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Setting up an automated testing environment for Samba on Gluster

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Introductions

Implementation

Future Roadmap

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Glusterfs

▸ Open Source Scalable Network Filesystem

▸ Utilises off the shelf hardware

▸ Access to the filesystem provided by libgfapi, glusterfs-fuse, NFS and SMB

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Samba

- ‣ Export GlusterFS using SMB
- ‣ Samba uses vfs_glusterfs module to talk to the Glusterfs cluster.

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CTDB

- ▸ Turns Samba into a clustered service

- ▸ By providing the needed cross-node IPC:
    - · clustered TDB database
    - · Inter-node messaging

- ▸ Additionally: resource management:
    - · Monitors nodes
    - · Monitors Samba service
    - · Manages pool of ip addresses

Challenges

▸ Multiple Machines Involved

▸ Multiple Projects Involved

▸ Multiple Configuration Options

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Requirements

- ▸ Automate setup of cluster nodes

- ▸ Test runner to run various tests

- ▸ Run periodically

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Gluster Samba Integration

- ▸ Github
  - · https://github.com/gluster/samba-integration
- ▸ Branches
  - · master
  - · centos-ci
  - · samba-build
  - · tests

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Tools

- ▶ CentOS 7
- ▶ Vagrant
  - · libvirt
- ▶ Ansible
  - · gluster-ansible

Samba master test RPMs

▶ Test RPMs for easy installation on nodes

▶ Builds created nightly

▶ Gluster already has nightly RPMs from the master branch spec file

Branch – samba-build

▶ Fetches current samba master

▶ Creates an SRPM loosely based on fedora rawhide

▶ Builds binary RPMs for centos

▶ Runs a basic install test

▶ Builds running nightly in centos-ci

Package Repositories

- ▶ GlusterFS
  - · http://artifacts.ci.centos.org/gluster/nightly/master.repo
- ▶ Samba
  - · http://artifacts.ci.centos.org/gluster/nightly-samba/samba-nightly-master.repo

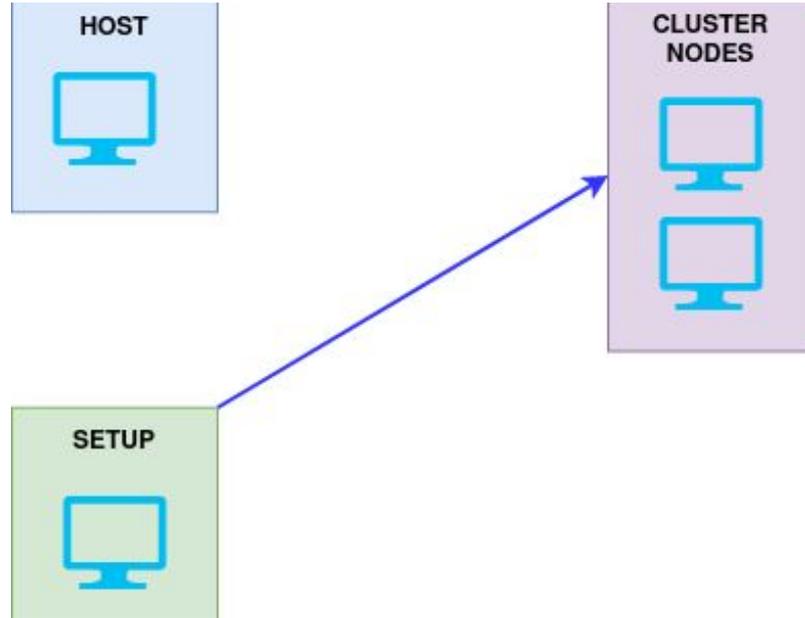Testing Testing - one two, one two!

Branch – master

- ▶ Creates virtual machines
- ▶ Installs cluster nodes and clients
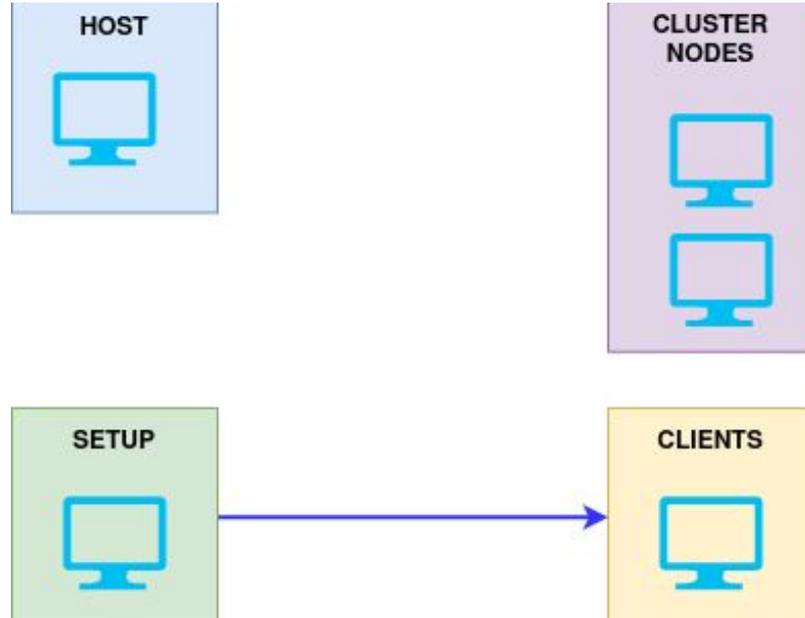   - · cluster–vars.yml
    - · test-info.yml
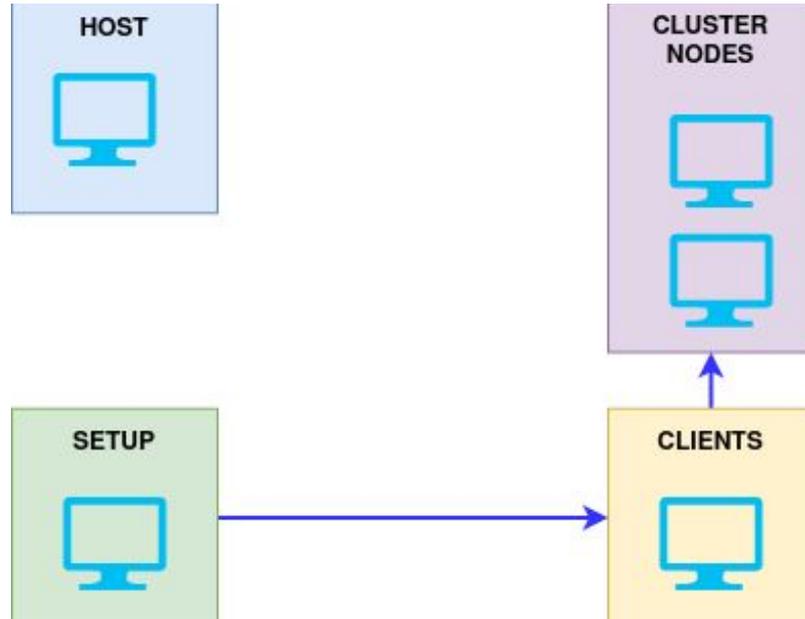- ▶ Runs tests

Setup vm setup

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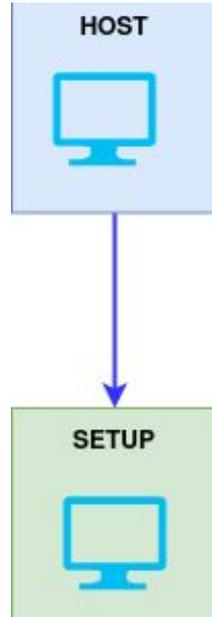
Setup vm Storage0/1

Setup vm Client1

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Run Tests

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Branch – tests

▸ Executed once the nodes and clients are setup

▸ Contains the test runner and various tests

▸ Simple sanity tests using the cifs kernel module

▸ Smbtorture tests

⋅ Latest nightly build smbtorture test used

⋅ Re-use selftest infrastructure for known fails and
  unreliable results

▸ Focus is now on adding more tests.

CentOS CI Environment

‣ https://ci.centos.org/

‣ Free Jenkins based bare metal machines for open source projects to build CI / test infrastructures

‣ https://wiki.centos.org/QaWiki/CI/GettingStarted

‣ Using: Gluster Space (for now)

‣ Job definitions: https://github.com/gluster/centosci/

Branch – centos-ci

- ▶ Entry point for the Centos-CI environment

- ▶ Script invoked by the centos-ci jenkins jobs

- ▶ Sets up the host machine

- ▶ Fetches master branch and kickstarts install and test

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Centos-ci – what are we running / testing?

- ▸ Nightly:
  - · Full clustered test run from master
  - · build samba RPMs from master
- ▸ PRs:
  - · Master (full cluster test)
  - · Tests (full cluster test)
  - · Centos-ci (full cluster test)
  - · Samba-build (build and install)

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Future road map

▶ Tests! Tests! Tests!

▶ Test different configuration options

▶ Plugin other distributed file systems

▶ Centos-ci:

○ Get samba space?

○ Use in gitlab? (not so easy...)

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Thank You

Questions?

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