Extend a Linux file system after resizing a volume

Example: Extend the file system of NVMe EBS volumes

1. [Connect to your instance](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AccessingInstances.html).
2. To verify the file system for each volume, use the **df -hT** command.

>> df -hT

1. To check whether the volume has a partition that must be extended, use the lsblk command to display information about the NVMe block devices attached to your instance.

>>>> lsblk

1. For volumes that have a partition, such as the root volume shown in the previous step, use the **growpart** command to extend the partition. Notice that there is a space between the device name and the partition number.

**sudo growpart /dev/nvme0n1 1**

1. (Optional) To verify that the partition reflects the increased volume size, use the **lsblk** command again.

lsblk

1. To verify the size of the file system for each volume, use the **df -h** command. In this example output, both file systems reflect the original volume size, 8 GB .

df –h

1. To extend the file system on each volume, use the correct command for your file system, as follows:

* [XFS file system] To extend the file system on each volume, use the **xfs\_growfs** command. In this example, / and /data are the volume mount points shown in the output for **df -h**.

**sudo xfs\_growfs –d /**

If the XFS tools are not already installed, you can install them as follows.

**sudo apt install xfsprogs**

1. [ext4 file system] To extend the file system on each volume, use the **resize2fs** command.

**sudo resize2fs /dev/nvme0n1p1**

df –h

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Addition volume (separate disk):

1. df –hT
2. lsblk
3. sudo growpart /dev/xvdf 1
4. lsblk
5. df –h
6. sudo xfs\_growfs -d /data
7. sudo yum install xfsprogs
8. **sudo resize2fs /dev/xvdf1**
9. df -h