Testing
one two, one two!

Setting up an automated testing environment for Samba on Gluster

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Introductions

Implementation

Future Roadmap
Introductions

Glusterfs

- Open Source Scalable Network Filesystem
- Utilises off the shelf hardware
- Access to the filesystem provided by libgfapi, glusterfs-fuse, NFS and SMB
Samba

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

Requirements

- Automate setup of cluster nodes
- Test runner to run various tests
- Run periodically
Gluster Samba Integration

- Github
  - https://github.com/gluster/samba-integration

- Branches
  - master
  - centos-ci
  - samba-build
  - tests
Implementation

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
Implementation - prerequisites

Package Repositories

- GlusterFS
  - http://artifacts.ci.centos.org/gluster/nightly/master.repo
- Samba
Implementation

Branch - master

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

Setup vm setup
Implementation

Setup vm Storage0/1

HOST

CLUSTER NODES

SETUP

Testing Testing - one two, one two!
Implementation

Setup vm Client1
Implementation

Run Tests
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
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)
Future Roadmap

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...)
Thank You

Questions?

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