

Troubleshoot Prime Collaboration Assurance/Provisioning (PCA/PCP) Disk Space Issues

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Introduction

This document describes how to allocate more disk space to a Virtual Machine (VM) when the /opt partition(partition for PCP/PCA) is already at 96% or higher

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- PCA/PCP

You will need root access to the PCA/PCP, if you do not have root access, steps to request for root access are described at the bottom of this document

Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Problem

Following are the symptoms the PCP/PCA will start experiencing when the hard drive(/opt) is at 96% or higher

- Very Slow performance
- User not able to modify anything in the Graphical User Interface (GUI)
- Backups continuously fail
- When the command **df -h** is run you can see the /opt at 96% or above

Steps to Verify the df -h output

Step 1. Establish a secure shell (SSH) session to the PCP/PCA using an application such as putty, and authenticate with the root account (On the PCA use port 26 and on the PCP use port 22).

Step 2. Input: **df -h** and look towards the bottom right for /opt, if the usage is 96% or higher you are running into this issue

```
[root@Assu115 ~]# df -h
Filesystem              Size  Used Avail Use% Mounted on
/dev/mapper/smosvg-rootvol
                        4.8G  904M  3.6G  20% /
/dev/mapper/smosvg-altrootvol
                        93M   5.6M   83M   7% /altroot
/dev/mapper/smosvg-home
                        465M   11M  431M   3% /home
/dev/mapper/smosvg-recvol
                        93M   5.6M   83M   7% /recovery
/dev/mapper/smosvg-localdiskvol
                        15G   4.5G   9.0G  34% /localdisk
/dev/mapper/smosvg-storedatavol
                        9.5G  151M   8.9G   2% /storedata
/dev/mapper/smosvg-tmpvol
                        9.7G  1.2G   8.1G  13% /tmp
/dev/mapper/smosvg-usrvol
                        7.6G  967M   6.3G  14% /usr
/dev/mapper/smosvg-varvol
                        4.8G  805M   3.7G  18% /var
/dev/sda2                972M   18M   905M   2% /storedconfig
/dev/mapper/smosvg-optvol
                        167G   26G  133G  17% /opt
/dev/sda1                91M   16M   70M   19% /boot
tmpfs                    6.8G     0   6.8G   0% /dev/shm
```

Solution

You must add additional Hard disk on the VM to resolve this issue

Step 1. Power down the VM

Step 2. Add Extra Hard Disk Drive (HDD) on the VM:

- Log in to Vsphere and right click on your VM.
- Select **Power>Power Off**.
- Right Click and Select **Edit Settings**, on the hardware tab select the hard disk 1 (take a note if you provisioned it as thin or thick provisioning) and at the top click **Add**.
- Add your new Hard disk and use the same provisioning as the first hard disk.
- (typically for PCP 50GB is sufficient and for PCA 100GB will work).
- After this is added, power back on the VM then login as root into your PCP/PCA .

Step 3. Allocate the New HDD Space to /opt:

- Log in to your PCP/PCA as root using Putty or SecureCRT.
- Run the command: **fdisk -l** (this will list the available partitions)

You will see one of the partitions not having a valid partition table

Disk /dev/sdb doesn't contain a valid partition table

Step 3. Run the command : **fdisk /dev/sdb**

- At the bottom you should see

Command (m for help)

type: n

(this will add a new partition to /dev/sdb)

You will select P for Primary Partition

The Partition number will be 1

The first cylinder will be 1 and last cylinder will be the last cylinder listed, typically the last in the partition, it will list the default and you will put in that number.

```
Command (m for help): n
Command action
  e   extended
  p   primary partition (1-4)
p
Partition number (1-4): 1
First cylinder (1-1305, default 1):
Using default value 1
Last cylinder or +size or +sizeM or +sizeK (1-1305, default 1305):
Using default value 1305
```

Step 4. After you create the partition as above you will need to change the partition to a Linux Logical Volume Manager (LVM) partition

command (m for help) type: t

Next you will see: Hex Code (type L to list codes): type 8e Note: You now have changed the partition to a Linux LVM Partition

Step 5. Write to disk and exit using the below command

Command (m for Help): press w

Step 6. Run the command **pvcreate /dev/sdb1** to create the /dev/sdb1 physical volume.

Type: **pvdisplay**, you should see the new Physical Volume with the disk size as allocated

```
"/dev/sdb1" is a new physical volume of "10.00 GB"
--- NEW Physical volume ---
PV Name                /dev/sdb1
VG Name
PV Size                10.00 GB
Allocatable           NO
PE Size (KByte)       0
Total PE              0
Free PE               0
Allocated PE          0
PV UUID                4jp0J6-jWJJ-pSWF-e9k7-AeIQ-p7jN-YNRTvQ
```

Step 7. Extend the volume group using : **vgextend smosvg /dev/sdb1**

After it has successfully extended you will see "smosvg successfully extended"

Step 8. Extend the LVM using: **lvextend /dev/mapper/smosvg-optvol /dev/sdb1**

Step 10. Add the volume to the /opt partition using : **resize2fs /dev/mapper/smosvg-optvol**

You can Verify the increased disk space using the **df -h** command:

```
/dev/mapper/smosvg-optvol
55G 12G 40G 24% /opt
```

Requesting Root Access to the PCA/PCP

Note: It is important to ensure that the spaces where applicable are in place

PCA 11.x and above you can follow the below procedure to gain Root access

Step 1. Log in to the PCA through CLI as the Admin User created from install.

Step 2. Input command: **root_enable**

Step 3. Enter in your root password.

Step 4. Logged in as admin enter in root and enter in your root password to gain access to root.

PCP 12.x and above you will need TAC to provide you with the CLI Access as this is restricted, the process is as below

Step 1. Log in to PCP GUI.

Step 2. Navigate to Administration > Logging and Showtech > Click on troubleshooting account > create the userid and select an appropriate time you will need root access to accomplish this.

Step 3. Provide to TAC the challenge string and they will provide you the password (this password will be very lengthy, do not worry it will work).

Example:

```
AQAAAAEAAAAC8srFZB2prb2dsaw4NSm9zZXBoIEtvZ2xpbGAAAbgBAAIIBAQIABAAA FFFFEBE0
AawDAJEEAEBDTj1DaXNjb1N5c3RlbXM7T1U9UHJpbWVDb2xsYWJvcnF0aW9uUHJv FFFFEB81
dmlzaW9uaW5nO089Q2l2Y29TeXN0ZW1zBQAIAAAAAFmxsrwGAEBDTj1DaXNjb1N5 FFFFEB8A
c3RlbXM7T1U9UHJpbWVDb2xsYWJvcnF0aW9uUHJvdm1zaW9uaW5nO089Q2l2Y29T FFFFEBAD0
eXN0ZW1zBwABAAGAAQEJAAEACgABAQsBAJUUhvhxkM6YNYVFRPT3jcqAsrl/1ppr FFFFEB2B
yr1AYzJa9Ft01A4l8VB1p8IVqbqHrrCAIYUmVXWnzXTuxtWcY2wPSsIzW2GSdFZM FFFFEB9F3
LplEKEX+q7ZADshWeSMYJQkY7I9oJTFd5P4QE2eHZ2oppiCScgf3Fii60Ruvhim FFFFEBAD9
kbb06JUguABWZU2HV00hXHfjMZNqpUvhCWCCIHNKfddwB6crb0yV4xoXnNe5/2+X FFFFEBACE
7Nzf2xWfaIwJOS4kGp5S29u8wNMAIb1t9jn7+iPg8Rezizeu+HeUgs2T8a/LTmou FFFFEB8F
Vu9Ux3PBOM4xIkFpKa7provli1PmIeRJodmObfS1Y9jgqb3AYGgJxMAMAAFB6w== FFFFEBAA7
DONE.
```

Step 4. Log out of your current user and login with the userid you created and the password provided by TAC.

Step 5. Navigate to Troubleshooting Account > Launch > Click on Console Account and create your cli user id and password.

Step 6. Now log in to PCP as the user you created and perform the above steps.