

Matrix compute nodes

Table containing node numbers and hardware information.

See also

- [Processor info and core counts](#)

Node number (new Matrix)	Type (vintage)	Motherboard	BIOS version	Processor (More info)	Hyperthreadable	Memory	Local HD
headnode	2014	Supermicro X9DRW	3.2	2 x E5-2603v2	No	32GB	256SSD for main OS, RAID 1 for (2) 4TB notbackedup
m001(Yi He)	GPU	Supermicro X8DTG-QF	2.0b	2 x X5650	Yes	12GB	250GB
m002	GPU	Supermicro X8DTG-QF	2.0c	2 x E5645	Yes	24GB	250GB
m003	GPU	Supermicro X8DTG-QF	2.0b	2 x E5645	Yes	24GB	320GB
m004(Yi He)	GPU	Supermicro X8DTG-QF	2.0b	2 x E5645	Yes	24GB	320GB
m021	I	Tyan S5372	V4.05	2 x E5335	No	4GB	80GB
m022	I	Tyan S5372	V4.05	2 x E5335	No	4GB	80GB
m023	I	Tyan S5372	V4.05	2 x E5335	No	4GB	80GB
m024	I	Tyan S5372	V4.05	2 x E5335	No	4GB	80GB
m025	I	Tyan S5372	V4.05	2 x E5335	No	4GB	80GB
m026	I	Tyan S5372	V4.05	2 x E5335	No	4GB	80GB
m027	I	Tyan S5372	V4.05	2 x E5335	No	4GB	80GB
m028	I	Tyan S5372	V4.05	2 x E5335	No	4GB	80GB
m029	I	Tyan S5372	V4.05	2 x E5335	No	4GB	80GB
m030	I	Tyan S5372	V4.05	2 x E5335	No	4GB	80GB
m031	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m032	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m033	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m034	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m035	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m036	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m037	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m038	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m039	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m040	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m041	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m042	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m043	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m044	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m045	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m046	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m047	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m048	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m049	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m050	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m051	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m052	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m053	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m054	II	Asus DSBF-DE	1006	2 x E5420	No	4GB	80GB
m055	I	Tyan S5372	V4.05	2 x E5335	No	4GB	80GB
m056	III	Asus Z8PE-D12	1201	2 x E5620	Yes	12GB	320GB
m057	III	Asus Z8PE-D12	1201	2 x E5620	Yes	12GB	320GB

[illegible]

m113	2014	Supermicro X9DRT-HF	3.2	2 x E5-2670v2	Yes	64GB	500GB
m114	2014	Supermicro X9DRT-HF	3.2	2 x E5-2670v2	Yes	64GB	500GB
m115	2014	Supermicro X9DRT-HF	3.2	2 x E5-2670v2	Yes	64GB	500GB

Applications	Version
amber	10 & 14
gamess	2009
gaussian	g03-E.01 & g09-C.01 & g09-D.01
gcc compiler	4.47
gromacs	4.5.4 & 5.0
gsl	1.9
intel compiler	2015.0.090
matlab	2015a
mopac	2012
mpich	1.2.7p1_intel-10.1_em64_ssh
mpich2	1.4 & 1.4.1p1-intel_2015.0.090
openmm	4.0
openmpi	1.4.3 & 1.6.5-intel_2015.0.090
pgi	1.9-0
pulchra	304
scwrl4	4
shifx2	v107
SPARTA+	v2.60
wordom	0.21

Maintenance records:

3/16/2016 - updated BIOS on m108-m115 from 3.0a to 3.2. Synology RS3412xs updated from DSM 5.2-5644 Update 2 to DSM 5.2-5644 Update 5. - meh26

3/16/2016: Lulu: There are no security updates available via YUM. FSCK run no errors found.

6/9/2016: Lulu: No firmware update from Michael. There are no security updates available via YUM. FSCK run no errors found. Synology firmware got updated. We did UPS test. After 15 minutes, Synology went to safe mode and Matrix head node got to shutdown properly and battery was about %67 full. We found one switch has a few links problem, which makes m101 cannot boot and m102 lost network connection from head node. Ticket created:

- INC000001693005 Scheraga - Matrix node m101 both network link on the switch are not working

9/14/2016: Lulu: No firmware update from Michael. There are no security updates available via YUM. No FSCK. Synology firmware got updated. m102 cannot boot. It looks like network switch or cable problem.

12/14/2016: Lulu: No firmware update from Michael. There are no security updates available via YUM. Forced FSCK. Synology firmware got updated. m102 cannot boot. It looks like network switch or cable problem.

3/22/2017: Lulu: No firmware update from Michael. There are no security updates available via YUM. No FSCK. Synology firmware got updated. starting iscsi takes long time (almost 2 minutes) and stopping iscsi also takes long time. We are not sure if it is related with Synology recent major update. We will watch for this when we do Synology update with Crane group.

6/14/2017: Lulu: No firmware update from Michael. Forced FSCK. Synology firmware got updated. m102 cannot boot. Looks like network issue.

12/13/2017: Lulu: No firmware update from Michael. Forced FSCK. Synology firmware got updated. m102 cannot boot. Looks like network issue. Head node one power supply is bad and making noise.

3/15/2018: Lulu: No firmware update from Michael. Synology firmware got updated. Headnode rebooted but pbs_server service was off and cannot be started (server database issue). I didn't want to re-initialize the database by "pbs_server -t create". I decided to get the "serverdb" file recovered from EZbackup and it seems working.

6/28/2018: Lulu: No firmware update from Michael. Forced FSCK. Synology firmware got updated. m102 cannot boot. It is cable problem. m106 /m107 power supply is broken and need to be replace.

9/12/2018: Michael:

1. Router replaced
2. Scheraga Synology updated to DSM 6.2.1-23824.
3. Nodes 56 to 95 should be updated from Asus Z8PE-D12 v1201 to v1401. Nodes 108 to 115 should be updated from Supermicro X9DRT-HF v3.2 to v3.3.

9/12/2018: Lulu: m102 cannot boot. It is cable(both) or switch problem. m081 power may have issue.

12/12/2018: Michael: Scheraga Synology needs to be updated to 6.2.1-23824-2 from 6.2.1-23824-1. It has to be done manually according to Synology. Headnode BIOS should be updated from 3.2 to 3.3.

3/13/2019: Michael: upgraded the firmware on the Matrix router. Trying to use remote management tools to take it from 1.10.7 to 1.10.9 for the Edgerouter X.

3/13/2019: Lulu: Synology firmware upgrade. Forced fsck. m050 cannot boot.

10/23/2019: Lulu: Synology firmware upgrade. Forced fsck (including iscsi drives). m030,m050, m089, m115 cannot boot.

12/11/2019: Lulu: Synology firmware upgrade. m030,m039, m050, m085, m115 cannot boot.

3/11/2020,6/10/2020, 9/15/2020 Lulu: Synology firmware upgrade. Forced fsck. m030,m039, m050, m085, m115 cannot boot.