

Lukasz Zajac lab assignment

Answer the questions:

a. Explain the purpose of the \$SCRATCH filesystem according to the documentation. What filesystem is used for \$SCRATCH and can you explain in a simple way why ext4/xfs/nfs cannot be used here?

b. What is the main feature (and benefit) of an RDMA network transfer? Why is it important for highly parallel jobs? What network types offer RDMA?

ANSWER:

- a.
- b.

Create a "hello world" batch job, which will:

a. Get information about CPU (hint: use lscpu or similar command)

b. Report how many cores are available for the job (there are multiple ways to do this, think of a convenient way of checking how many CPUs should be used)

c. Please remember to specify the account (-A) parameter for jobs, which should be set to the allocation name reported by "hpc-grants" command. In most cases it will be something like that:

```
-A plglscclclass24-cpu
```

ANSWER:

JOB SCRIPT

```
#!/bin/bash
#SBATCH -A plglscclclass24-cpu
#SBATCH --cpus-per-task=10
#SBATCH --time=00:01:00

lscpu
nproc
```

RESULT

```
[ares][plggqsterius@login01 lab2]$ ls
helloworld.sh slurm-11968384.out slurm-11968466.out ## Create a "hello world" batch job, which will:
[ares][plggqsterius@login01 lab2]$ rm slurm-11968384.out
[ares][plggqsterius@login01 lab2]$ cat slurm-11968466.out Get information about CPU (hint: use lscpu or similar)
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
CPU(s):                 48
On-line CPU(s) list:   0-47
Thread(s) per core:    1
Core(s) per socket:    24
Socket(s):              2
NUMA node(s):          4
Vendor ID:              GenuineIntel
CPU family:             6
Model:                  85
Model name:             Intel(R) Xeon(R) Platinum 8268 CPU @ 2.90GHz
Stepping:               7
CPU MHz:                3499.999
CPU max MHz:            3900.0000
CPU min MHz:            1200.0000
BogoMIPS:               5800.00
Virtualization:         VT-x
L1d cache:              32K
L1i cache:              32K
L2 cache:               1024K
L3 cache:               36608K
NUMA node0 CPU(s):      0-3,7,8,12-14,18-20
NUMA node1 CPU(s):      4-6,9-11,15-17,21-23
NUMA node2 CPU(s):      24-27,31-33,37-39,43,44
NUMA node3 CPU(s):      28-30,34-36,40-42,45-47
Flags:                  fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx
fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopo
logy nonstop_tsc cpuid aperfmperf pni pclmulqdq dtes64 ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid d
ca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_
fault epb cat_l3 cdp_l3 invpcid_single ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept vpi
d ept_ad fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms invpcid cqm mpx rdt_a avx512f avx512dq rdseed adx smap clfl
u shopt clwb intel_pt avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
cqm_mbm_local dtherm ida arat pln pts pku ospke avx512_vnni md_clear flush_l1d arch_capabilities
10
```

Use an array job to render a an animation from the blender demo-files. Here are some tips:

a. Warning! Rendering on a cluster is pretty fast, but queue times are, in some cases, unpredictable. Please account for queue times from minutes to, in some cases, hours!

b. You can use the sample animation from blender demo page:

https://mirrors.dotsrc.org/blender/demo/geometry-nodes/repeat_zone_flower_by_MiRA.blend (frame range for this animation is from 1 to 100)

demo site: <https://www.blender.org/download/demo-files/> (Repeat Zone – Flower is linked above). Unfortunately, not all demo scenes work in an environment without display 😞

c. Please use the “plgrid” partition to submit jobs.

d. Assuming you chose to use the linked demo scene: Using a batch job configuration of 1 node with 4 CPUs per task seems to be a good choice, as rendering one frame may take up to 20 minutes. Requesting more CPUs will shorten render time, but queue times might increase. You can declare that each job will use up to 1GB of memory instead of the default 4GB per CPU – this might help with queue times.

I. (hint) In a real-world scenario, choosing job configuration, accounting for application performance, and queue times is one of the main challenges of using a cluster-real world scenario, choosing job configuration, accounting for application performance and queue times is one of the main challenges of using a cluster.

e. Blender is available through the modules system described above.

Each job should render one frame, this can be achieved with blender this way:

https://docs.blender.org/manual/en/latest/advanced/command_line/render.html

I. (hint) Ensure that the ‘-f’ parameter is at the end of a command line! Blender tends to ignore it otherwise.

f. Please verify if the images were rendered and if the animation looks OK.

g. Please provide a part of hpc-jobs-history command output with information about your jobs.

h. What efficiency was achieved?

Answer the question: Can you estimate how many CPU-hours were used for the whole animation?

i. (hint) This can be estimated on job parameters and/or read from the hpc-jobs-history output.

j. Answer the question: How many CPUs/threads blender uses?

I. (hint) The answer doesn’t have to include a number.

ANSWER:

SCRIPT:

```
#!/bin/bash
#SBATCH -N 1
#SBATCH
#SBATCH -A plglscclclass24-cpu
#SBATCH --cpus-per-task=4
#SBATCH --time=00:20:00
#SBATCH --array=1-100
#SBATCH --mem-per-cpu=1000M

modules load blender
blender -b repeat_zone_flower_by_MiRA.blend -f $SLURM_ARRAY_TASK_ID
```

OUTPUT:

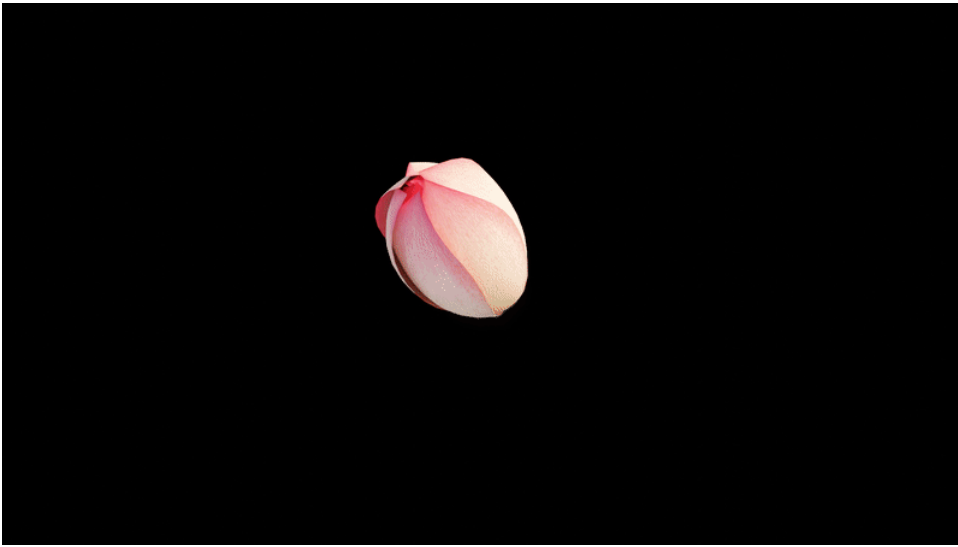
i have typo in module load, but loaded blender earlier so it worked

```
[ares][plgqsterius@login01 lab2]$ cat slurm-11970071_1.out
/var/spool/slurmd/job11970072/slurm_script: line 10: modules: command not found
Blender 4.2.2 LTS (hash c03d7d98a413 built 2024-09-24 00:09:56)
Read blend: "/net/people/plgrid/plgqsterius/labs/lab2/repeat_zone_flower_by_MiRA.blend"
Fra:1 Mem:20.24M (Peak 20.90M) | Time:00:00.00 | Mem:0.00M, Peak:0.00M | Scene, View Layer | Synchronizing object | Rose
Fra:1 Mem:20.49M (Peak 20.90M) | Time:00:00.00 | Mem:0.00M, Peak:0.00M | Scene, View Layer | Initializing
Fra:1 Mem:17.73M (Peak 20.90M) | Time:00:00.01 | Mem:0.00M, Peak:0.00M | Scene, View Layer | Waiting for render to start
Fra:1 Mem:17.73M (Peak 20.90M) | Time:00:00.01 | Mem:0.00M, Peak:0.00M | Scene, View Layer | Loading render kernels (may take a few minutes
the first time)
Fra:1 Mem:17.73M (Peak 20.90M) | Time:00:00.01 | Mem:0.00M, Peak:0.00M | Scene, View Layer | Updating Scene
Fra:1 Mem:17.73M (Peak 20.90M) | Time:00:00.01 | Mem:0.00M, Peak:0.00M | Scene, View Layer | Updating Shaders
Fra:1 Mem:17.83M (Peak 20.90M) | Time:00:00.01 | Mem:0.02M, Peak:0.02M | Scene, View Layer | Updating Procedurals
Fra:1 Mem:17.83M (Peak 20.90M) | Time:00:00.01 | Mem:0.02M, Peak:0.02M | Scene, View Layer | Updating Background
```

Fra:1	Mem:17.83M (Peak 20.90M)	Time:00:00.01	Mem:0.02M, Peak:0.02M	Scene, View Layer	Updating Camera			
Fra:1	Mem:17.83M (Peak 20.90M)	Time:00:00.01	Mem:0.02M, Peak:0.02M	Scene, View Layer	Updating Meshes Flags			
Fra:1	Mem:17.83M (Peak 20.90M)	Time:00:00.01	Mem:0.02M, Peak:0.02M	Scene, View Layer	Updating Objects			
Fra:1	Mem:17.83M (Peak 20.90M)	Time:00:00.01	Mem:0.02M, Peak:0.02M	Scene, View Layer	Updating Objects Copying Transformations to device			
Fra:1	Mem:17.84M (Peak 20.90M)	Time:00:00.01	Mem:0.03M, Peak:0.03M	Scene, View Layer	Updating Objects Applying Static Transformations			
Fra:1	Mem:17.84M (Peak 20.90M)	Time:00:00.01	Mem:0.03M, Peak:0.03M	Scene, View Layer	Updating Particle Systems			
Fra:1	Mem:17.84M (Peak 20.90M)	Time:00:00.01	Mem:0.03M, Peak:0.03M	Scene, View Layer	Updating Particle Systems Copying Particles to device			
Fra:1	Mem:17.84M (Peak 20.90M)	Time:00:00.01	Mem:0.03M, Peak:0.03M	Scene, View Layer	Updating Meshes			
Fra:1	Mem:17.88M (Peak 20.90M)	Time:00:00.01	Mem:0.03M, Peak:0.03M	Scene, View Layer	Updating Mesh Computing attributes			
Fra:1	Mem:17.97M (Peak 20.90M)	Time:00:00.01	Mem:0.03M, Peak:0.03M	Scene, View Layer	Updating Mesh Copying Attributes to device			
Fra:1	Mem:17.96M (Peak 20.90M)	Time:00:00.01	Mem:0.12M, Peak:0.12M	Scene, View Layer	Updating Geometry BVH Mesh 9/9 Building BVH			
Fra:1	Mem:17.96M (Peak 20.90M)	Time:00:00.01	Mem:0.12M, Peak:0.12M	Scene, View Layer	Updating Geometry BVH Plane 1/9 Building BVH			
Fra:1	Mem:17.96M (Peak 20.90M)	Time:00:00.01	Mem:0.12M, Peak:0.12M	Scene, View Layer	Updating Geometry BVH Mesh 3/9 Building BVH			
Fra:1	Mem:17.96M (Peak 20.90M)	Time:00:00.01	Mem:0.12M, Peak:0.12M	Scene, View Layer	Updating Geometry BVH Mesh 4/9 Building BVH			
Fra:1	Mem:17.96M (Peak 20.90M)	Time:00:00.01	Mem:0.15M, Peak:0.15M	Scene, View Layer	Updating Geometry BVH Mesh 4/9 Building BVH			
0%								
Fra:1	Mem:17.96M (Peak 20.90M)	Time:00:00.01	Mem:0.22M, Peak:0.22M	Scene, View Layer	Updating Geometry BVH Mesh 8/9 Building BVH			
Fra:1	Mem:17.96M (Peak 20.90M)	Time:00:00.01	Mem:0.19M, Peak:0.22M	Scene, View Layer	Updating Geometry BVH Mesh 6/9 Building BVH			
Fra:1	Mem:17.96M (Peak 20.90M)	Time:00:00.01	Mem:0.20M, Peak:0.22M	Scene, View Layer	Updating Geometry BVH Mesh 7/9 Building BVH			
Fra:1	Mem:17.96M (Peak 20.90M)	Time:00:00.01	Mem:0.27M, Peak:0.29M	Scene, View Layer	Updating Scene BVH Building			
Fra:1	Mem:17.96M (Peak 20.90M)	Time:00:00.01	Mem:0.27M, Peak:0.29M	Scene, View Layer	Updating Scene BVH Building BVH			
Fra:1	Mem:17.96M (Peak 20.90M)	Time:00:00.01	Mem:0.29M, Peak:0.29M	Scene, View Layer	Updating Scene BVH Copying BVH to device			
Fra:1	Mem:17.96M (Peak 20.90M)	Time:00:00.01	Mem:0.29M, Peak:0.29M	Scene, View Layer	Updating Mesh Computing normals			
Fra:1	Mem:18.04M (Peak 20.90M)	Time:00:00.01	Mem:0.29M, Peak:0.29M	Scene, View Layer	Updating Mesh Copying Mesh to device			
Fra:1	Mem:18.04M (Peak 20.90M)	Time:00:00.01	Mem:0.36M, Peak:0.36M	Scene, View Layer	Updating Objects Flags			
Fra:1	Mem:18.04M (Peak 20.90M)	Time:00:00.01	Mem:0.36M, Peak:0.36M	Scene, View Layer	Updating Primitive Offsets			
Fra:1	Mem:18.04M (Peak 20.90M)	Time:00:00.01	Mem:0.36M, Peak:0.36M	Scene, View Layer	Updating Images			
Fra:1	Mem:18.04M (Peak 20.90M)	Time:00:00.01	Mem:0.36M, Peak:0.36M	Scene, View Layer	Updating Images Loading sky_nishita			
Fra:1	Mem:19.05M (Peak 20.90M)	Time:00:00.11	Mem:1.36M, Peak:1.36M	Scene, View Layer	Updating Camera Volume			
Fra:1	Mem:19.05M (Peak 20.90M)	Time:00:00.11	Mem:1.36M, Peak:1.36M	Scene, View Layer	Updating Lookup Tables			
Fra:1	Mem:19.05M (Peak 20.90M)	Time:00:00.11	Mem:1.44M, Peak:1.44M	Scene, View Layer	Updating Lights			
Fra:1	Mem:19.05M (Peak 20.90M)	Time:00:00.11	Mem:1.44M, Peak:1.44M	Scene, View Layer	Updating Lights Importance map			
Fra:1	Mem:20.06M (Peak 24.55M)	Time:00:00.12	Mem:2.46M, Peak:4.96M	Scene, View Layer	Updating Lights Computing tree			
Fra:1	Mem:20.06M (Peak 24.55M)	Time:00:00.12	Mem:2.46M, Peak:4.96M	Scene, View Layer	Updating Integrator			
Fra:1	Mem:21.06M (Peak 24.55M)	Time:00:00.12	Mem:3.46M, Peak:4.96M	Scene, View Layer	Updating Film			
Fra:1	Mem:21.06M (Peak 24.55M)	Time:00:00.12	Mem:3.38M, Peak:4.96M	Scene, View Layer	Updating Lookup Tables			
Fra:1	Mem:21.06M (Peak 24.55M)	Time:00:00.12	Mem:3.46M, Peak:4.96M	Scene, View Layer	Updating Baking			
Fra:1	Mem:21.06M (Peak 24.55M)	Time:00:00.12	Mem:3.46M, Peak:4.96M	Scene, View Layer	Updating Device Writing constant memory			
Fra:1	Mem:21.06M (Peak 24.55M)	Time:00:00.12	Mem:3.46M, Peak:4.96M	Scene, View Layer	Sample 0/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:00:00.58	Remaining:01:58.16	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 1/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:00:28.73	Remaining:01:24.08	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 65/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:00:35.42	Remaining:01:17.66	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 80/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:00:40.74	Remaining:01:07.69	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 96/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:00:46.06	Remaining:00:59.06	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 112/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:00:51.30	Remaining:00:51.18	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 128/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:00:56.52	Remaining:00:43.86	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 144/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:01:01.78	Remaining:00:36.99	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 160/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:01:07.20	Remaining:00:30.49	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 176/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:01:12.44	Remaining:00:24.10	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 192/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:01:17.69	Remaining:00:17.90	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 208/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:01:22.93	Remaining:00:11.83	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 224/256			
Fra:1	Mem:100.18M (Peak 100.18M)	Time:01:28.18	Remaining:00:05.87	Mem:82.57M, Peak:82.57M	Scene, View Layer Sample 240/256			
Fra:1	Mem:139.73M (Peak 210.93M)	Time:01:33.46	Mem:82.57M, Peak:82.57M	Scene, View Layer	Sample 256/256			
Fra:1	Mem:139.73M (Peak 210.93M)	Time:01:33.46	Mem:82.57M, Peak:82.57M	Scene, View Layer	Finished			
Fra:1	Mem:57.08M (Peak 210.93M)	Time:01:33.47	Compositing					
Fra:1	Mem:57.08M (Peak 210.93M)	Time:01:33.47	Compositing Initializing execution					
Fra:1	Mem:57.09M (Peak 210.93M)	Time:01:33.48	Compositing Operation 2-6					
Fra:1	Mem:57.09M (Peak 210.93M)	Time:01:33.48	Compositing Operation 3-6					
Fra:1	Mem:88.79M (Peak 210.93M)	Time:01:33.48	Compositing Operation 4-6					
Fra:1	Mem:88.79M (Peak 210.93M)	Time:01:33.48	Compositing Operation 5-6					
Fra:1	Mem:88.79M (Peak 210.93M)	Time:01:34.57	Compositing Operation 6-6					
Fra:1	Mem:88.79M (Peak 210.93M)	Time:01:34.58	Compositing Operation 7-6					
Saved: '/net/people/plgrid/plgqesterius/labs/lab2/flower_render_test/Flower01_0001.png'								
Time: 01:34.87 (Saving: 00:00.28)								

CONVERSION TO GIF:

```
ffmpeg -framerate 10 -i Flower01_%04d.png -vf "scale=800:-1:flags=lanczos,palettegen" -y palette.png
ffmpeg -framerate 10 -i Flower01_%04d.png -i palette.png -lavfi "scale=800:-1:flags=lanczos [x]; [x][1:v] paletteuse" -y output.gif
```



HPC-JOBS-HISTORY:

not everything, because list contains 100rows, but idea is apparent

11970071_7	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	98.5%	00:06:24	00:01:36	00:20:00	2024-10-14 11:19:00
11970071_1	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	97.1%	00:06:20	00:01:37	00:20:00	2024-10-14 11:19:01
11970071_2	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	97.1%	00:06:20	00:01:37	00:20:00	2024-10-14 11:19:01
11970071_3	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	96.7%	00:06:20	00:01:37	00:20:00	2024-10-14 11:19:01
11970071_4	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	97.4%	00:06:20	00:01:37	00:20:00	2024-10-14 11:19:01
11970071_5	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	98.3%	00:06:20	00:01:37	00:20:00	2024-10-14 11:19:01
11970071_8	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	97.6%	00:06:36	00:01:39	00:20:00	2024-10-14 11:19:03
11970071_6	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	97.5%	00:06:40	00:01:40	00:20:00	2024-10-14 11:19:04
11970071_9	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	97.7%	00:06:40	00:01:40	00:20:00	2024-10-14 11:19:04
11970071_10	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	96.6%	00:06:52	00:01:43	00:20:00	2024-10-14 11:19:07
11970071_11	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	96.5%	00:07:00	00:01:45	00:20:00	2024-10-14 11:19:09
11970071_15	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	96.8%	00:07:00	00:01:45	00:20:00	2024-10-14 11:19:09
11970071_16	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	97.5%	00:07:04	00:01:46	00:20:00	2024-10-14 11:19:10
11970071_14	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	97.5%	00:07:16	00:01:49	00:20:00	2024-10-14 11:19:13
11970071_17	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	97.2%	00:07:16	00:01:49	00:20:00	2024-10-14 11:19:13
11970071_13	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	97.7%	00:07:20	00:01:50	00:20:00	2024-10-14 11:19:14
11970071_19	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	97.9%	00:07:36	00:01:54	00:20:00	2024-10-14 11:19:16
11970071_18	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	98.2%	00:07:40	00:01:57	00:20:00	2024-10-14 11:19:21
11970071_20	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	98.5%	00:07:40	00:01:57	00:20:00	2024-10-14 11:19:21
11970071_22	blender_sample_job.sh	plgrid	1	4	3.9618	4.9%	97.6%	00:08:40	00:02:10	00:20:00	2024-10-14 11:19:34
11970071_12	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	92.6%	00:08:56	00:02:14	00:20:00	2024-10-14 11:19:38
11970071_21	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	98.6%	00:09:04	00:02:16	00:20:00	2024-10-14 11:19:40
11970071_23	blender_sample_job.sh	plgrid	1	4	3.9618	4.0%	97.7%	00:09:04	00:02:16	00:20:00	2024-10-14 11:19:40
11970071_24	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	97.4%	00:09:40	00:02:25	00:20:00	2024-10-14 11:19:49
11970071_25	blender_sample_job.sh	plgrid	1	4	3.9618	33.1%	97.9%	00:10:04	00:02:31	00:20:00	2024-10-14 11:19:55
11970071_26	blender_sample_job.sh	plgrid	1	4	3.9618	22.0%	97.5%	00:10:36	00:02:39	00:20:00	2024-10-14 11:20:03
11970071_27	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	97.8%	00:11:16	00:02:49	00:20:00	2024-10-14 11:20:13
11970071_28	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	97.9%	00:11:52	00:02:58	00:20:00	2024-10-14 11:20:22
11970071_29	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	98.0%	00:12:36	00:03:09	00:20:00	2024-10-14 11:20:33
11970071_30	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	98.3%	00:13:24	00:03:21	00:20:00	2024-10-14 11:20:45
11970071_31	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	98.3%	00:14:12	00:03:33	00:20:00	2024-10-14 11:20:57
11970071_32	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	97.9%	00:15:00	00:03:47	00:20:00	2024-10-14 11:21:11
11970071_33	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	98.5%	00:15:56	00:03:59	00:20:00	2024-10-14 11:21:23
11970071_34	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	98.4%	00:17:00	00:04:17	00:20:00	2024-10-14 11:21:41
11970071_35	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	98.7%	00:18:12	00:04:33	00:20:00	2024-10-14 11:21:57
11970071_36	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	98.4%	00:19:16	00:04:49	00:20:00	2024-10-14 11:22:13
11970071_37	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	98.6%	00:20:28	00:05:07	00:20:00	2024-10-14 11:22:31
11970071_38	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	98.6%	00:22:04	00:05:31	00:20:00	2024-10-14 11:22:55
11970071_39	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	98.0%	00:23:40	00:05:57	00:20:00	2024-10-14 11:23:21
11970071_40	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	98.0%	00:25:00	00:06:17	00:20:00	2024-10-14 11:23:41
11970071_41	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	98.9%	00:27:04	00:06:46	00:20:00	2024-10-14 11:24:10
11970071_42	blender_sample_job.sh	plgrid	1	4	3.9618	6.0%	98.0%	00:29:32	00:07:23	00:20:00	2024-10-14 11:24:47
11970071_43	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	99.0%	00:31:40	00:07:55	00:20:00	2024-10-14 11:25:19
11970071_44	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	99.0%	00:33:36	00:08:24	00:20:00	2024-10-14 11:25:40
11970071_45	blender_sample_job.sh	plgrid	1	4	3.9618	6.2%	99.1%	00:35:00	00:08:47	00:20:00	2024-10-14 11:26:11
11970071_46	blender_sample_job.sh	plgrid	1	4	3.9618	6.0%	99.1%	00:37:40	00:09:25	00:20:00	2024-10-14 11:26:49
11970071_47	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	99.1%	00:39:24	00:09:51	00:20:00	2024-10-14 11:27:15
11970071_48	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	99.1%	00:41:52	00:10:20	00:20:00	2024-10-14 11:27:52
11970071_49	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	99.1%	00:42:24	00:10:36	00:20:00	2024-10-14 11:28:00
11970071_50	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	99.2%	00:42:56	00:10:44	00:20:00	2024-10-14 11:28:00
11970071_51	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	99.1%	00:44:56	00:11:14	00:20:00	2024-10-14 11:28:30
11970071_52	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	99.3%	00:45:52	00:11:20	00:20:00	2024-10-14 11:28:52
11970071_53	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	99.3%	00:46:32	00:11:30	00:20:00	2024-10-14 11:29:02
11970071_54	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	99.3%	00:47:04	00:11:46	00:20:00	2024-10-14 11:29:10
11970071_55	blender_sample_job.sh	plgrid	1	4	3.9618	34.7%	99.4%	00:48:04	00:12:01	00:20:00	2024-10-14 11:29:25
11970071_58	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	99.5%	00:48:56	00:12:14	00:20:00	2024-10-14 11:29:30
11970071_59	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	99.4%	00:49:12	00:12:18	00:20:00	2024-10-14 11:29:42
11970071_63	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	99.5%	00:49:36	00:12:24	00:20:00	2024-10-14 11:29:46
11970071_67	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	99.4%	00:49:36	00:12:24	00:20:00	2024-10-14 11:29:40
11970071_68	blender_sample_job.sh	plgrid	1	4	3.9618	5.0%	99.4%	00:49:40	00:12:25	00:20:00	2024-10-14 11:29:49
11970071_65	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	99.3%	00:49:44	00:12:26	00:20:00	2024-10-14 11:29:50
11970071_70	blender_sample_job.sh	plgrid	1	4	3.9618	5.9%	99.4%	00:49:44	00:12:26	00:20:00	2024-10-14 11:29:50