









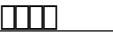




-  2.8 PiB



-  bbfs
-  fsa  fs04  fs08  fs09  fs10  fs12  fs13  fs14
-  /archive



<https://table.nju.edu.cn/dtable/view-external-links/custom/hpc-storage/>








Tier 0










/bbfs


 NVMe SSD  Burst Buffer 


-  bbfs
-  100%
-  117 TiB
- IO 4*HPE ProLiant DL380 Gen10: bb01 bb02 bb03 bb04
- CPU: 2*Intel Xeon Gold 5122 (2 Cores, 16.5MB Cache, 3.60 GHz)
- RAM: 192 GB (12x16GB), 6 Channels, DDR4-2666 ECC RDIMM
- Network: 2*25 Gigabit Ethernet, 100 Gbit/s EDR InfiniBand, 100 Gbit/s Omni-Path
- SSD: 8*Intel SSD DC P4510, 64-Layer TLC 3D NAND, 4TB 6.3PBW, 2.5in U.2 15mm, PCIe 3.1 x4 NVMe
- 


/bbfs/fs*/



 /fs*/ /bbfs/fs*/  /fs*/  /bbfs/fs*/



 /fs*/  /bbfs/fs*/  /fs*/





 /fsa/home/yaoge/in









/bbfs/fsa/home/yaoge/in SSD


 /bbfs/fsa/home/yaoge/out SSD


 /fsa/home/yaoge/out 

/bbfs/scratch/

 30 atime

checkpoint .tmp  .temp 

 Check Point

 /bbfs/scratch/yaoge

SSD

Tier 1

/.snapshot

/fsa /fsa/.snapshots /fsa/.snapshots/20220804-1800 2022 8 4 18 0

/fsa

- 100%
- 361 TiB
- 0 7 2
- IO 2*HP ProLiant DL380 Gen9: io01 io02
- 2*10 Gigabit Ethernet, 56 Gbit/s FDR InfiniBand
- DDN SFA7700X 32GB
- Data: 10TB 3.5-inch 7.2Krpm 12Gb/s SAS 10 RAID6 5 RAID6
Metadata: Toshiba Enterprise SSD PX02SMU040 MLC 10DWPD 400GB 2.5-inch 12Gb/s SAS
10 RAID6

/fs04

- 100%
- 14 TiB

- IO 2*10 Gigabit Ethernet Dell PowerEdge 12G R720xd: io08
- RAID Dell PERC H710P Mini (LSI SAS2208 ROC), 1GB cache with Intelligent Battery Backup Unit
- 900GB 2.5-inch 10Krpm 6Gb/s SAS 5 RAID5 4 RAID5 2

/fs08

- 100%
- 14 TiB
- 0 3
- IO 2*Inspur NF5270M3: io10 io11
- 2*1 Gigabit Ethernet, 40 Gbit/s QDR InfiniBand
- Inspur AS500H (NetApp E2600) 4GB Write caching with mirroring, High Performance Tier
- 900GB 2.5-inch 10Krpm 6Gb/s SAS 5 RAID5 4 RAID5 2

/fs09

- 100%
- 24 TiB
- 0 7 2
- IO 2*Inspur NF5270M3: io10 io11
- 2*1 Gigabit Ethernet, 40 Gbit/s QDR InfiniBand
- Inspur AS500H (NetApp E2600) 4GB Write caching with mirroring, High Performance Tier
- 3TByte 3.5-inch 7.2Krpm 6Gb/s NL-SAS 12 Disk Pool 1 2 Virtual Disk

/fs10

- 100%
- 9.9 TiB
- Inspur NF5270M3: io12
- 2*1 Gigabit Ethernet, 40 Gbit/s QDR InfiniBand
- RAID LSI MegaRAID SAS 9271-8i (LSI SAS2208 ROC), 1GB
- 900GB 2.5-inch 10Krpm 6Gb/s SAS 5 RAID5 3 RAID5 1

/fs12

- 100%
- 14 TiB
- IO 2*HP ProLiant DL380 Gen9: io01 io02
- 2*10 Gigabit Ethernet, 56 Gbit/s FDR InfiniBand
- HP MSA 2040 SAN 4GB
- 900GB 2.5-inch 10Krpm 6Gb/s SAS 5 RAID5 4 RAID5 3

/fs13

- 100%
- 30 TiB
- IO 2*HP ProLiant DL380 Gen9: io01 io02
- 2*10 Gigabit Ethernet, 56 Gbit/s FDR InfiniBand
- HP MSA 2040 SAN 4GB
- 4TByte 3.5-inch 7.2Krpm 6Gb/s SAS 6 RAID6 2 RAID6 1

/fs14

- 100%
- 262 TiB
- IO Dell PowerEdge R730: io13
- 2*10 Gigabit Ethernet
- RAID Dell PERC H730P Mini (LSI SAS3108 ROC), 2GB NV cache with Intelligent Battery Backup Unit
- 8TByte 3.5-inch 7.2Krpm 12Gb/s SAS 6 RAID6
- RAID Dell PERC H830 (LSI SAS3108 ROC), 2GB NV cache with Intelligent Battery Backup Unit
- JBOD 8TByte 3.5-inch 7.2Krpm 12Gb/s SAS 6 RAID6 8 RAID6



/fs00

- 100%
- 3.3 TB
- 0 7 12
- IO HP ProLiant DL380 Gen9: io01 io02
- 2*10 Gigabit Ethernet, 56 Gbit/s FDR InfiniBand
- HP MSA 2040 SAN 4GB
- 900GB 2.5-inch 10Krpm 6Gb/s SAS 2 RAID1 2 RAID1 1
- IO Inspur NF5270M3: io10 io11
- 2*1 Gigabit Ethernet, 40 Gbit/s QDR InfiniBand
- Inspur AS500H (NetApp E2600) 4GB
- Write caching with mirroring, High Performance Tier
- 900GB 2.5-inch 10Krpm 6Gb/s SAS 2 RAID1 2

- IO Inspur NF5270M3: io12
- 2*1 Gigabit Ethernet, 40 Gbit/s QDR InfiniBand
- RAID LSI MegaRAID SAS 9271-8i (LSI SAS2208 ROC), 1GB cache with Battery Backup Unit
- 900GB 2.5-inch 10Krpm 6Gb/s SAS 2 RAID1 1
- RAID1+



Tier 2



/archive

- 100%
- 1.91 PiB
- 0 7 4
- IO Dell PowerEdge R740xd: stor.nju.edu.cn
- 2*25 Gigabit Ethernet
- RAID-Z 3
-



/.zfs/snapshot

/archive /archive/.zfs/snapshot /archive/.zfs/snapshot/20220904-0000 2022 9 4








0 0






Tier 2



s3.nju.edu.cn

-  100%
-  2.12 PB
-  UniverStor P20000
-  12*10 Gigabit Ethernet
-  Large object: 15/4, Small object: 6/4
-  S3
- Endpoint: http://s3.nju.edu.cn OR https://s3.nju.edu.cn
- Region: “ ” us-east-1
- 



- 
-  24

/tmp/ /var/tmp/



/dev/shm/

██

/ssd/ /tmp/ssd

████████ SSD████████████████████



/fs04

- █████ 885 GB
- IO████ IBM System x3650: io03
- RAID██ IBM ServeRAID 8k (Adaptec), 256MB cache with battery
- ███ 146GB 3.5-inch 10Krpm 3Gb/s SAS██ 5████ RAID5████ 1██ 2█ RAID5
████ 1████

/fs02

- █████ 7.3 TB
- IO████ IBM System x3650 M3: io05
- ███ Chelsio 20 Gigabit Ethernet
- ███ IBM System Storage DS3200, 1GB cache with battery backup
- ███ 2TByte 3.5-inch 7.2Krpm 3Gb/s SATA█ 6████ RAID6

/fs06

- █████ 443 GB
- IO████ HP ProLiant DL380 G5: io09
- █████ 20 Gbit/s DDR InfiniBand
- RAID██ HP Smart Array P400, 512MB Battery-Backed Write Cache
- ███ 146GB 2.5-inch 10Krpm 3Gb/s SAS█ 5████ RAID5█ 1████

/fs07

- 7.3 TB
- HP ProLiant DL380 G5: io09
- 20 Gbit/s DDR InfiniBand
- HP StorageWorks MSA2312sa G2
- 1TByte 3.5-inch 7.2Krpm 3Gb/s SATA RAID6 RAID6

/fs05

- 1010 GB
- HP ProLiant DL380 G5: io04
- HP Smart Array P400, 512MB Battery-Backed Write Cache
- 300GB 2.5-inch 10Krpm 3Gb/s SAS RAID5 RAID5

/fs05b

- 932 GB
- HP ProLiant DL380 G5: io04
- HP Smart Array P400, 512MB Battery-Backed Write Cache
- 1TByte 2.5-inch 7.2Krpm 3Gb/s NL-SAS RAID0

/fs03

- 2.2 TB
- Dell PowerEdge 12G R720: io07
- Dell PERC H710P Mini (LSI SAS2208 ROC), 1GB cache with Intelligent Battery Backup Unit
- 600GB 2.5-inch 10Krpm 6Gb/s SAS RAID5 RAID5

/fs11

- 16 TB

- IO Dell PowerEdge 12G R720: io07
 - Dell MD3200i 2GB cache with battery backup
 - 2TByte 3.5-inch 7.2Krpm 6Gb/s NL-SAS 12 Disk Pool 1
- Virtual Disk

/fs01

- fs01
- 100% 50% 50%
- 4.4 TB
- IO IBM System x3650 M3: io05 io06
- Chelsio 2*10 Gigabit Ethernet
- RAID IBM ServeRAID M5015 (LSI SAS2108 ROC), 512MB cache with Battery Backup Unit
- 300GB 2.5-inch 10Krpm 6Gb/s SAS 5 RAID5 2 4 RAID5
- 1