System boot up failure of Neha Storage servers

# Issue with MDS1: The server was hanging after displaying ‘Setting up logical volume manager’ message

## Cause:

One of the physical disk was having bad sectors

## Procedure followed to figure out the issue:

1. Entered RAID BIOS(Ctrl + E) while booting and ran consistency check on the RAID volume.
2. Consistency check reported read failure from one of the physical disk. This reveled that one of the physical drive is not readable.
3. To locate the exact drive, the BIOS setting for Mass storage controller(**BIOS->Advanced-> Mass storage configuration**) is set to **Enhanced mode** for getting access to the individual drives independently.
4. Did **dd if=/dev/sda of=/dev/null** on **sda**, **sdb** and **sdc** drives.
5. **dd** reported I/O error while reading from **sda** which confirmed that it has some bad sectors
6. Removed this physical disk and reverted the BIOS setting to **SW RAID** for rebuilding the raid volume
7. The system has automatically started rebuilding using the hot spare(third drive)
8. After the rebuilding was completed the system was rebooted
9. On attempting to boot, the system reported that a manual file system check is needed to fix some issue with /var file system.
10. After running e2fsck on /var and fixing few inconsistencies the system booted to GUI resolving the issue

# Issue with MDS2: The server was hanging due to kernel panic(Init not found)

## Cause:

BIOS setting for MAS Storage configuration got disturbed due to some unknown reason. It was set to Enhanced mode instead of SW RAID.

## Procedure followed to figure out the issue:

1. Looking at the kernel panic, we could understand that the kernel is unable to locate / filesystem.
2. Booted the system using RHEL DVD to rescue mode and found that the physical disks and file system are consistent.
3. Inspecting the local disks using **fdisk –l**, reveled that the disk are appearing as individual disks instead of as a single RAID volume.
4. Checked the BIOS settings on MDS1 and figured out that the BIOS setting: **BIOS->Advanced-> Mass storage configuration** should be set to **SW RAID** which was mistakenly set to **Enhanced mode**.
5. Reverting this back to **SW RAID** and rebooting the system resolved the issue.