1、网络配置

```
1  [root@tds047 ~]# vim /etc/sysconfig/network-scripts/ifcfg-p1p1
2  TYPE=Ethernet
3  PROXY_METHOD=none
4  BROWSER_ONLY=no
5  BOOTPROTO=static
6  DEFROUTE=yes
7  IPV4_FAILURE_FATAL=no
8  IPV6INIT=yes
9  IPV6_AUTOCONF=yes
10 IPV6_DEFROUTE=yes
11 IPV6_FAILURE_FATAL=no
12 IPV6_ADDR_GEN_MODE=stable-privacy
13 NAME=p1p1
14 UUID=befc8f9d-7947-44bd-94a5-dfdf74d5caf8
15 DEVICE=p1p1
16 ONBOOT=yes
17
18 MTU=9000
19 IPADDR=192.168.12.47
20 PREFIX=24
21 GATEWAY=192.168.12.1
22 [root@tds047 ~]#
```

2、sudo配置

```
1  [root@tds043 ~]# cd /etc/sudoers.d/
2  [root@tds043 sudoers.d]# ll
3  total 12
4  -r--r----- 1 root root 48 Feb 24  2022 htop
5  -r--r----- 1 root root 22 Feb 24  2022 it_root
```

```
 6  -r--r----- 1 root root 30 Feb 24  2022 suuser
 7  [root@tds043 sudoers.d]# cat  htop
 8  %IT ALL=(ALL,ALL) /usr/sbin/iftop,/usr/bin/htop
 9  [root@tds043 sudoers.d]# cat it_root
10  %IT ALL=(ALL,ALL) ALL
11  [root@tds043 sudoers.d]# cat suuser
12  %IT ALL=(ALL,!root)  /bin/csh
13  [root@tds043 sudoers.d]#
14  [root@tds043 sudoers.d]# scp htop it_root suuser  192.168.12.47:/etc/sudoers.d/
```

3、/etc/hosts配置

```
 1  [root@tds047 ~]# cat /etc/hosts
 2  192.168.12.40 tds040
 3  192.168.12.41 tds041
 4  #192.168.12.42 tds042
 5  192.168.12.43 tds043
 6  #192.168.12.44 tds044
 7  #192.168.12.56 tds056
 8  #192.168.12.57 tds057
 9
10  #192.168.22.20 tds020
11  192.168.22.21 tds021
12  192.168.12.63 tds060
13  192.168.12.62 tds062
14  192.168.12.63 tds063
15
16  192.168.21.20 wds020
17  192.168.11.40 wds040
18  192.168.11.50 wds050
19  192.168.11.60 wds060
20  192.168.11.60 wxsvn
21
22  192.168.20.20 sds020
23  192.168.10.60 sds060
24  192.168.10.40 sds040
25
```

```
26  [root@tds047 ~]#
```

4、ssh配置

```
1  [root@tds047 sudoers.d]# sed -i 's/#X11DisplayOffset.*/X11DisplayOffset 200/g'
   /etc/ssh/sshd_config
2
3
4  [root@tds047 sudoers.d]# vi /etc/ssh/sshd_config
5  AddressFamily inet
6  PermitRootLogin yes
7  PubkeyAuthentication yes
8  [root@tds047 sudoers.d]# systemctl restart sshd
```

5、selinux

```
1  [root@tds047 sudoers.d]# sed -i 's/SELINUX=enforcing*/SELINUX=disabled/g'
   /etc/selinux/config
2  [root@tds047 sudoers.d]# setenforce 0
```

6、firewalld

```
1  [root@tds047 sudoers.d]# systemctl disable firewalld.service
2  [root@tds047 sudoers.d]# systemctl stop firewalld.service
```

7、管理员权限

```
1  #取消admin用户的管理员权限（wheel)
2  [root@tds047 sudoers.d]# usermod -G admin admin
```

```
3   #查看管理员权限用户
4   [root@tds047 sudoers.d]# grep -i --color 'wheel' /etc/group
```

8、/etc/fstab配置

```
1   [root@tds047 ~]# mkdir -p /eda /proj /oldproj /misc/upload
2   [root@tds047 ~]# vim /etc/fstab
3   192.168.12.63:/home      /home      nfs      defaults,vers=4.0 0 0
4   192.168.12.63:/eda      /eda      nfs      defaults,vers=4.0 0 0
5   192.168.12.63:/proj      /proj      nfs      defaults 0 0
6   192.168.12.62:/proj      /oldproj      nfs      defaults 0 0
7   192.168.12.63:/misc/upload      /misc/upload      nfs      defaults,vers=4.0 0 0
8
9   [root@tds047 ~]#
10  [root@tds047 ~]# mount -a
```

9、yum配置

```
1   [root@tds047 ~]# yum-config-manager | grep "repo:"
2   ================================= repo: base ==================================
3   ================================= repo: extras ================================
4   ================================= repo: updates ===============================
5   [root@tds047 ~]# cp /eda/share/conf/nexus.repo  /etc/yum.repos.d/
6   [root@tds047 ~]# yum-config-manager --disable {base,extras,updates}
7   [root@tds047 ~]# yum makecache
8
9   [root@tds047 ~]# yum install -y libxml2 glibc-devel htop ctags tree iftop ksh cscope
    vim-X11 tmux git tcsh tcl filezilla ftp konsole
10  [root@tds047 ~]# yum install -y gcc-c++ glibc-devel.i686 subversion gcc libmng libGLU
    subversion git-svn
11  [root@tds047 ~]# yum install -y iftop ncdu htop
12  [root@tds047 ~]# yum groupinstall -y "Development tools"
13  [root@tds047 ~]# yum groupinstall -y "Additional Development"
14  [root@tds047 ~]# yum install -y meld lsb-core-noarch tmux cgdb
15  [root@tds047 ~]# yum install -y python3-pip python3 pdb
```

```
16  [root@tds047 ~]# yum install -y xorg-x11-fonts* readline.i686
17  [root@tds047 ~]# yum-complete-transaction
18
19  #修复库
20  [root@tds047 ~]# yum install -y readline.i686
21  [root@tds047 ~]# ln -s /lib/libreadline.so.6 /lib/libreadline.so.5
22  [root@tds047 ~]# ln -s /lib/libhistory.so.6 /lib/libhistory.so.5
23  [root@tds047 ~]# ln -s /usr/lib64/libreadline.so /usr/lib64/libreadline.so.5
24  [root@tds047 ~]# ln -s /usr/lib64/libhistory.so /usr/lib64/libhistory.so.5
```

10、禁止开机自启

```
1  [root@tds047 ~]# systemctl disable libvirtd postfix
```

11、nfs

```
1  [root@tds047 ~]# echo 0 > /proc/sys/fs/leases-enable
2  或sysctl -w fs.leases-enable=0
3  [root@tds047 ~]# service nfs restart
```

12、ldap

```
1  [root@tds047 ~]# yum install openldap-clients nss-pam-ldapd nscd -y
2  [root@tds047 ~]# authconfig --enableldap --enableldapauth --ldapserver=192.168.12.63 --
   ldapbasedn="ou=People,dc=beijing,dc=tsinghua" --enablemkhomedir --update
3  #验证
4  [root@tds047 ~]# id qianj
5  uid=10251(qianj) gid=12000(THU)
   groups=12000(THU),25011(wxtools),26001(wqtools),12006(FTPA),45963(IT),26020(test2),2602
   1(test3)
6  [root@tds047 ~]#
7  [root@tds047 ~]# systemctl restart sshd
```

13、ntp，时间

```
1  [root@tds047 ~]# yum install ntpdate ntp -y
2  [root@tds047 ~]# echo 192.168.12.62 > /etc/ntp/step-tickers
3  [root@tds047 ~]# systemctl enable ntpdate.service
4  [root@tds047 ~]# timedatectl set-timezone Asia/Shanghai
5  [root@tds047 ~]# timedatectl set-ntp yes
6  [root@tds047 ~]# ntpdate 192.168.12.62
```

14、crontab

```
1  [root@tds047 ~]# install -m 755 /eda/share/conf/killzombie.sh  /usr/local/bin/
2  [root@tds047 ~]# crontab -l
3  */5 * * * * /usr/bin/mount -a
4
5  */10 * * * * /usr/sbin/ntpdate tds062 &
6
7  30 */1 * * * (/usr/local/bin/killzombie.sh >> /tmp/killzombile.log) &
8
9  [root@tds047 ~]#
10 [root@tds047 ~]# cat /usr/local/bin/killzombie.sh
11 #!/bin/bash
12
13
14
15
16 kill_noroot_process () {
17     for v in $*;
18     do
19         echo "== kill $v =="
20         ps -o pid,user,ppid,cmd --no-headers --ppid 1 | grep  "$v" | while read l
21         do
22             pid=$(echo "$l" | awk -F" " '"$2" != "root" {print $1}')
```

```
23        if [ ! -z "$pid"  ];then
24            echo "$l "
25            kill -9 $pid
26        fi
27        done
28    done
29 }
30
31
32 kill_noroot_process ./simv
33 kill_noroot_process common_shell_exec
34
35
36 sleep 2
37
38 echo "== zombize  =="
39
40 ps -o pid,user,stat,cmd --no-headers -a | while read line
41 do
42    pid=$(echo "$line" | awk '$3=="Z" {print $1}')
43    if [ ! -z "$pid"  ];then
44        echo "$line"
45        kill -9 "$pid"
46    fi
47 done
48 [root@tds047 ~]#
```

15、其他

```
1 #locale
2 localectl status
3 localectl list-locales
4 localectl set-locale LANG=xxx
5
6 #限制
7 [root@tds047 ~]# cp /eda/share/conf/22-iclab.conf /etc/security/limits.d/
8 [root@tds047 ~]# cat /etc/security/limits.d/22-iclab.conf
```

```
 9   @THU hard fsize  52428800
10   @THU soft fsize  52428800

12   @THU hard nofile 10000
13   @THU soft nofile 10000

15   @THU hard nproc 9000
16   @THU soft nproc 9000
17  [root@tds047 ~]#

19  #disable ipv6
20  [root@tds047 ~]# cat <<EOF>> /etc/sysctl.conf
21  > net.ipv6.conf.all.disable_ipv6 = 1
22  > net.ipv6.conf.default.disable_ipv6 = 1
23  > net.ipv6.conf.default.autoconf = 0
24  > EOF
25  [root@tds047 ~]# sysctl -p
26  net.ipv6.conf.all.disable_ipv6 = 1
27  net.ipv6.conf.default.disable_ipv6 = 1
28  net.ipv6.conf.default.autoconf = 0
29  [root@tds047 ~]#

31  #postfix
32  [root@tds047 ~]# vim /etc/postfix/main.cf
33  inet_interfaces = 127.0.0.1
34  [root@tds047 ~]#

36  #misc
37  [root@tds047 ~]# echo "alias vi='vim'" >> /etc/profile

38  [root@tds047 ~]# cp /eda/share/conf/tu_fix.csh /etc/profile.d/
39  [root@tds047 ~]# cat /etc/profile.d/tu_fix.csh

41   alias filezilla="unset LD_LIBRARY_PATH && /usr/bin/filezilla"
42   alias firefox="unset LD_LIBRARY_PATH && /usr/bin/firefox"
43   alias vi="vim"
44  [root@tds047 ~]#
45  [root@tds047 ~]# yum install libGLU libXp libXt libXtst zlib ncurses-libs libXScrnSaver
46  [root@tds047 ~]# yum install libXp.i686 libXt.i686 libXtst.i686 zlib.i686 elfutils-
    libelf.i686
```

```
47  [root@tds047 ~]# yum install ncurses-libs.i686

48

49  #gvfs
50  [root@tds047 ~]# sed -i 's/gvfsd/gvfsd --no-fuse/' /usr/share/dbus-
    1/services/org.gtk.vfs.Daemon.service

51

52  #konsole
53  [root@tds047 ~]# yum install konsole -y
54  [root@tds047 ~]# install -m 755 /eda/share/conf/konsolerc  /etc/kde/
55  [root@tds047 ~]# cat /etc/kde/konsolerc
56  [$Version]
57  update_info=konsole.upd:2.9.0-global-options

58

59  [Desktop Entry]
60  DefaultProfile=Shell.profile

61

62  [Favorite Profiles]
63  Favorites=

64

65  [KonsoleWindow]
66  AllowMenuAccelerators=true

67

68  [MainWindow]
69  Height 1080=873
70  Height 768=769
71  Width 1024=1025
72  Width 1920=1612

73

74  [TabBar]
75  TabBarPosition=Top
76  ShowQuickButtons=true
77  [root@tds047 ~]#

78

79  #module
80  [root@tds047 ~]# yum install tcl tcl-devel -y
81  [root@tds047 ~]# cd /eda/share/conf/modules-3.2.10/
82  [root@tds047 modules-3.2.10]# make && make install
83  [root@tds047 modules-3.2.10]# ln -s /usr/share/Modules/3.2.10/init/csh
    /etc/profile.d/modules.csh
```

```
84  [root@tds047 modules-3.2.10]# ln -s /usr/share/Modules/3.2.10/bin/modulecmd
    /usr/bin/modulecmd
85  [root@tds047 modules-3.2.10]#
86
87  #disable gnome-initial-setup
88  mkdir ~/.config
89  echo "yes" > ~/.config/gnome-initial-setup-done
90  或者
91  yum erase gnome-initial-setup -y
92  或者
93  rm /etc/xdg/gnome-initial-setup-first-login.desktop
94
95  #polkitd
96  [root@tds047 ~]# rm -rf /etc/xdg/autostart/org.gnome.SettingsDaemon.Account.desktop
97  [root@tds047 ~]# systemctl restart polkit
98
99  #模式切换
100 a. Desktop without X
101 systemctl set-default multi-user.target
102 b. booting into X
103 systemctl set-default graphical.target
104
105 systemctl get-default
106
107 #meld
108 [root@tds047 ~]# yum reinstall -y meld
109 [root@tds047 ~]# ln -s /usr/share/icons/hicolor/16x16/actions/meld*
    /usr/share/icons/gnome/16x16/actions/
110
111 #禁止自启
112 [root@tds047 ~]# systemctl disable libvirtd
113 [root@tds047 ~]# systemctl disable avahi-daemon
114
115 #pip和python
116 [root@tds047 ~]# cp /eda/share/conf/pip.conf /etc/
117 [root@tds047 ~]# cat /etc/pip.conf
118 [global]
119 index =
    http://tds063:8081/repository/pypi/pypi
    index =
120 index-url =
```

```
                http://tds063:8081/repository/pypi/simple
         index-url =
121    timeout=60000

122

123    [install]

124    trusted-host=tds063

125    [root@tds047 ~]#

126    [root@tds047 ~]# pip3 install scapy

127    [root@tds047 ~]# yum install python2-pip -y

128    [root@tds047 ~]# pip2 install scapy

129

130
```

16、添加pcie的nvm硬盘

此硬盘不支持RAID，也不支持安装操作系统；

四块硬盘作为一个分区；

fdisk -l查看如下

```
[root@tds047 ~]# fdisk  -l

Disk /dev/nvme2n1: 7681.5 GB, 7681501126656 bytes, 15002931888 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes


Disk /dev/nvme0n1: 7681.5 GB, 7681501126656 bytes, 15002931888 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes


Disk /dev/nvme1n1: 7681.5 GB, 7681501126656 bytes, 15002931888 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes


Disk /dev/nvme3n1: 7681.5 GB, 7681501126656 bytes, 15002931888 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

WARNING: fdisk GPT support is currently new, and therefore in an experimental phase.
ur own discretion.
```

```
1    [root@tds047 ~]# parted  /dev/nvme0n1

2    [root@tds047 ~]# parted  /dev/nvme0n1

3    GNU Parted 3.1
```

```
4  Using /dev/nvme0n1

5  Welcome to GNU Parted! Type 'help' to view a list of commands.

6  (parted) mklabel gpt

7  Warning: The existing disk label on /dev/nvme0n1 will be destroyed and all data on
   this disk

8  will be lost. Do you want to continue?

9  Yes/No? yes

10 (parted) mkpart primary xfs

11 Start? 0

12 End? 7682GB

13 Warning: The resulting partition is not properly aligned for best performance.

14 Ignore/Cancel? Ignore

15 (parted) mkpart primary xfs 0-1        //此行可不用

16 (parted) p

17 Model: NVMe Device (nvme)

18 Disk /dev/nvme0n1: 7682GB

19 Sector size (logical/physical): 512B/512B

20 Partition Table: gpt

21 Disk Flags:

22

23 Number  Start    End      Size     File system   Name      Flags

24  1      17.4kB   7682GB   7682GB                 primary

25

26 (parted) toggle 1 lvm

27 (parted) p

28 Model: NVMe Device (nvme)

29 Disk /dev/nvme0n1: 7682GB

30 Sector size (logical/physical): 512B/512B

31 Partition Table: gpt

32 Disk Flags:

33

34 Number  Start    End      Size     File system   Name      Flags

35  1      17.4kB   7682GB   7682GB                 primary   lvm    //变为lvm类型了

36

37 (parted)

38 (parted) quit

39 Information: You may need to update /etc/fstab.

40

41 You have new mail in /var/spool/mail/root

42 [root@tds047 ~]# partprobe
```

```
[root@tds047 ~]#
[root@tds047 ~]# pvcreate /dev/nvme0n1
WARNING: gpt signature detected on /dev/nvme0n1 at offset 512. Wipe it? [y/n]: y
  Wiping gpt signature on /dev/nvme0n1.
WARNING: gpt signature detected on /dev/nvme0n1 at offset 7681501126144. Wipe it?
  [y/n]: y
  Wiping gpt signature on /dev/nvme0n1.
WARNING: PMBR signature detected on /dev/nvme0n1 at offset 510. Wipe it? [y/n]: y
  Wiping PMBR signature on /dev/nvme0n1.
  Physical volume "/dev/nvme0n1" successfully created.
[root@tds047 ~]# pvdisplay
  --- Physical volume ---
  PV Name               /dev/sda3
  VG Name               centos
  PV Size               <1.09 TiB / not usable 2.00 MiB
  Allocatable           yes (but full)
  PE Size               4.00 MiB
  Total PE              285403
  Free PE               0
  Allocated PE          285403
  PV UUID               q6XbZ0-2QSK-rvVB-ClKe-zYKI-3dCo-f0jB3P

  "/dev/nvme0n1" is a new physical volume of "<6.99 TiB"
  --- NEW Physical volume ---
  PV Name               /dev/nvme0n1
  VG Name
  PV Size               <6.99 TiB
  Allocatable           NO
  PE Size               0
  Total PE              0
  Free PE               0
  Allocated PE          0
  PV UUID               G29PKK-m3Aw-kvee-f1Na-Y0af-n3Ka-QIfwec

[root@tds047 ~]#


#同操作其他的硬盘
[root@tds047 ~]# parted /dev/nvme1n1
```

```
[root@tds047 ~]# parted /dev/nvme1n1
GNU Parted 3.1
Using /dev/nvme1n1
Welcome to GNU Parted! Type 'help' to view a list of commands.
(parted) mklabel gpt
Warning: The existing disk label on /dev/nvme1n1 will be destroyed and all data on this disk
will be lost. Do you want to continue?
Yes/No? yes
(parted) mkpart primary xfs 0-1
End? 1
Warning: The resulting partition is not properly aligned for best performance.
Ignore/Cancel? i
(parted) print
Model: NVMe Device (nvme)
Disk /dev/nvme1n1: 7682GB
Sector size (logical/physical): 512B/512B
Partition Table: gpt
Disk Flags:

Number  Start   End     Size    File system  Name     Flags
 1      17.4kB  1000kB  983kB                primary

(parted) toggle 1 lvm
(parted) quit
Information: You may need to update /etc/fstab.

You have new mail in /var/spool/mail/root
[root@tds047 ~]# partprobe
[root@tds047 ~]#
```

后来第三块和第四块硬盘直接pvcreate就完成了。

```
[root@tds047 ~]# pvs
  PV            VG      Fmt  Attr PSize   PFree
  /dev/nvme0n1          lvm2 ---  <6.99t <6.99t
  /dev/nvme1n1          lvm2 ---  <6.99t <6.99t
  /dev/sda3     centos  lvm2 a--  <1.09t      0
[root@tds047 ~]# pvcreate /dev/nvme2n1
WARNING: ext4 signature detected on /dev/nvme2n1 at offset 1080. Wipe it? [y/n]:
  WARNING: Invalid input ''.
WARNING: ext4 signature detected on /dev/nvme2n1 at offset 1080. Wipe it? [y/n]: y
  Wiping ext4 signature on /dev/nvme2n1.
  Physical volume "/dev/nvme2n1" successfully created.
[root@tds047 ~]# pvs
  PV            VG      Fmt  Attr PSize   PFree
  /dev/nvme0n1          lvm2 ---  <6.99t <6.99t
  /dev/nvme1n1          lvm2 ---  <6.99t <6.99t
  /dev/nvme2n1          lvm2 ---  <6.99t <6.99t
  /dev/sda3     centos  lvm2 a--  <1.09t      0
[root@tds047 ~]# pvcreate /dev/nvme3n1
WARNING: ext4 signature detected on /dev/nvme3n1 at offset 1080. Wipe it? [y/n]: y
  Wiping ext4 signature on /dev/nvme3n1.
  Physical volume "/dev/nvme3n1" successfully created.
[root@tds047 ~]# pvs
  PV            VG      Fmt  Attr PSize   PFree
  /dev/nvme0n1          lvm2 ---  <6.99t <6.99t
  /dev/nvme1n1          lvm2 ---  <6.99t <6.99t
  /dev/nvme2n1          lvm2 ---  <6.99t <6.99t
  /dev/nvme3n1          lvm2 ---  <6.99t <6.99t
  /dev/sda3     centos  lvm2 a--  <1.09t      0
[root@tds047 ~]#
```

通过pvdisplay、pvs、pvscan查看

```
"/dev/nvme2n1" is a new physical volume of "<6.99 TiB"
--- NEW Physical volume ---
PV Name                   /dev/nvme2n1
VG Name
PV Size                   <6.99 TiB
Allocatable               NO
PE Size                   0
Total PE                  0
Free PE                   0
Allocated PE              0
PV UUID                   CzMvx6-H0ev-JBxO-2NYf-b8II-53nD-1HUuUU

[root@tds047 ~]# pvs
  PV             VG      Fmt  Attr PSize   PFree
  /dev/nvme0n1           lvm2 ---  <6.99t  <6.99t
  /dev/nvme1n1           lvm2 ---  <6.99t  <6.99t
  /dev/nvme2n1           lvm2 ---  <6.99t  <6.99t
  /dev/nvme3n1           lvm2 ---  <6.99t  <6.99t
  /dev/sda3      centos  lvm2 a--  <1.09t       0
[root@tds047 ~]# pvscan
  PV /dev/sda3        VG centos          lvm2 [<1.09 TiB / 0      free]
  PV /dev/nvme3n1                        lvm2 [<6.99 TiB]
  PV /dev/nvme1n1                        lvm2 [<6.99 TiB]
  PV /dev/nvme0n1                        lvm2 [<6.99 TiB]
  PV /dev/nvme2n1                        lvm2 [<6.99 TiB]
  Total: 5 [29.03 TiB] / in use: 1 [<1.09 TiB] / in no VG: 4 [<27.95 TiB]
[root@tds047 ~]#
```

创建vg

```
1  [root@tds047 ~]# vgcreate  nvmvg1 /dev/nvme0n1 /dev/nvme1n1 /dev/nvme2n1 /dev/nvme3n1

2    Volume group "nvmvg1" successfully created

3

4   #查看验证

5  [root@tds047 ~]# vgdisplay

6    --- Volume group ---

7    VG Name               centos

8    System ID

9    Format                lvm2

10   Metadata Areas        1

11   Metadata Sequence No  4

12   VG Access             read/write

13   VG Status             resizable

14   MAX LV                0

15   Cur LV                3

16   Open LV               3

17   Max PV                0

18   Cur PV                1

19   Act PV                1
```

```
20    VG Size              <1.09 TiB
21    PE Size              4.00 MiB
22    Total PE             285403
23    Alloc PE / Size      285403 / <1.09 TiB
24    Free  PE / Size      0 / 0
25    VG UUID              pm7lpH-AHqu-cPNJ-3OPN-9spE-BlyR-QFK60A
26
27    --- Volume group ---
28    VG Name              nvmvg1
29    System ID
30    Format               lvm2
31    Metadata Areas       4
32    Metadata Sequence No  1
33    VG Access            read/write
34    VG Status            resizable
35    MAX LV               0
36    Cur LV               0
37    Open LV              0
38    Max PV               0
39    Cur PV               4
40    Act PV               4
41    VG Size              <27.95 TiB
42    PE Size              4.00 MiB
43    Total PE             7325648
44    Alloc PE / Size      0 / 0
45    Free  PE / Size      7325648 / <27.95 TiB
46    VG UUID              sCtwBL-0n5E-IO4g-YE8U-4oUb-7QBe-Nqo59D
47
48  [root@tds047 ~]# vgscan
49    Reading volume groups from cache.
50    Found volume group "centos" using metadata type lvm2
51    Found volume group "nvmvg1" using metadata type lvm2
52  [root@tds047 ~]#
```

创建lv

```
1  [root@tds047 ~]# lvcreate -L 27.9t -n localcache nvmvg1
2    Rounding up size to full physical extent 27.90 TiB
```

```
 3     Logical volume "localcache" created.

 4   [root@tds047 ~]#

 5   [root@tds047 ~]# lvs

 6     LV          VG      Attr       LSize    Pool Origin Data%  Meta%  Move Log Cpy%Sync
     Convert

 7     local_data centos -wi-ao---- <882.86g

 8     root        centos -wi-ao----  200.00g

 9     swap        centos -wi-ao----   32.00g

10     localcache nvmvg1 -wi-a-----   27.90t

11   [root@tds047 ~]#

12   [root@tds047 ~]# lvdisplay
```

```
[root@tds047 ~]# pvs
  PV            VG      Fmt  Attr PSize   PFree
  /dev/nvme0n1 nvmvg1 lvm2 a--  <6.99t      0
  /dev/nvme1n1 nvmvg1 lvm2 a--  <6.99t      0
  /dev/nvme2n1 nvmvg1 lvm2 a--  <6.99t      0
  /dev/nvme3n1 nvmvg1 lvm2 a--  <6.99t 46.21g
  /dev/sda3    centos lvm2 a--  <1.09t      0
[root@tds047 ~]# vgs
  VG      #PV #LV #SN Attr   VSize    VFree
  centos    1   3   0 wz--n-  <1.09t       0
  nvmvg1    4   1   0 wz--n- <27.95t 46.21g
[root@tds047 ~]# lvs
  LV          VG      Attr       LSize    Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  local_data centos -wi-ao---- <882.86g
  root        centos -wi-ao----  200.00g
  swap        centos -wi-ao----   32.00g
  localcache nvmvg1 -wi-a-----   27.90t
[root@tds047 ~]#
```

格式化

```
1   [root@tds047 ~]# mkfs.xfs /dev/nvmvg1/localcache
```

挂载

```
1   [root@tds047 ~]# mkdir /localcache
2   [root@tds047 ~]# mount /dev/nvmvg1/localcache  /localcache
```

```
[root@tds047 ~]# mkdir /localcache
[root@tds047 ~]# mount /dev/nvm
nvme0      nvme0n1   nvme1      nvme1n1   nvme2     nvme2n1   nvme3      nvme3n1   nvmvg1/
[root@tds047 ~]# mount /dev/nvmvg1/localcache   /localcache
[root@tds047 ~]# df -h | grep -v tmpfs
Filesystem                    Size   Used  Avail  Use%  Mounted on
/dev/mapper/centos-root       200G   6.0G   194G    3%  /
/dev/sda2                     2.0G   170M   1.9G    9%  /boot
/dev/sda1                     400M    12M   389M    3%  /boot/efi
/dev/mapper/centos-local_data 883G    34M   883G    1%  /local_data
192.168.12.63:/home           466G    27G   439G    6%  /home
192.168.12.63:/eda            3.7T   2.3T   1.4T   64%  /eda
192.168.12.63:/proj            35T   7.9T    27T   23%  /proj
192.168.12.62:/proj            39T    26T    13T   68%  /oldproj
192.168.12.63:/misc/upload     94G    38G    56G   40%  /misc/upload
/dev/mapper/nvmvg1-localcache  28T    34M    28T    1%  /localcache
[root@tds047 ~]#
```

```
1  [root@tds047 ~]# vim /etc/fstab

2  /dev/nvmvg1/localcache           /localcache         xfs         defaults 0 0

3  [root@tds047 ~]# mount -a
```

重启服务器后正常。

17、桌面快捷方式

参考

```
[qianj@tds021 ~/Desktop]$ pwd
/home/qianj/Desktop
[qianj@tds021 ~/Desktop]$ ll
total 28
-rwx--x--x  1 qianj THU 170 Mar 14 15:43 tds040.desktop
-rwx--x--x  1 qianj THU 172 Mar 11 14:14 tds041.desktop
-rwx--x--x. 1 qianj THU 170 Sep 26  2021 tds042.desktop
-rwx--x--x  1 qianj THU 172 Mar 11 14:13 tds043.desktop
-rwx--x--x. 1 qianj THU 170 Sep 26  2021 tds044.desktop
-rwx--x--x  1 qianj THU 172 Apr 12 15:47 tds045.desktop
-rwx--x--x  1 qianj THU 172 Apr 14 17:27 tds063.desktop
[qianj@tds021 ~/Desktop]$ cat tds041.desktop
[Desktop Entry]
Version=1.0
Type=Application
Name=tds041
Exec=ssh -X tds041 -f konsole
Icon=utilities-terminal
Terminal=true
StartupNotify=false
Name[en_US]=tds041.desktop
[qianj@tds021 ~/Desktop]$
```

1 [qianj@tds021 ~/Desktop]$ cat tds041.desktop

2 [Desktop Entry]

3 Version=1.0

4 Type=Application

5 Name=tds041

6 Exec=ssh -X tds041 -f konsole

7 Icon=utilities-terminal

8 Terminal=true

9 StartupNotify=false

10 Name[en_US]=tds041.desktop

11 [qianj@tds021 ~/Desktop]$

18、遇到问题

（1）ssh连接

ssh到tds047提示如下

处理方法

```
1  [qianj@tds021 ~/.ssh]$ pwd
2  /home/qianj/.ssh
3  [qianj@tds021 ~/.ssh]$ ll
4  total 4
5  -rw-r--r--. 1 qianj THU 3206 Apr 12 13:45 known_hosts
6  [qianj@tds021 ~/.ssh]$ grep tds047 known_hosts
7  tds047,192.168.12.47 ecdsa-sha2-nistp256
   AAAAE2VjZHNhLXNoYTItbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBCujvK7JxMzA8pHJhbVjTnSFc2fMk32/RA5
   7mZN/IsJ2xyDzYLZ8gXYwFc7uMpcpvo10jFXxD8pZldo6sFrph9k=
8  [qianj@tds021 ~/.ssh]$
9  #将tds047这行删除即可
```


(2) svn升级

旧版本使用提示如下

```
[zhengxj@tds041 tsim]$ svn up
svn: E155021: This client is too old to work with the working copy at
'/proj/tsrn200/wa/zhengxj/bak_trunk' (format 31).
You need to get a newer Subversion client. For more details, see
  http://subversion.apache.org/faq.html#working-copy-format-change

[zhengxj@tds041 tsim]$
```

查看版本以及升级

```
1  [qianj@tds047 ~]$ svnversion --version
2  svnversion, version 1.7.14 (r1542130)
3
4  #从tds043拷贝新的nexus.repo
5  [root@tds047 yum.repos.d]# yum makecache
6  [root@tds047 yum.repos.d]# yum update subversion
7  [root@tds047 yum.repos.d]# svnversion --version
8  svnversion, version 1.11.1 (r1850623)
```

（3）补库文件

```
1  [root@tds047 ~]# yum install libpng12-devel.x86_64 -y
```
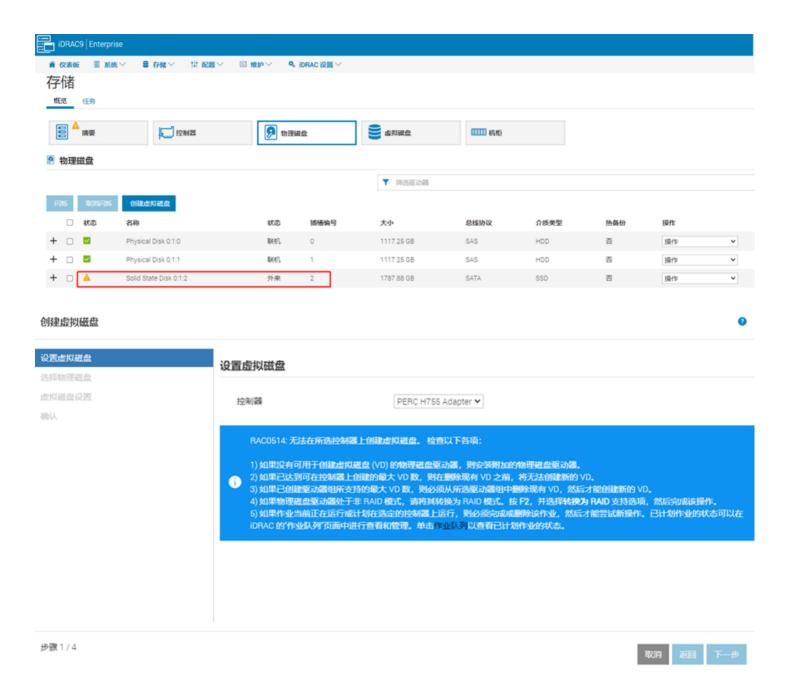
19、修改idrac地址

通过原idrac地址登录idrac后，如下操作

修改为新的IP地址192.168.32.17后应用即可，稍等30s左右新的IP地址即可使用。

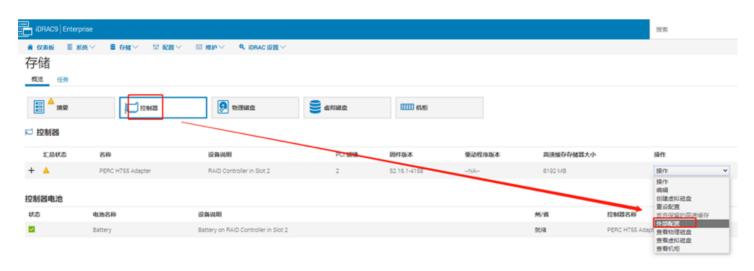## 20、运算服务器添加硬盘

tds043新增一块本地SSD，通过idrac查看如下图，状态是"外来"无法创建虚拟磁盘。原因是硬盘是拆机件，里面有之前的RAID信息。

iDRAC9 | Enterprise

仪表板 ｜ 系统 ∨ ｜ 存储 ∨ ｜ 配置 ∨ ｜ 维护 ∨ ｜ iDRAC 设置 ∨

存储

概览　任务

摘要　｜　控制器　｜　物理磁盘　｜　虚拟磁盘　｜　机柜

物理磁盘

筛选驱动器

闪烁　取消闪烁　创建虚拟磁盘

	状态	名称	状态	插槽编号	大小	总线协议	介质类型	热备份	操作
+	✅	Physical Disk 0:1:0	联机	0	1117.25 GB	SAS	HDD	否	操作 ∨
+	✅	Physical Disk 0:1:1	联机	1	1117.25 GB	SAS	HDD	否	操作 ∨
+	⚠	Solid State Disk 0:1:2	外来	2	1787.88 GB	SATA	SSD	否	操作 ∨

创建虚拟磁盘

设置虚拟磁盘
选择物理磁盘
虚拟磁盘设置
确认

设置虚拟磁盘

控制器　　　　　PERC H755 Adapter ∨

ℹ RAC0514: 无法在所选控制器上创建虚拟磁盘。检查以下各项：

1) 如果没有可用于创建虚拟磁盘 (VD) 的物理磁盘驱动器，则安装附加的物理磁盘驱动器。
2) 如果已达到可在控制器上创建的最大 VD 数，则在删除现有 VD 之前，将无法创建新的 VD。
3) 如果已创建驱动器组所支持的最大 VD 数，则必须从所选驱动器组中删除现有 VD，然后才能创建新的 VD。
4) 如果物理磁盘驱动器处于非 RAID 模式，请将其转换为 RAID 模式。按 F2，并选择转换为 RAID 支持选项，然后完成该操作。
5) 如果作业当前正在运行或计划在选定的控制器上运行，则必须完成或删除该作业，然后才能尝试新操作。已计划作业的状态可以在 iDRAC 的作业队列页面中进行查看和管理。单击作业队列以查看已计划作业的状态。

步骤 1/4　　　　　取消　返回　下一步

此时需要先将原有的配置清除掉，点击"存储"下的"控制器"，然后选择控制器后面的"操作"中的下拉选项"外部配置"

iDRAC9 | Enterprise　　　搜索

仪表板 ｜ 系统 ∨ ｜ 存储 ∨ ｜ 配置 ∨ ｜ 维护 ∨ ｜ iDRAC 设置 ∨

存储

概览　任务

摘要　｜　控制器　｜　物理磁盘　｜　虚拟磁盘　｜　机柜

控制器

汇总状态	名称	设备说明	PCI插槽	固件版本	驱动程序版本	高速缓存存储器大小	操作
+ ⚠	PERC H755 Adapter	RAID Controller in Slot 2	2	52.16.1-4158	--NA--	8192 MB	操作 ∨

下拉选项：
操作
编辑
创建虚拟磁盘
重设配置
丢弃保留的高速缓存
外部配置
查看物理磁盘
查看虚拟磁盘
查看机柜

控制器电池

状态	电池名称	设备说明		州/省	控制器名称
✅	Battery	Battery on RAID Controller in Slot 2		就绪	PERC H755 Adapter

如果硬盘中数据还要，就点"导入外部配置"；如果不要就点"清除外部配置"

外部配置: PERC H755 Adapter 在插槽中2   ❓

磁盘	导入后状态	RAID 级别	容量	剩余冗余	热备份状态
Virtual Disk255	失败	RAID-5	300.00 GB	0	不适用
Virtual Disk255	失败	RAID-5	6851.50 GB	0	不适用

[取消] [导入外部配置] [清除外部配置]

⚠️ **警告**

RAC0662: 清除外部配置操作将从控制器的关联物理磁盘驱动器删除外部虚拟磁盘信息。
清除将移除与虚拟磁盘关联的元数据，使物理磁盘驱动器可用于创建新的虚拟磁盘。
要移除外部数据，请执行初始化操作。

按"确定"继续。

[取消] [确定]

✅ **已创建待处理操作**   ✕

您已成功在 控制器 上创建了待处理操作
PERC H755 Adapter

命令 ⌄	组件类型	组件名称	操作
0	控制器	PERC H755 Adapter	清除外部配置

[以后应用] [立即应用] [下次重启时应用] [在计划的时间应用] [放弃所有待处理项]
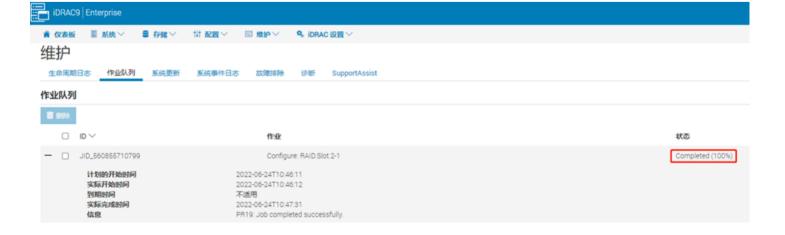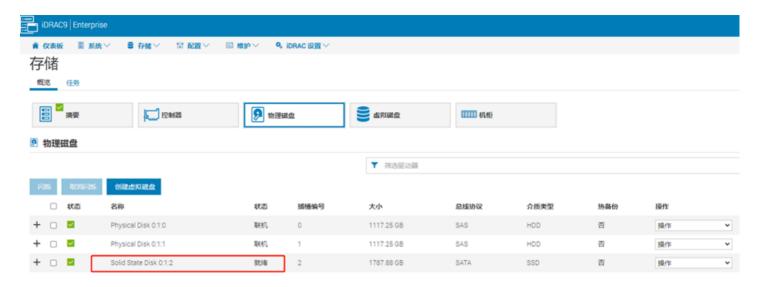
然后在"作业列队"中看到进度

iDRAC9 | Enterprise

🏠 仪表板　📋 系统 ⌄　🖥 存储 ⌄　⚙ 配置 ⌄　🖼 维护 ⌄　🔧 iDRAC 设置 ⌄

维护

生命周期日志　作业队列　系统更新　系统事件日志　故障排除　诊断　SupportAssist

作业队列

🗑 删除

☐	ID ⌄	作业	状态
— ☐	JID_560855710799	Configure: RAID.Slot.2-1	Completed (100%)
	计划的开始时间	2022-06-24T10:46:11	
	实际开始时间	2022-06-24T10:46:12	
	到期时间	不适用	
	实际完成时间	2022-06-24T10:47:31	
	信息	PR19: Job completed successfully.	

然后返回"存储"查看如下，状态变为"就绪"

接下来就是创建虚拟磁盘了

创建虚拟磁盘

设置虚拟磁盘
选择物理磁盘
虚拟磁盘设置
确认

选择物理磁盘

跨度数 ⓘ   1 ∨

▼ 筛选驱动器   筛选器选项

状态		名称	插槽编号	协议	介质类型	安全状态	大小
☑	✅	Solid State Disk 0:1:2	2	SATA	SSD	不支持	1.75 TB

选定磁盘 [1] 最小 [1] 最大 [32]

步骤 2 / 4   取消 返回 **下一步**

创建虚拟磁盘

设置虚拟磁盘
选择物理磁盘
虚拟磁盘设置
确认

虚拟磁盘设置

最大容量   1.75 TB

布局   RAID-0

协议   SATA

介质类型   SSD

块大小   512 字节

容量*   1.75   TB ∨

步骤 3 / 4   取消 返回 **下一步**

创建虚拟磁盘

虚拟磁盘设置

容量	1.75 TB
布局	RAID-0
协议	SATA
介质类型	SSD
块大小	512 字节

已选择物理磁盘 - 跨度 1

状态	名称	插槽编号	协议	介质类型	安全状态	大小
☑	Solid State Disk 0:1:2	2	SATA	SSD	不支持	1.75 TB

步骤 4 / 4

取消　返回　下一步　**添加到待处理**

☑ **已创建待处理操作**　　　　　　　　　　　　　　　　✕

您已成功在 创建虚拟磁盘 上创建了待处理操作
PERC H755 Adapter

命令 ⌄	组件类型	组件名称	操作
0	虚拟磁盘	vdisk20220624	创建虚拟磁盘

以后应用　**立即应用**　下次重启时应用　在计划的时间应用　放弃所有待处理项

ⓘ 信息
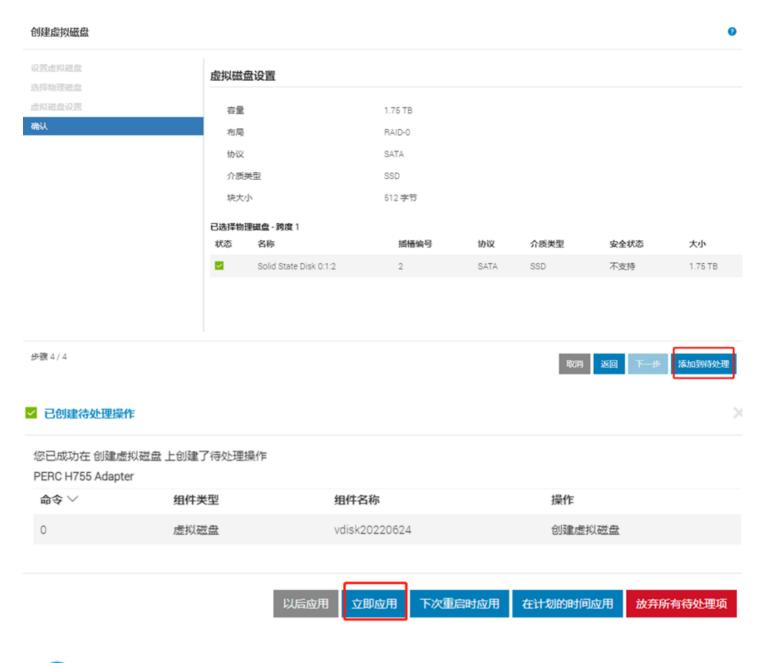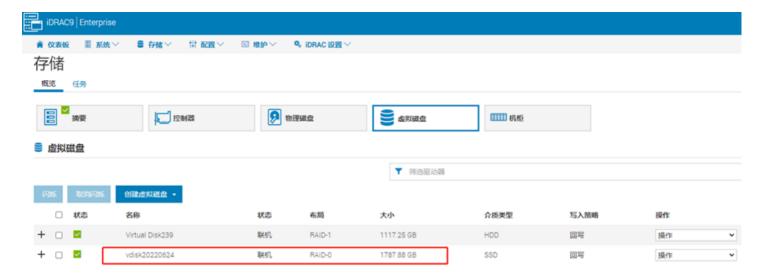
RAC0609: 作业 JID_560859570013 已成功添加到作业队列。

作业状态可以在"作业队列"页面上查看。

作业队列　确定

完成后，在"虚拟磁盘"下就可以看到新建的这个了，如下图

接下来就是到服务器上进行分区，格式化和挂载了

`fdisk -l` 查看如下

接下来 `fdisk /dev/sdb` 进行分区

```
[root@tds043 ~]# fdisk /dev/sdb
Welcome to fdisk (util-linux 2.23.2).

Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table
Building a new DOS disklabel with disk identifier 0x7a64e3e6.

Command (m for help): n
Partition type:
   p   primary (0 primary, 0 extended, 4 free)
   e   extended
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-3749445631, default 2048):
Using default value 2048
Last sector, +sectors or +size{K,M,G} (2048-3749445631, default 3749445631):
Using default value 3749445631
Partition 1 of type Linux and of size 1.8 TiB is set

Command (m for help): p

Disk /dev/sdb: 1919.7 GB, 1919716163584 bytes, 3749445632 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 262144 bytes / 262144 bytes
Disk label type: dos
Disk identifier: 0x7a64e3e6

   Device Boot      Start         End      Blocks   Id  System
/dev/sdb1            2048  3749445631  1874721792   83  Linux

Command (m for help): w
The partition table has been altered!

Calling ioctl() to re-read partition table.
Syncing disks.
[root@tds043 ~]#
```

然后格式化为xfs格式，创建挂载点后进行挂载，并查看，如下图

```
[root@tds043 ~]# mkfs.xfs /dev/sdb1
meta-data=/dev/sdb1              isize=512    agcount=32, agsize=14646272 blks
         =                       sectsz=512   attr=2, projid32bit=1
         =                       crc=1        finobt=0, sparse=0
data     =                       bsize=4096   blocks=468680448, imaxpct=5
         =                       sunit=64     swidth=64 blks
naming   =version 2              bsize=4096   ascii-ci=0 ftype=1
log      =internal log           bsize=4096   blocks=228864, version=2
         =                       sectsz=512   sunit=64 blks, lazy-count=1
realtime =none                   extsz=4096   blocks=0, rtextents=0
[root@tds043 ~]# mkdir /prjcache
[root@tds043 ~]# mount /dev/sdb1 /prjcache
[root@tds043 ~]# df -h | grep -v tmpfs
Filesystem                      Size  Used Avail Use% Mounted on
/dev/mapper/centos-root         200G   11G  190G   6% /
/dev/sda2                      1014M  225M  790M  23% /boot
/dev/sda1                       200M   12M  189M   6% /boot/efi
/dev/mapper/centos-local_data   900G  504M  900G   1% /local_data
192.168.12.62:/proj              39T   30T  9.2T  77% /oldproj
192.168.12.63:/proj              35T  8.2T   26T  24% /proj
192.168.12.63:/eda              3.7T  2.3T  1.4T  63% /eda
192.168.12.63:/misc/upload       94G   11G   83G  11% /misc/upload
192.168.12.63:/home             466G   21G  445G   5% /home
/dev/sdb1                       1.8T   34M  1.8T   1% /prjcache
[root@tds043 ~]#
```

以tds045为例说明，后期哪个项目要使用，就在/prjcache目录下创建对应的目录，并修改对应的所属用户和组权限，如下图

```
[root@tds045 /]# cd prjcache/
[root@tds045 prjcache]# ll
total 0
drwxr-xr-x 9 tsrn10 tsrn10 100 Jun 17 11:00 tsrn10
drwxr-xr-x 3 tsrn20 tsrn20  19 Jun  6 09:24 tsrn20
drwxr-xr-x 3 root   root    20 Jun 20 19:42 tsrn500
[root@tds045 prjcache]#
```

最后还要将挂载信息写入到/etc/fstab文件中，推荐使用UUID来挂载，否则服务器重启后可能进入不了系统。

查询UUID的命令有lsblk -f或者blkid。

```
[root@tds043 prjcache]# vim /etc/fstab
[root@tds043 prjcache]# cat /etc/fstab

#
# /etc/fstab
# Created by anaconda on Wed Feb 23 22:25:04 2022
#
# Accessible filesystems, by reference, are maintained under '/dev/disk'
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info
#
/dev/mapper/centos-root /                           xfs     defaults        0 0
UUID=a524678b-2ecc-404d-bf5a-87154626e66a /boot      xfs        defaults        0 0
UUID=3B9D-AC03          /boot/efi                vfat     umask=0077,shortname=winnt 0 0
/dev/mapper/centos-local_data /local_data          xfs      defaults        0 0
/dev/mapper/centos-swap swap                        swap     defaults        0 0

#192.168.12.63:/eda      /eda     nfs     defaults,vers=4.0 0 0
#192.168.12.62:/proj     /proj    nfs     defaults 0 0
#192.168.12.63:/home     /home    nfs     defaults,vers=4.0 0 0
#192.168.12.63:/misc/upload    /misc/upload    nfs     defaults,vers=4.0 0 0

192.168.12.63:/home     /home    nfs     defaults,vers=4.0 0 0
192.168.12.63:/eda      /eda     nfs     defaults,vers=4.0 0 0
192.168.12.63:/proj     /proj    nfs     defaults 0 0
192.168.12.62:/proj     /oldproj    nfs     defaults 0 0
192.168.12.63:/misc/upload    /misc/upload    nfs     defaults,vers=4.0 0 0
/dev/sdb1       /prjcache       xfs     defaults        0 0
[root@tds043 prjcache]#
```

通过/dev/sdb1来挂载，当服务器重启会遇到如下图的情况

```
[root@tds043 ~]# ping 192.168.12.63
connect: Network is unreachable
[root@tds043 ~]# journalctl -p err -b
-- Logs begin at Tue 2023-03-07 21:29:08 CST, end at Tue 2023-03-07 21:29:49 CST. -
Mar 07 21:29:08 tds043 kernel: i8042: No controller found
Mar 07 21:29:19 tds043 systemd[1]: Failed to mount /prjcache.
Mar 07 21:29:19 tds043 systemd[1]: Failed to mount /misc/upload.
Mar 07 21:29:19 tds043 systemd[1]: Failed to mount /home.
Mar 07 21:29:19 tds043 systemd[1]: Failed to mount /eda.
Mar 07 21:29:19 tds043 systemd[1]: Failed to mount /proj.
Mar 07 21:29:19 tds043 systemd[1]: Failed to mount /oldproj.
[root@tds043 ~]#
```

其实就是有余/prjcache是后加的硬盘sdb，但是系统重启后变成了sda，没有通过UUID来写入fstab，导致系统无法进入。所以将/etc/fstab里的sdb注释掉后重启，然后修改fstab使用UUID挂载即可。