

HLIT-VDI for working with proprietary software: COMSOL, MATLAB, MATHEMATICA, MAPLE

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HISTORY

V1.0	XenServer	HDX3DPRO	Receiver
V2.0	KVM	VNC	TightVNC
V3.0	Proxmox	VNC	Guacamole (web)



V2.0, KVM, VNC

Server specs

2x Intel Xeon E5-2697

8x Nvidia Tesla M60

512 Gb RAM

VM specs

4 cores

24 Gb RAM

8 Gb GPU

Centos 7

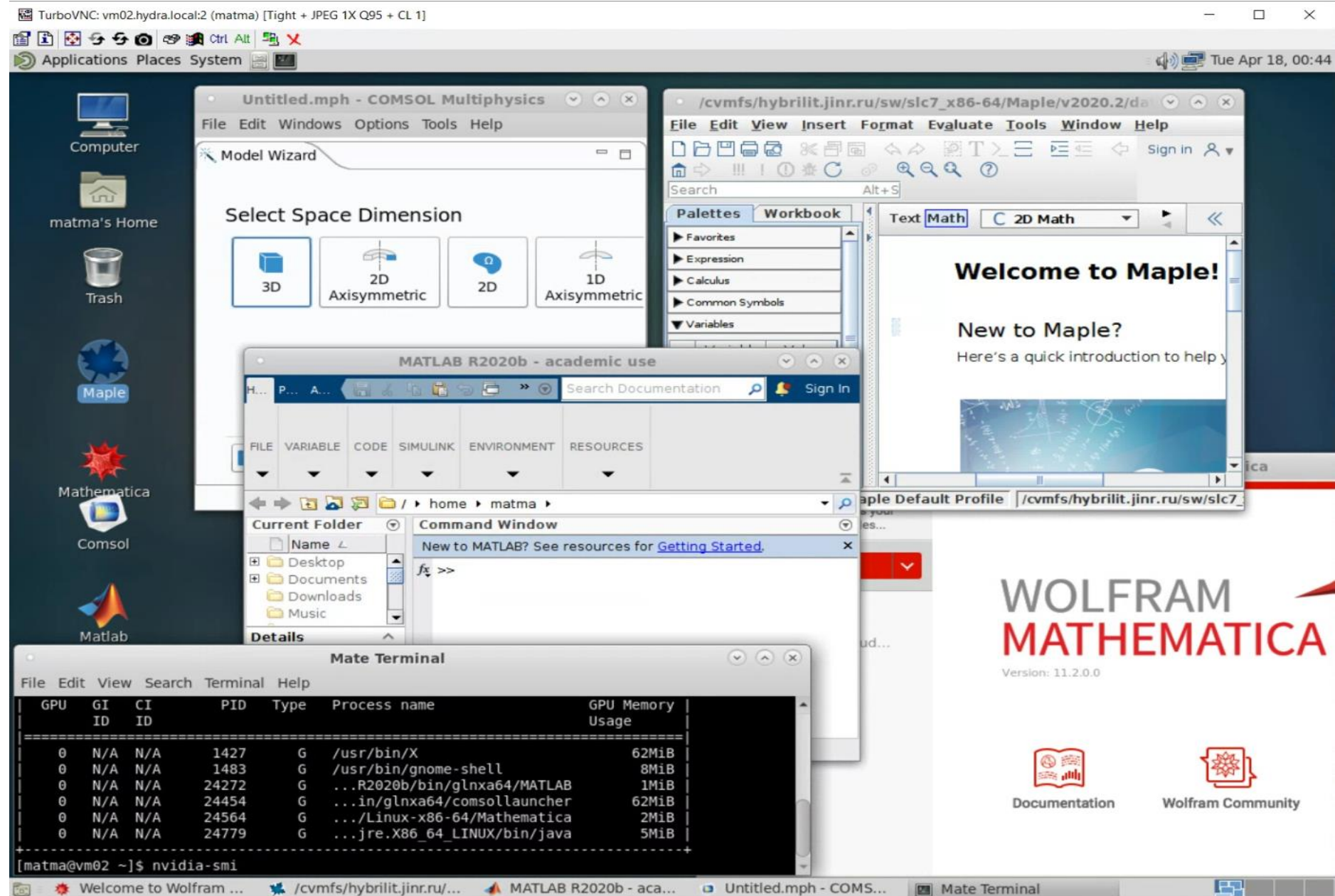
Software

Matlab 2022

Maple 2020

Mathematica 11.2

Comsol 6.2



Computer
maple.mw matlab.mathematica.nb

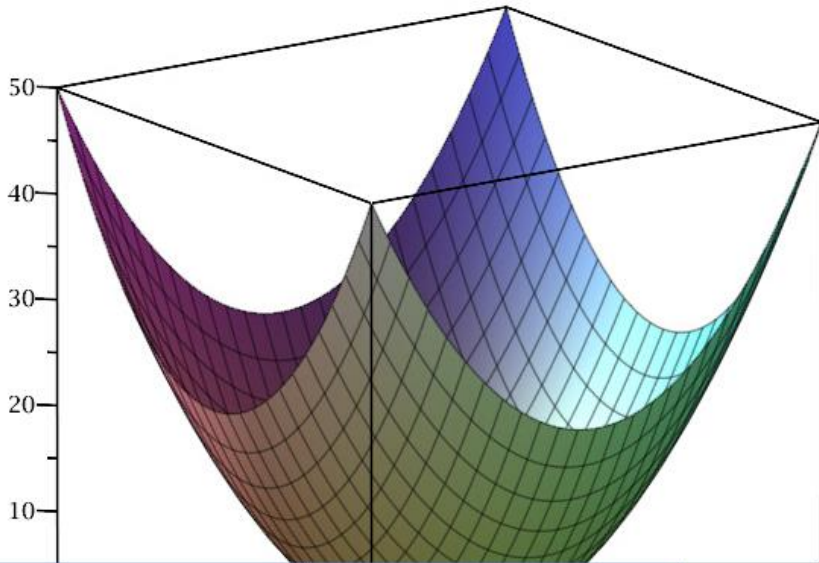
/zfs/store1.hydra.local/user/t/test11/Desktop/maple.mw - [Server 3] - Maple 2020

File Edit View Insert Format Evaluate Tools Window Help

Start.mw x maple.mw x

Text Math C 2D Math Lucida Bright 12 B I U

$plot3d(x^2 + y^2, x = -5..5, y = -5..5);$



Math Editor Shortcuts
Evaluate: Enter
Evaluate Inline: Alt+Enter
Toggle Math/Text: F5
Toggle to Executable Math: Shift+F
Exit Fraction/Superscript: →
Assignments: a := b
Functions: f := x -> x^2
Equations: x = y
Command Complete: Esc
Navigate Placeholders: Tab

Ready Editable Maple Default Profile /zfs/store1.hydra.local/user/t/test11/Desktop Memory: 4.18M Time: 0.13s Zoom: 100% Math Mode

TurboVNC: vm01.hydra.local:4 (test11) [Tight + JPEG 1X Q95 + CL 1]

Applications Places System Mon Nov 24, 23:29

MATLAB R2022b - academic use

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FILE NAVIGATE CODE ANALYZE

Current Folder: /zfs/store1.hydra.local/user/t/test11/Desktop

Details

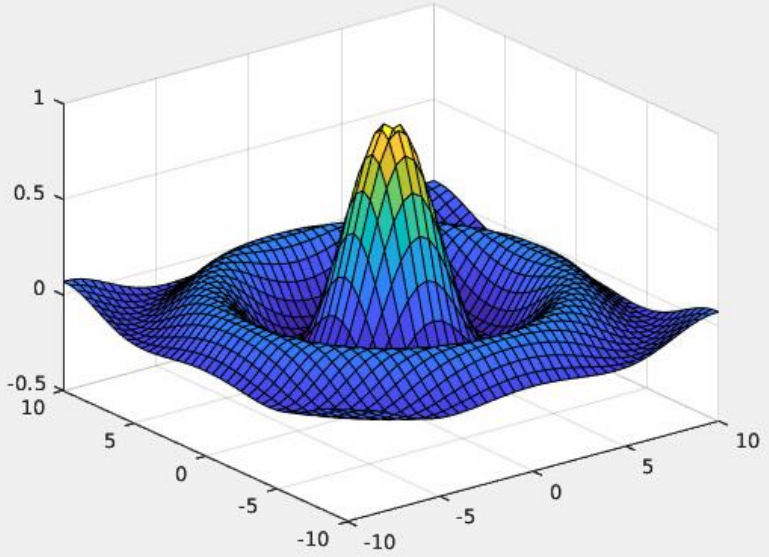
Workspace

Name	Value
x	1x41 double
X	41x41 double
y	1x41 double
Y	41x41 double
Z	41x41 double

Editor - /zfs/store1.hydra.local/user/t/test11/Desktop

```
matlab.m
1 x = -10:0.5:10;
2 y = -10:0.5:10;
3 [X,Y] = meshgrid(x,y);
4 Z = sin(sqrt(X.^2 + Y.^2))./sqrt(X.^2 + Y.^2);
5 surf(X,Y,Z);
6
```

Figure 1



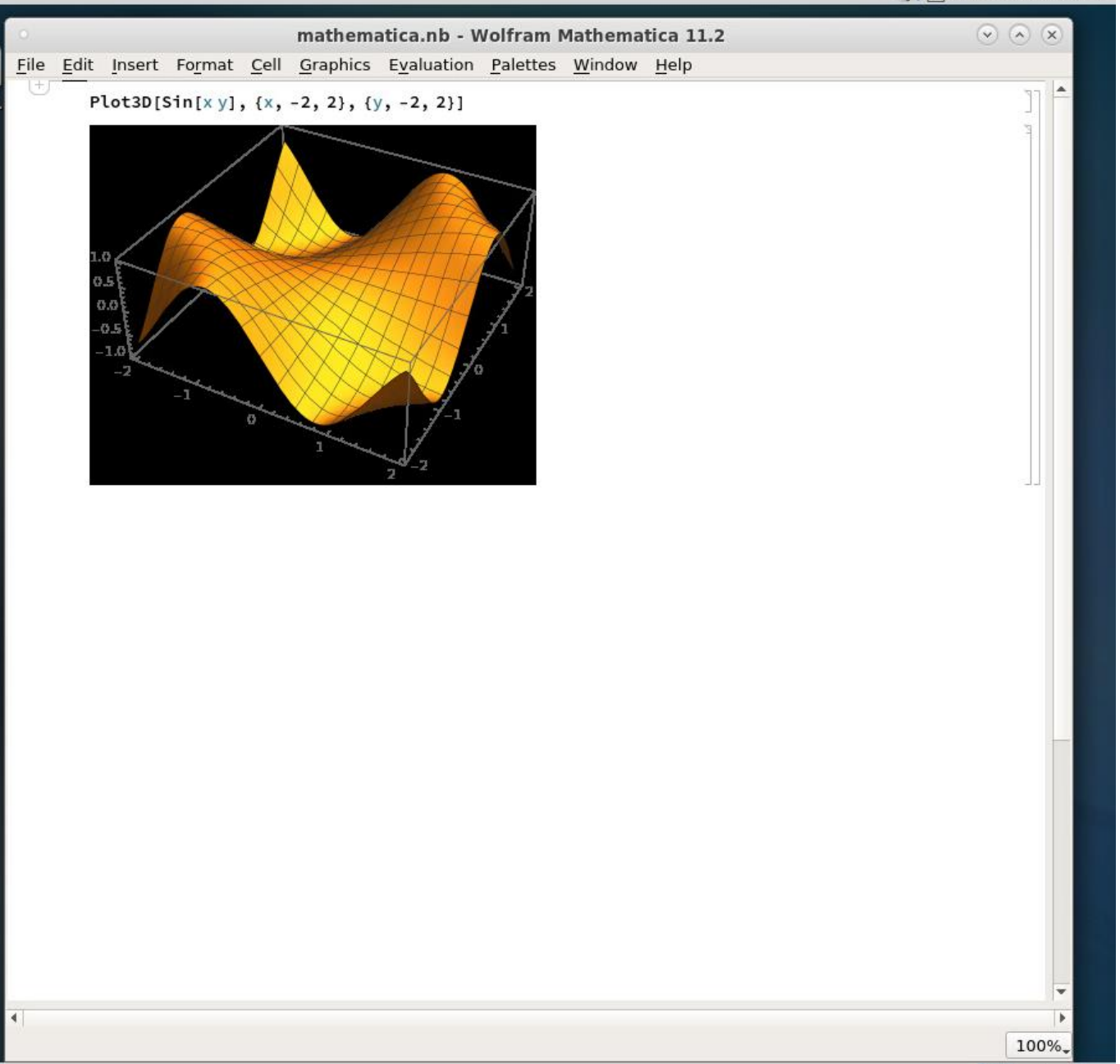
Command Window

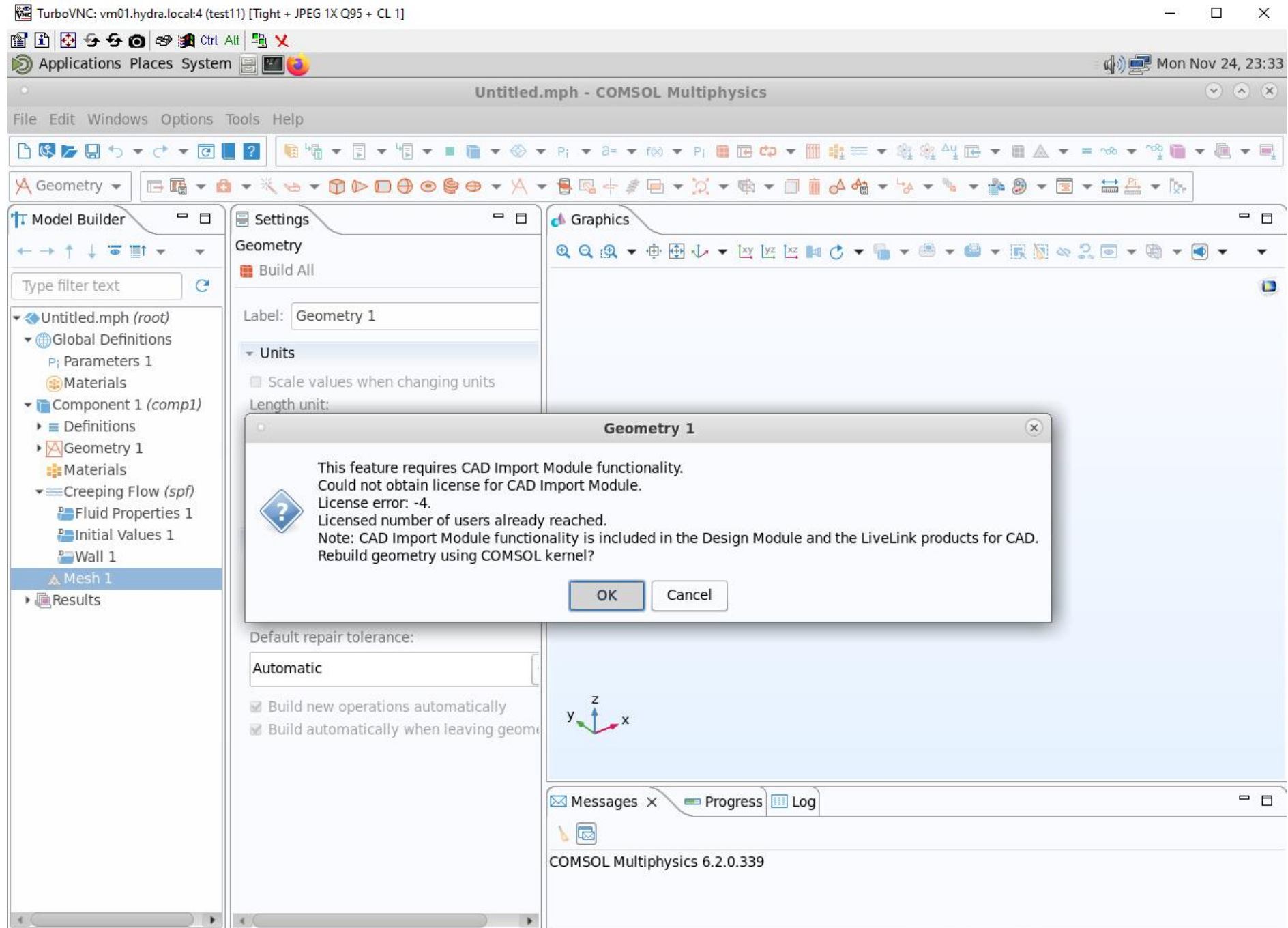
New to MATLAB? See resources for [Getting Started](#).

```
>> matlab
fx >>
```

Zoom: 100% UTF-8 LF script Ln 3 Col 8

Computer
maple.mw matlab.
test11's Home
Maple
Trash
Matlab
Mathematica
Comsol





TurboVNC: vm01.hydra.local:4 (test11) [Tight + JPEG 1X Q95 + CL 1]

Applications Places System

Mon Nov 24, 23:34

Mate Terminal

File Edit View Search Terminal Help

```
[test11@vm01 ~]$ nvidia-smi
Mon Nov 24 23:33:54 2025
```

NVIDIA-SMI 515.43.04 Driver Version: 515.43.04 CUDA Version: 11.7									
GPU	Name	Persistence-M	Bus-Id	Disp.A	Volatile	Uncorr. ECC			
Fan	Temp	Perf	Pwr:Usage/Cap	Memory-Usage	GPU-Util	Compute M.			
MIG M.									
0	Tesla M60	Off	00000000:00:08.0	Off	0%	Off			
N/A	21C	P8	13W / 150W	83MiB / 8192MiB		Default			
N/A									

Processes:							
GPU	GI ID	CI ID	PID	Type	Process name	GPU Memory Usage	
0	N/A	N/A	1516	G	/usr/bin/X	68MiB	
0	N/A	N/A	1572	G	/usr/bin/gnome-shell	8MiB	
0	N/A	N/A	20791	G	.../Linux-x86-64/Mathematica	2MiB	

```
[test11@vm01 ~]$
```

Mathematica

Open from Cloud...

Documentation Wolfram Community Resources

Show at startup ☒

7 CENTOS

Welcome to Wolfram ... Mate Terminal


```
user01@localhost:~  
[user01@localhost ~]$ nvidia-smi  
Mon Nov 24 23:55:26 2025  
+-----+  
| NVIDIA-SMI 550.54.14              Driver Version: 550.54.14      CUDA Version: 12.4     |  
+-----+  
| GPU   Name                               Persistence-M   Bus-Id        Disp.A | Volatile Uncorr. ECC |  
| Fan   Temp   Perf           Pwr:Usage/Cap       Memory-Usage | GPU-Util  Compute M. |  
|=====+=====+  
|    0  Tesla V100-SXM2-32GB             On               00000000:06:10:0  Off          0  
| N/A   30C    P0              40W / 300W           82MiB / 32768MiB |    0%      Default  |  
|=====+=====+  
+-----+  
+-----+  
| Processes:                               GPU Memory |  
| GPU   GI    CI        PID   Type   Process name                      Usage |  
|=====+=====+  
|    0  N/A   N/A         1344   G   /usr/libexec/Xorg                  66MiB |  
|    0  N/A   N/A         1369   G   /usr/bin/gnome-shell               14MiB |  
+-----+  
[user01@localhost ~]$
```



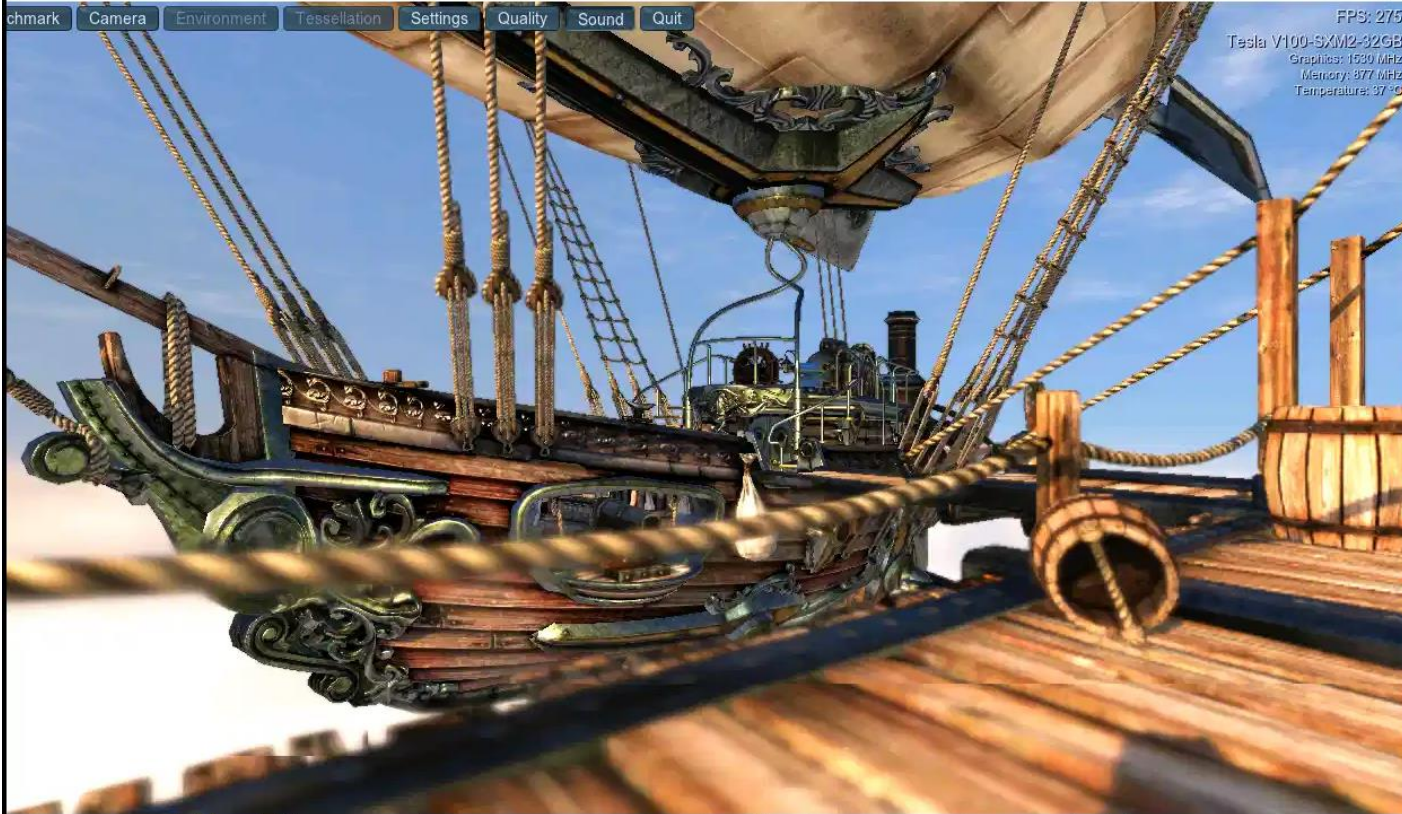
Корзина

Engine Heaven Benchmark 4.0 Basic (Direct3D11)

enchmark Camera Environment Tessellation Settings Quality Sound Quit

FPS: 275

Tesla V100-SXM2-32GB
Graphics: 1530 MHz
Memory: 877 MHz
Temperature: 37 °C



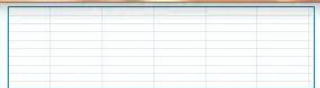
0%



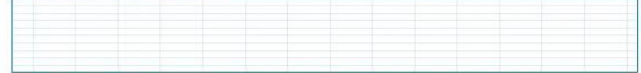
Ethernet
Ethernet
0: 118 Гб; 0,4 Мбит/с



Вычисление 0
29% (37 °C)



Использование выделенной памяти 32,0 Гб



Использование общей памяти 8,0 Гб



Использование 29% Выделенная память 0,4/32,0 Гб Версия DirectX: 12 (FL 1.0 : Co...
Зарезервированная аппаратно память: 404 МБ

Меньше Открыть монитор ресурсов



23:57
24.11.2025 ENG