

640x640x640	ARCHER2 (1 nodes, 4 MPI processes)	ARCH 3 (128GB memory, 8 MPI processes)	ARCH 4 (128GB memory, 8 MPI processes)	ARCH 4 (serial, 20GB memory)	cloud10	Laptop (NVIDIA 1060M)
ParaView Version	5.9.1	5.10.1	5.3.0	5.3.0	4.4.0	5.9.1
Smart	~4 fps	~2 fps	~0.15 fps (with Error 1)	~0.2 fps (with Error 1)		
GPU	~3 fps	~2 fps	~0.15 fps (with Error 1)	~0.3 fps (with Error 1)	no GPUs	~2.6 fps
OSPRay	ParaView not built with OSPRay	~1.5 fps	VTK not built with OSPRay (Error 2)	blank screen (0.09) or server crash	OSPRay only from version 5.1.0	~2 fps
Ray Cast Only	cannot render in full LOD (0.021)	cannot render in full LOD	cannot render in full LOD (0.2)	cannot render in full LOD (even for screenshot)	~0.5 fps	cannot render in full LOD

- 1 `pthread_setaffinity_np` failure for tid 0: Invalid argument (0 to 39)
2 Warning VTK is not linked to OSPRay so can not VolumeRender with it

640x640x640	ARCHER2 (1 nodes, 4 MPI processes)	ARCHER2 (1 nodes, 4 MPI processes)	ARCHER2 (1 nodes, 16 MPI processes)	ARCHER2 (1 nodes, 64 MPI processes)	ARCHER2 (1 nodes, 128 MPI processes)
ParaView Version	5.10.1	5.9.1	5.9.1	5.9.1	5.9.1
Smart	~5.8 fps	~4 fps	~4 fps	~3 fps	~4 fps
GPU	~4 fps	~3 fps	~2 fps	~4 fps	~3 fps
OSPRay	~0.5 fps	ParaView not built with OSPRay	ParaView not built with OSPRay	ParaView not built with OSPRay	ParaView not built with OSPRay
Ray Cast Only	~0.1 fps	cannot render in full LOD (0.021)	cannot render in full LOD	cannot render in full LOD	cannot render in full LOD

640x640x640	ARCHER2 (2 nodes, 4 MPI processes)	ARCHER2 (2 nodes, 16 MPI processes)	ARCHER2 (2 nodes, 64 MPI processes)	ARCHER2 (2 nodes, 128 MPI processes)
ParaView Version		5.9.1	5.9.1	5.9.1
OSPRay		Client connected: (82.920s) [processer 0 (82.950s) [processer 0	[vtkSocketCommunicator.c:781 - ERROR: vtkSocketCommunicator (0x679b4d): Could not receive tag: 1 [vtkTCPNetworkAccessManager:397 - ERROR: vtkTCPNetworkAccessManager (0x6b6c6d): Some error in socket processing	
Ray Cast Only				

NOTE: With high resolution data, such as 1280x1280x1280, ParaView gives a warning and fails to render in GPU/Smart mode:
Error: Capabilities Check via proxy texture 3D allocation failed
(still curious about the GPU mode, knowing that Archer2 is not advertised to have a GPU):

1024 ⁻³	ARCHER2 (1 nodes, 1 MPI processes)	ARCHER2 (1 nodes, 2 MPI processes)	ARCHER2 (1 nodes, 4 MPI processes)	ARCHER2 (1 nodes, 8 MPI processes)	ARCHER2 (1 nodes, 16 MPI processes)
ParaView Version	5.10.1	5.10.1	5.10.1	5.10.1	5.10.1
Smart	ERROR 1	ERROR 1	ERROR 1	~1.9 fps	~2 fps
GPU	ERROR 1	ERROR 1	ERROR 1	~2.1 fps	~2 fps
OSPRay	~0.6 fps	~0.6 fps + artifacts	~0.4 fps + artifacts	~0.2 fps + artifacts	~0.11 fps + artifacts
Ray Cast Only	cannot render in full LOD (0.021 fps)	cannot render in full LOD (0.021 fps)	cannot render in full LOD (0.0204 fps)	cannot render in full LOD (0.0195 fps)	cannot render in full LOD (0.018 fps)
Surface ID	no process IDs given	ERROR 2	ERROR 3	ERROR 4	ERROR 5

Error Listing:

- 1 `vtkVolumeTexture (0x510ed80):` Capabilities check via proxy texture 3D allocation failed!
2 `vtkTextureObject (0x2a575d0):` Attempt to use a texture buffer exceeding your hardware's limits. This can happen when trying to color by cell data with a large dataset. Hardware limit is 65536 values while 9820162 was requested.
3 `vtkTextureObject (0x2a76d00):` Attempt to use a texture buffer exceeding your hardware's limits. This can happen when trying to color by cell data with a large dataset. Hardware limit is 65536 values while 4007622 was requested.
4 `vtkTextureObject (0x2a4b100):` Attempt to use a texture buffer exceeding your hardware's limits. This can happen when trying to color by cell data with a large dataset. Hardware limit is 65536 values while 2452482 was requested.
5 `vtkTextureObject (0x2b05420):` Attempt to use a texture buffer exceeding your hardware's limits. This can happen when trying to color by cell data with a large dataset. Hardware limit is 65536 values while 1634562 was requested.

Due to highly diverging CPU/GPU results, later tests only consider Smart/GPU Rendering Modes

1024 ⁻³	ARCHER2 (1 nodes, 32 MPI processes)	ARCHER2 (1 nodes, 64 MPI processes)	ARCHER2 (1 nodes, 128 MPI processes)	ARCHER2 (1 nodes, 256 MPI processes)	ARCHER2 (1 nodes, 512 MPI processes)
ParaView Version	5.10.1	5.10.1	5.10.1	5.10.1	ERROR 10
Smart	~2.7 fps	~2.8 fps	~2.5 fps	~0.85 fps	.
GPU	~2.5 fps	~2.8 fps	~2.3 fps	~0.80 fps	.
Surface ID	ERROR 6	ERROR 7	ERROR 8	ERROR 9	ERROR 11*

- 6 `vtkTextureObject (0x22ab220):` Attempt to use a texture buffer exceeding your hardware's limits. This can happen when trying to color by cell data with a large dataset. Hardware limit is 65536 values while 1020802 was requested.
7 `vtkTextureObject (0x2954e00):` Attempt to use a texture buffer exceeding your hardware's limits. This can happen when trying to color by cell data with a large dataset. Hardware limit is 65536 values while 611842 was requested.
8 `vtkTextureObject (0x2c23b40):` Attempt to use a texture buffer exceeding your hardware's limits. This can happen when trying to color by cell data with a large dataset. Hardware limit is 65536 values while 407682 was requested.
9 `vtkTextureObject (0x2294d70):` Attempt to use a texture buffer exceeding your hardware's limits. This can happen when trying to color by cell data with a large dataset. Hardware limit is 65536 values while 254402 was requested.
10 `run: error: Unable to create step for job 2189355: More processors requested than permitted`
11* `vtkTextureObject (0x38a6b90):` Attempt to use a texture buffer exceeding your hardware's limits. This can happen when trying to color by cell data with a large dataset. Hardware limit is 65536 values while 152322 was requested.
* Run on 2 Nodes

1024 ⁻³	ARCHER2 (2 nodes, 64 MPI processes)	ARCHER2 (2 nodes, 128 MPI processes)	ARCHER2 (2 nodes, 256 MPI processes)	ARCHER2 (2 nodes, 512 MPI processes)
ParaView Version	5.10.1	5.10.1	5.10.1	5.10.1
Smart	~3.4 fps	~3 fps	~1.6 fps	~0.28 fps

1024 ⁻³	ARCHER2 (4 nodes, 128 MPI processes)	ARCHER2 (4 nodes, 256 MPI processes)	ARCHER2 (4 nodes, 512 MPI processes)
ParaView Version	5.10.1	5.10.1	5.10.1
Smart	~4 fps	~2 fps	~0.3 fps

1024 ⁻³	ARCHER2 (16 nodes, 512 MPI processes)	ARCHER2 (16 nodes, 1024 MPI processes)	ARCHER2 (16 nodes, 2048 MPI processes)	ARCHER2 (2 nodes, 64 MPI processes)	ARCHER2 (2 nodes, 128 MPI processes)
ParaView Version	5.10.1	5.10.1	5.10.1	5.10.1	5.10.1
Smart	~0.5 fps	~0.04 fps	crash	~4.4 fps	~4.3 fps
Surface ID	ERROR 11	ERROR 12	~7 fps		

- 12 `vtkTextureObject (0x28d32e0):` Attempt to use a texture buffer exceeding your hardware's limits. This can happen when trying to color by cell data with a large dataset. Hardware limit is 65536 values while 101442 was requested.

2560 ⁻³	ARCHER2 (16 nodes, 64 MPI processes)	ARCHER2 (4 nodes, 64 MPI processes)	ARCHER2 (2 nodes, 64 MPI processes)	ARCHER2 (1 nodes, 64 MPI processes)
ParaView Version	5.10.1	5.10.1	5.10.1	5.10.1
Smart	~1.5 fps	~1.25 fps	~1.3 fps	~0.8 fps