# ****Storage Management****

Please make sure you are stating from a ‘clean slate’ by running

/scenariolabs/Storage/resetStorageToOriginal

### Question 1

You are working on a system which has a newly acquired filesystem mounted on /DS1201, the associated Logical Volume being Ora01

The filesystem and data was to have been put in place by a contractor and indeed have been, to an extent. However, sudden budget cuts meant the contractor had to leave before completing the task. You have to finish off the job.

Run the command

/scenariolabs/Storage/Q1

This will set up the scenario. You the department running the weblogic app is complaining that it isn’t working, this has been traced to the lack of access to the database which, in turn, has been traced to the absence of the filesystem.

Try ‘mount /DS1201’. This should work. Alas it fails.

Your job is to get the system to automatically mount /DS1201. The idea is that the filesystem should be available directly after a reboot.

/scenariolabs/Storage/CheckQ1

Will tell you if you have fixed the underlying difficulty.

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| **Answer**: 01  Step 1: Verify the problem (*mount /DS1201* – doent work)   * cat /etc/fstab * lk (identify the file name is wrong, may use *df -h*)   step 2: use vi to edit name   * vi /etc/fstab * go on the last line and change the name to DS1201   Step 3: mount   * use mount /DS1201 |

### Question 2

To set up the scenario, run the command

/scenariolabs/Storage/Q2

You have a number of machines which have access to shared disks through a Storage Area Array. The shared storage in question appears on this system as the Logical Volume ‘Ora01’.

Normally this LV is used by another machine. That machine has failed due to a power supply problem which will take some time to fix. It has been decided to mount the filesystem/volume on your current machine, which is in the fortunate position of being able, at least, to access the storage. An entry has been added to /etc/fstab and you are ready to mount. Run the command.

mount /DS1201

You can see that it will not mount. You are under time pressure. Please get this filesystem mounted so that the application can be started on this machine. Also, you need to make sure it mounts each time the machine boots. Obviously, since this partition contains data, it cannot be overwritten or rebuilt.

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| **Answer 02:**  Step 1: Verify problem   * run mount /DS1201 (will show wrong file system) * View file system, use *lsblk –fs* notice file system problem in the listing, the volume is ext4   Step 2: use vi to correct it   * Vi /etc/fstab (change the file system to ext4)   Step 3: mount   * use mount /DS1201 |

### Question 3

There was a sudden power outage which has badly affected a number of crucial systems in the data centre. Sadly, it came at busy time. Actually, the increased power demands due to increasing workloads in the datacentre *caused* a substation to trip out. Set up the scenario with:

/scenariolabs/Storage/Q3 (takes 20-30 seconds to complete)

Please bring the /data filesystem back online as quickly as possible.

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| **Answer 03:**  Step 1: Check   * use cat /etc/fstab * try to mount /data (will give you wrong fs type) * use lsblk –fs will revels the volume has no file system specified   Step 2 Repair   * use xfs\_repair /dev/rootvg/samllVol   Step 3: mount data   * use mount /data * may visit it ls /data > cd /data/lost+found |

### Question 4

Victim of its own success the trial of a new Oracle database has lead to the /DS1201 filesystem filling up, bringing a popular piece of software to its knees. It can still be used for read purposes but no more can be written. Management do NOT want the database to be taken offline, so no downtime. They do want you to sort out the space problem and bring the space usage to between 10% - 20%.

Set up the scenario with:

/scenariolabs/Storage/Q4

Please bring the /data filesystem back online as quickly as possible.

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| **Answer 04:**  Step 1: Check   * use df -h (will show dive in question is 100% full)   Step 2 Extend vol   * use lvextend -L +400M /dev/rootvg/Ora01 (name of logical drive)   Step 3: grow file system   * use xfs\_growfs /dev/rootvg/Ora01d |