

Storage - Bug #11808

glibc EOS upgrade

02/24/2016 09:34 AM - Gerard Bernabeu Altayo

Status:	Resolved	Start date:	02/24/2016
Priority:	Normal	Due date:	
Assignee:	Gerard Bernabeu Altayo	% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:		Spent time:	0.00 hour
Description			
We need to upgrade all EOS nodes for glibc, reboot included. We have a whole day downtime so we can be disruptive.			

History

#1 - 02/24/2016 09:45 AM - Gerard Bernabeu Altayo

I did the compactification on cmssrv222 and then upgrade& reboot.

Doing upgrade&reboot to the standby cmssrv238 and all the FSTs:

```
rgang_ssh eosfst.2016024 'uptime'
rgang_ssh eosfst.2016024 'yum clean all; yum update -y --exclude=xrootd*'

[root@cmsadmin1 gerard1]# rgang_ssh eosfst.2016024 'rpm -q glibc-2.12-1.166.el6_7.7.x86_64'
cmseos12.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos11.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos13.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos14.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos15.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos16.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos17.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos1.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos5.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos4.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos3.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos2.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos25.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos26.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos27.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos28.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos29.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos30.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos31.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos32.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos33.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos39.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos34.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos36.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos34.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos38.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos37.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos35.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos42.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos40.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos41.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos43.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos44.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos45.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos46.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos47.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos49.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos48.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos50.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos51.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos52.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos53.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos56.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos54.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos55.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
```

```
cmseos57.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos58.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos59.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos60.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos61.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos62.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
cmseos63.fnal.gov= glibc-2.12-1.166.el6_7.7.x86_64
```

#2 - 02/24/2016 09:52 AM - Gerard Bernabeu Altayo

As it's getting too usual, the MGM (head node) does NOT want to start fine... This is an old known issue, it is trying to start as slave and it fails:

```
160224 09:47:26 time=1456328846.110097 func=BootNamespace level=ALERT logid=e5a3ae8e-db0d-11e5-9468
-a0369f23d048 unit=mgm@cmssrv222.fnal.gov:1094 tid=00007f375b3c4740 source=Master:1861 tide
nt=<service> sec= uid=0 gid=0 name= geo="" msg="running boot sequence (as slave)"
160224 09:47:26 time=1456328846.146342 func=BootNamespace level=NOTE logid=e5a3ae8e-db0d-11e5-9468
-a0369f23d048 unit=mgm@cmssrv222.fnal.gov:1094 tid=00007f375b3c4740 source=Master:1920 tide
nt=<service> sec= uid=0 gid=0 name= geo="" eos directory view configure started as slave
160224 09:47:26 time=1456328846.146639 func=BootNamespace level=CRIT logid=e5a3ae8e-db0d-11e5-9468
-a0369f23d048 unit=mgm@cmssrv222.fnal.gov:1094 tid=00007f375b3c4740 source=Master:1975 tide
nt=<service> sec= uid=0 gid=0 name= geo="" eos view initialization failed after 0 seconds
160224 09:47:26 time=1456328846.146669 func=BootNamespace level=CRIT logid=e5a3ae8e-db0d-11e5-9468
-a0369f23d048 unit=mgm@cmssrv222.fnal.gov:1094 tid=00007f375b3c4740 source=Master:1977 tide
nt=<service> sec= uid=0 gid=0 name= geo="" initialization returned ec=3 Unable to read the magic number f
rom: /var/eos/md/directories.cmssrv238.fnal.gov.mdlog
160224 09:47:26 10292 XrootdConfig: Unable to create file system object via libXrdEosMgm.so
160224 09:47:26 10292 XrootdConfig: Unable to load file system.
----- xrootd protocol initialization failed.
160224 09:47:26 10292 XrdProtocol: Protocol xrootd could not be loaded
----- xrootd mgm@cmssrv222.fnal.gov:-1 initialization failed.
```

Following the instructions in <http://eos.readthedocs.org/en/latest/configuration/master.html>

```
[root@cmssrv222 ~]# service eos stop
Stopping xrootd: mgm [ OK ]
Stopping xrootd: mq [ OK ]
Stopping xrootd: sync [ OK ]
[root@cmssrv222 ~]# service eos master mgm
Configured MGM on localhost as master [ OK ]
[root@cmssrv222 ~]#
[root@cmssrv222 ~]# service eos master mq
Configured MQ on localhost as master [ OK ]
[root@cmssrv222 ~]# service eos start
```

```
Starting xrootd as mgm with -n mgm -c /etc/xrd.cf.mgm -m -l /var/log/eos/xrdlog.mgm -b -Rdaemon
```

Now I am rebooting all the FSTs:

```
[root@cmsadmin1 gerard1]# rgang_ssh eosfst.2016024 'reboot'
cmseos12.fnal.gov= cmseos11.fnal.gov= cmseos13.fnal.gov= cmseos14.fnal.gov= cmseos15.fnal.gov= cmseos16.fnal.g
ov= cmseos17.fnal.gov= cmseos1.fnal.gov= cmseos5.fnal.gov= cmseos4.fnal.gov= cmseos3.fnal.gov= cmseos2.fnal.go
v= cmseos25.fnal.gov= cmseos26.fnal.gov= cmseos27.fnal.gov= cmseos28.fnal.gov= cmseos29.fnal.gov= cmseos30.fna
l.gov= cmseos31.fnal.gov= cmseos32.fnal.gov= cmseos33.fnal.gov= cmseos39.fnal.gov= cmseos34.fnal.gov= cmseos36
.fnal.gov= cmseos34.fnal.gov= cmseos38.fnal.gov= cmseos37.fnal.gov= cmseos35.fnal.gov= cmseos42.fnal.gov= cmse
os40.fnal.gov= cmseos41.fnal.gov= cmseos43.fnal.gov= cmseos44.fnal.gov= cmseos45.fnal.gov= cmseos46.fnal.gov=
cmseos47.fnal.gov= cmseos49.fnal.gov= cmseos48.fnal.gov= cmseos50.fnal.gov= cmseos51.fnal.gov= cmseos52.fnal.g
ov= cmseos53.fnal.gov= cmseos56.fnal.gov= cmseos54.fnal.gov= cmseos55.fnal.gov= cmseos57.fnal.gov= cmseos58.fn
al.gov= cmseos59.fnal.gov= cmseos60.fnal.gov= cmseos61.fnal.gov= cmseos62.fnal.gov= cmseos63.fnal.gov= [root@c
msadmin1 gerard1]#
```

#3 - 02/24/2016 10:01 AM - Gerard Bernabeu Altayo

A few FSTs are not booting right, others are still booting. The only ones that came online shortly after reboot are the empty ones (as expected).

Will be looking at the failed ones...

```
[root@cmssrv222 ~]# eos fs ls
#.....
#.....
# host (#...) # id # path # schedgroup # geotag # boot # confi
gstatus # drain # active
#.....
#.....
cmseos12.fnal.gov (1095) 41 /storage/data3 default.2 booting
```

rw	nodrain	online	cmseos12.fnal.gov (1095)	42	/storage/data1	default.3	booting
rw	nodrain	online	cmseos12.fnal.gov (1095)	43	/storage/data2	default.1	booting
rw	nodrain	online	cmseos11.fnal.gov (1095)	44	/storage/data1	default.0	booting
rw	nodrain	online	cmseos11.fnal.gov (1095)	45	/storage/data2	default.3	booting
rw	nodrain	online	cmseos11.fnal.gov (1095)	46	/storage/data3	default.2	booting
rw	nodrain	online	cmseos13.fnal.gov (1095)	47	/storage/data1	default.0	booting
rw	nodrain	online	cmseos13.fnal.gov (1095)	48	/storage/data2	default.1	booting
rw	nodrain	online	cmseos13.fnal.gov (1095)	49	/storage/data3	default.2	booting
rw	nodrain	online	cmseos14.fnal.gov (1095)	50	/storage/data1	default.0	booting
rw	nodrain	online	cmseos14.fnal.gov (1095)	51	/storage/data2	default.1	booting
rw	nodrain	online	cmseos14.fnal.gov (1095)	52	/storage/data3	default.3	bootfailure
rw	nodrain	online	cmseos15.fnal.gov (1095)	53	/storage/data1	default.0	booting
rw	nodrain	online	cmseos15.fnal.gov (1095)	54	/storage/data2	default.1	booting
rw	nodrain	online	cmseos15.fnal.gov (1095)	55	/storage/data3	default.3	booting
rw	nodrain	online	cmseos16.fnal.gov (1095)	56	/storage/data1	default.3	booting
rw	nodrain	online	cmseos16.fnal.gov (1095)	57	/storage/data2	default.1	booting
rw	nodrain	online	cmseos16.fnal.gov (1095)	58	/storage/data3	default.2	booting
rw	nodrain	online	cmseos17.fnal.gov (1095)	59	/storage/data1	default.0	booting
rw	nodrain	online	cmseos17.fnal.gov (1095)	60	/storage/data2	default.1	booting
rw	nodrain	online	cmseos17.fnal.gov (1095)	61	/storage/data3	default.2	booting
rw	nodrain	online	cmseos1.fnal.gov (1095)	62	/storage/data1	default.0	booting
rw	nodrain	online	cmseos1.fnal.gov (1095)	63	/storage/data2	default.1	booting
rw	nodrain	online	cmseos1.fnal.gov (1095)	64	/storage/data3	default.2	bootfailure
rw	nodrain	online	cmseos5.fnal.gov (1095)	65	/storage/data1	default.0	booted
ro	nodrain	online	cmseos5.fnal.gov (1095)	66	/storage/data2	default.1	booted
ro	nodrain	online	cmseos5.fnal.gov (1095)	67	/storage/data3	default.2	booted
ro	nodrain	online	cmseos4.fnal.gov (1095)	68	/storage/data1	default.0	booting
ro	nodrain	online	cmseos4.fnal.gov (1095)	69	/storage/data2	default.1	booting
ro	nodrain	online	cmseos4.fnal.gov (1095)	70	/storage/data3	default.2	booting
ro	nodrain	online	cmseos3.fnal.gov (1095)	71	/storage/data1	default.0	booting
ro	nodrain	online	cmseos3.fnal.gov (1095)	72	/storage/data2	default.2	booting
ro	nodrain	online	cmseos3.fnal.gov (1095)	73	/storage/data3	default.1	booting
ro	nodrain	online	cmseos2.fnal.gov (1095)	74	/storage/data1	default.0	booting
ro	nodrain	online	cmseos2.fnal.gov (1095)	75	/storage/data2	default.1	booting
ro	nodrain	online	cmseos2.fnal.gov (1095)	76	/storage/data3	default.3	booted
ro	nodrain	online	cmseos25.fnal.gov (1095)	103	/storage/data1	default.0	booting
rw	nodrain	online	cmseos25.fnal.gov (1095)	104	/storage/data2	default.1	booting
rw	nodrain	online					

cmseos26.fnal.gov (1095)	105	/storage/data1	default.2	booting
rw nodrain online				
cmseos26.fnal.gov (1095)	106	/storage/data2	default.3	booting
rw nodrain online				
cmseos27.fnal.gov (1095)	107	/storage/data1	default.0	booting
rw nodrain online				
cmseos27.fnal.gov (1095)	108	/storage/data2	default.1	booting
rw nodrain online				
cmseos27.fnal.gov (1095)	109	/storage/data3	default.2	booting
rw nodrain online				
cmseos28.fnal.gov (1095)	110	/storage/data1	default.0	booting
rw nodrain online				
cmseos28.fnal.gov (1095)	111	/storage/data2	default.1	booting
rw nodrain online				
cmseos29.fnal.gov (1095)	112	/storage/data1	default.2	booting
rw nodrain online				
cmseos29.fnal.gov (1095)	113	/storage/data2	default.3	booting
rw nodrain online				
cmseos30.fnal.gov (1095)	116	/storage/data1	default.0	booting
rw nodrain online				
cmseos30.fnal.gov (1095)	117	/storage/data2	default.1	booting
rw nodrain online				
cmseos31.fnal.gov (1095)	119	/storage/data1	default.2	booting
rw nodrain online				
cmseos31.fnal.gov (1095)	120	/storage/data2	default.3	booting
rw nodrain online				
cmseos32.fnal.gov (1095)	122	/storage/data1	default.0	booting
rw nodrain online				
cmseos32.fnal.gov (1095)	123	/storage/data2	default.1	booting
rw nodrain online				
cmseos33.fnal.gov (1095)	125	/storage/data1	default.2	booting
rw nodrain online				
cmseos33.fnal.gov (1095)	126	/storage/data2	default.3	booting
rw nodrain online				
cmseos39.fnal.gov (1095)	134	/storage/data1	default.2	booting
rw nodrain online				
cmseos39.fnal.gov (1095)	135	/storage/data2	default.3	booting
rw nodrain online				
cmseos34.fnal.gov (1095)	136	/storage/data1	default.0	booting
rw nodrain online				
cmseos36.fnal.gov (1095)	137	/storage/data1	default.0	booting
rw nodrain online				
cmseos36.fnal.gov (1095)	138	/storage/data2	default.1	booting
rw nodrain online				
cmseos34.fnal.gov (1095)	139	/storage/data2	default.1	booting
rw nodrain online				
cmseos38.fnal.gov (1095)	140	/storage/data1	default.0	booting
rw nodrain online				
cmseos38.fnal.gov (1095)	141	/storage/data2	default.1	booting
rw nodrain online				
cmseos37.fnal.gov (1095)	142	/storage/data1	default.2	booting
rw nodrain online				
cmseos37.fnal.gov (1095)	143	/storage/data2	default.3	booting
rw nodrain online				
cmseos35.fnal.gov (1095)	144	/storage/data1	default.2	booting
rw nodrain online				
cmseos35.fnal.gov (1095)	145	/storage/data2	default.3	booting
rw nodrain online				
cmseos42.fnal.gov (1095)	146	/storage/data1	default.0	booting
rw nodrain online				
cmseos42.fnal.gov (1095)	147	/storage/data2	default.1	booting
rw nodrain online				
cmseos40.fnal.gov (1095)	148	/storage/data1	default.0	booting
rw nodrain online				
cmseos40.fnal.gov (1095)	149	/storage/data2	default.1	booting
rw nodrain online				
cmseos41.fnal.gov (1095)	150	/storage/data1	default.2	booting
rw nodrain online				
cmseos41.fnal.gov (1095)	151	/storage/data2	default.3	booting
rw nodrain online				
cmseos43.fnal.gov (1095)	152	/storage/data1	default.2	booting
rw nodrain online				
cmseos43.fnal.gov (1095)	153	/storage/data2	default.3	booting
rw nodrain online				
cmseos44.fnal.gov (1095)	154	/storage/data1	default.0	booting

rw	nodrain	online	cmseos44.fnal.gov (1095)	155	/storage/data2	default.1	booting
rw	nodrain	online	cmseos45.fnal.gov (1095)	156	/storage/data1	default.2	booting
rw	nodrain	online	cmseos45.fnal.gov (1095)	157	/storage/data2	default.3	booting
rw	nodrain	online	cmseos46.fnal.gov (1095)	158	/storage/data1	default.0	booting
rw	nodrain	online	cmseos46.fnal.gov (1095)	159	/storage/data2	default.1	booting
rw	nodrain	online	cmseos47.fnal.gov (1095)	160	/storage/data1	default.2	booting
rw	nodrain	online	cmseos47.fnal.gov (1095)	161	/storage/data2	default.3	booting
rw	nodrain	online	cmseos49.fnal.gov (1095)	162	/storage/data1	default.2	booting
rw	nodrain	online	cmseos49.fnal.gov (1095)	163	/storage/data2	default.3	booting
rw	nodrain	online	cmseos48.fnal.gov (1095)	164	/storage/data1	default.0	booting
rw	nodrain	online	cmseos48.fnal.gov (1095)	165	/storage/data2	default.1	booting
rw	nodrain	online	cmseos50.fnal.gov (1095)	166	/storage/data1	default.0	booted
ro	nodrain	online	cmseos50.fnal.gov (1095)	167	/storage/data2	default.1	booted
ro	nodrain	online	cmseos51.fnal.gov (1095)	168	/storage/data1	default.2	booted
ro	nodrain	online	cmseos51.fnal.gov (1095)	169	/storage/data2	default.3	booted
ro	nodrain	online	cmseos52.fnal.gov (1095)	170	/storage/data1	default.0	booted
drain	draining	online	cmseos52.fnal.gov (1095)	171	/storage/data2	default.1	booted
drain	draining	online	cmseos53.fnal.gov (1095)	172	/storage/data1	default.2	booted
drain	draining	online	cmseos53.fnal.gov (1095)	173	/storage/data2	default.3	booting
drain	draining	online	cmseos56.fnal.gov (1095)	174	/storage/data1	default.0	booting
ro	nodrain	online	cmseos56.fnal.gov (1095)	175	/storage/data2	default.1	booting
ro	nodrain	online	cmseos54.fnal.gov (1095)	176	/storage/data1	default.0	booting
ro	nodrain	online	cmseos54.fnal.gov (1095)	177	/storage/data2	default.1	booting
ro	nodrain	online	cmseos55.fnal.gov (1095)	178	/storage/data1	default.2	booting
ro	nodrain	online	cmseos55.fnal.gov (1095)	179	/storage/data2	default.3	booting
ro	nodrain	online	cmseos57.fnal.gov (1095)	180	/storage/data1	default.2	booting
ro	nodrain	online	cmseos57.fnal.gov (1095)	181	/storage/data2	default.3	booting
ro	nodrain	online	cmseos58.fnal.gov (1095)	182	/storage/data1	default.0	booting
ro	nodrain	online	cmseos58.fnal.gov (1095)	183	/storage/data2	default.1	booting
ro	nodrain	online	cmseos59.fnal.gov (1095)	184	/storage/data1	default.2	booting
ro	nodrain	online	cmseos59.fnal.gov (1095)	185	/storage/data2	default.3	booting
ro	nodrain	online	cmseos60.fnal.gov (1095)	186	/storage/data1	default.0	booting
ro	nodrain	online	cmseos60.fnal.gov (1095)	187	/storage/data2	default.1	booting
ro	nodrain	online	cmseos61.fnal.gov (1095)	188	/storage/data1	default.2	booting
ro	nodrain	online	cmseos61.fnal.gov (1095)	189	/storage/data2	default.3	booting
ro	nodrain	online	cmseos62.fnal.gov (1095)	190	/storage/data1	default.0	booting
ro	nodrain	online	cmseos62.fnal.gov (1095)	191	/storage/data2	default.1	booting
ro	nodrain	online					

```

cmseos63.fnal.gov (1095) 192 /storage/data1 default.2 booting
ro nodrain online
cmseos63.fnal.gov (1095) 193 /storage/data2 default.3 booting
ro nodrain online
[root@cmssrv222 ~]#

```

#4 - 02/24/2016 10:04 AM - Gerard Bernabeu Altayo

So far not many failed:

```

[root@cmssrv222 ~]# eos fs ls -e
#.....
#          host #   id #   path #   boot # configstatus #   drain #... #errmsg
#.....
cmseos14.fnal.gov   52 ...e/data3 bootfailure      rw   nodrain  14 cannot clean SQLITE DB
on local disk
cmseos1.fnal.gov   64 ...e/data3 bootfailure      rw   nodrain  14 cannot clean SQLITE DB
on local disk
[root@cmssrv222 ~]#

```

Fixing this issue by forcing the metadata to be regenerated:

```

[root@cmseos14 ~]# service eos stop && mv /var/eos/md/*.sql /tmp/; service eos start
Stopping xrootd: fst [ OK ]

Starting xrootd as fst with -n fst -c /etc/xrd.cf.fst -l /var/log/eos/xrdlog.fst -b -Rdaemon
[ OK ]

[root@cmseos14 ~]#

```

I've done the same on cmseos1

#5 - 02/24/2016 12:31 PM - Gerard Bernabeu Altayo

- Status changed from New to Resolved

all FSTs are back online, closing.