











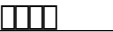




-  4.071 PiB



-  bbfs
-  fsa  fsb  fs04  fs08  fs09  fs10  fs12  fs13  fs14
-  fs00
-  /archive



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



Tier 0 



[/bbfs](#)

100% NVMe SSD100% Burst Buffer100%

- 100% bbfs
- 100% 100%
- 100% 117 TiB
- IO100% 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
- 100%

/bbfs/fs*/

100% /fs*/100% /bbfs/fs*/ 100% /fs*/ 100% /bbfs/fs*/

100% /fs*/ 100% /bbfs/fs*/ 100% /fs*/

100%

100% /fsa/home/yaoge/in

100%

/bbfs/fsa/home/yaoge/in100% SSD100%

100% /bbfs/fsa/home/yaoge/out100% SSD

100% /fsa/home/yaoge/out 100%

/bbfs/scratch/

100% 30100% atime100%

checkpoint100% .tmp 100% .temp 100%

Check Point

/bbfs/scratch/yaoge

SSD

Tier 1

/snapshot

/fsb

/fsa/.snapshots

/fsb/.snapshots/20220804-1800

2022

8

4

18

0

/fsa

- 100%
- 361 TiB
- IO

2*HP ProLiant DL380 Gen9: io01 io02
- 2*10 Gigabit Ethernet, 56 Gbit/s FDR InfiniBand
- DDN SFA7700X32GB
- Data: 10TB 3.5-inch 7.2Krpm 12Gb/s SAS10RAID65RAID6
Metadata: Toshiba Enterprise SSD PX02SMU040 MLC 10DWPD 400GB 2.5-inch 12Gb/s SAS
10RAID6

/fsb

- 100%

- 1264 TiB
- 0 7 2
- Lenovo DSS-G 210
- 2*Lenovo ThinkSystem SR655 V3: dss01 dss02
- 2*25 Gigabit Ethernet, 200 Gbit/s HDR InfiniBand
- JBOD 1*Lenovo D4390
- 88*Western Digital Ultrastar DC HC570 22TB 3.5-inch 7.2Krpm 12Gb/s SAS
2*Samsung PM1655 800GB 3DWPD 2.5-inch 24Gb/s SAS 24Gb
- Reed-Solomon code 8+2p 3

/fs04

- 100%
- 14 TiB
- IO Dell PowerEdge 12G R720xd: io08
- 2*10 Gigabit Ethernet
- 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
- 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
- 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
- IO 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 RAID1 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 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 RAID1 1
- RAID1+



Tier 2

/archive

- 100%
- 1.91 PiB
- 0 7 4
- IO Dell PowerEdge R740xd: zfs

- 2*25 Gigabit Ethernet
- RAID-Z 3
- /archive

/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