Adding swap space in Linux

When running Alfresco in a Linux environment, in some circumstances, it may be necessary to add extra swap space.

There are two ways in which you can add swap space in Linux.

1. Create a swap space using a file.
    a. Create a swap file using the dd command.
    For example, to create a file named linuxswapfile in the root directory use the following command:

    ```
    dd if=/dev/zero of=/root/myswapfile bs=1M count=1024
    ```

    This example creates a swap file with the name linuxswapfile under the root directory with a size of 1024MB (1GB).

    b. Change the permission of the swap file using the chmod command so that only root can access it.

    ```
    # chmod 600 /root/linuxswapfile
    ```

    c. Make this file a swap file using the mkswap command.

    ```
    # mkswap /root/linuxswapfile
    Setting up swapspace version 1, size = 1073737 kB
    ```

    d. Enable the newly created swapfile using the swapon command.

    ```
    # swapon /root/linuxswapfile
    ```

    e. Ensure that the swap file is available as a swap area even after the reboot by adding the following line to the /etc/fstab file.

    ```
    # cat /etc/fstab
    /root/linuxswapfile            swap                swap    defaults       0 0
    ```

    f. Verify that the newly created swap area is available to you by using the swapon -s command.

    ```
     # swapon -s
    Filename                        Type            Size    Used    Priority
    /dev/sda2                       partition       4192956 0       -1
    /root/linuxswapfile             file            1048568 0       -2

    # free -k
                 total       used       free     shared    buffers     cached
    Mem:       3082356    3022364      59992          0      52056    2646472
    -/+ buffers/cache:     323836    2758520
    Swap:      5241524          0    5241524
    ```

    Note: The output of the swapon -s command will contain the value file in the Type column if the swap area is available to you.

2. If you have an additional hard disk (or space available in an existing disk) you can create a partition using the fdisk command and use this partition for additional swap space. To set up a partition called /dev/sdc1 as swap area:
    a. Make this file a swap file using the mkswap command.

```
# mkswap /dev/sdc1
Setting up swapspace version 1, size = 1073737 kB
```

    b. Enable the newly created swap file using the swapon command.

```
# swapon /dev/sdc1
```

    c. Ensure that the swap file is available as a swap area even after the reboot by adding the following line to the /etc/fstab file.

```
# cat /etc/fstab
/dev/sdc1           swap                swap    defaults       0 0
```

    d. Verify that the newly created swap area is available to you by using the swapon -s command.

```
# swapon -s
Filename                        Type            Size    Used    Priority
/dev/sda2                       partition       4192956 0       -1
/dev/sdc1                       partition       1048568 0       -2

# free -k
             total       used       free     shared    buffers     cached
Mem:       3082356    3022364      59992          0      52056    2646472
-/+ buffers/cache:     323836    2758520
Swap:      5241524          0    5241524
```

    Note: The output of the swapon -s command will contain the value file in the Type column if the swap area is available to you.