

## Symptoms:

When the CC-SG Hardware Appliance (shipped from the factory in early 2017) with firmware releases 6.2.0 or earlier is upgraded to newer firmware releases, users may experience an error message **“Failed to construct component instance”** when accessing the nodes/targets. In rare cases, CC-SG may experience boot failure after the upgrade.

## Root Cause:

CC-SG uses the boot partition for its operating system boot files and related services. The hardware appliances shipped from the factory (prior to early 2017) with firmware releases prior to the 6.2.0 release with a fixed boot partition size. The subsequent CC-SG firmware upgrade includes updates to the operating system and service with larger files leaving behind older files in the boot partition. This causes boot partition space constraints and causes issues with the firmware upgrade and the reported issue.

If the boot partition utilization is above 50%, upgrading to CC-SG may cause CC-SG boot failure or result in node access issues with errors reported in the symptoms above.

CC-SG hardware appliance with 7.0 and later releases shipped from the factory (and virtual appliances) has a larger boot partition size and is **NOT** affected by this issue.

## Solution:

If the boot partition is above 50% utilization, please [contact the technical support team](#) to obtain a patch to free up the space for the boot partition before applying the firmware upgrade.

Please check the /boot partition utilization at your current firmware release.

To check the /boot partition utilization, login to CC-SG on the [admin diagnostic console](#) and navigate to [Operation > Utilities > Disk / RAID Utilization > RAID Status + Disk Utilization](#)



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File Operation
CC-SG Administrator Console: RAID Status + Disk Utilization:
Personalities : [raid1]
md1 : active raid1 sda2[0] sdb2[1]
      976527168 blocks super 1.1 [2/2] [UU]
      bitmap: 1/8 pages [4KB], 65536KB chunk

md0 : active raid1 sda1[0] sdb1[1]
      102336 blocks super 1.0 [2/2] [UU]

Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        3.9G     0  3.9G   0% /dev
tmpfs           3.9G     0  3.9G   0% /dev/shm
tmpfs           3.9G   9.1M  3.9G   1% /run
tmpfs           3.9G     0  3.9G   0% /sys/fs/cgroup
/dev/mapper/svg-C7root 2.9G   58M  2.7G   3% /
/dev/mapper/svg-C7usr  3.8G   2.5G  1.2G  69% /usr
/dev/mapper/svg-C7sg   2.9G  490M  2.3G  18% /sg
/dev/mapper/svg-tmp    2.0G   3.1M  1.9G   1% /tmp
/dev/mapper/svg-C7var  7.9G  607M  6.9G   8% /var
/dev/mapper/svg-C7opt  5.7G  606M  4.8G  12% /opt
/dev/mapper/svg-C7DB   8.6G  295M  7.9G   4% /sg/DB
/dev/md0            93M   71M  18M  81% /boot
  
```

Obtain the patch from the technical support team and apply it via the firmware upgrade menu.

<https://help.raritan.com/ccsg/v11.5.0/en/#/home/1868/10/11>

Verify the utilization is below 50% and proceed to upgrade.

```

File Operation
CC-SG Administrator Console: RAID Status + Disk Utilization:
Personalities : [raid1]
md1 : active raid1 sda2[0] sdb2[1]
      976527168 blocks super 1.1 [2/2] [UU]
      bitmap: 1/8 pages [4KB], 65536KB chunk

md0 : active raid1 sda1[0] sdb1[1]
      102336 blocks super 1.0 [2/2] [UU]

Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        3.9G     0  3.9G   0% /dev
tmpfs           3.9G     0  3.9G   0% /dev/shm
tmpfs           3.9G   9.1M  3.9G   1% /run
tmpfs           3.9G     0  3.9G   0% /sys/fs/cgroup
/dev/mapper/svg-C7root 2.9G   58M  2.7G   3% /
/dev/mapper/svg-C7usr  3.8G   2.5G  1.2G  68% /usr
/dev/mapper/svg-C7sg   2.9G  490M  2.3G  18% /sg
/dev/mapper/svg-tmp    2.0G   3.4M  1.9G   1% /tmp
/dev/mapper/svg-C7var  7.9G  281M  7.3G   3% /var
/dev/mapper/svg-C7opt  5.7G  707M  4.7G  13% /opt
/dev/mapper/svg-C7DB   8.6G  273M  7.9G   4% /sg/DB
/dev/md0            93M   41M  48M  47% /boot
  
```

Please consult the CC-SG firmware release note for the required upgrade path.