CloudByte™
Enterprise Storage for Virtualization

CloudByte ElastiStor Integration Guide for MySQL

Contents

Introduction

This document explains the procedures for hosting MySQL database on CloudByte ElastiStor Storage. The following procedures are for iSCSI and NFS protocols.

Prerequisites

- A Linux machine with CentOS 5.5 or RHEL 6.3 installed on it.
- iSCSI or NFS Storage Volumes on CloudByte ElastiStor. For details, see http://www.docs.cloudbyte.com/what-is-elasticenter/provisioning-storage/

Procedures

1. Disable SELINUX and stop the ip tables on the Linux Client. For details, see the section *Disable SELINUX*.
2. Install MySQL 5.5 RPM package on the Linux Client. For details, see Installing MySQL 5.5.
3. Mount the iSCSI or NFS Storage Volumes on the Linux machine. For details, see Mounting the Storage Volumes on the Linux machine.
4. Create a configuration file in the /etc folder. For details, see Creating my.cnf.
5. Initialize the MySQL data directory on the mount point created in step 3. For details, see Initializing MySQL data directory.
6. Preconfigure the system environment. For details, see Preconfiguring the system environment.
7. Start the MySQL service on the Linux client using the following command: `service mysql restart`.

Note: If you copy and paste the commands in the section, ensure that they appear correctly on the CLI.

ssDisable SELINUX

Log in as root and perform the following procedures on the Linux Client:

1. Disable firewall using the following commands:
   ```
   service iptables stop
   chkconfig iptables off
   ```
2. Run the following command to check the status of firewall: `service iptables status`.
3. To disable SELINUX, set SELINUX to disabled in the file `/etc/selinux/config`.
4. Run the following command to reboot the Linux Client: `reboot`.
5. After the reboot of the Linux Client, run the following command to check the status SELINUX service: `sestatus`.

Installing MySQL 5.5

1. Download MySQL 5.5 RPM package from the following URL: http://dev.mysql.com/downloads/mysql/5.5.html
2. Run the following command to untar the MySQL RPM package: `tar –xvf package_name`.
3. Run the following command to check for an older installation of MySQL: `rpm -qa | grep`

mysql.

4. If an older installation of MySQL is found, run the following command to uninstall it: `rpm -e package_name`.

Note: If there are any dependent packages, run the following command for forced uninstallation of the packages: `rpm -e --nodeps package_name`.

5. Run the following command to install the MySQL RPM package: `rpm -ivh package_name`.

Mounting the Storage Volumes on the Linux machine

iSCSI LUNs

Perform the procedures in the section *Without CHAP authentication* using the following URL: http://www.docs.cloudbyte.com/deploying-nfs-and-iscsi-from-cloudbyte-elastistor-on-red-hat-enterprise-linux/deploying-fibre-channel-fc-from-cloudbyte-elastistor/

NFS shares

1. Run the following command to discover the NFS share on the Linux Client: `showmount -e TSM_IP_address`.
2. Run the following command to mount the NFS share on the Linux Client: `mount -o proto=tcp,nolock tsmip:/NFS_share_name mountpoint`.

Creating my.cnf

1. Create a configuration file named my.cnf in the /etc directory using the following command: `vi /etc/my.cnf`
2. Add the following lines in the `my.cnf` file:

```
[client]
#password       = your_password
port            = 3306
socket          = mountpoint/mysql.sock
# Here follows entries for some specific programs
# The MySQL server
[mysqld]
port            = 3306
socket          = mountpoint/mysql.sock
skip-external-locking
max_allowed_packet = 2G
key_buffer_size = 64M
table_open_cache = 64
sort_buffer_size = 512K
net_buffer_length = 8K
read_buffer_size = 256K
read_rnd_buffer_size = 512K
myisam_sort_buffer_size = 8M
innodb-file-per-table
```

```
datadir=mountpoint
pid-file=mountpoint/mysql.pid
# Replication Master Server (default)
# binary logging is required for replication
log-bin=mountpoint/mysql-bin
log-error=mountpoint/mysqld.log
```

3. In the highlighted code, replace *mountpoint* with the Storage Volume mounted path.

Initializing MySQL data directory

1. Run the following command to go to the mount directory: `cd mount_directory_path`.
2. Run the following command to change the ownership of mount directory to MySQL user: `chown -R mysql:mysql *`.
3. Run the following command to initialize the MySQL data directory and create the system tables that it contains: `mysql_install_db --user=mysql --ldata=mountpoint`.

Preconfiguring the system environment

1. Run the following command to go to the mount directory: `cd mount_directory_path`.
2. Run the following command to change the ownership of mount directory to MySQL user: `chown -R mysql:mysql *`.
3. Run the following command to create process identification file: `touch mountpoint/mysql.pid`.
4. Run the following command to change the ownership of the PID file to MySQL user: `chown -R mysql:mysql *`.
5. Run the following command to ensure that no MySQL process is running: `ps -aux | grep mysql`.
6. If any of the MySQL processes is running, kill it using the following command: `kill -9 process_id`.