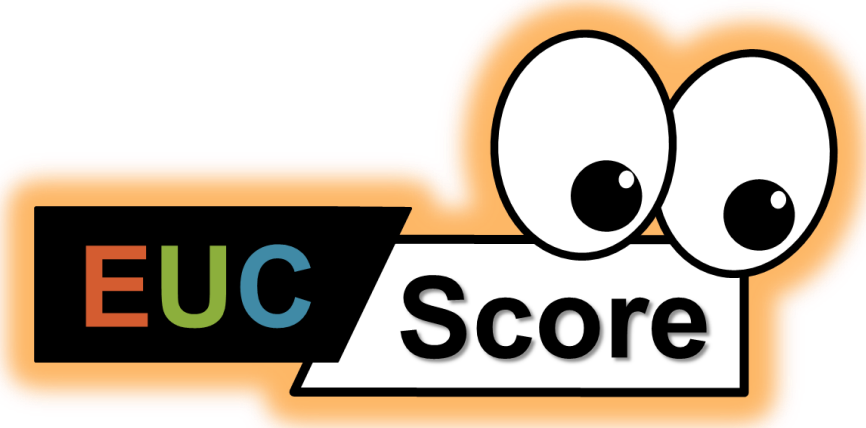
EUC Score Introduction

Q1/2026

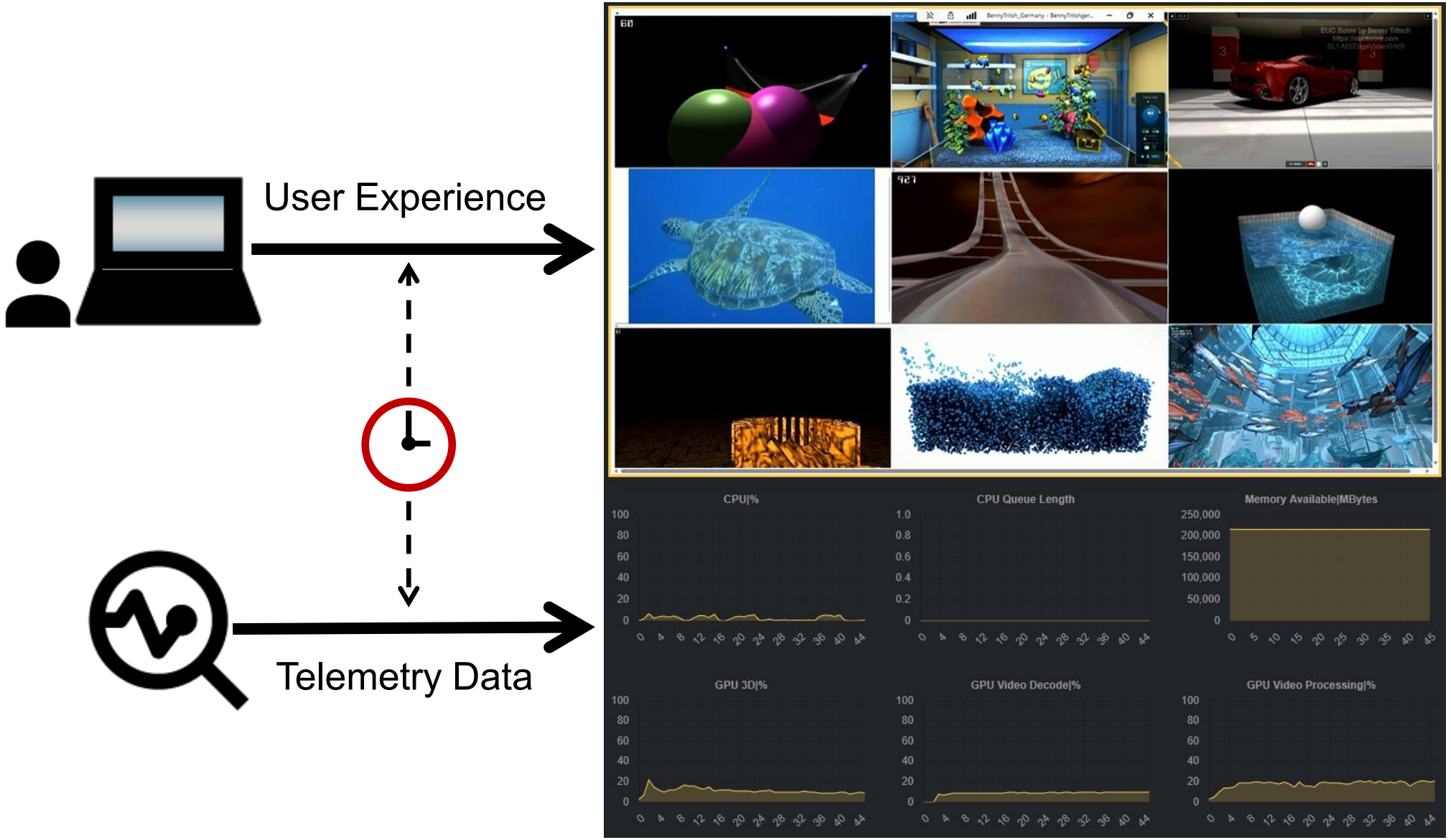
Dr. Benny Tritsch | Independent Performance Data Scientist
info@eucscore.com | https://drtritsch.com | linkedin.com/in/drtritsch



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

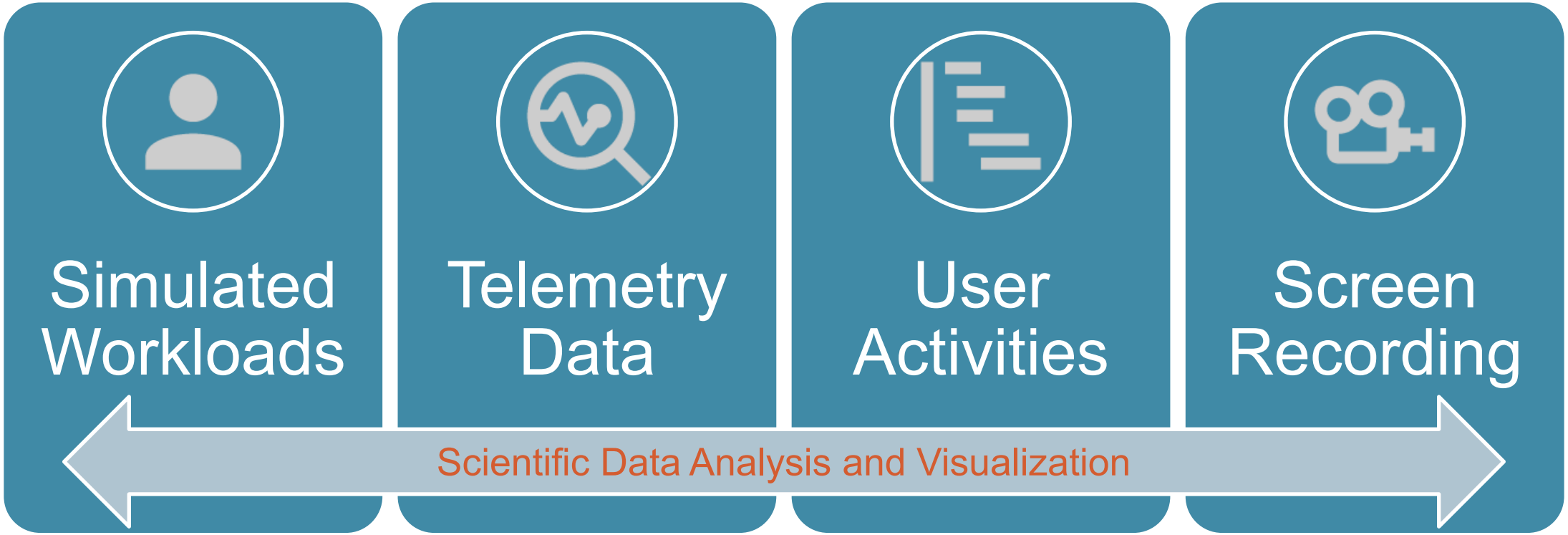
Quantify pain relief success
Before-after analysis of system optimizations and software updates

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



EUC Score Downloads – Registration Required

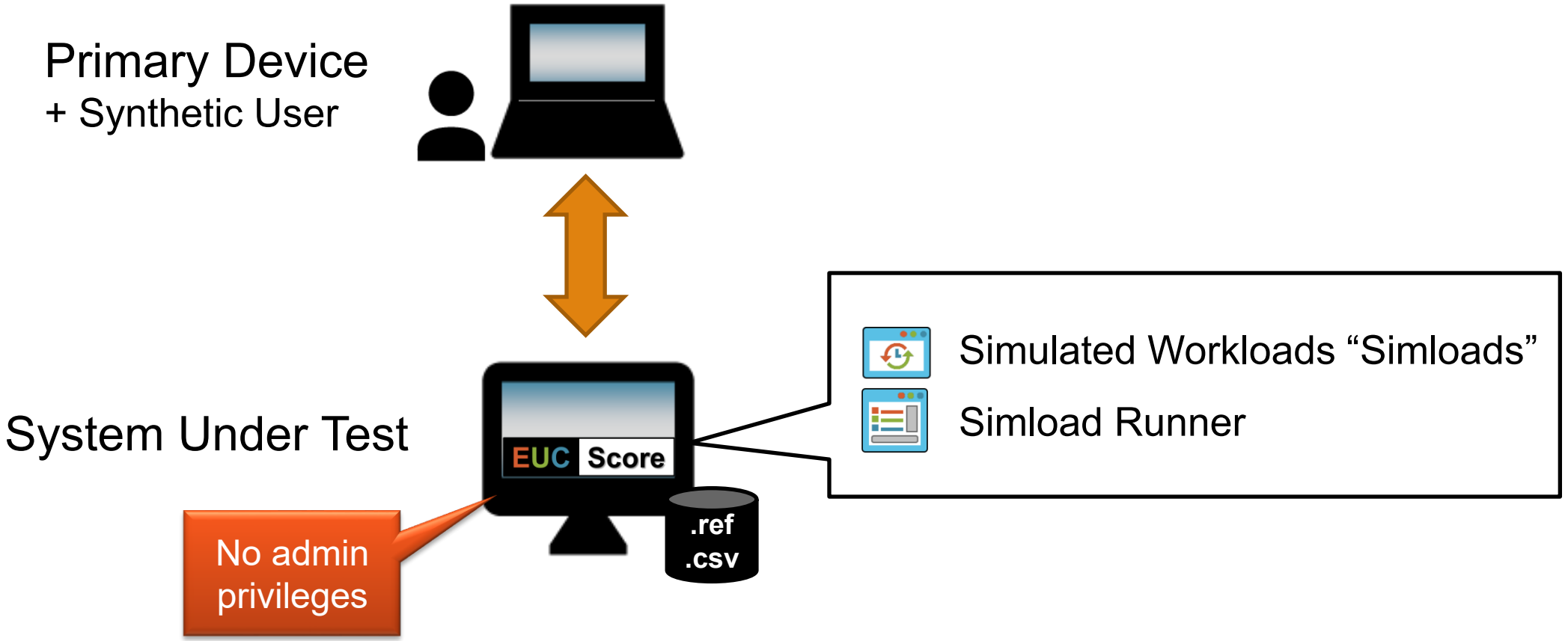
Last update: January 31, 2026

EUC Score v26.01 Installer Packages

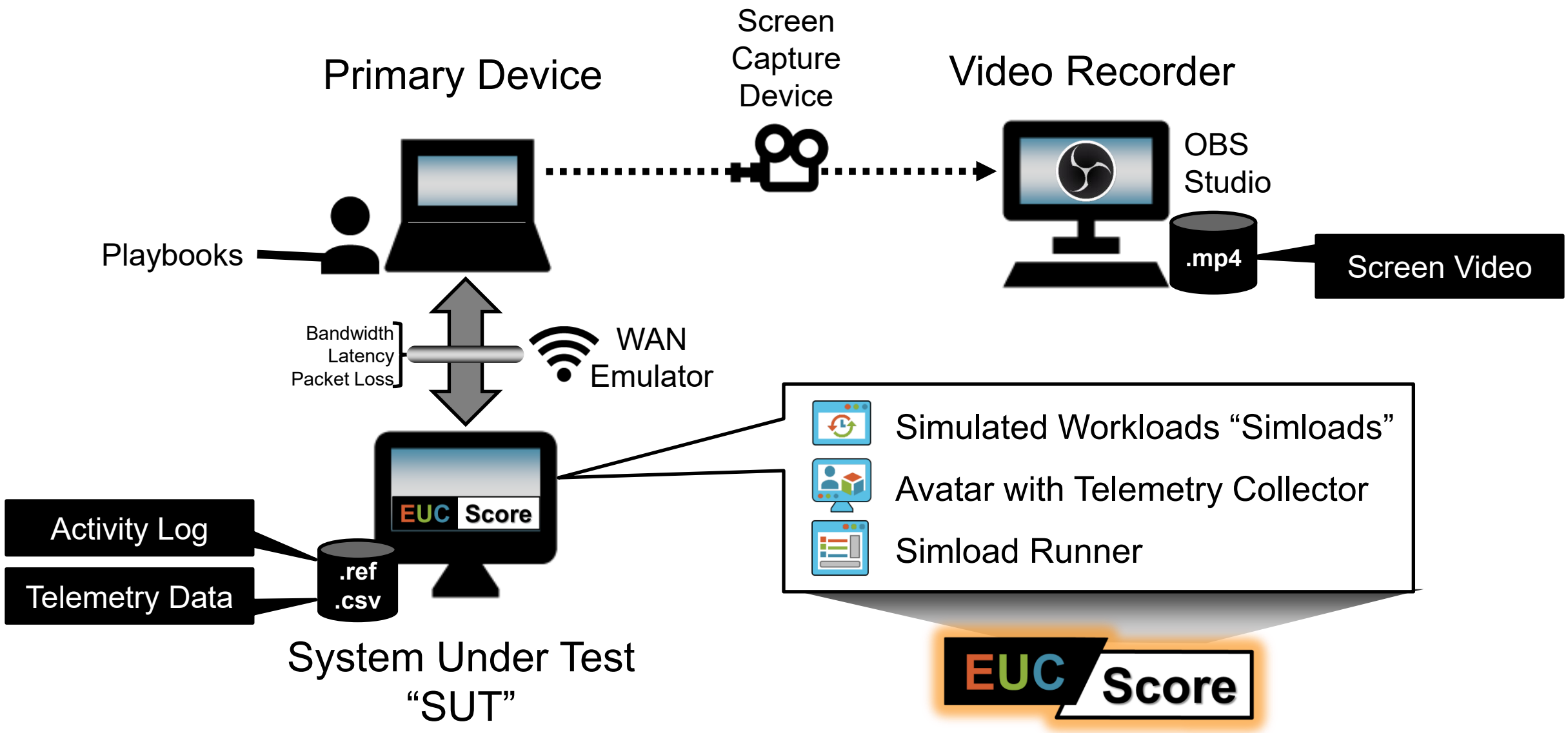
EUC Score Base Installer Package v26.01 - MANDATORY, INSTALL FIRST!		Download
EUC Score Enterprise Installer Package v26.01 - INSTALL AFTER BASE PACKAGE	**More Simloads**	Download
EUC Score Enterprise 3rd Party Installer Package v26.01 - INSTALL AFTER ENTERPRISE PACKAGE		Download
EUC Score Avatar Installer Package v26.01 - INSTALL AFTER BASE OR ENTERPRISE PACKAGE	**Better Control**	Download
EUC Score Sync Player Installer Package v26.01	**Visualization**	Download

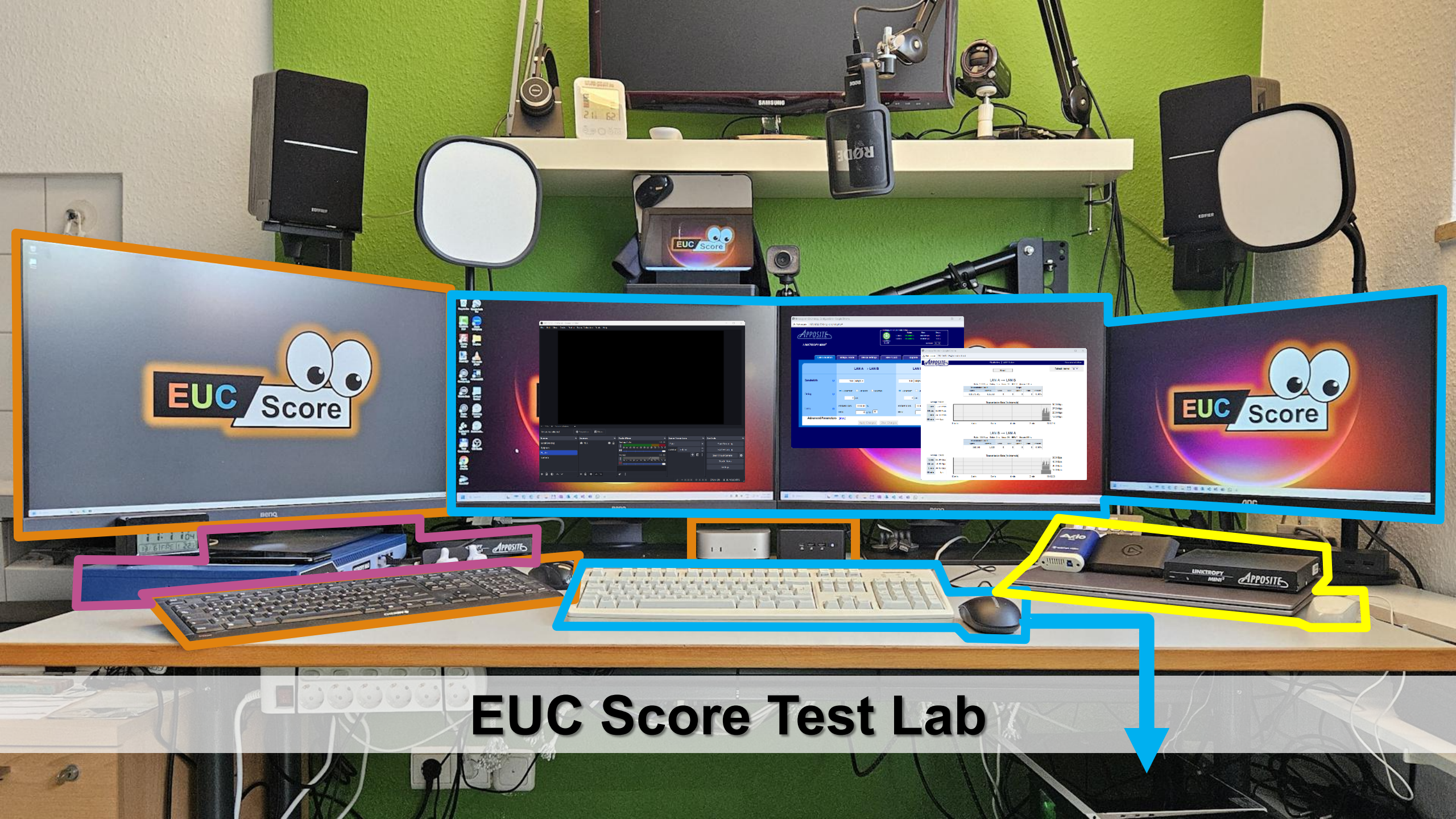
EUC Score Basic Lab

Ad-hoc Observation of Perceived User Experience



EUC Score Enterprise Test Lab

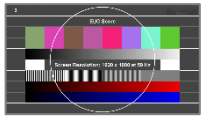




EUC Score Test Lab

Primary Simloads that don’t require a GPU

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

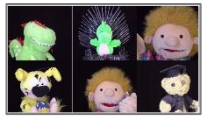
Videos / HTML5

WMPlayer480MP4
480p MP4 video

WMPlayer720MP4
720p MP4 video

WMPlayer180MP4
1080p MP4 video

MSEdgeVideoConf4
4 separate videos



MSEdgeVideoConf6
6 separate videos

MSEdgeVideoGrid9
9 separate videos

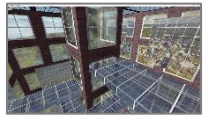
MSEdgeFishbowlHTML5
HTML5 app

Animations

MSEdgeGifScroll1 / 2
Medium animation

MSEdgePhotoGalleryJS
JPG photo gallery

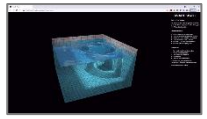
RollercoasterDX9
Medium DirectX 9 app



BSPBlendingDX11
Demanding DirectX 11 app

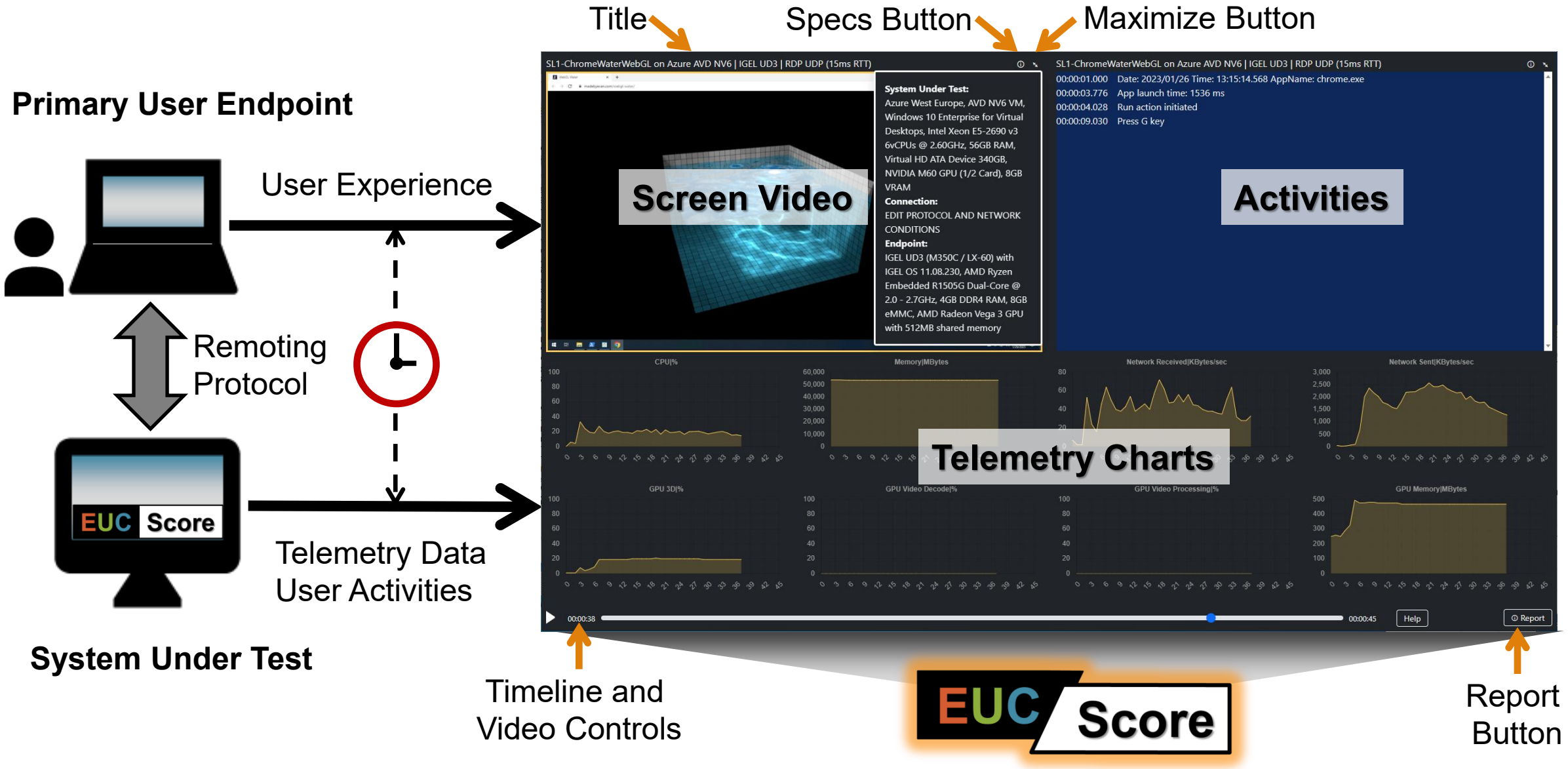
MSEdgeCarVisualizer
Demanding WebGL app

MSEdgeAquariumWebGL
Demanding WebGL app

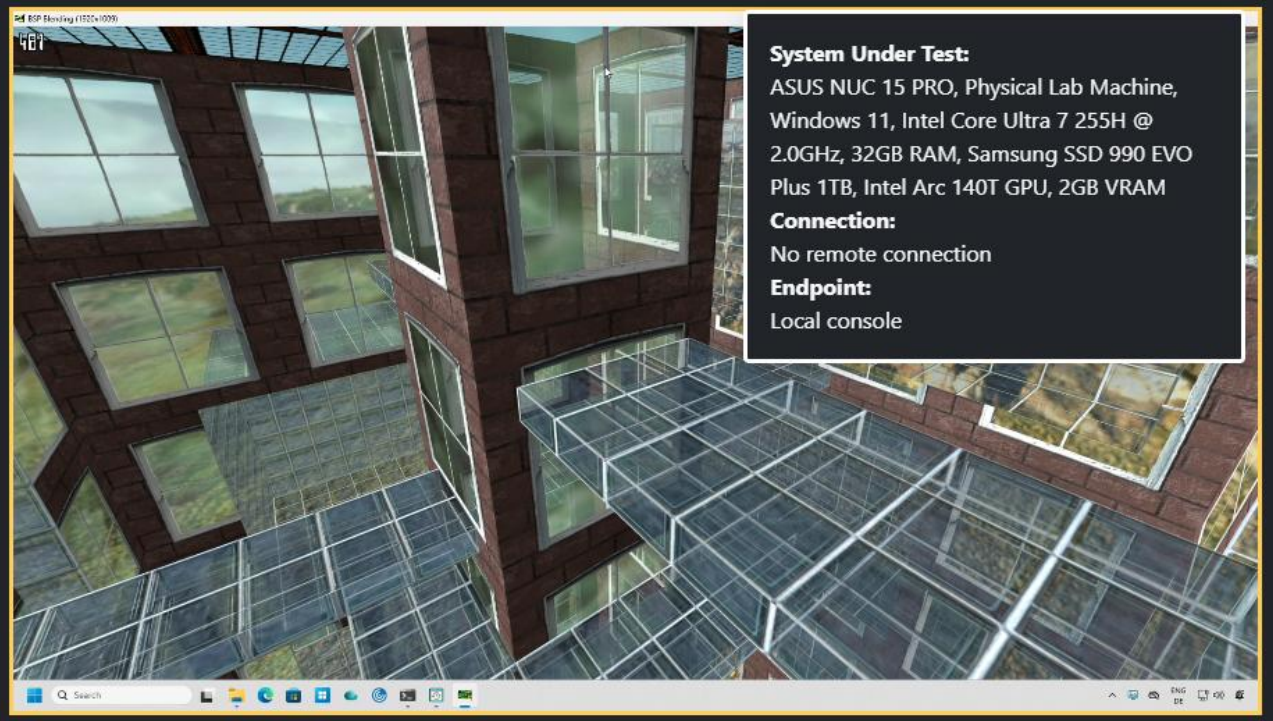


MSEdgeWaterWebGL
Demanding WebGL app

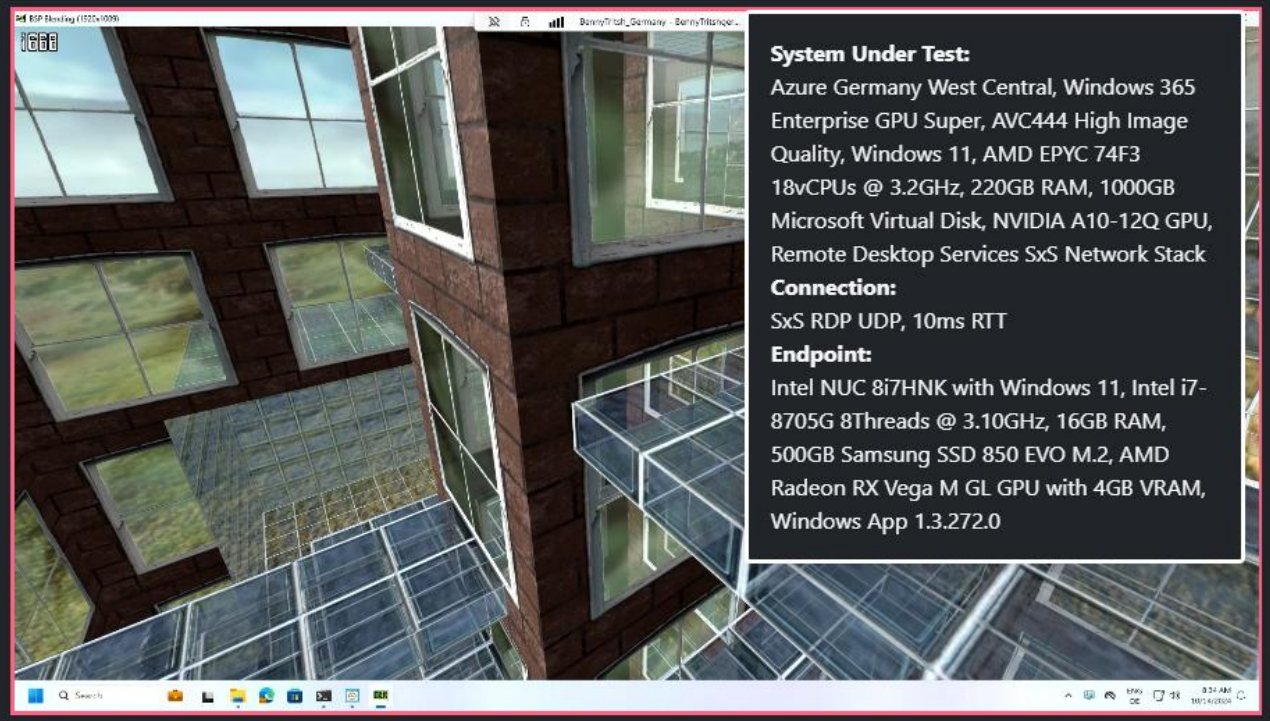
Visual Data Analytics – Sync Player

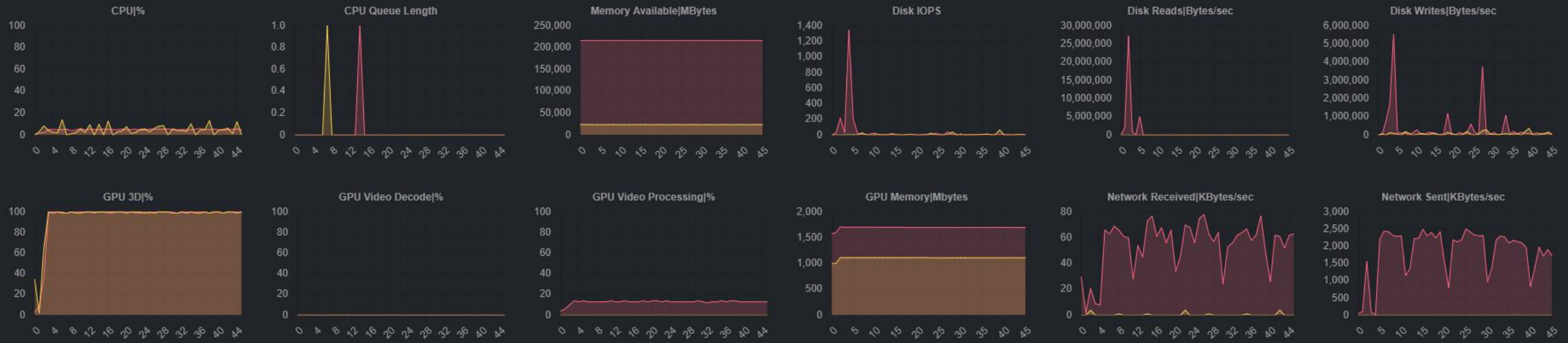


SL1-BSPBlendingDX11 on Physical Machine NUC15Pro w/ Arc GPU | Local Console



SL1-BSPBlendingDX11 on Azure Windows 365 Enterprise GPU Super | SxS RDP UDP (10ms RTT)





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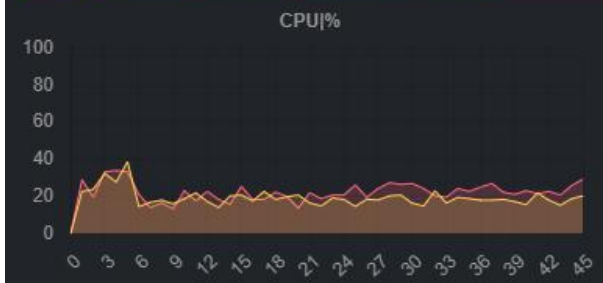
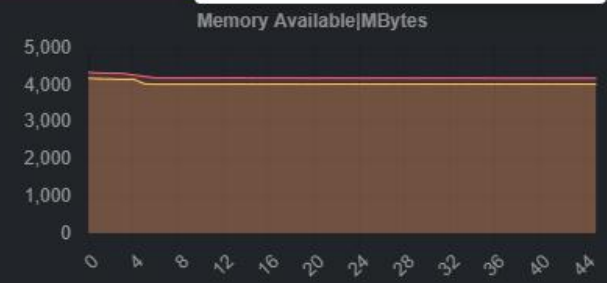
SL1-FurMarkOpenGL on VMware TestDrive | Win11 | NVIDIA L40-2Q | Blast (175ms RTT)

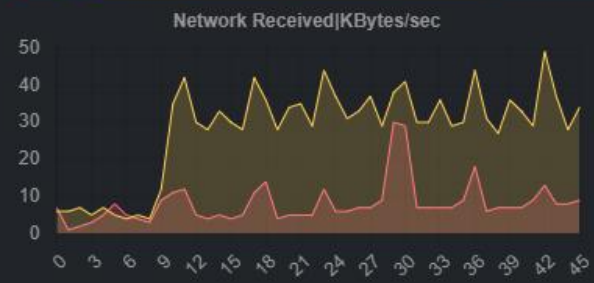
System Under Test:
VMware TestDrive, Windows 11, Intel Xeon Gold 6330 2x2vCPUs @ 2.00GHz, 8GB RAM, 120GB Storage, NVIDIA L40-2Q, VMware Horizon Display Driver
Connection:
Blast, 175ms RTT
Endpoint:
Intel NUC 8i7HNK with Windows 11, Intel i7-8705G 8Threads @ 3.10GHz, 16GB RAM, 500GB Samsung SSD 850 EVO M.2, AMD Radeon RX Vega M GL GPU with 4GB VRAM, VMware Horizon Client 2306 8.10.0

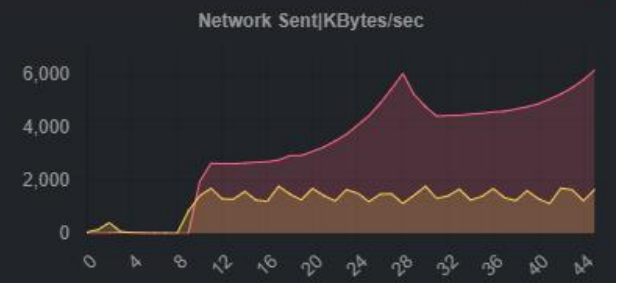
SL1-FurMarkOpenGL on VMware TestDrive | Win11 | NVIDIA L40-2Q | PCoIP (175ms RTT)

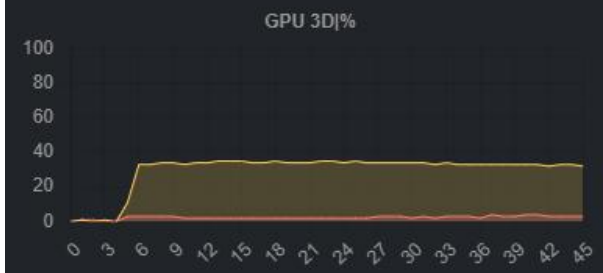
System Under Test:
VMware TestDrive, Windows 11, Intel Xeon Gold 6330 2x2vCPUs @ 2.00GHz, 8GB RAM, 120GB Storage, NVIDIA L40-2Q
Connection:
PCoIP, 175ms RTT
Endpoint:
Intel NUC 8i7HNK with Windows 11, Intel i7-8705G 8Threads @ 3.10GHz, 16GB RAM, 500GB Samsung SSD 850 EVO M.2, AMD Radeon RX Vega M GL GPU with 4GB VRAM

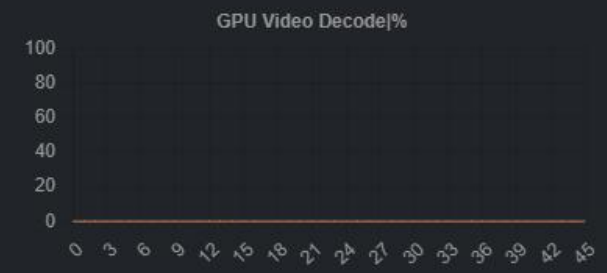


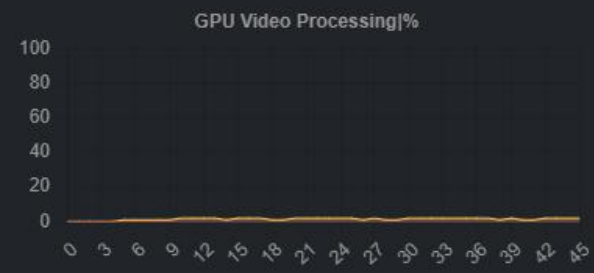


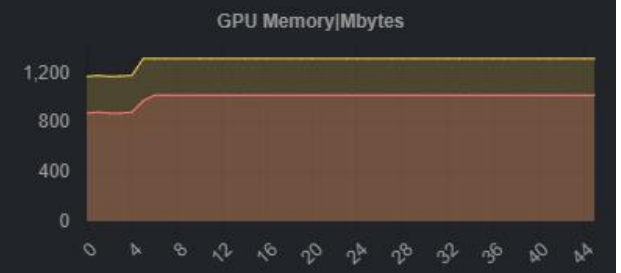












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Call to Action

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

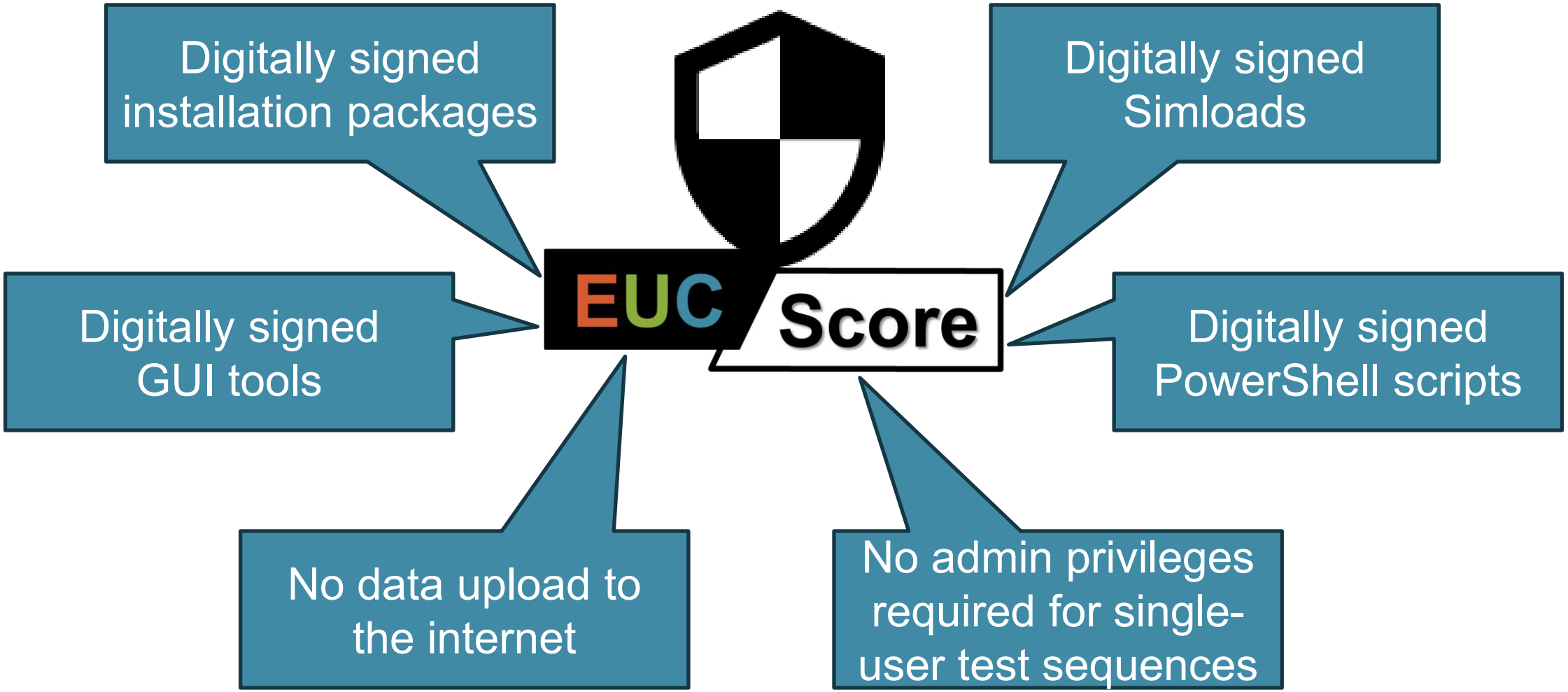
EUC Score Testing Methodology

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



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 (= score) that represents the performance. Typically, each Score Simload is associated with a specific theme.

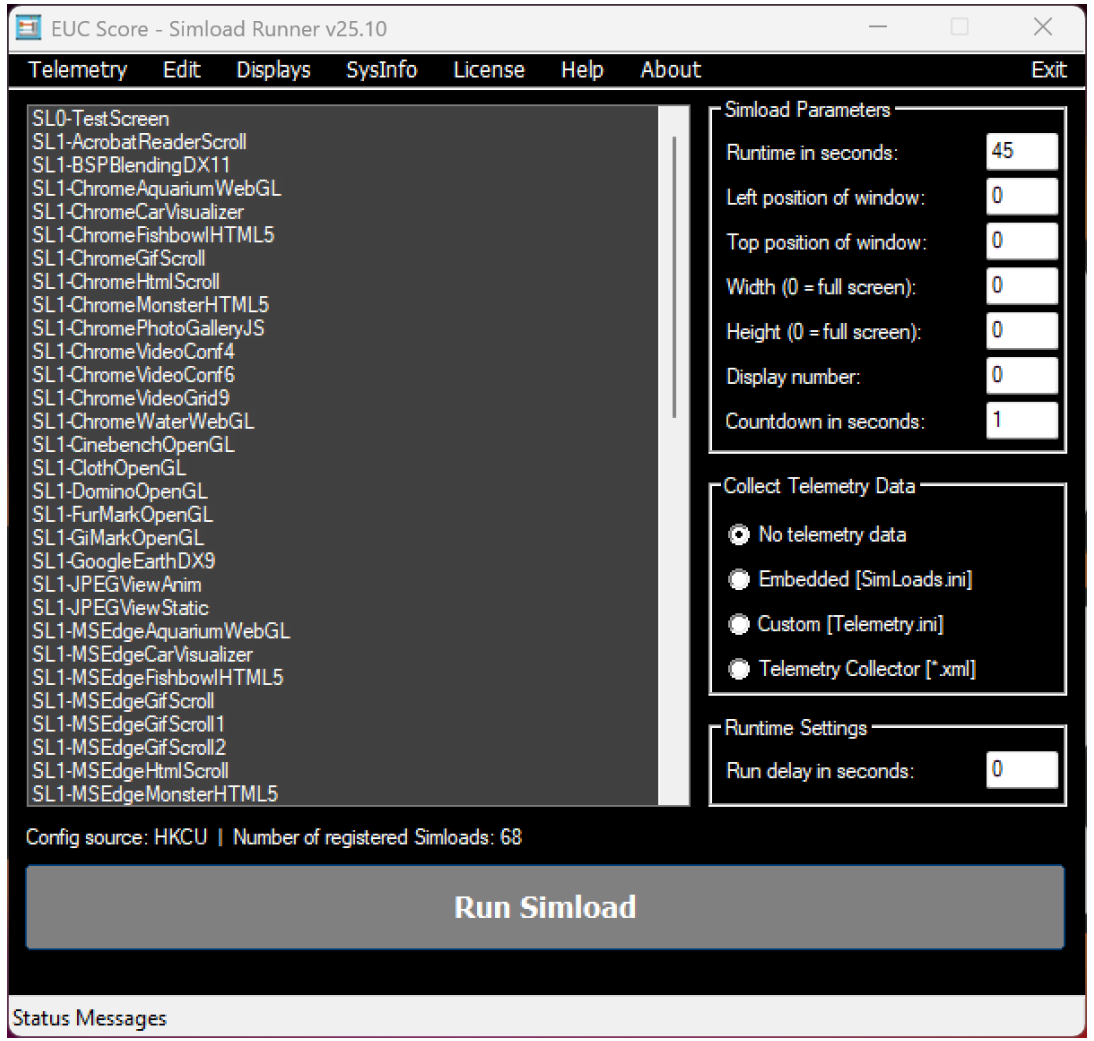
EUC Score Simload Gallery: https://eucscore.com/gallery.html

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

Simload Runner

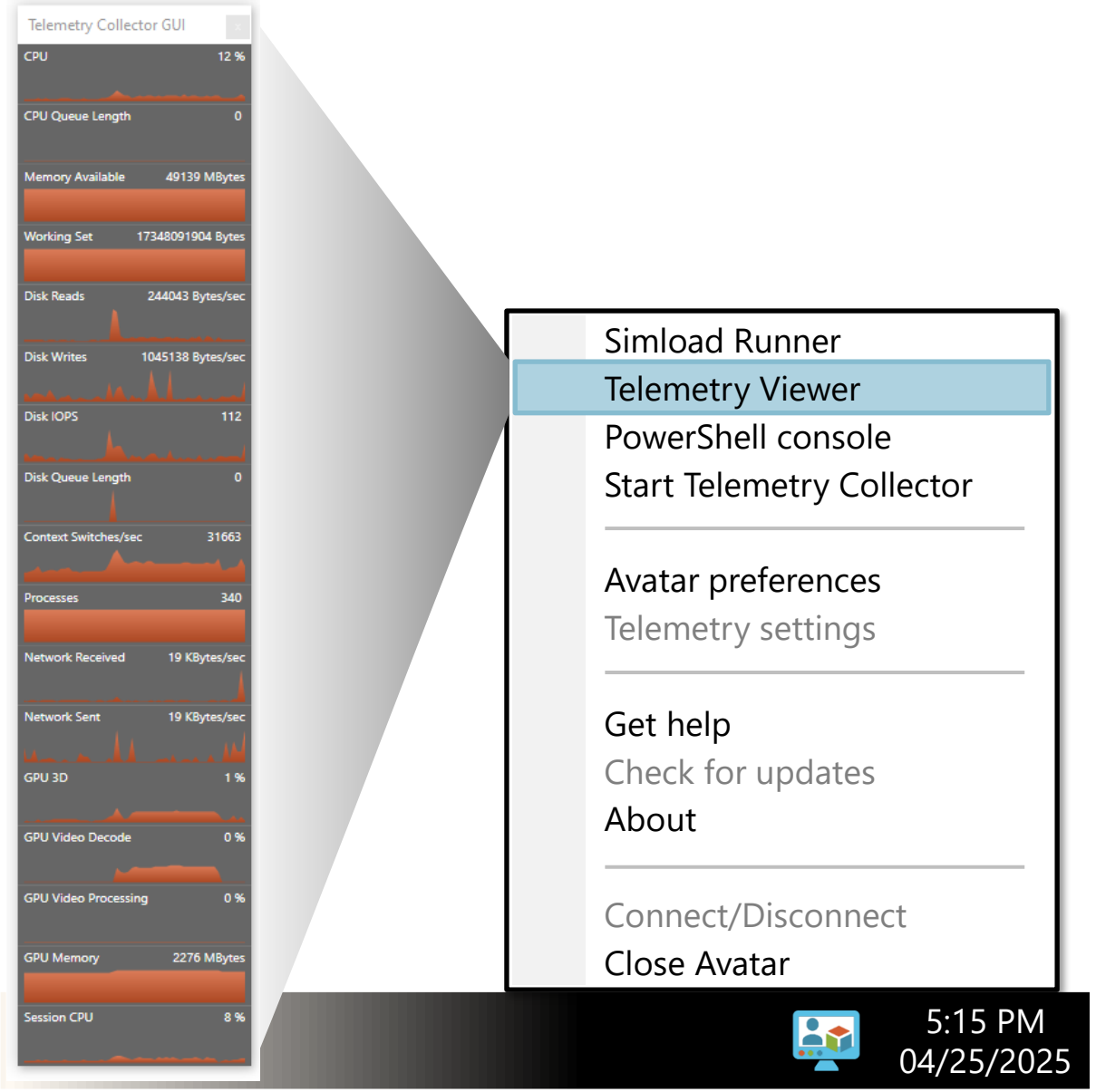
Run Freeware simulated workloads

Run Enterprise simulated workloads



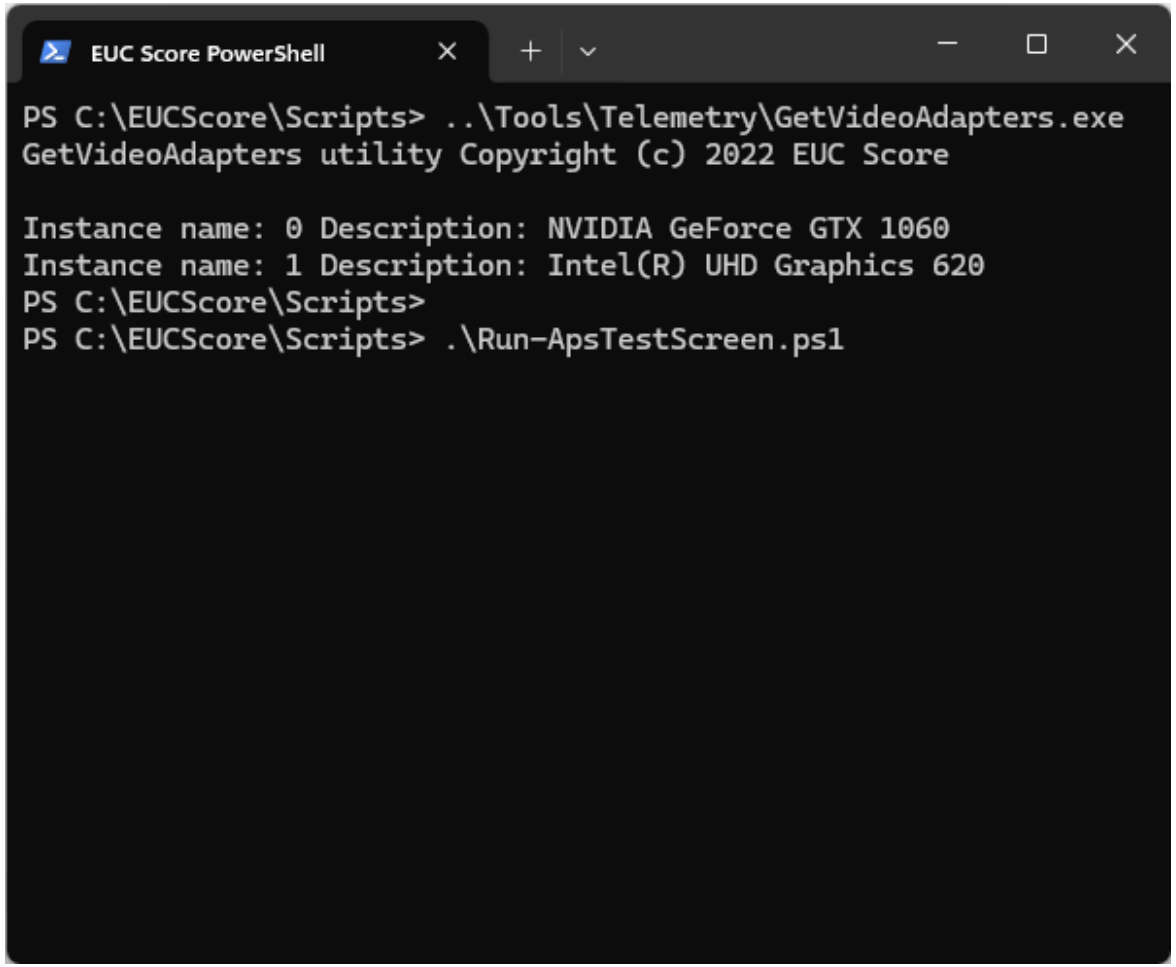
EUC Score Avatar

- 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

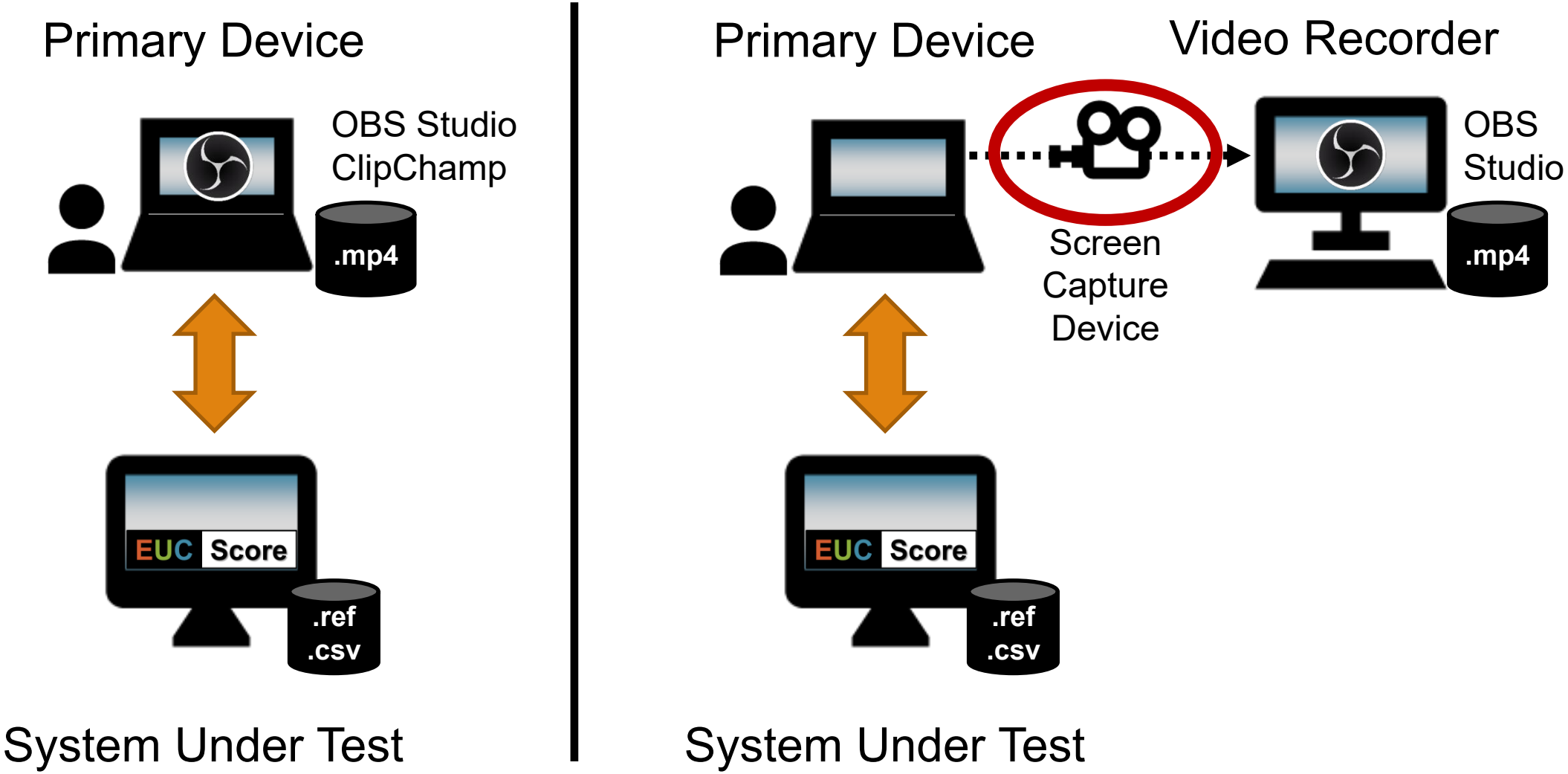


EUC Score PowerShell Commands

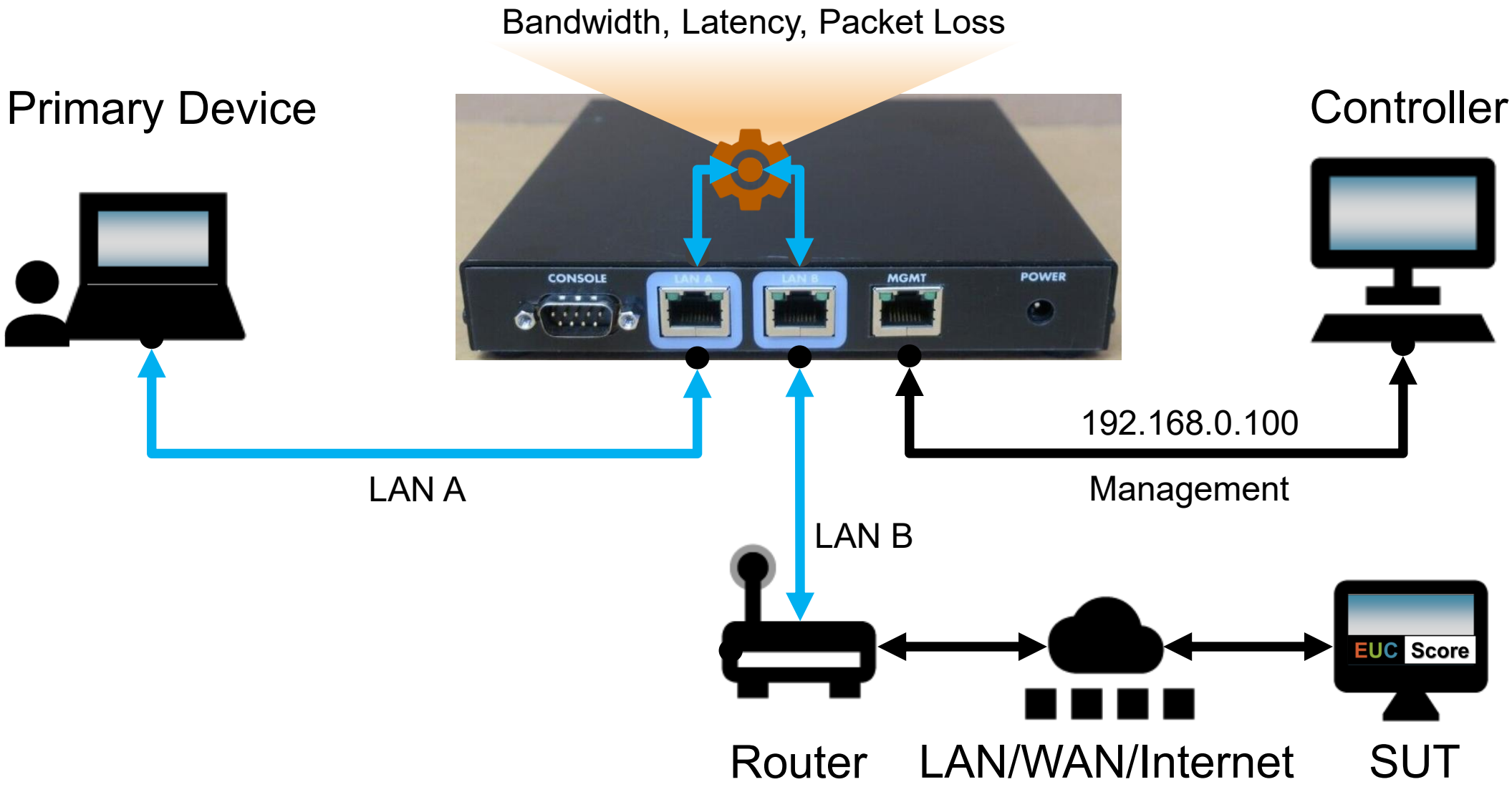
- List-EucSimloadItem
- Run-EucSimload -SimloadName -Seconds [-Telemetry] [-x -y [-width -height]]
- Start-EucSimload -SimloadName -TempObject [-x -y [-width -height]]
- Stop-EucSimload -SimloadName -TempObject
- Start-EucTelemetryCollector [-Id]
- Stop-EucTelemetryCollector



Screen Video Recording Options



Adding a WAN Emulator



linktropy-mini2 (Linktropy Configuration) - Google Chrome

Not secure 192.168.2.254/cgi-bin/init.php#

APPOSITE TECHNOLOGIES

LINKTROPY MINI²

linktropy-mini2 (192.168.2.254)

Emulation On/Off

	Status	Rate	Drops
LAN A	UP (100FD)	150.0 Kbps	53353
LAN B	UP (100FD)	13.08 Kbps	17502

Refresh: 1s

Link Emulation | Bridge / Route | Device Settings | Save / Load | Upgrade | M

	LAN A ⟶ LAN B	LAN B ⟶ LAN A
Bandwidth	100 Mbps	100 Mbps
Delay	Constant / Uniform / Normal; 0 ms	Constant / Uniform / N; 0 ms
Loss	Packet Loss 0.0000 %; BER 0 x 10 - 14	Packet Loss 0.0000 %; BER 0 x 10 - 14

Advanced Parameters [show]

Apply Changes | Clear Changes

Linktropy Monitor - Google Chrome

Not secure 192.168.2.254/monitor.html

APPOSITE TECHNOLOGIES

Statistics | ARP Table | Documentation

Reset

Refresh Interval: 1s

LAN A ⟶ LAN B

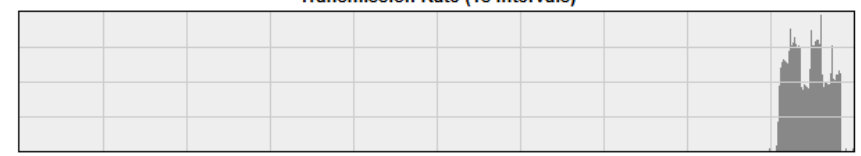
Rate: 100.0 Mbps **Delay:** 0 ms **Loss:** 0% **BER:** 0 **Queue:** 250 ms

Transmission Count		Drops				
Bytes	Frames	Loss	BER	Queue	Total	Percent
183,075,915	155,663	0	0	0	0	0.00%

Average Tx Rate

1 sec	1.287 Mbps
10 sec	3.205 Mbps
1 min	24.39 Mbps
10 min	----- bps

Transmission Rate (1s intervals)



LAN B ⟶ LAN A

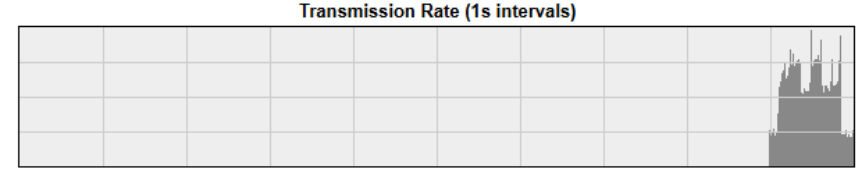
Rate: 100.0 Mbps **Delay:** 0 ms **Loss:** 0% **BER:** 0 **Queue:** 250 ms

Transmission Count		Drops				
Bytes	Frames	Loss	BER	Queue	Total	Percent
262,142	1,223	0	0	0	0	0.00%

Average Tx Rate

1 sec	16.09 Kbps
10 sec	18.45 Kbps
1 min	34.46 Kbps
10 min	----- bps

Transmission Rate (1s intervals)



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

Sync Player Readme

Create Single-View Sync Player Clips

Step-by-step instructions:

1. Run Create-SingleDataStructure.ps1 to create the file and folder structure in the data folder with the results of an EUC Score test sequence.
2. [Optional] Run Convert-CsvFiles.ps1 for non-English systems under test.
3. Review and edit the **.results file** located in the data folder, in particular the sTitle, sSUT, sConnection and sEndpoint values in the [Common] section. Modifying the iCountDownInSec and iStartDelayInMilliseconds values is optional in case the synchronization of the data visualization needs to be fine-tuned. Do not modify the sType value.
4. Run Create-SingleSyncPlayerClips.ps1 to create Sync Player clips in single-view mode.
5. Run Create-LinkList.ps1 to create a HTML link list in the data folder allowing you to open all new Sync Player clips of the test sequence.
6. Use the **link list** to review each Sync Player clip you created in STEP 4. Edit the **.results file**, in particular the sFindings (and optionally the fVideoRealFps, sRating and sTags) values in each [Simload] section.
7. Run Create-SingleSyncPlayerClips.ps1 again with the same parameters as in STEP 4.
8. Use the **link list** again to watch individual Sync Player clips.
9. [NOT IMPLEMENTED, YET] Run **Export-SingleSyncPlayerClip.ps1** to export one or all Sync Player clips in a test sequence folder to a target folder.
10. [NOT IMPLEMENTED, YET] Run **Create-SingleSpecFile.ps1** to create a .spec file that contains values of all test environment parameters.
11. [NOT IMPLEMENTED, YET] Run **Create-SingleXmlPackage.ps1** to create an XML file that can be used to publish a test run.

Simple Script Sequence

```
.\Create-SingleDataStructure.ps1 -DataFolder d:\Results\Test1
.\Create-SingleSyncPlayerClips.ps1 -DataFolder d:\Results\Test1
.\Create-LinkList.ps1 -DataFolder d:\Results\Test1
```

Left Title – Single View Mode (i)(z)

Right Title – Single View Mode (i)(z)

Left Media Tile
“Screen Recording”
[.mp4]

Description

00:00:03.776 App launch time: 1536 ms
00:00:04.028 Run action initiated
00:00:09.030 Press G key

System & User Activities
[.ref]

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

Video & Data Animation Controls

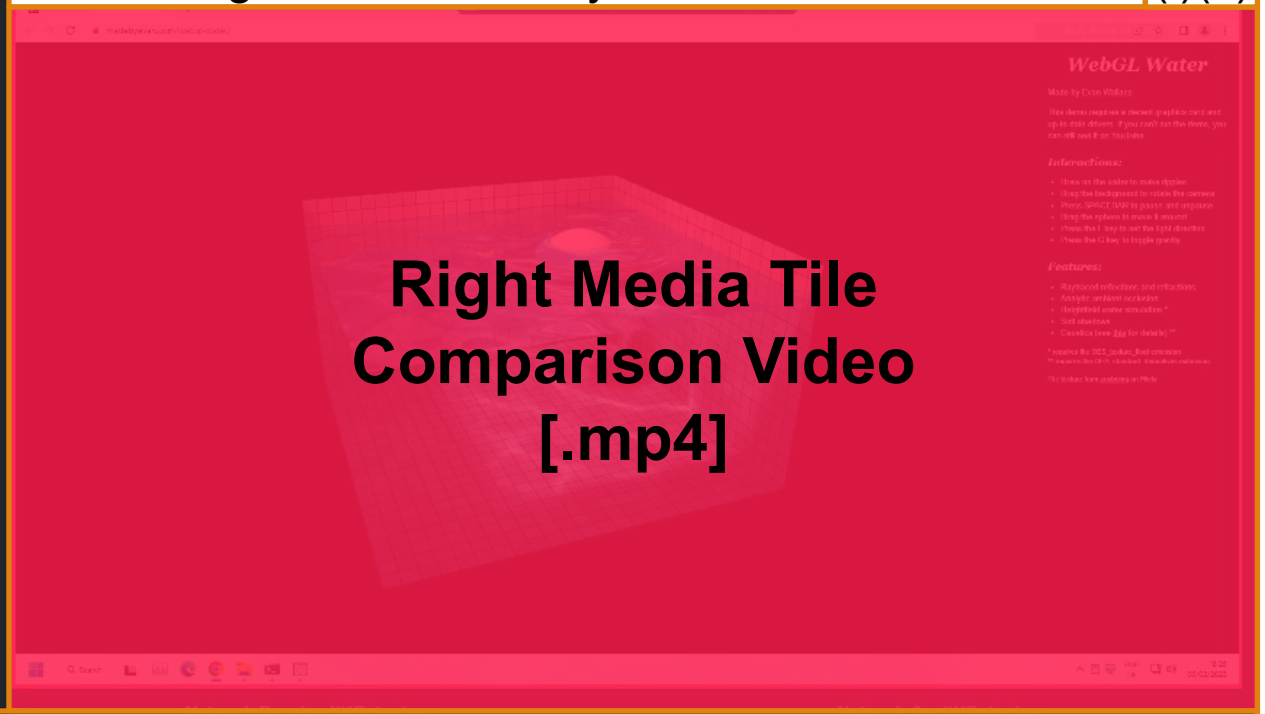
00:00:38 00:00:45

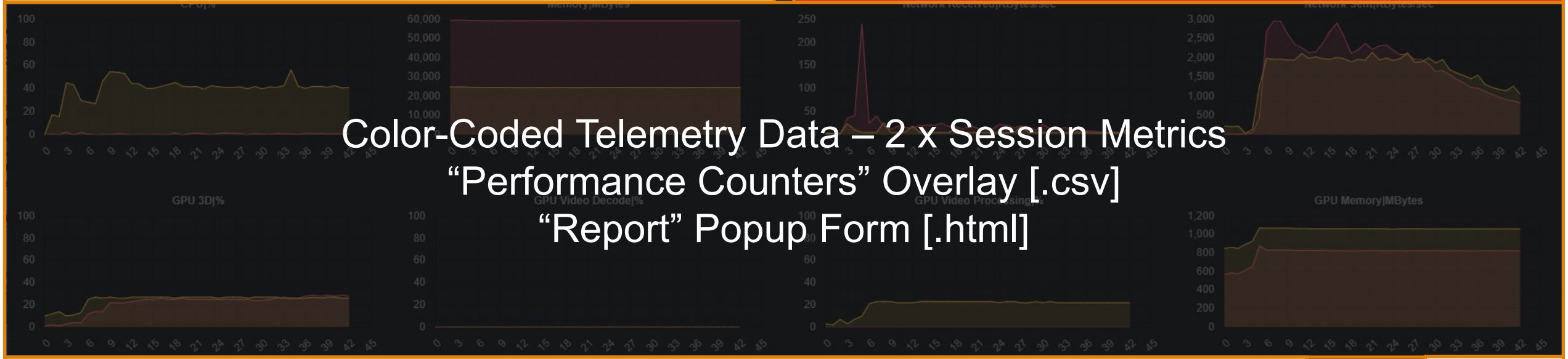
Help

Report

Left Title – Side-by-Side View Mode (i)(z)

Right Title – Side-by-Side View Mode (i)(z)



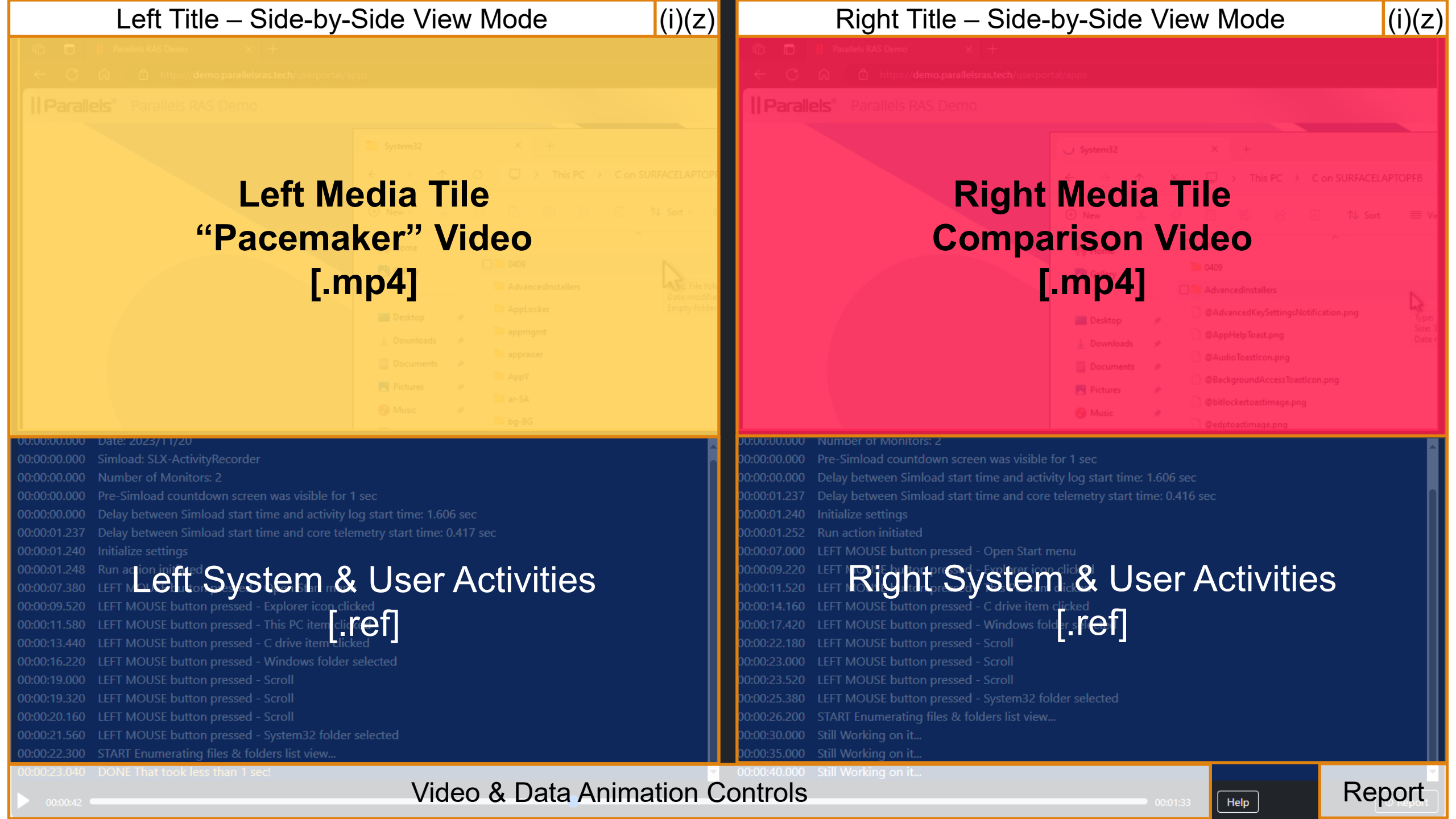


Video & Data Animation Controls

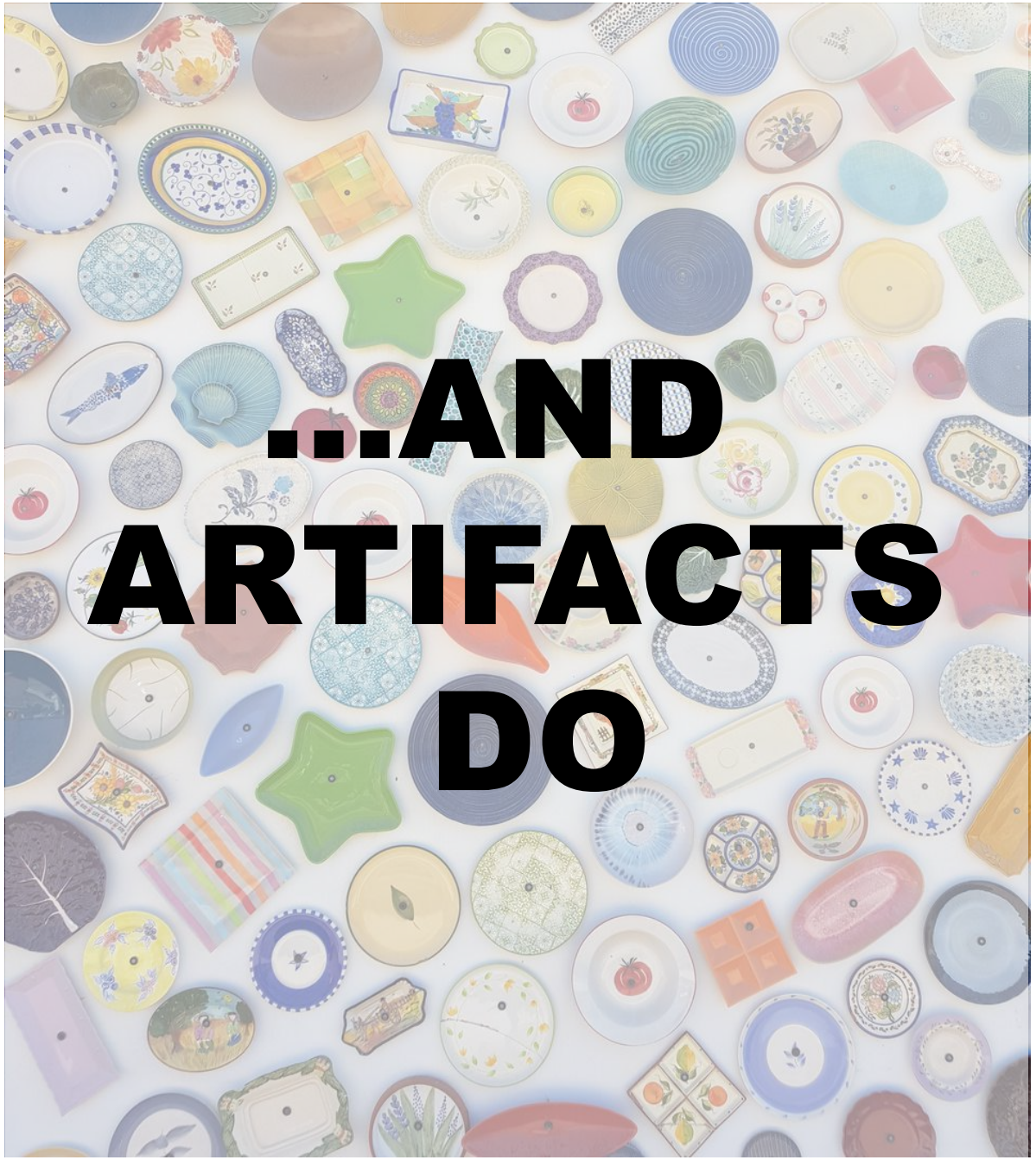
00:00:41 00:00:45

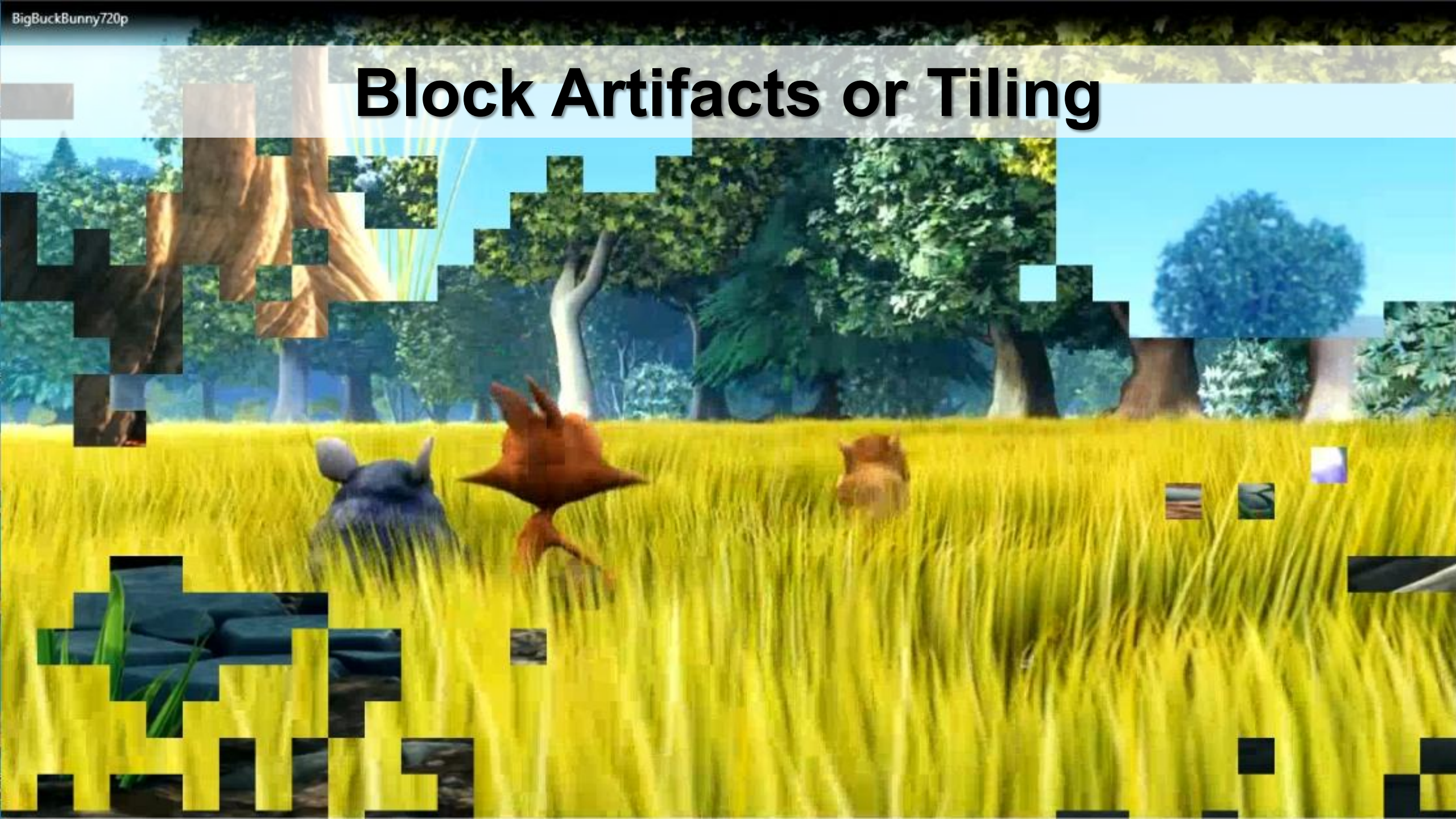
Help

Report

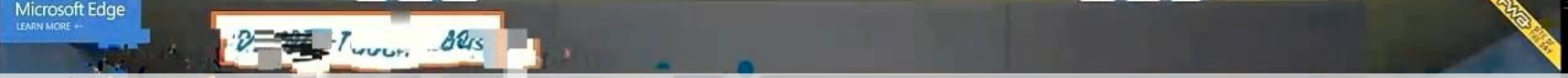

Left Title – Side-by-Side View Mode
(i)(z)
Right Title – Side-by-Side View Mode
(i)(z)
Left Media Tile
“Pacemaker” Video
[.mp4]
Right Media Tile
Comparison Video
[.mp4]
00:00:00.000 Simload: SLX-ActivityRecorder
00:00:00.000 Number of Monitors: 2
00:00:00.000 Pre-Simload countdown screen was visible for 1 sec
00:00:00.000 Delay between Simload start time and activity log start time: 1.606 sec
00:00:01.237 Delay between Simload start time and core telemetry start time: 0.417 sec
00:00:01.240 Initialize settings
00:00:01.248 Run action initiated
00:00:07.380 LEFT MOUSE button pressed - Open Start menu
00:00:09.520 LEFT MOUSE button pressed - Explorer icon clicked
00:00:11.580 LEFT MOUSE button pressed - This PC item clicked
00:00:13.440 LEFT MOUSE button pressed - C drive item clicked
00:00:16.220 LEFT MOUSE button pressed - Windows folder selected
00:00:19.000 LEFT MOUSE button pressed - Scroll
00:00:19.320 LEFT MOUSE button pressed - Scroll
00:00:20.160 LEFT MOUSE button pressed - Scroll
00:00:21.560 LEFT MOUSE button pressed - System32 folder selected
00:00:22.300 START Enumerating files & folders list view...
00:00:23.040 DONE That took less than 1 sec!
Left System & User Activities
[.ref]
00:00:00.000 Number of Monitors: 2
00:00:00.000 Pre-Simload countdown screen was visible for 1 sec
00:00:00.000 Delay between Simload start time and activity log start time: 1.606 sec
00:00:01.237 Delay between Simload start time and core telemetry start time: 0.416 sec
00:00:01.240 Initialize settings
00:00:01.252 Run action initiated
00:00:07.000 LEFT MOUSE button pressed - Open Start menu
00:00:14.160 LEFT MOUSE button pressed - C drive item clicked
00:00:22.180 LEFT MOUSE button pressed - Scroll
00:00:23.000 LEFT MOUSE button pressed - Scroll
00:00:23.520 LEFT MOUSE button pressed - Scroll
00:00:25.380 LEFT MOUSE button pressed - System32 folder selected
00:00:26.200 START Enumerating files & folders list view...
00:00:30.000 Still Working on it...
00:00:35.000 Still Working on it...
00:00:40.000 Still Working on it...
Right System & User Activities
[.ref]
00:00:42
00:01:33
Video & Data Animation Controls
Help
Report

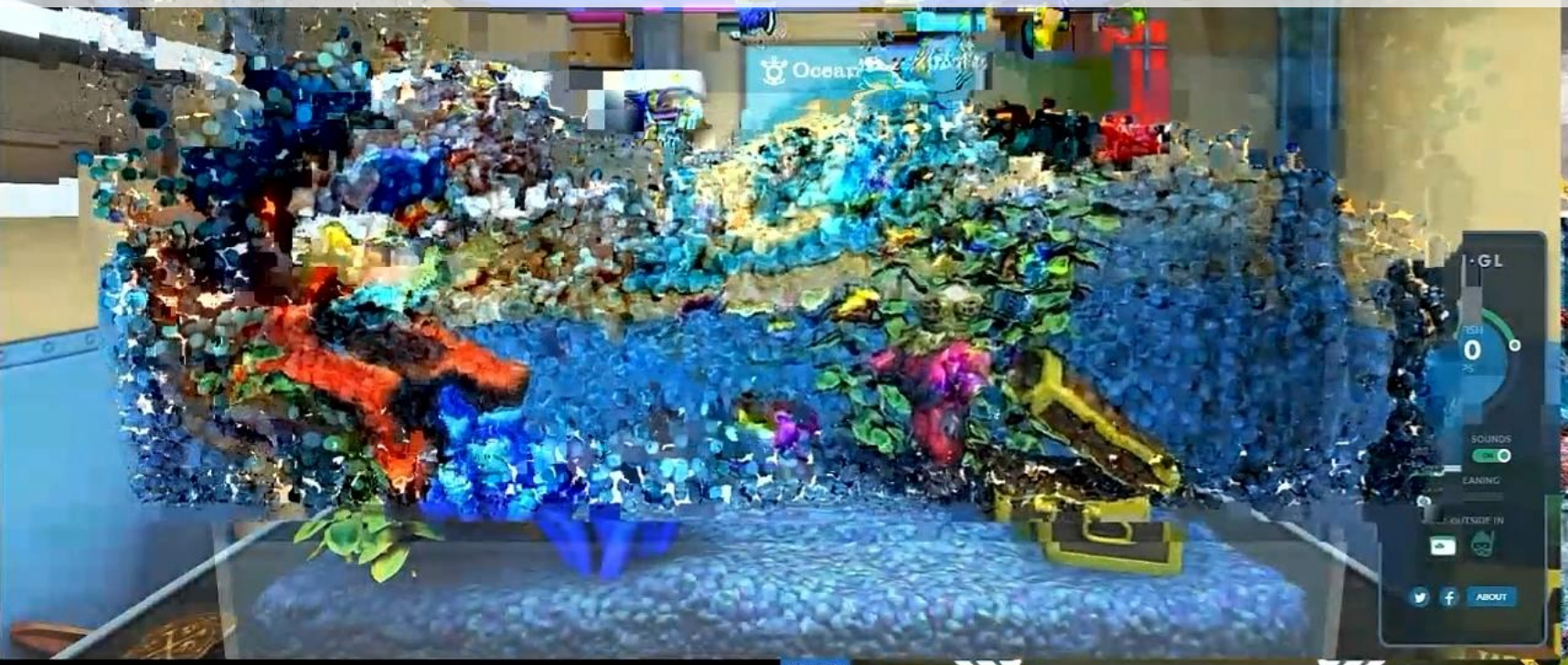

VIDEO GAMES
DON'T MAKE
US VIOLENT
LAG DOES

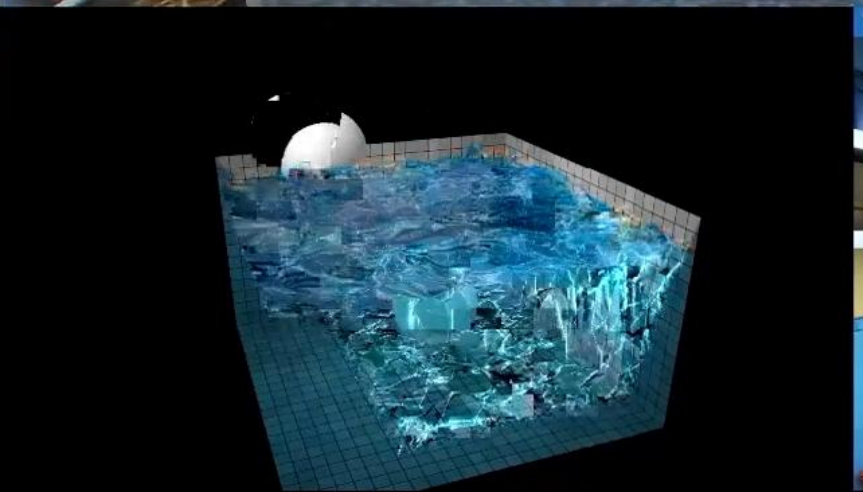

...AND
ARTIFACTS
DO

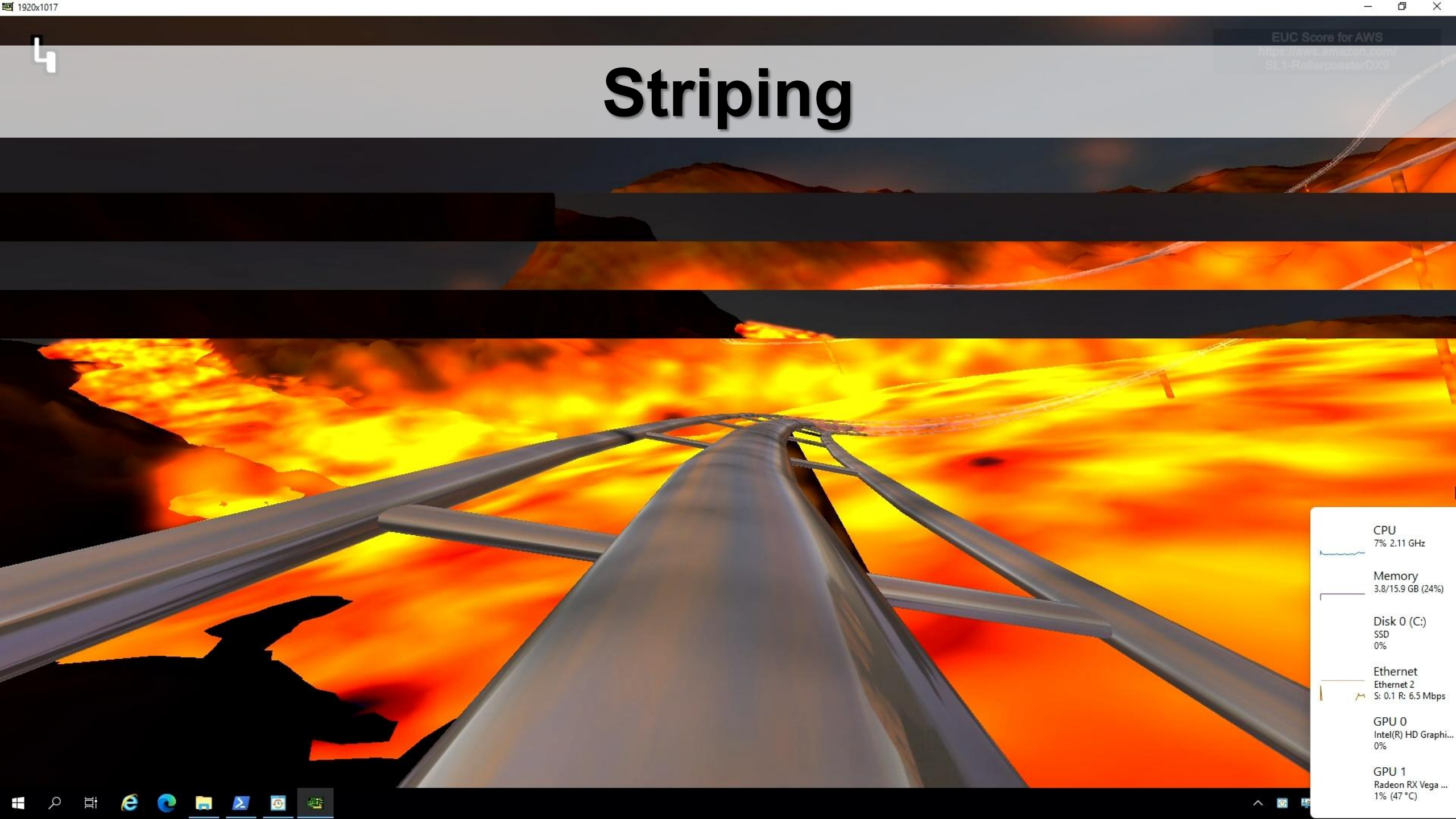

BigBuckBunny720p
Block Artifacts or Tiling

Smear Artifacts (Airbrush Effect)

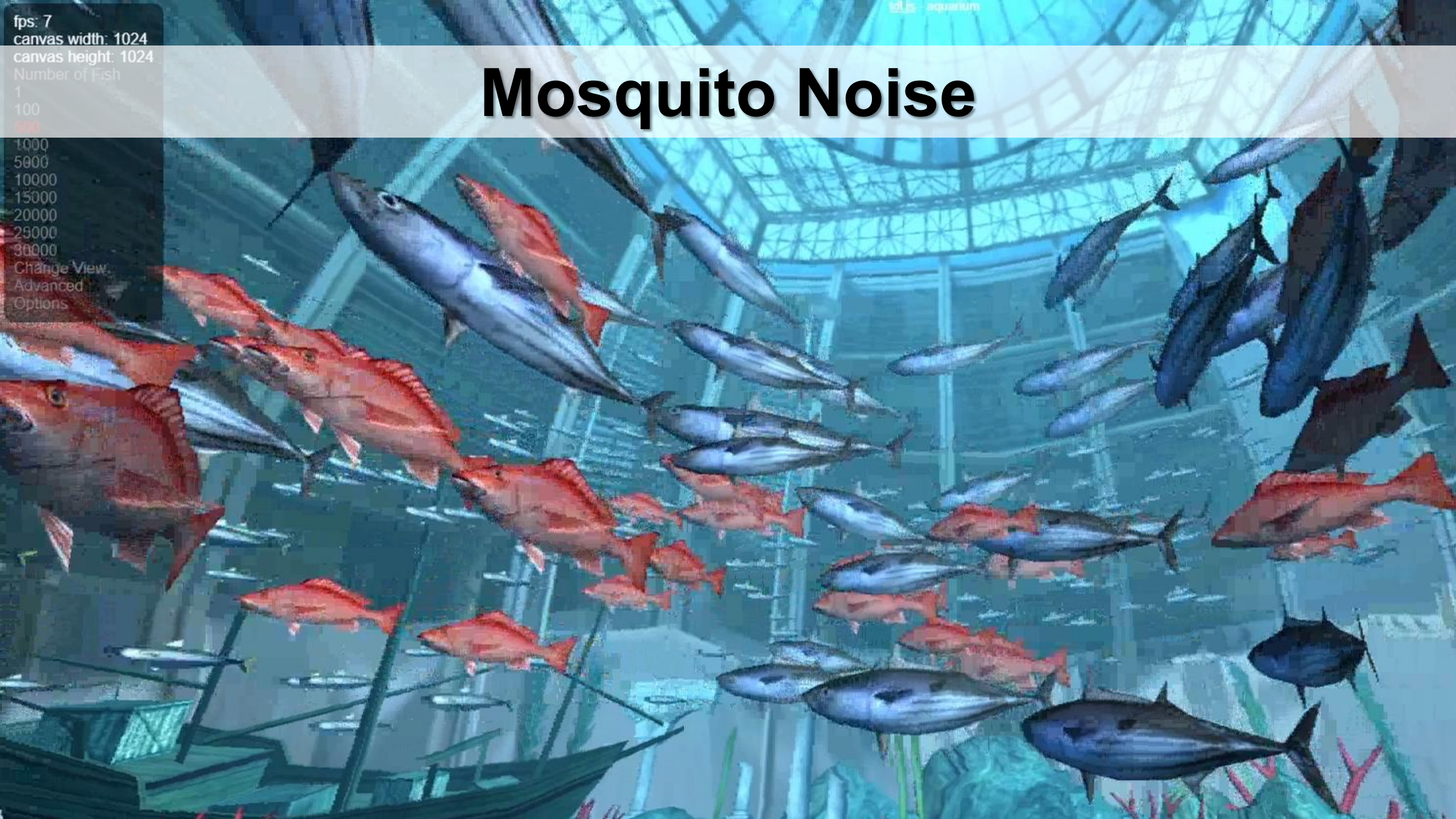







1920x1017
EUC Score for AWS
https://aws.amazon.com/
SL1-RollercoasterDX9
Striping
CPU
7% 2.11 GHz
Memory
3.8/15.9 GB (24%)
Disk 0 (C:)
SSD
0%
Ethernet
Ethernet 2
S: 0.1 R: 6.5 Mbps
GPU 0
Intel(R) HD Graphi...
0%
GPU 1
Radeon RX Vega ...
1% (47 °C)

Blurriness



Mosquito Noise

Thank You

Benny Tritsch | info@eucscore.com