

EUC Score Introduction

Q4/2026

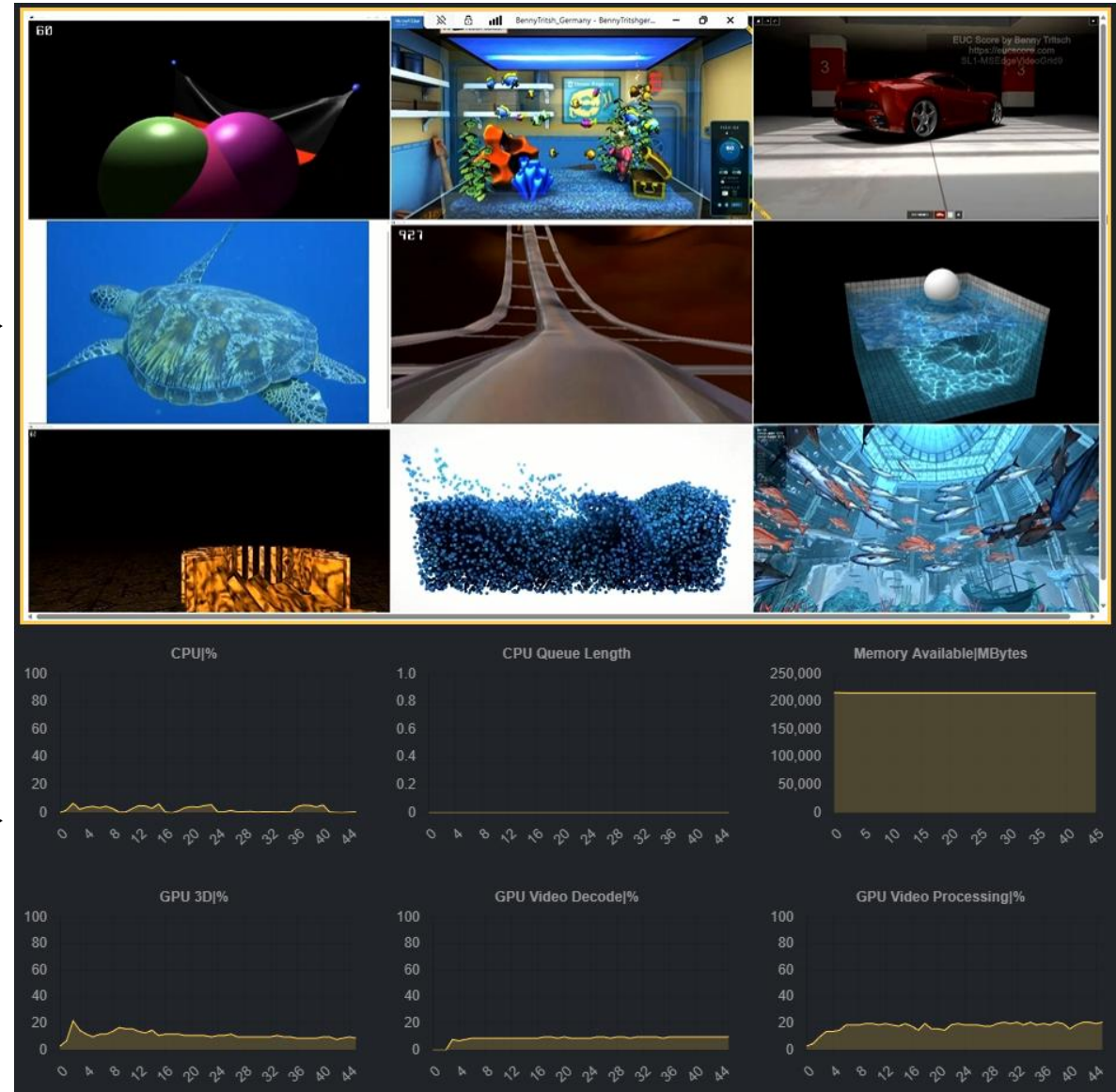
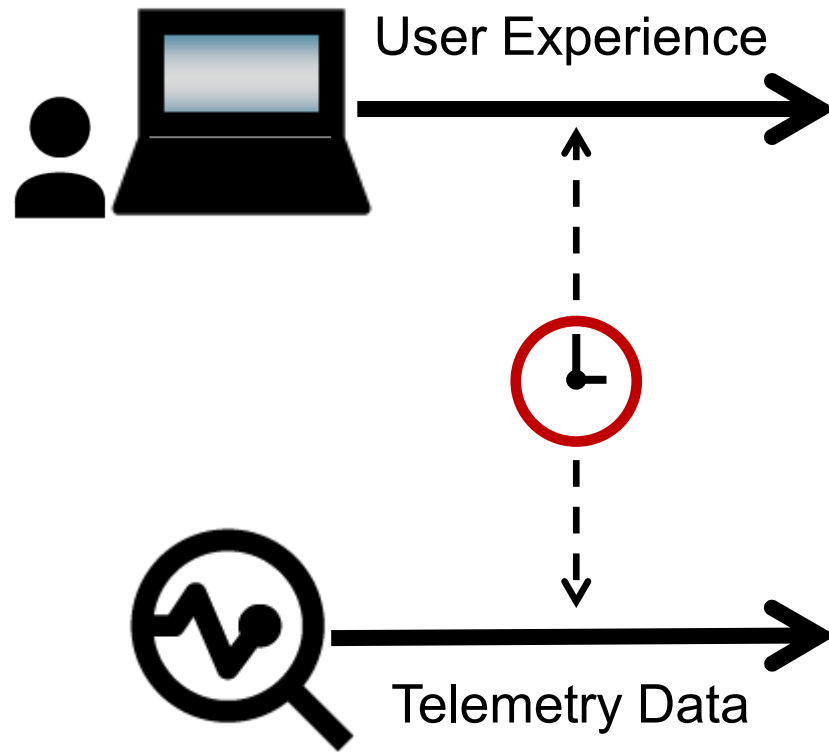
Dr. Benny Tritsch | Independent Performance Data Scientist
info@eucscore.com | <https://drtritsch.com> | [linkedin.com/in/drtritsch](https://www.linkedin.com/in/drtritsch)



EUC Score measures and quantifies
perceived end-user experience in Windows
remoting and digital workspace environments,
both on premises and in the cloud – fast,
precise, repeatable and intuitive

...and with a globally unique data visualization

Screen Videos + Telemetry Data Combined



From a User's Perspective: Quality Criteria

	Boot and logon duration	Measure boot time + logon time + user session load time until it is ready for user interaction. Includes identity management and authentication methods.
	Application and content load time	Measure time from user starting an application until the content appears and the application is ready for user input, including access to the storage system.
	User input delay (“Lag”)	Measures responsiveness of graphical elements after user-initiated triggers = “time from mouse click to screen update” (lag, latency, system response time).
	Graphics APIs supported	Detect incompatibilities when running graphics applications using the DirectX, OpenGL, Vulkan and WebGL APIs.
	Media formats supported	Detect incompatibilities when opening and playing media files, such as MP4, MPEG, MOV, WMV or AVI.
	Distortion of media	Measure media and screen output quality. Detect image, animation, and audio/video compression and decompression artifacts and anomalies.
	Screen refresh rate	Measure the number of times per second that the desktop or application can draw consecutive images on the screen and in the host frame buffer (frames per sec = fps).
	Endpoint specs and quality	Determine the screens' number of pixels, density, and visual dimensions – frame buffer requirements grow with resolution and screen number. Detect periphery incompatibilities.
	Application reliability and stability	Detect application hangs, freezes, crashes or unhandled exceptions. Measure consistency, dependability and robustness of applications.
	Session consistency and resilience	Check if user state is preserved across subsequent sessions. Measure session disruptions, hangs, disconnects/reconnects, availability, timeouts and redundancy.

Six Benefits of Using EUC Score

Diagnose end-user pain symptoms and solve IT support sorrows with proactive synthetic testing



Identify potential pain

Pre-production capabilities,
performance and load testing



Examine existing pain

Ad-hoc diagnostics in
production environments



Prevent new pain

What-if analysis and
comparison of system designs
and migration scenarios



Quantify pain relief success

Before-after analysis of system
optimizations and software updates



Measure chronic pain

DaaS and VDI service level
agreement management



Deliver less pain by design

EUC software quality assurance
and quality control

User Experience Benchmarking

EUC Score Toolset



Simulated
Workloads



Telemetry
Data



User
Activities



Screen
Recording

Scientific Data Analysis and Visualization

EUC Score Benchmarking – Step-by-Step

1. Install the EUC Score toolset on the system under test
2. Open Simload Runner and collect system information
3. Run Score Simloads on the system under test
4. Run Primary Simloads, record screen videos and collect telemetry data
5. Use Sync Player to visualize and analyze screen videos and telemetry data

EUC Score Freeware

<https://eucscore.com/freeware/>

Last update: 14 September 2026

EUC Score Base Installation Package v26.09 - includes Primary Base Simloads, 2 Personas, 10 Score Simloads, new versions of Simload Runner and Data Miner, and some supplementary tools

Download

EUC Score Base Installation Package v26.07 - includes Primary Base Simloads, 2 Personas, 10 Score Simloads, an activity recorder, Simload Runner, and some supplementary tools

Download

Stand-alone EUC Score Data Miner v24.10 - Analyze hardware and software of physical or virtual Windows machines. Just download and unpack the ZIP file and start DataMiner.exe

Download

EUC Score Logo Package - Logos and Wallpapers

Download

EUC Score Introduction Q1/2026 - Slide Deck (PDF)

Download

EUC Score Downloads – Registration Required

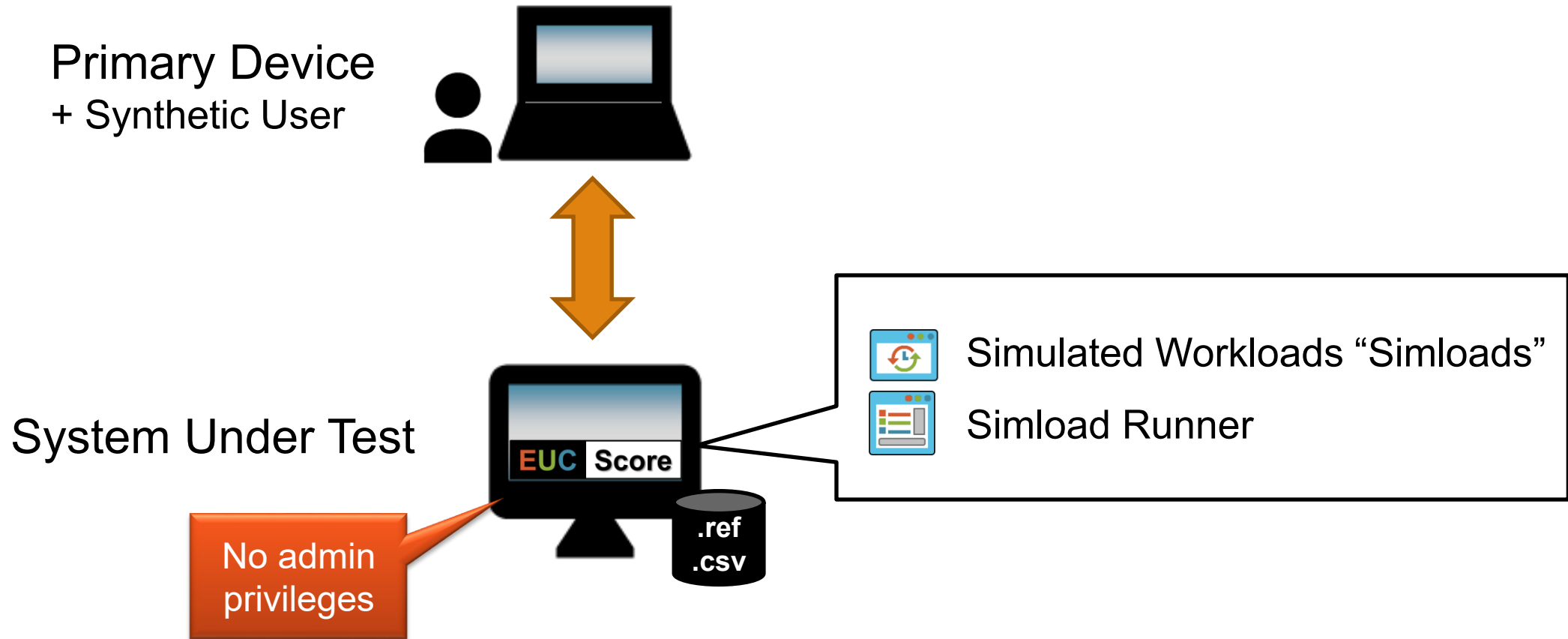
Last update: 14 September 2026

EUC Score v26.07 Installer Packages (+ updated base components)

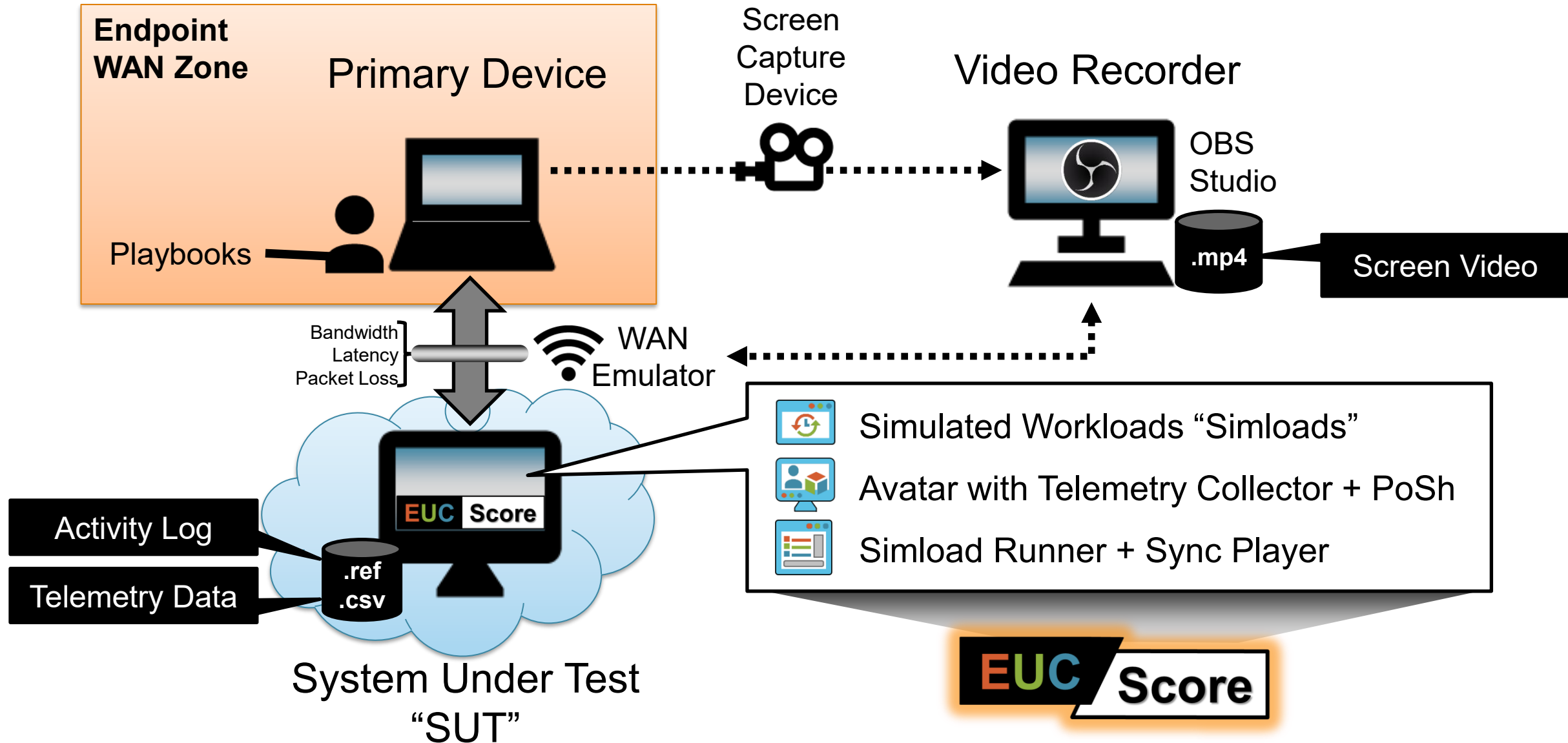
EUC Score Base Installer Package v26.09 - MANDATORY, INSTALL FIRST!		Download
EUC Score Enterprise Installer Package v26.07 - INSTALL AFTER BASE PACKAGE	More Simloads	Download
EUC Score Enterprise 3rd Party Installer Package v26.07 - INSTALL AFTER ENTERPRISE PACKAGE		Download
EUC Score Avatar Installer Package v26.07 - INSTALL AFTER BASE OR ENTERPRISE PACKAGE	Better Control	Download
EUC Score Sync Player Installer Package v26.07	Visualization	Download

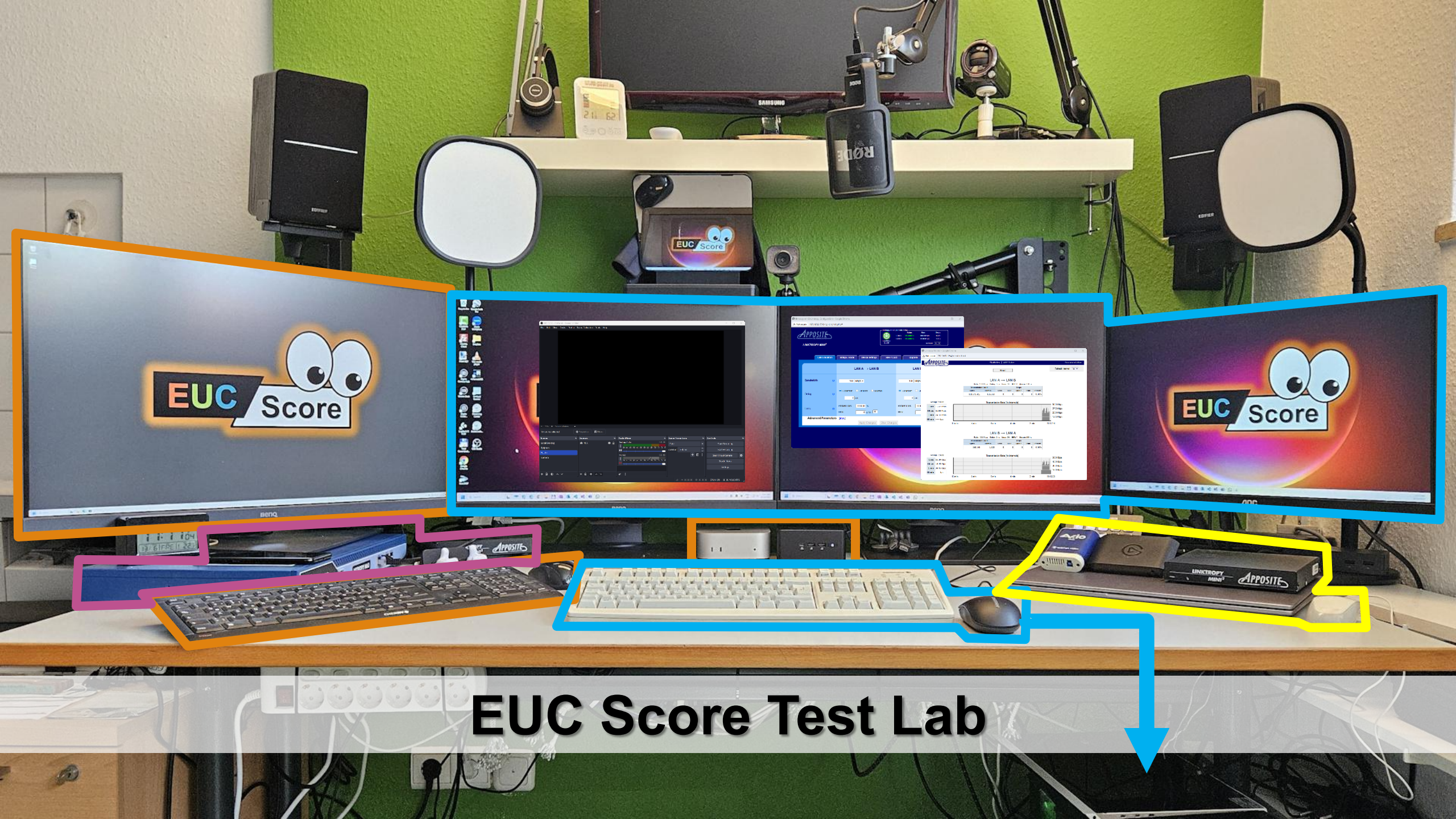
EUC Score Basic Lab

Ad-hoc Observation of Perceived User Experience



EUC Score Enterprise Test Lab





EUC Score Test Lab

EUC Score - Simload Runner v26.09 - Community Edition

Home Edit View Scan Info

TelemetryDesktopSysInfoScoreSettingsExit

SL0-TestScreen

System Information Summary

Computername=LANCELOT
Manufacturer=ASUS
Model=System Product Name
OSName=Microsoft Windows 11 Enterprise
OSVersion=10.0.26200.9457
InstallDate=03/10/2025 11:18:44
LastBootUpTime=09/20/2026 12:20:00
MemoryTotal=63.77GB
MemoryFree=47.45GB
CPU1=11th Gen Intel(R) Core(TM) i7-11700K @ 3.60GHz
MaxClockSpeedCPU1=3600MHz
CPUCores/vCPUs=16
GPU1=Intel(R) UHD Graphics 750
GPU2=NVIDIA GeForce RTX 4060
GPU3=DisplayLink USB Device
GPU4=DisplayLink USB Device
PrimaryDisplay=1920x1200 @ 59Hz
Monitor0=Left:0 Top:-600 Right:5760 Bottom:1200
Monitor1=Left:1920 Top:0 Right:3840 Bottom:1200
Monitor2=Left:3840 Top:0 Right:5760 Bottom:1080
Monitor3=Left:0 Top:0 Right:1920 Bottom:1200
Monitor4=Left:1635 Top:-600 Right:2659 Bottom:0
NetInterface=Realtek PCIe 2.5GbE Family Controller
NIC=Realtek PCIe 2.5GbE Family Controller
NIC=Bluetooth Device (Personal Area Network)
Disk1=CT1000MX500SSD1 [931.51GB]
Disk2=WDC WD6400AAKS-65A7B2 [596.17GB]
Disk3=Samsung SSD 990 EVO Plus 1TB [931.51GB]

Close SysInfo Summary

Number of registered Simloads: 69Config source: HKCU

LANCELOT_Benny_SysInfo_2026-09-20-21-19-06.txt created in C:\EUCScore\Results\

45

0

0

0

0

0

1

0

E



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Run Simulated Workloads – “Simloads”

	Type	Description
	Type 1 Primary	Test run with an application that highlights a specific graphic or multimedia format (GDI, DirectX, OpenGL or video) – may require a pre-installed application.
	Type 2 Persona	Sequence of chained or overlayed user activities, orchestrated in such a way they generate the characteristic behavior and consistent load pattern of a predefined interactive user type.
	Type 3 Score	Measures predefined system metrics used to produce a number that represents the remoting protocol-independent performance. Typically, each Score Simload is associated with a specific theme.

EUC Score Simload Gallery: <https://eucscore.com/gallery.html>

NOTE: Each Simload stores system and user activities in a .ref file and may collect telemetry data into a .csv file if configured accordingly

Score Simloads

Windows / Storage



AppDialog
Windows Dialog



AppStart
Windows App Start



IOPS
Storage Perf Test



UserProfileLarge
Storage Perf Test



UserProfileSmall
Storage Perf Test

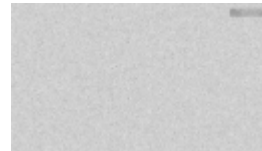
GDI / GDI+



GDIPlusGraphics
GDI+ Perf Test



GDIPlusRect
GDI+ Perf Test



WhiteNoise
GDI Perf Test

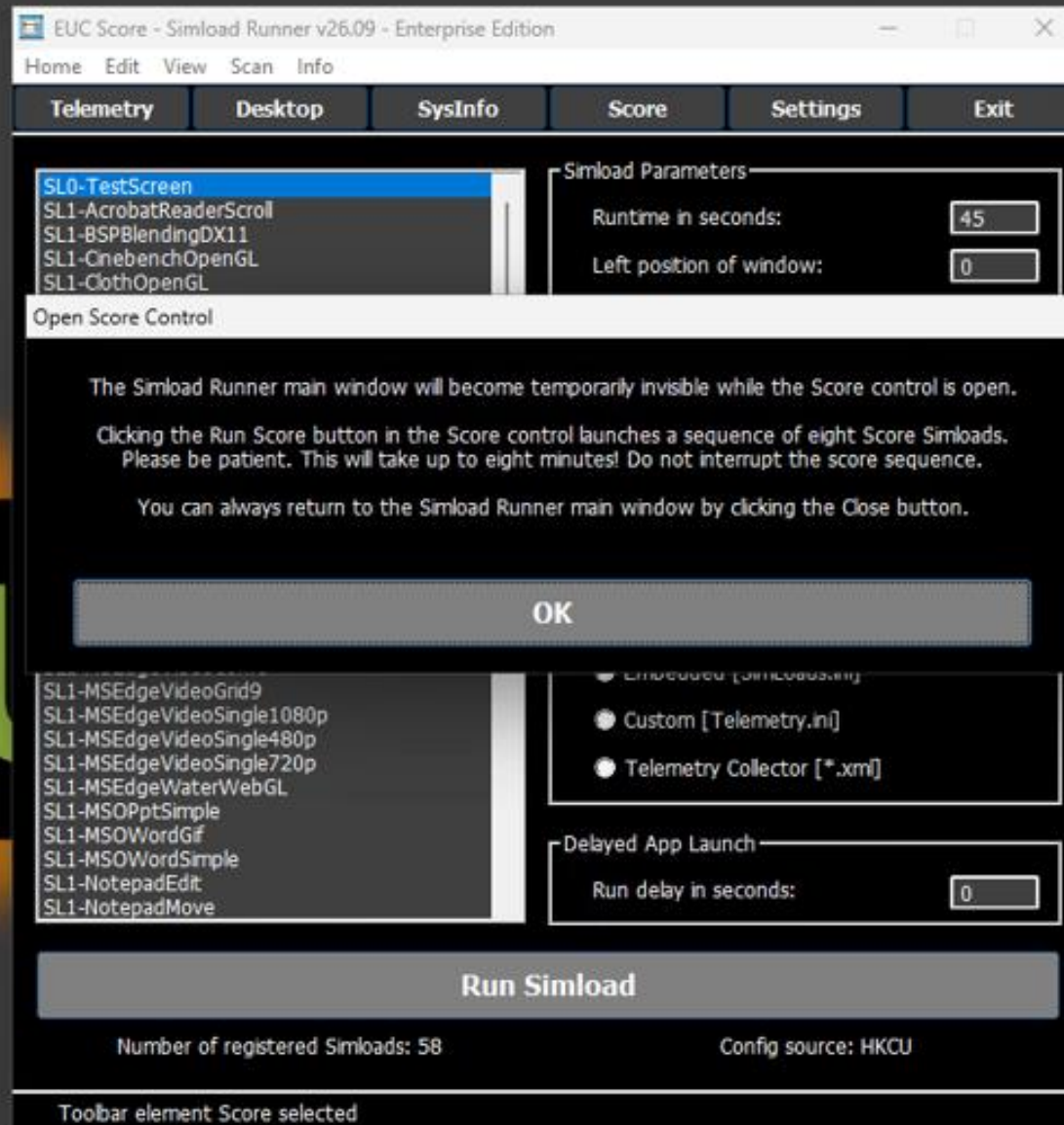


FractalsDragon
GDI+ Perf Test



FractalsPythagoras
GDI+ Perf Test

<https://eucscore.com/results/scores.html>



Score Sequence

Windows Control Score

		Result	Weight	Score	Average
Ready	APP DIALOG	1 / 0.3	x 3	= 10	9.76
Ready	APP START	1 / 0.63	x 6	= 9.52	

2D Graphics Score

		Result	Weight	Score	Average
Ready	GDI+ GRAPHICS	1 / 5.65	x 30	= 5.31	4.7
Ready	GDI+ RECTANGLES	1 / 1.17	x 5	= 4.27	
Ready	WHITE NOISE	1 / 44.18	x 200	= 4.53	

Storage Score

		Result	Weight	Score	Average
Ready	IOPS	1 / 9.82	x 8	= 0.81	1.88
Ready	USER PROFILE LARGE	1 / 15.73	x 25	= 1.59	
Ready	USER PROFILE SMALL	1 / 3.08	x 10	= 3.25	

[CPC-btrit-BZZW6_BernhardTritsch-2026-09-23-15-40-32.score]

			Total
Calculated	OVERALL SCORE	$(9.76 + 4.7 + 1.88) / 3$	5.45

Run Score

Open File

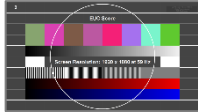
Close

Score Simloads – Noisy Neighbors

AVD with Noisy Neighbors (Auxilium IT)	Controls		2D Graphics			Storage			Overall
AVD Multi-Session E8ds_v5 (UK South), Windows 11 Enterprise multi-session, Intel Xeon Platinum 8370C 8vCPUs @ 2.80GHz, 64GB RAM, 128GB P10 Premium SSD, 1920x1080, FSLogix, SxS RDP, 0 Noisy Neighbors	9.69 ★★★★★		4.97 ★★★★★			2.45 ★★★★★			5.70 ★★★★★
	10.00 (0.30)	9.39 (0.64)	5.68 (5.28)	4.35 (1.15)	4.89 (40.88)	2.17 (3.69)	2.59 (9.65)	2.59 (3.86)	
AVD Multi-Session E8ds_v5 (UK South), Windows 11 Enterprise multi-session, Intel Xeon Platinum 8370C 8vCPUs @ 2.80GHz, 64GB RAM, 128GB Standard SSD , 1920x1080, FSLogix, SxS RDP, 0 Noisy Neighbors	9.48 ★★★★★		4.94 ★★★★★			2.39 ★★★★★			5.60 ★★★★★
	10.00 (0.30)	8.96 (0.67)	5.61 (5.35)	4.31 (1.16)	4.91 (40.71)	1.54 (5.21)	2.89 (8.64)	2.75 (3.63)	
AVD Multi-Session E8ds_v5 (UK South), Windows 11 Enterprise multi-session, Intel Xeon Platinum 8370C 8vCPUs @ 2.80GHz, 64GB RAM, 128GB P10 Premium SSD, 1920x1080, FSLogix, SxS RDP, 4 Noisy Neighbors	8.84 ★★★★★		2.63 ★★★★★			2.13 ★★★★★			4.53 ★★★★★
	9.68 (0.31)	8.00 (0.75)	3.17 (9.46)	2.03 (2.46)	2.70 (73.96)	1.40 (5.70)	2.61 (9.57)	2.39 (4.18)	
AVD Multi-Session E8ds_v5 (UK South), Windows 11 Enterprise multi-session, Intel Xeon Platinum 8370C 8vCPUs @ 2.80GHz, 64GB RAM, 128GB Standard SSD , 1920x1080, FSLogix, SxS RDP, 4 Noisy Neighbors	8.74 ★★★★★		2.85 ★★★★★			1.85 ★★★★★			4.48 ★★★★★
	9.68 (0.31)	7.79 (0.77)	3.32 (9.03)	2.51 (1.99)	2.73 (73.26)	1.41 (5.67)	2.08 (12.04)	2.06 (4.85)	
AVD Multi-Session E8ds_v5 (UK South), Windows 11 Enterprise multi-session, Intel Xeon Platinum 8370C 8vCPUs @ 2.80GHz, 64GB RAM, 128GB P10 Premium SSD, 1920x1080, FSLogix, SxS RDP, 8 Noisy Neighbors	4.66 ★★★★★		0.62 ★★★★★			0.74 ★★★★★			2.01 ★★★★★
	6.12 (0.49)	3.19 (1.88)	0.65 (46.21)	0.41 (12.27)	0.79 (252.80)	0.74 (10.80)	0.81 (31.04)	0.67 (15.03)	

Simulated Workloads (GPU not required)

Simple / Continuous



TestScreen
System info



NotepadEdit
Simple typing



NotepadMove
Moving app window



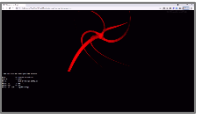
WordpadScroll
Office app scrolling



MSEdgeHtmlScroll
HTML doc scrolling



JPEGViewAnim
Simple animation



MSEdgeMonsterHTML5
Simple HTML5 app

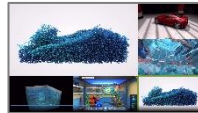
Videos / HTML5



WMPlayer480MP4
480p MP4 video



WMPlayer720MP4
720p MP4 video



WMPlayer180MP4
1080p MP4 video



MSEdgeVideoConf4
4 separate videos



MSEdgeVideoConf6
6 separate videos

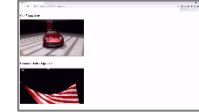


MSEdgeVideoGrid9
9 separate videos



MSEdgeFishbowlHTML5
HTML5 app

Animations



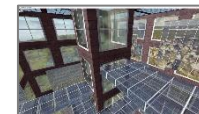
MSEdgeGifScroll1 / 2
Medium animation



MSEdgePhotoGalleryJS
JPG photo gallery



RollercoasterDX9
Medium DirectX 9 app



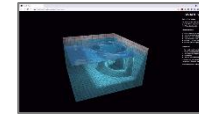
BSPBlendingDX11
Demanding DirectX 11 app



MSEdgeCarVisualizer
Demanding WebGL app



MSEdgeAquariumWebGL
Demanding WebGL app



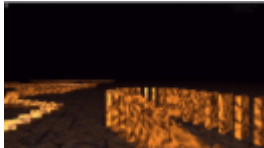
MSEdgeWaterWebGL
Demanding WebGL app

Simulated Workloads (GPU required)

Humus / Maxon / Google



ClothOpenGL
Humus



DominoOpenGL
Humus



ShadingDX11
Humus



CinebenchOpenGL
Maxon



GoogleEarthDX9
Google

Geeks3D



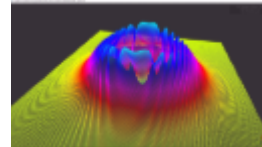
FurMarkOpenGL
Geeks3D GpuTest



GiMarkOpenGL
Geeks3D GpuTest



PixMarkOpenGL
Geeks3D GpuTest

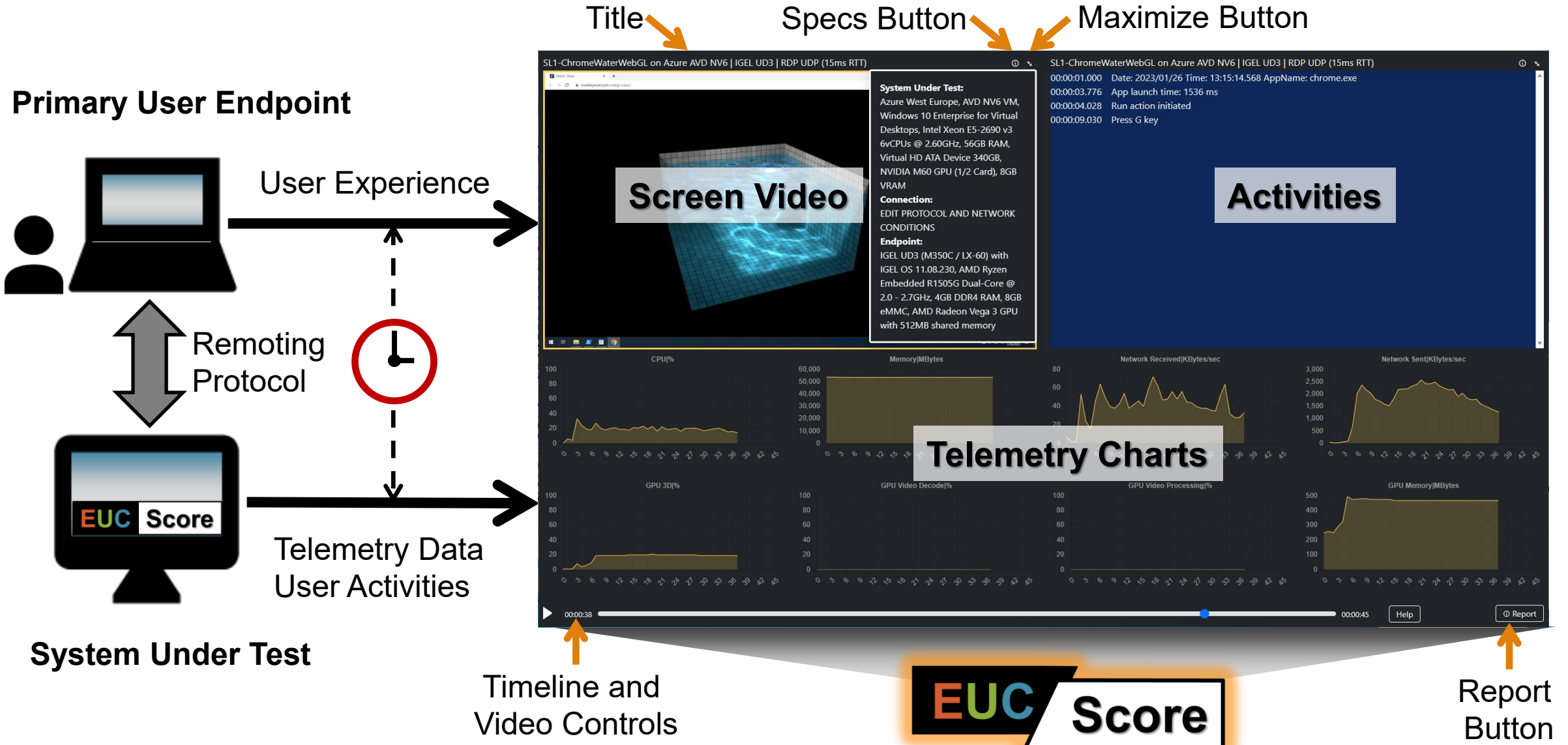


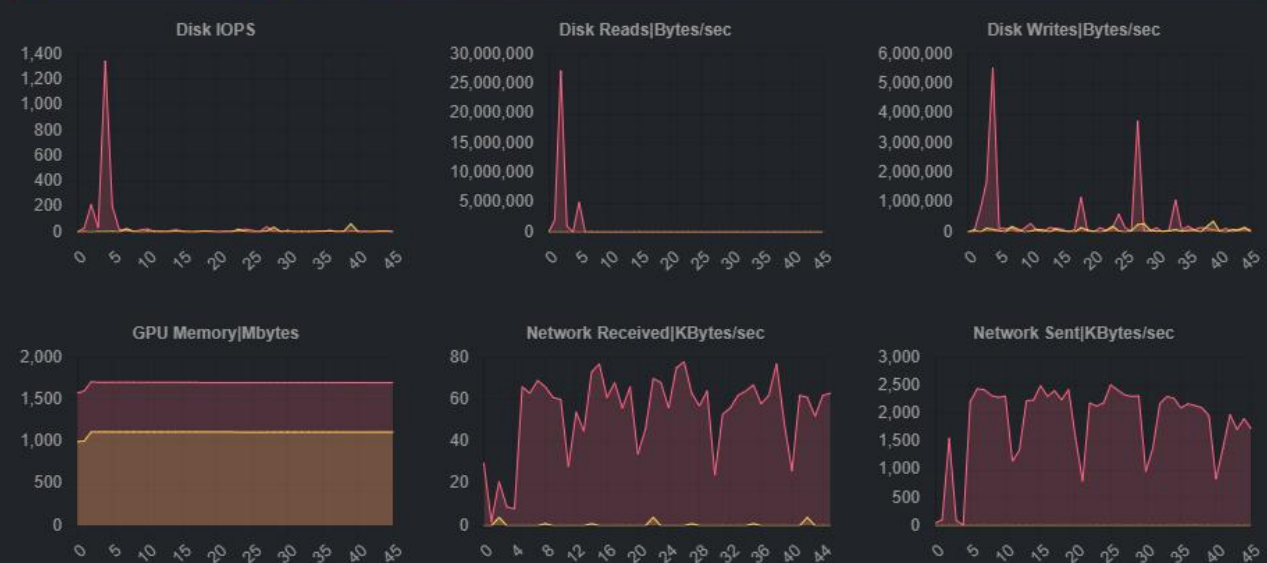
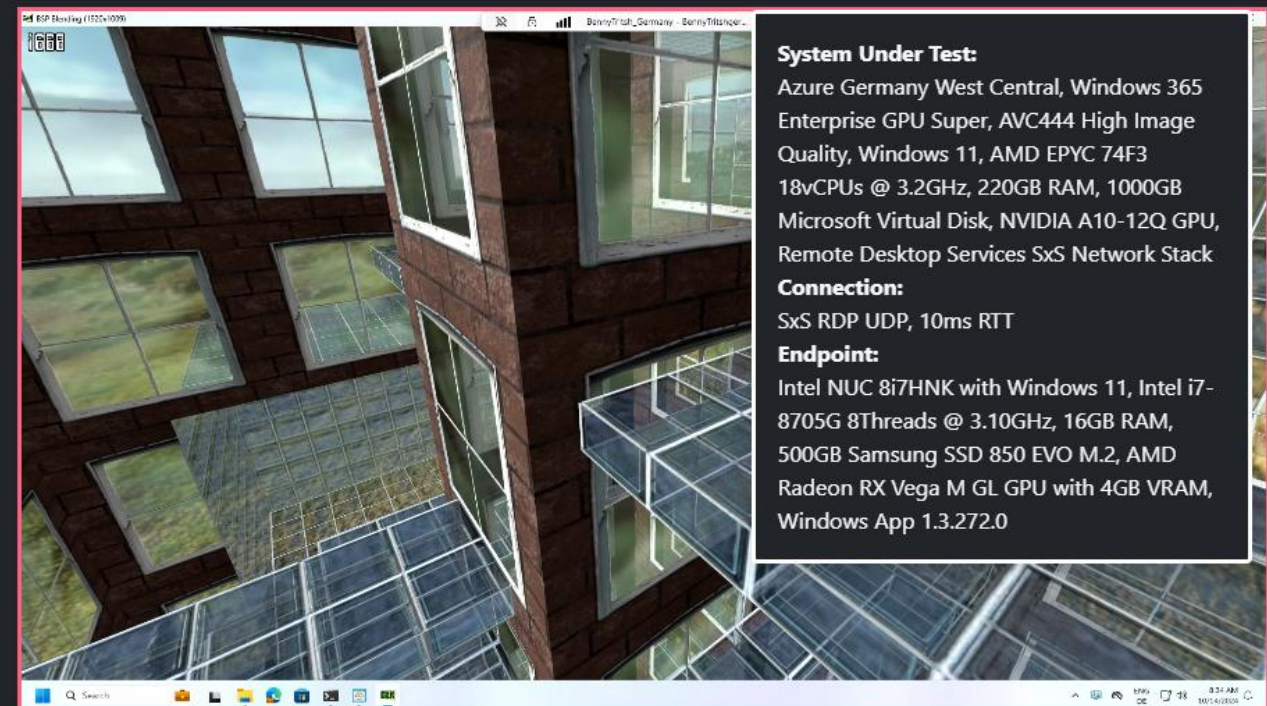
Plot3dOpenGL
Geeks3D GpuTest

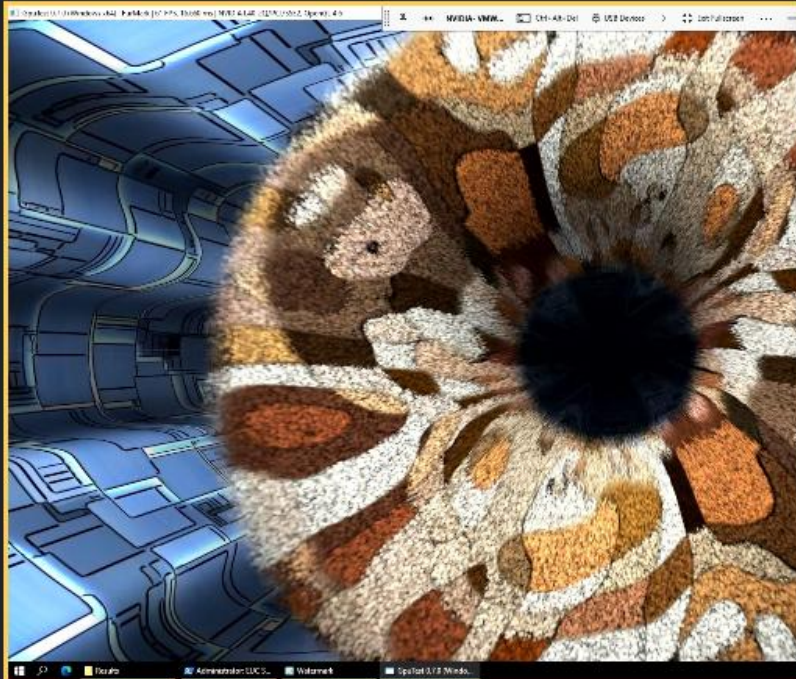


TessMarkOpenGL
Geeks3D GpuTest

Visual Data Analytics – Sync Player





**System Under Test:**

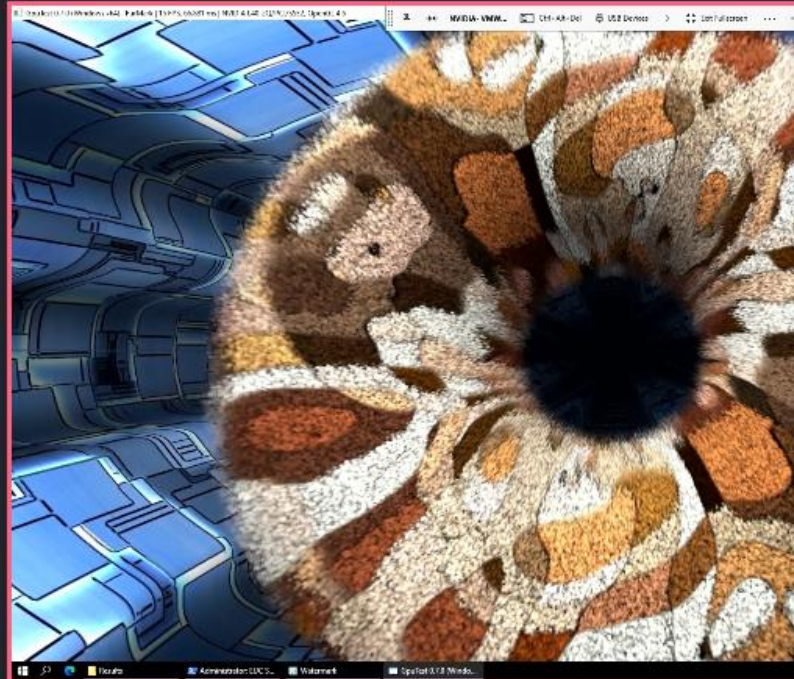
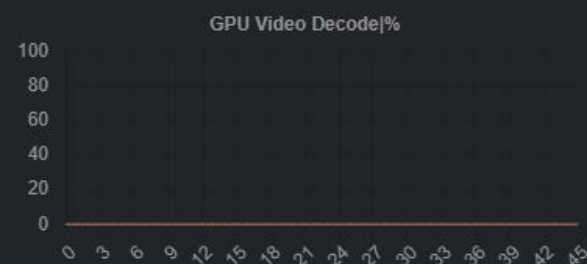
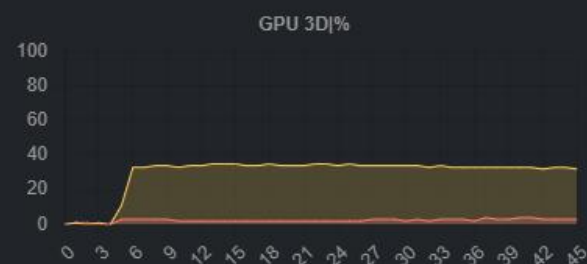
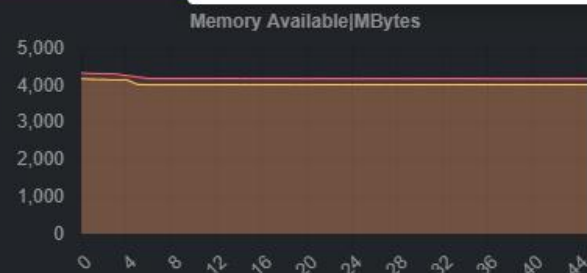
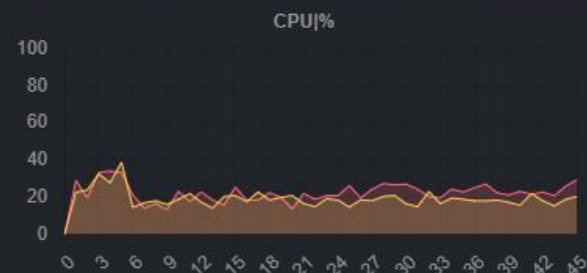
VMware TestDrive, Windows 11,
Intel Xeon Gold 6330 2x2vCPUs
@ 2.00GHz, 8GB RAM, 120GB
Storage, NVIDIA L40-2Q,
VMware Horizon Display Driver

Connection:

Blast, 175ms RTT

Endpoint:

Intel NUC 8i7HNK with
Windows 11, Intel i7-8705G
8Threads @ 3.10GHz, 16GB
RAM, 500GB Samsung SSD 850
EVO M.2, AMD Radeon RX Vega
M GL GPU with 4GB VRAM,
VMware Horizon Client 2306
8.10.0

**System Under Test:**

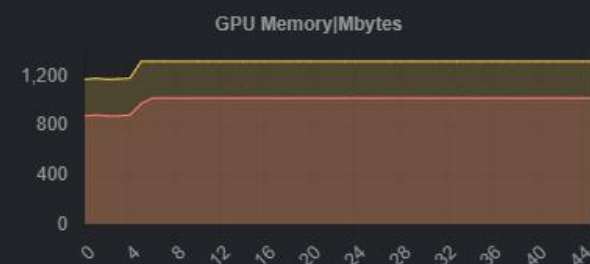
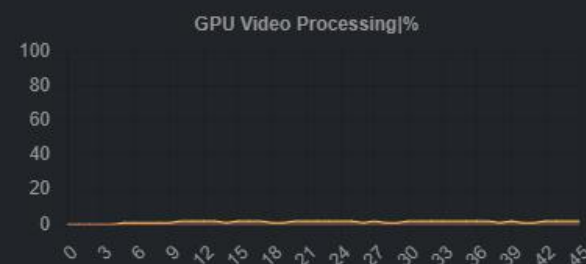
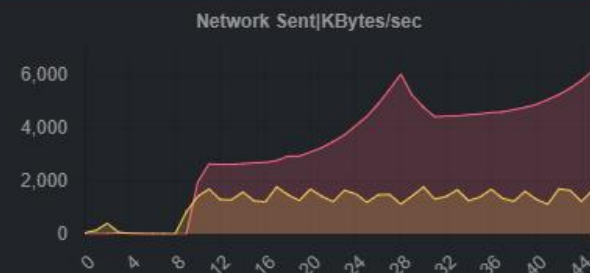
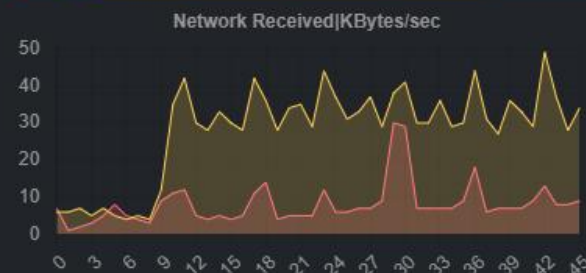
VMware TestDrive, Windows 11,
Intel Xeon Gold 6330 2x2vCPUs
@ 2.00GHz, 8GB RAM, 120GB
Storage, NVIDIA L40-2Q

Connection:

PCoIP, 175ms RTT

Endpoint:

Intel NUC 8i7HNK with
Windows 11, Intel i7-8705G
8Threads @ 3.10GHz, 16GB
RAM, 500GB Samsung SSD 850
EVO M.2, AMD Radeon RX Vega
M GL GPU with 4GB VRAM



Call to Action

If you want to learn more about
EUC Score, send me an email

info@eucscore.com



<https://eucscore.com>

<https://eucscore.com/results>

NOTE: The EUC Score toolset is free for
community benchmarking tests when the
results are made freely available to the public



EUC Score Links

<https://eucscore.com>



Home Page

<https://eucscore.com/freeware>



Freeware Download

- Blog articles: <https://drtritsch.com>
- Toolset documentation: <https://docs.eucscore.com>
- Test Methodology: <https://eucscore.com/methodology.html>
- Simload Gallery: <https://eucscore.com/gallery.html>
- Test Results (Sync Player): <https://eucscore.com/results>
- Terminology (Glossary): <https://eucscore.com/terminology.html>
- Lab Equipment: <https://eucscore.com/equipment.html>

Test Setup Details

EUC Score Testing Methodology

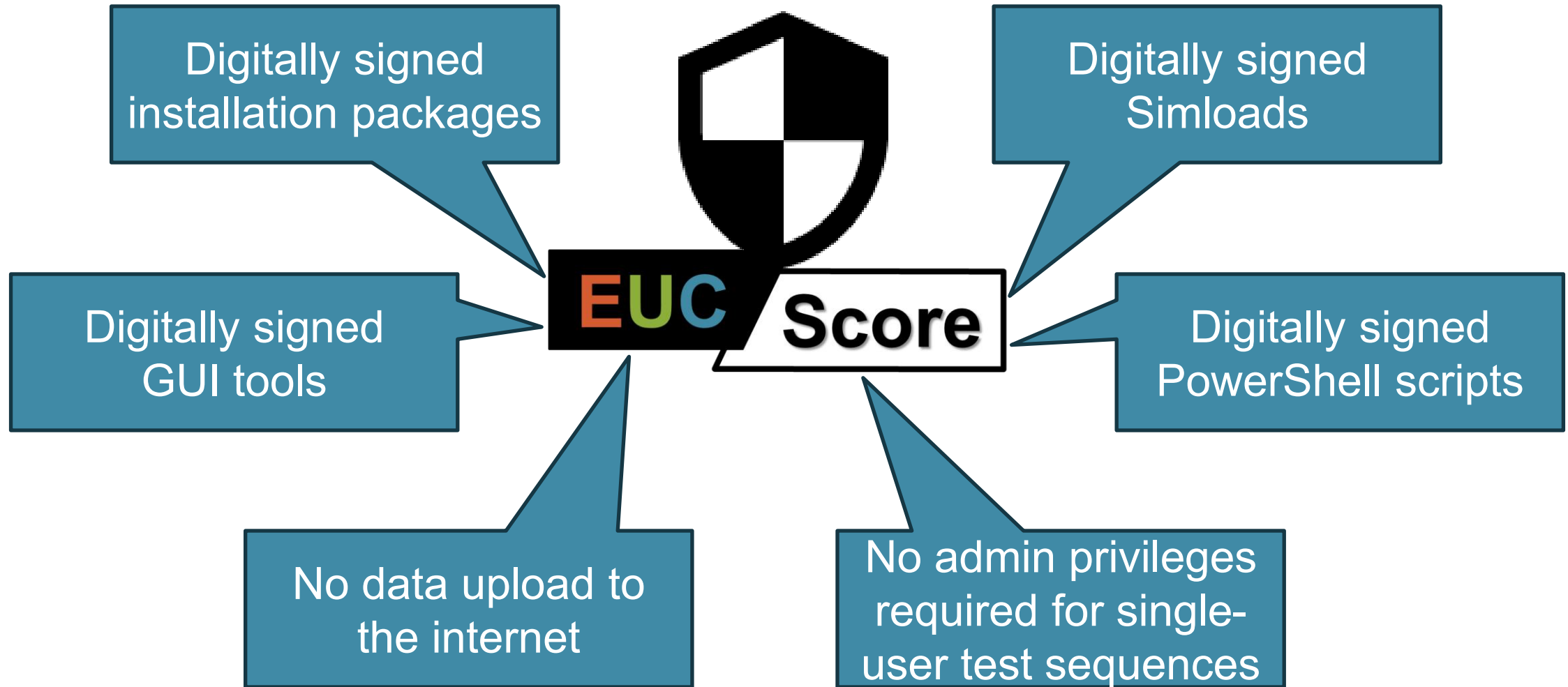
EUC Score Testing Methodology

EUC Score test phases

1. **Design & Build**: Pose testable question, state hypothesis, design experiment, and setup test environment (target system with test toolset, network, client device and test user accounts)
2. **Perform & Test**: Connect to target system from client device, select test workloads, prepare data collection, perform controlled and reproducible experiments, and collect/record test datasets
3. **Visualize, Analyze & Publish**: Review test results, visualize datasets, analyze test results, draw conclusions, and publish findings (and sometimes start all over again)

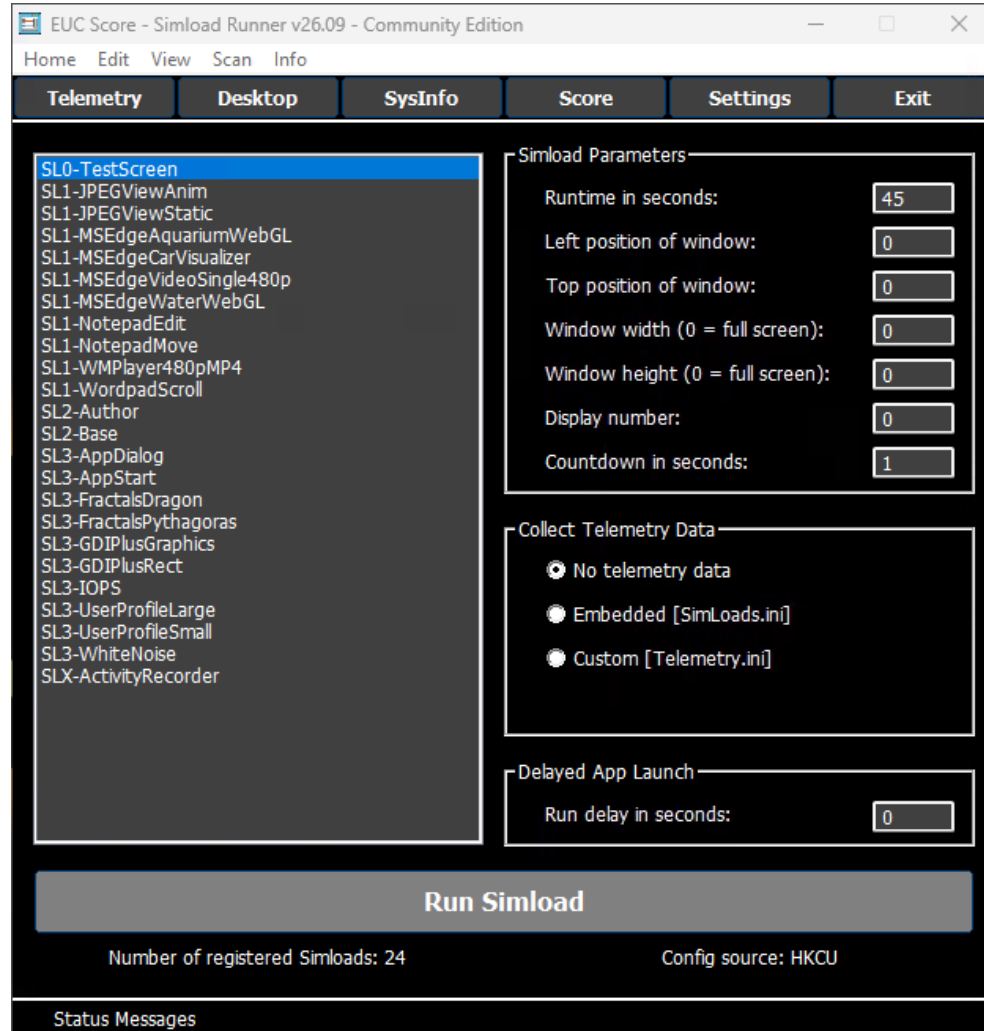
NOTE: Benchmarking experiments or simulations may not reflect the real world, but they help us to understand certain aspects of the real world

Build & Test: Secure by Design

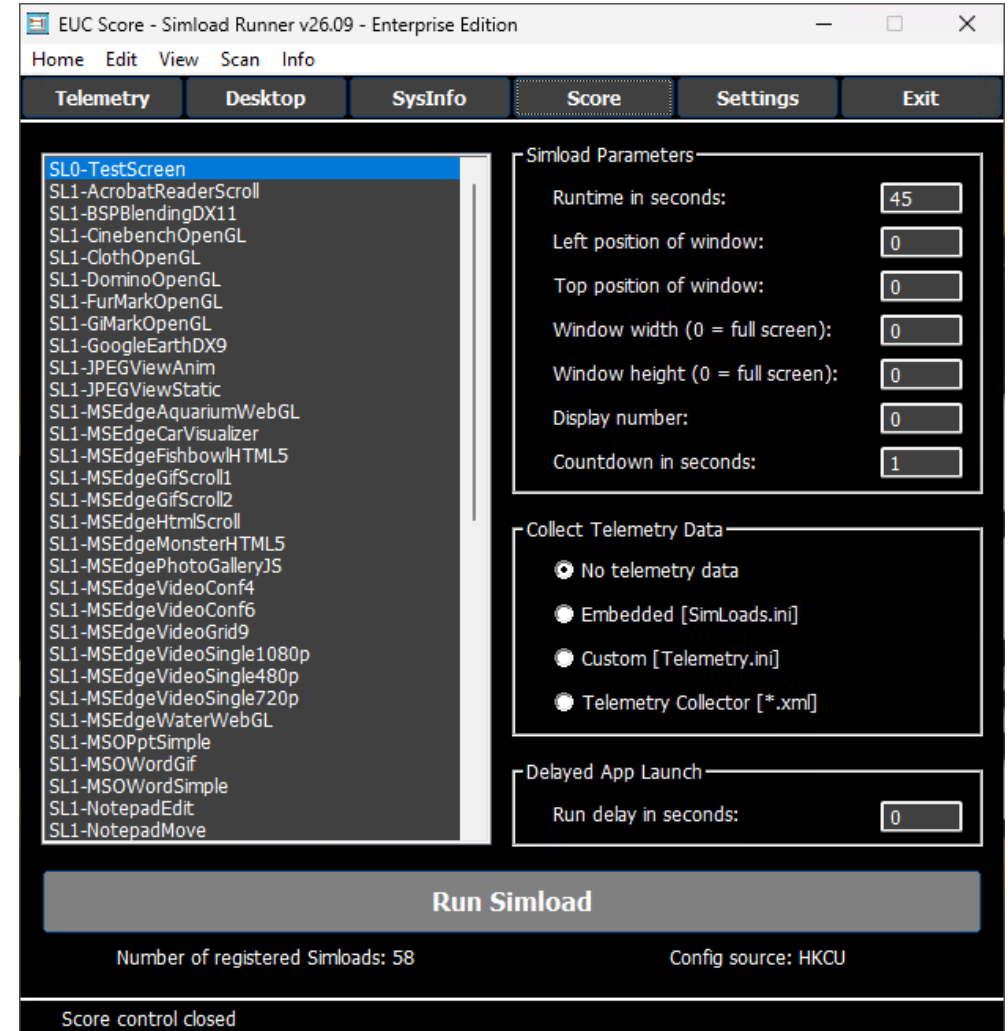


Simload Runner

Run Freeware simulated workloads

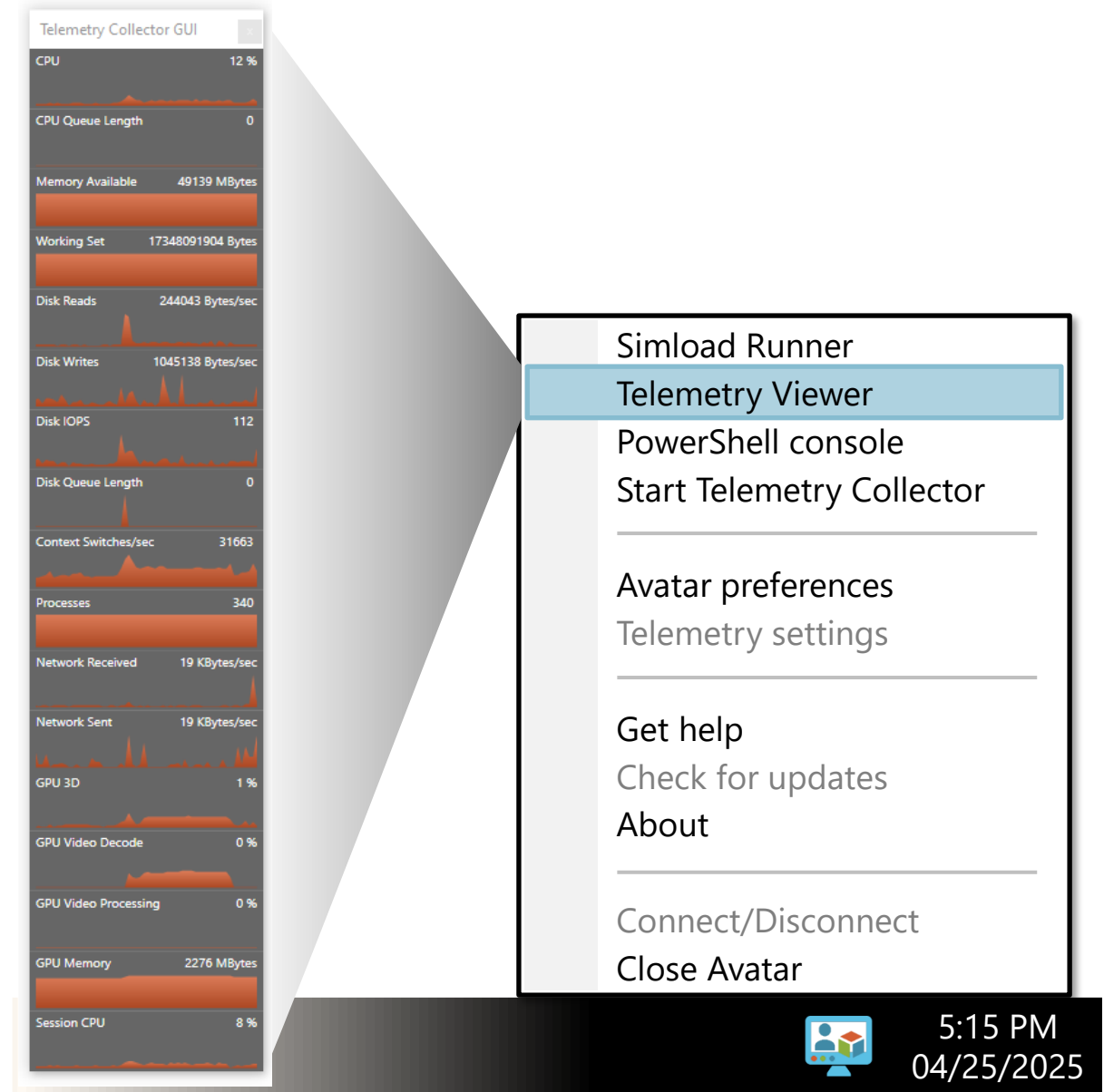


Run Enterprise simulated workloads



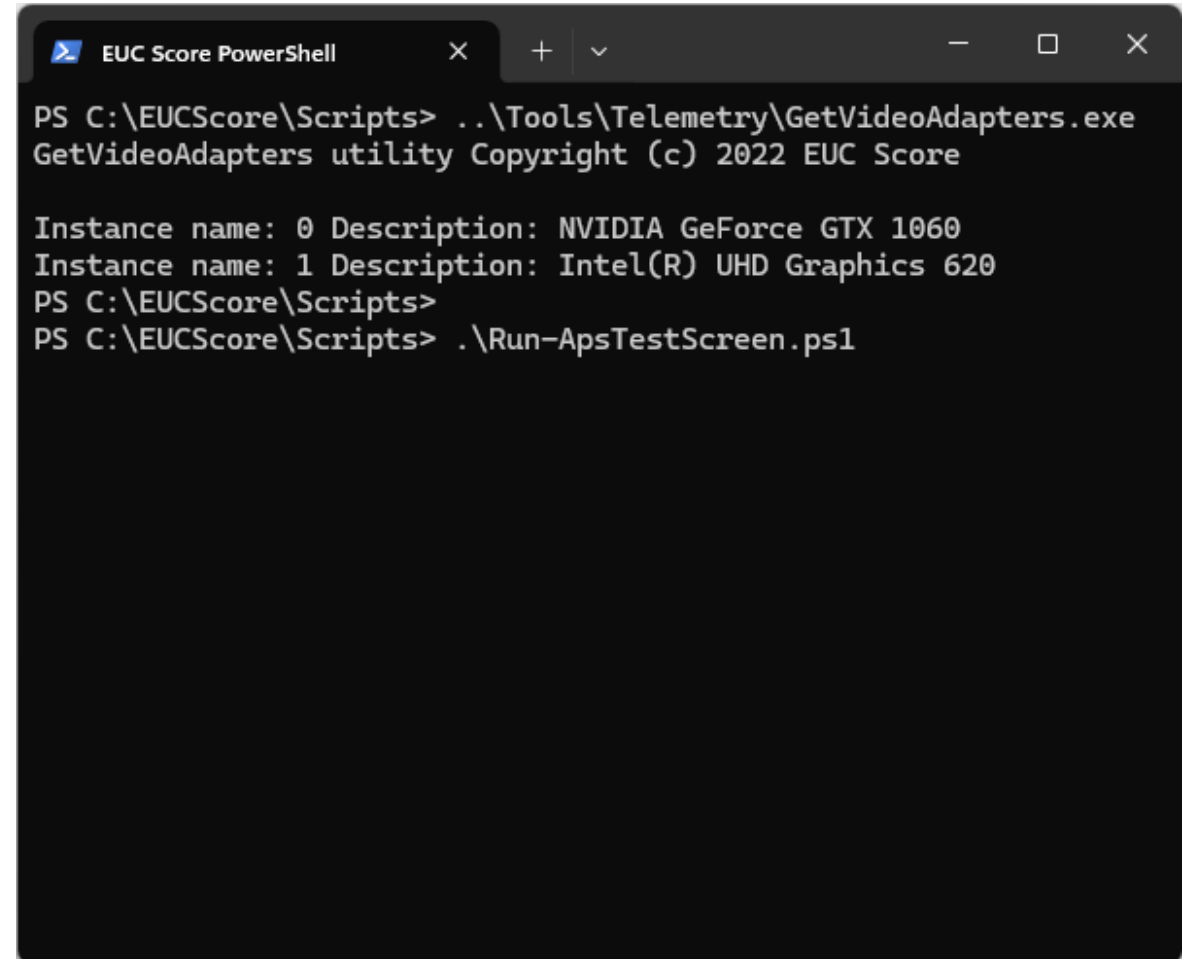
EUC Score Avatar

- The Avatar is a light-weight Windows system tray program that represents a Windows user in a test situation
- The main purpose of the Avatar is to control (run and start/stop) registered simulated workloads (“Simloads”) and collect telemetry data
- The PowerShell console controls all Avatar features from the command line



EUC Score PowerShell Commands

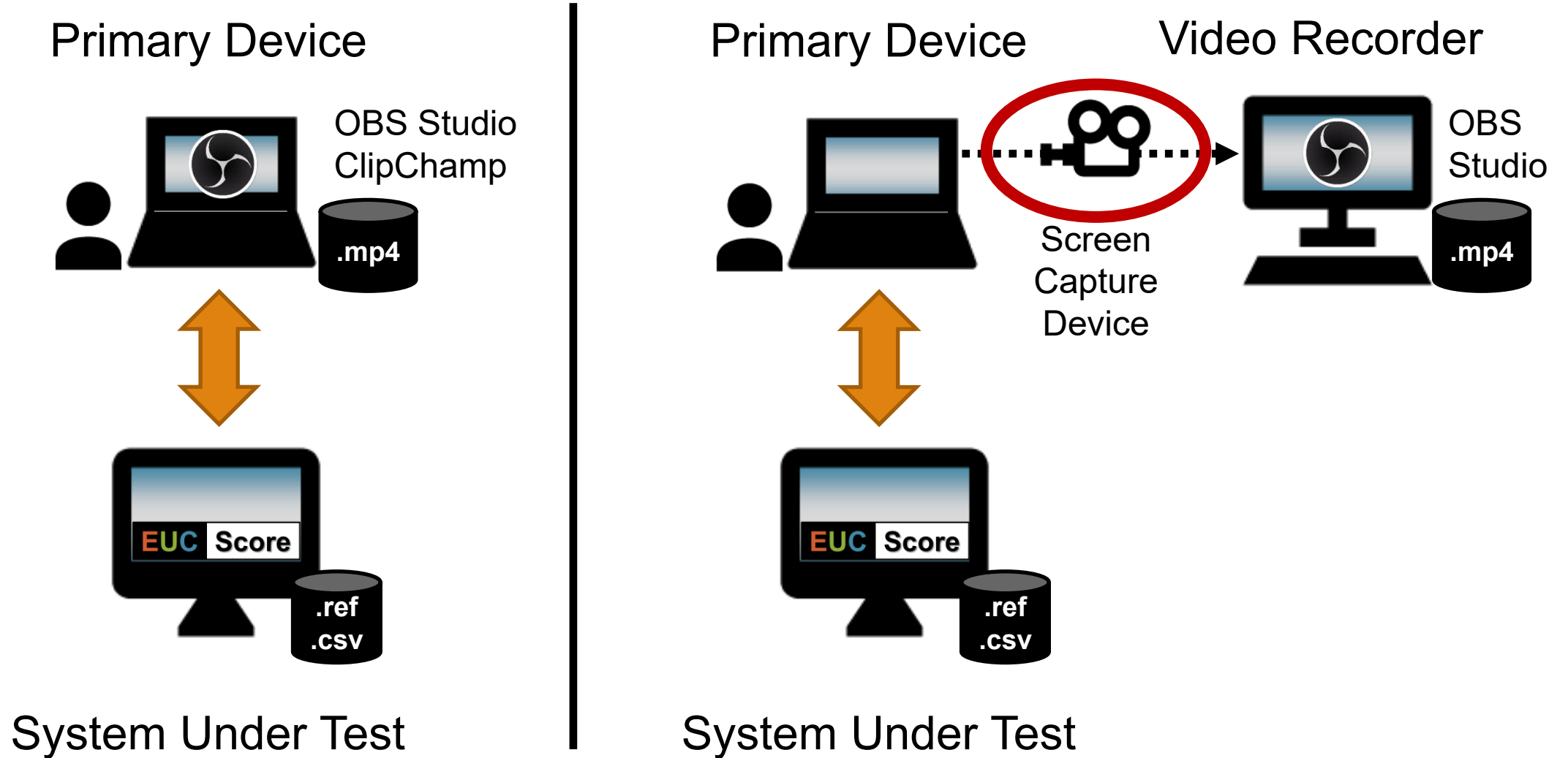
- List-EucSimloadItem
- Run-EucSimload -SimloadName
-Seconds [-Telemetry] [-x -y
[-width -height]]
- Start-EucSimload -SimloadName
-TempObject [-x -y [-width -height]]
- Stop-EucSimload -SimloadName
-TempObject
- Start-EucTelemetryCollector [-Id]
- Stop-EucTelemetryCollector



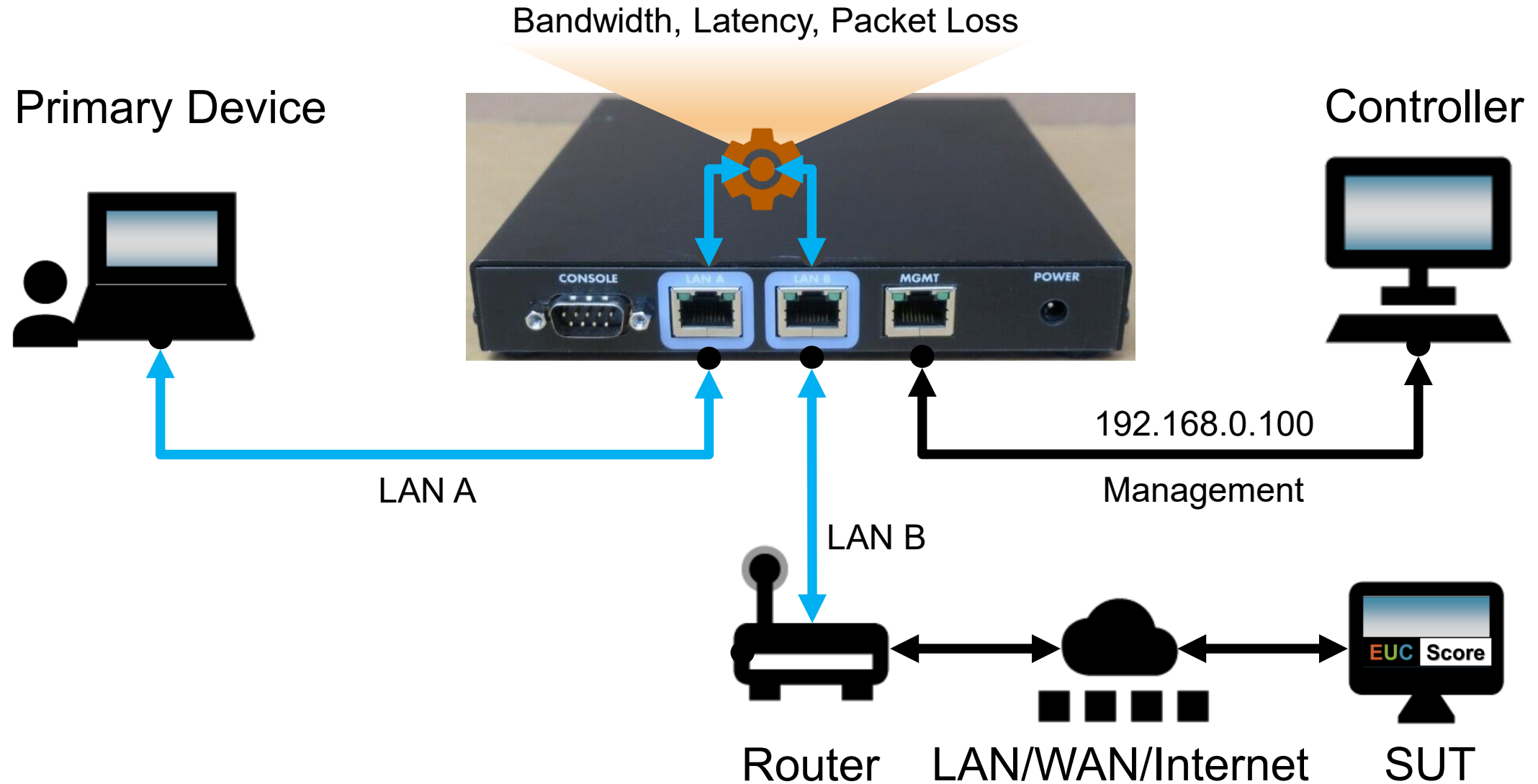
```
EUC Score PowerShell
PS C:\EUCScore\Scripts> ..\Tools\Telemetry\GetVideoAdapters.exe
GetVideoAdapters utility Copyright (c) 2022 EUC Score

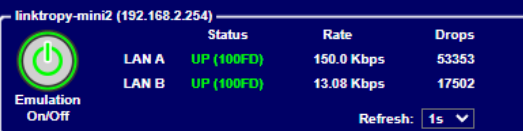
Instance name: 0 Description: NVIDIA GeForce GTX 1060
Instance name: 1 Description: Intel(R) UHD Graphics 620
PS C:\EUCScore\Scripts>
PS C:\EUCScore\Scripts> .\Run-ApsTestScreen.ps1
```

Screen Video Recording Options



Adding a WAN Emulator





Upgrade

LAN B $\rightarrow$ LAN A

Mbps ▾

☐ Uniform ☐ Normal

0 ms

0.0000 %

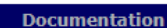
 0×10^{-14}

0.0000 %

 0×10^{-14} [\[show\]](#)

Clear Changes

⚠ Not secure 192.168.2.254/monitor.html



Refresh Interval: 1s ▼

Rate: 100.0 Mbps **Delay:** 0 ms **Loss:** 0% **BER:** 0 **Queue:** 250 ms

Average Tx Rate	
1 sec	1.287 Mbps
10 sec	3.205 Mbps
1 min	24.39 Mbps
10 min	----- bps

10 min ----- bps

The bar chart displays the transmission rate over 10 minutes, divided into 15 intervals. The y-axis represents the transmission rate with markers at 12, 25, 37, and 50. The x-axis shows time intervals: 10 min, 8 min, 6 min, 4 min, 2 min, and a final timestamp of 10:12:26. The transmission rate remains at zero for most of the duration, with a significant spike occurring in the final interval, reaching a peak of approximately 45.

Rate: 100.0 Mbps **Delay:** 0 ms **Loss:** 0% **BER:** 0 **Queue:** 250 ms

Average Tx Rate	
1 sec	16.09 Kbps
10 sec	18.45 Kbps
1 min	34.46 Kbps
10 min	----- bps

10 min ----- bps

Transmission Rate (15 Intervals)

60.0 Kbps
45.0 Kbps
30.0 Kbps
15.0 Kbps

10 min 8 min 6 min 4 min 2 min 10:12:26

WAN Emulator Network Profiles

Name	Bandwidth Limit	Round Trip Time	Packet Loss
Baseline (Unconstrained)	100 Mbit/s	10 milliseconds	0%
High packet loss	100 Mbit/s	10 milliseconds	2%
High round trip time	100 Mbit/s	110 milliseconds	0%
Low bandwidth	8 Mbit/s	10 milliseconds	0%
Very high packet loss	100 Mbit/s	10 milliseconds	5%
Very high round trip time	100 Mbit/s	310 milliseconds	0%
Very low bandwidth	2 Mbit/s	10 milliseconds	0%

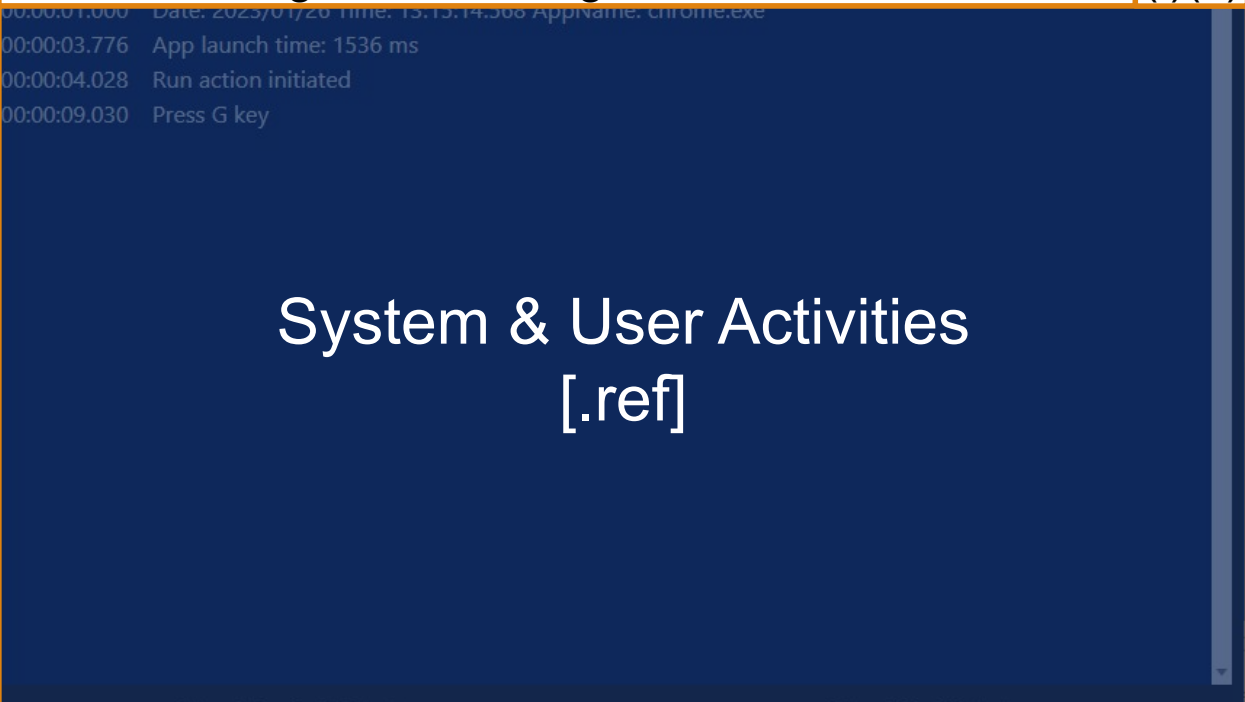
Test Data Visualization

Perceived User Experience Analysis

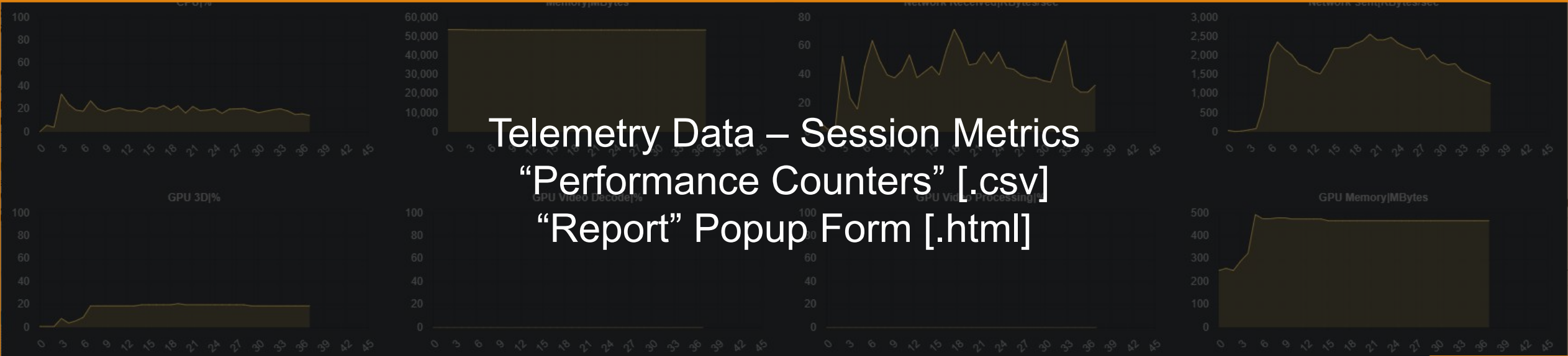
Left Media Tile
“Screen Recording”
[.mp4]

Description

System & User Activities
[.ref]



Telemetry Data – Session Metrics
“Performance Counters” [.csv]
“Report” Popup Form [.html]



Left Title – Side-by-Side View Mode

(i)(z)

Right Title – Side-by-Side View Mode

(i)(z)

Left Media Tile
“Pacemaker” Video
[.mp4]

Right Media Tile
Comparison Video
[.mp4]

Color-Coded Telemetry Data – 2 x Session Metrics
“Performance Counters” Overlay [.csv]
“Report” Popup Form [.html]

Video & Data Animation Controls

Help

Report

Left Media Tile
“Pacemaker” Video
[.mp4]

Right Media Tile
Comparison Video
[.mp4]

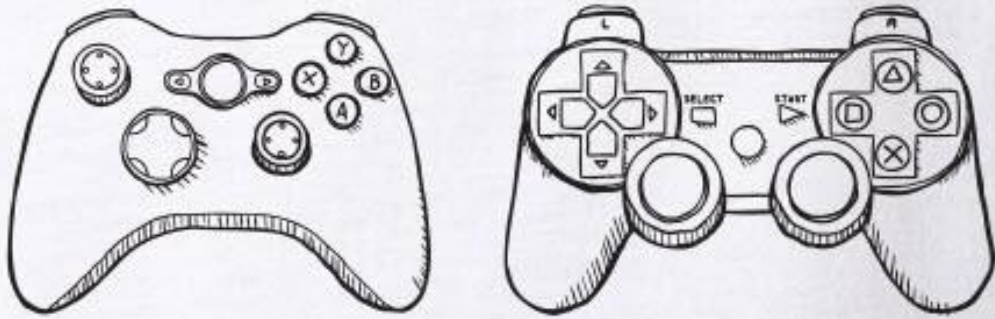
Left System & User Activities
[.ref]

Right System & User Activities
[.ref]

VIDEO GAMES

DON'T MAKE

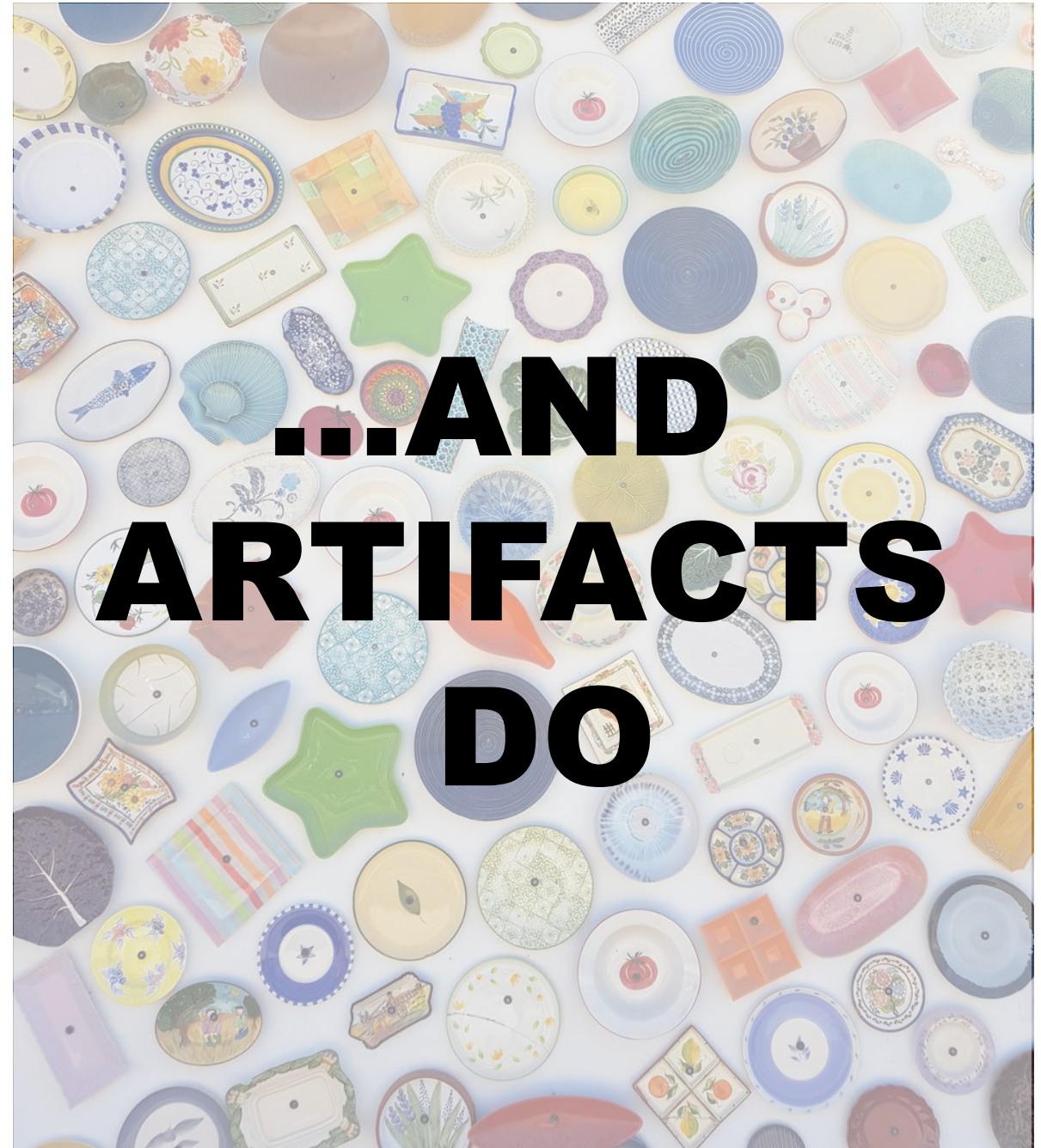
US VIOLENT



LAG DOES

FORGOTTEN
COMPUTERS AND PERIPHERALS

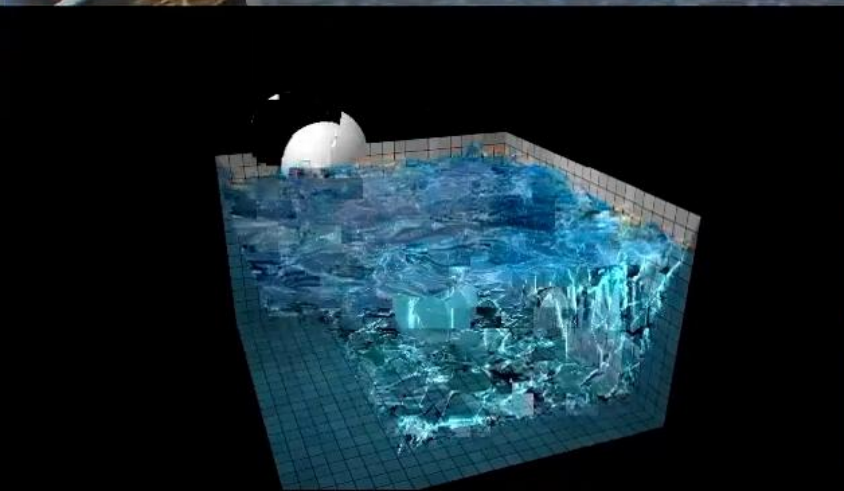
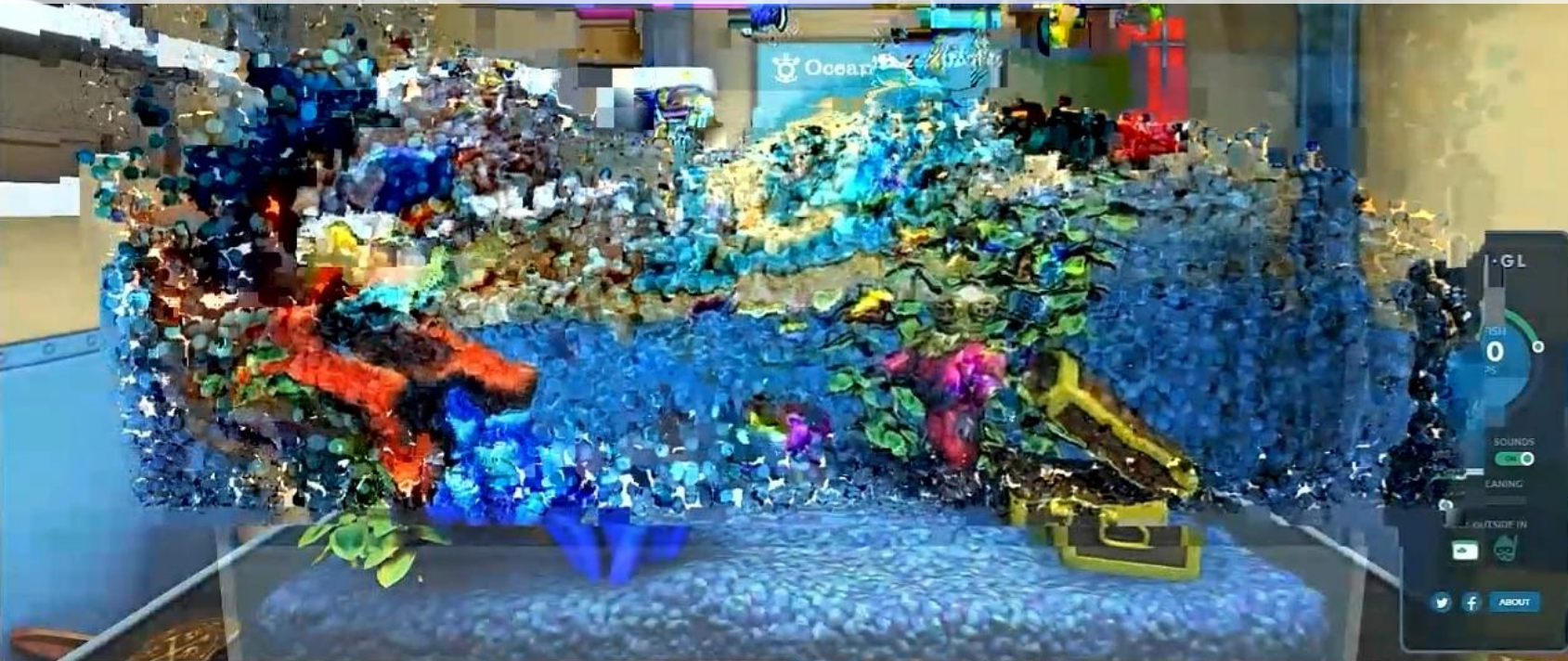
**...AND
ARTIFACTS
DO**



Block Artifacts or Tiling



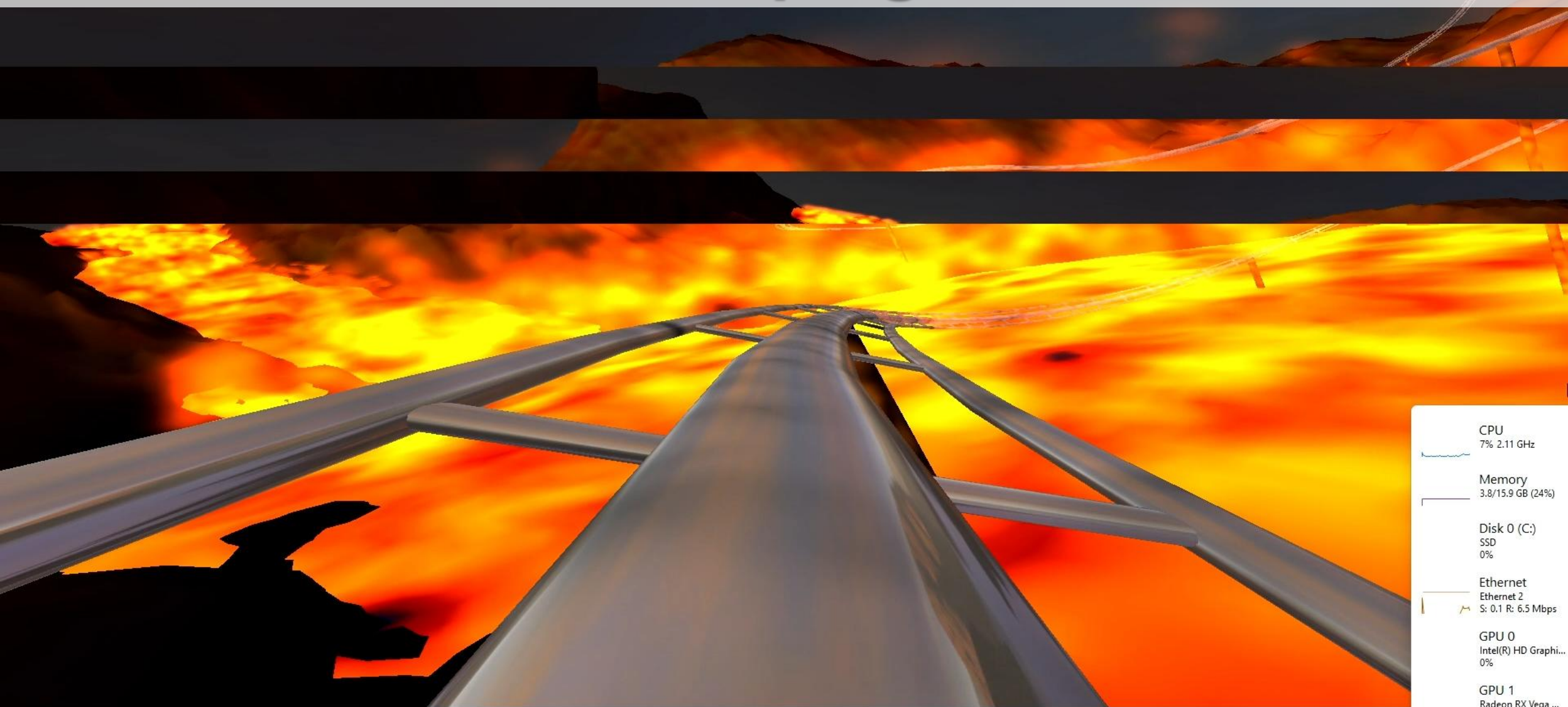
Smear Artifacts (Airbrush Effect)





Striping

EUC Score for AWS
<https://aws.amazon.com/>
SL1-RollercoasterDX9



CPU
7% 2.11 GHz

Memory
3.8/15.9 GB (24%)

Disk 0 (C:)
SSD
0%

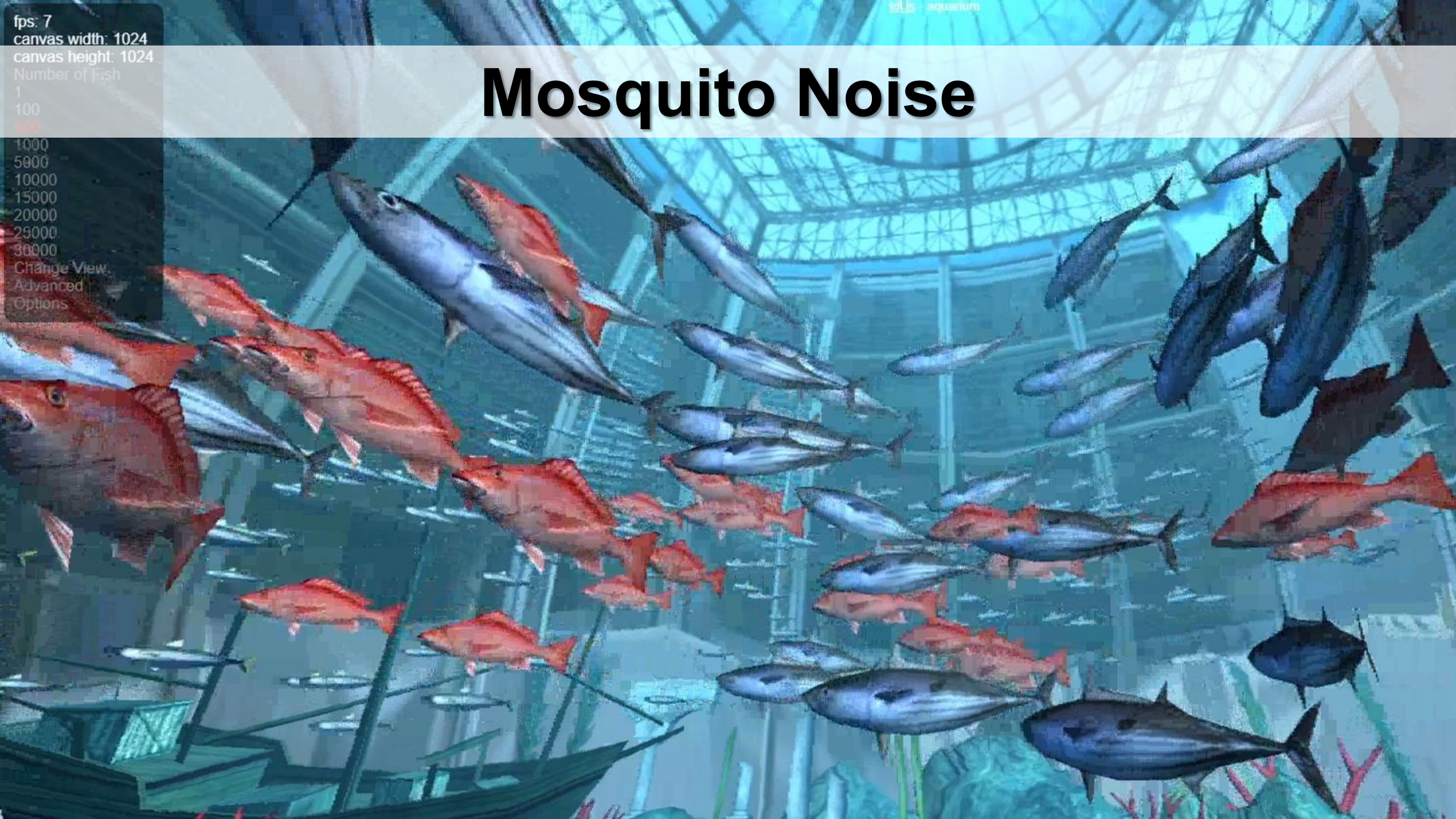
Ethernet
Ethernet 2
S: 0.1 R: 6.5 Mbps

GPU 0
Intel(R) HD Graphi...
0%

GPU 1
Radeon RX Vega ...
1% (47 °C)

Blurriness





Mosquito Noise

fps: 7
canvas width: 1024
canvas height: 1024
Number of Fish
1
100
500
1000
5000
10000
15000
20000
25000
30000
Change View
Advanced
Options

Thank You

Benny Tritsch | info@eucscore.com
