We had a issue in El\_Salvador, Cloudera Manager reporting Datanode Volume failure.

Error:

We have seen Datanode Volume failure issue on Cloudera Manager and found out the following error from /var/log/cloudera-scm-agent log.

[25/Sep/2017 14:46:14 +0000] 9316 MainThread agent        ERROR    Could not evaluate resource {u'io': None, u'named\_cpu': None, u'tcp\_listen': None, u'dynamic': True, u'rlimits': None, u'file': None, u'memory': None, u'directory': {u'path': u'/grid/5/dfs/dn', u'bytes\_free\_warning\_threshhold\_bytes': 0, u'group': u'hadoop', u'user': u'hdfs', u'mode': 448}, u'cpu': None, u'contents': None}

Traceback (most recent call last):

  File "/usr/lib64/cmf/agent/build/env/lib/python2.6/site-packages/cmf-5.8.4-py2.6.egg/cmf/agent.py", line 3604, in evaluate\_resources

    self.agent.mkabsdir(path=d["path"], user=d["user"], group=d["group"], mode=d["mode"])

  File "/usr/lib64/cmf/agent/build/env/lib/python2.6/site-packages/cmf-5.8.4-py2.6.egg/cmf/agent.py", line 1957, in mkabsdir

    os.makedirs(path)

  File "/usr/lib64/python2.6/os.py", line 150, in makedirs

    makedirs(head, mode)

  File "/usr/lib64/python2.6/os.py", line 157, in makedirs

    mkdir(name, mode)

OSError: [Errno 30] Read-only file system: '/grid/5/dfs'

When I go into the below location it throws me the following error, looks like it is related to Hardware (disk) failure. I would like you to look if the disk related to /grid/5 volume is fine or not.

[root@cm-pr-bgd-s01 5]# ll

ls: reading directory .: Input/output error

total 0

[root@cm-pr-bgd-s01 5]# pwd

/grid/5

[root@cm-pr-bgd-s01 5]# date

Mon Sep 25 14:48:56 CST 2017

Resolution:

We are working with the Client Infrastructure team to fix the Disk and take it from there and see if it resolved or not.

## Steps followed for Performing Disk Hot Swap for DataNodes Using Cloudera Manager

**Minimum Required Role:** [**Cluster Administrator**](https://www.cloudera.com/documentation/enterprise/5-8-x/topics/cm_sg_user_roles.html#concept_wfh_tvy_qp) (also provided by **Full Administrator**)

1. Configure data directories to remove the disk you are swapping out:
   1. Go to the HDFS service.
   2. Click the **Instances** tab.
   3. Click the affected DataNode.
   4. Click the **Configuration** tab.
   5. Select **Scope** > **DataNode**.
   6. Select **Category** > **Main**.
   7. Change the value of the **DataNode Data Directory** property to remove the directories that are mount points for the disk you are removing.**Warning:** Change the value of this property only for the specific DataNode instance where you are planning to hot swap the disk. *Do not* edit the role group value for this property. Doing so will cause data loss.
2. Click **Save Changes** to commit the changes.
3. Refresh the affected DataNode. Select **Actions** > **Refresh Data Directories**.
4. Remove the old disk and add the replacement disk.
5. Change the value of the **DataNode Data Directory** property to add back the directories that are mount points for the disk you added.
6. Click **Save Changes** to commit the changes.
7. Refresh the affected DataNode. Select **Actions** > **Refresh Data Directories**.
8. Run the HDFS fsck utility to validate the health of HDFS.

How to Replace the Disk

Reference :

As this disk is of 4T , you would have to use parted to perform the formatting . Please see the below :

Since fdisk cannot partition disks 2TB and higher , use “parted” command to partition the 4TB disks, below are the instructions :

·      On a new drive :

o   “parted /dev/<disk-name> mklabel gpt” { eg . parted /dev/sda mklabel gpt }

·      Partition the complete disk as 1 single partition :

o   “parted –a opt /dev/<disk-name> mkpart primary ext4 0% 100%”

·      Verify if the partition got created using :

o   “lsblk”

·      Format the partition using ext4 fs :

o   “mkfs.ext4 /dev/<partition-name>” { make sure to use partition name, usually a partition has a number to the end of disk name eg. /dev/sda1}

·      Verify if the format went fine using :

o   lsblk --fs command . It should show file-system format next to partition.