 745
  - Intel(R) Core(TM)2 CPU (2 cores, 2 threads) 6600 @ 2.40GHz
  - 2GB DDR2-667
  - Seagate Barracuda 80GB, 7200 RPM SATA II (ST3808110AS)
  - Broadcom 5751 NetXtreme Gigabit Controller
- NetGear ProSafe 16-Port 10/100 Desktop Switch FS116

5.2 Organization of the Installation Package

- Config Directory
- Lib Directory
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- Script ordering

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- configrc
- hosts
- ntp.conf

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5.4.1 Network Gateway

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All nodes

Controller

All nodes

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All nodes

Controller

Compute nodes

Network Gateway

Controller

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7 References

[1] M. Armbrust, A. Fox, R. Griffith, A. D. Joseph, R. Katz, A. Konwinski, G. Lee, D. Patterson, A. Rabkin, I. Stoica, and others, "A view of cloud computing," *Communications of the ACM*, vol. 53, pp. 50–58, 2010.

[2] R. Buyya, C. S. Yeo, S. Venugopal, J. Broberg, and I. Brandic, "Cloud computing and emerging IT platforms: Vision, hype, and reality for delivering computing as the 5th utility," *Future Generation computer systems*, vol. 25, pp. 599–616, 2009.