

# EUC Score Introduction

Q4/2025

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

---



End User Computing

EUC

“Admin Experience”

Hard Metrics



Digital Employee Experience

DEX

“User Experience”

Soft Metrics

# From a User's Perspective: DEX Quality Criteria

## EUC Score Focus in Red

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

**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

# 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 Testing Methodology

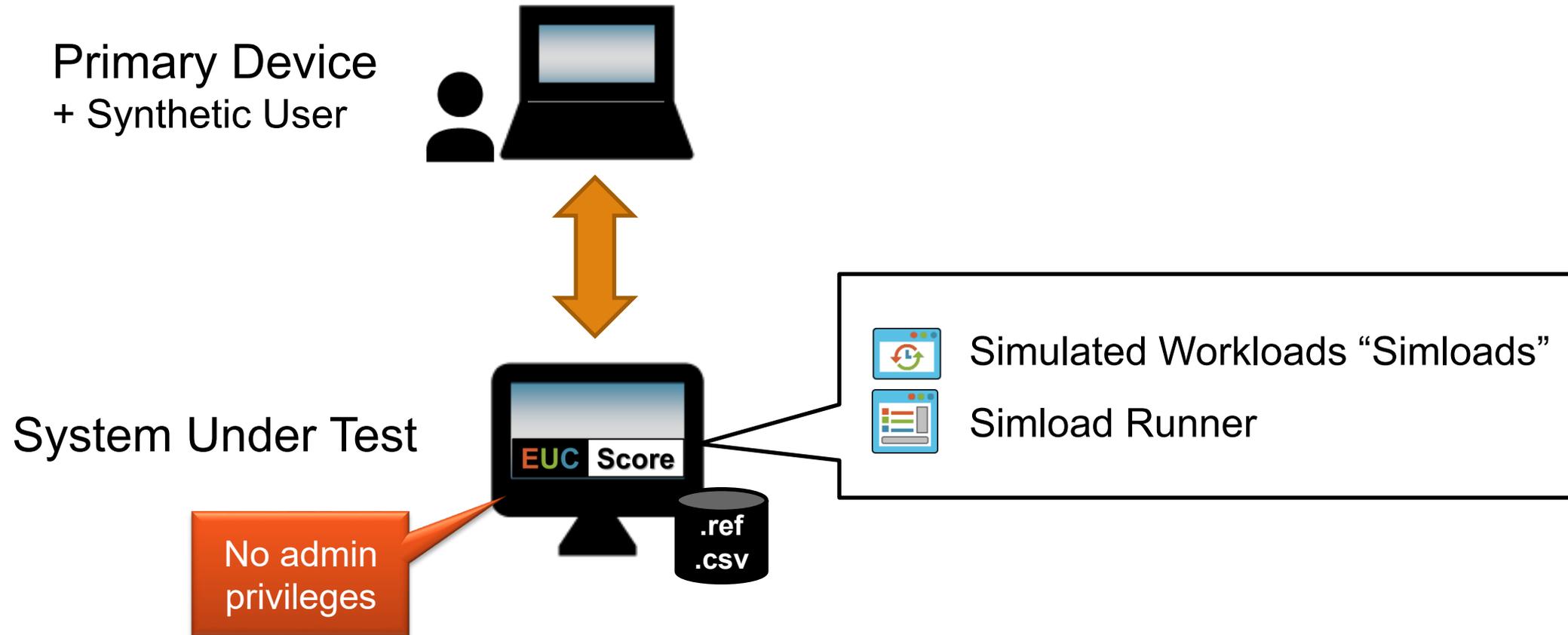
## EUC Score test phases

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)

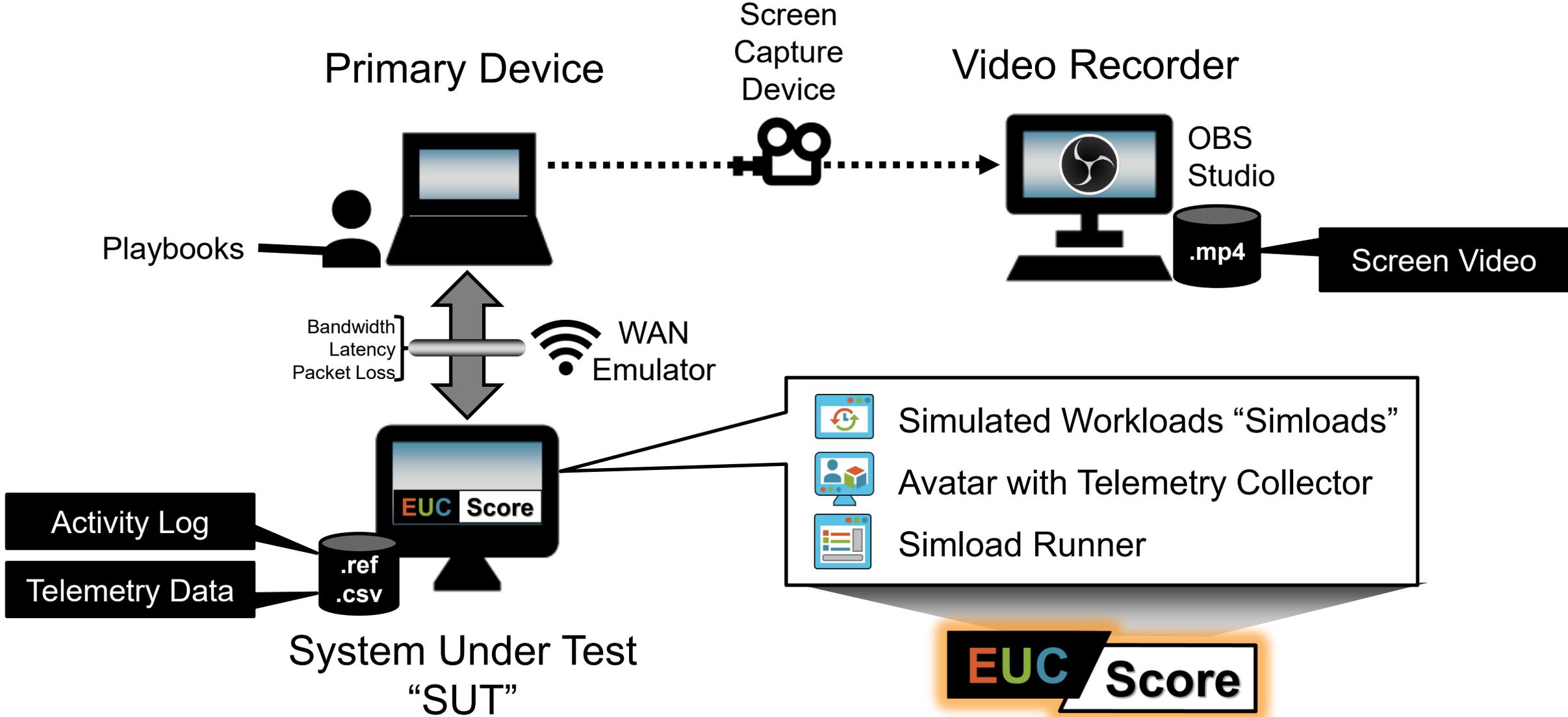
NOTE: Benchmarking experiments or simulations may not reflect the real world, but they help us to understand certain aspects of the real world

# EUC Score Basic Lab

Ad-hoc Observation of Perceived User Experience



# EUC Score Enterprise Test Lab

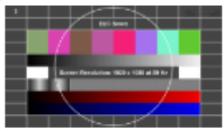


# Simulated Workloads – “Simloads”

	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 overlaid 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.

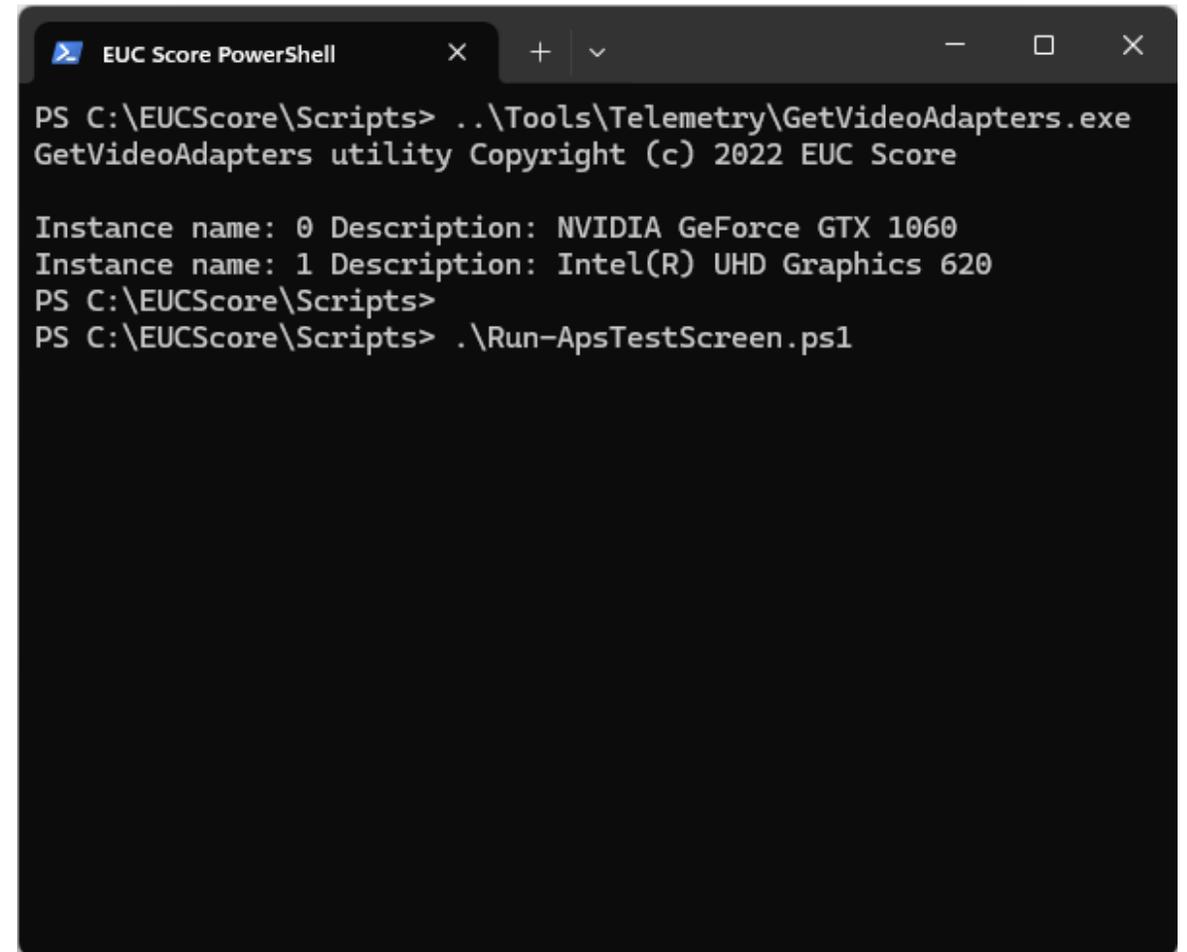
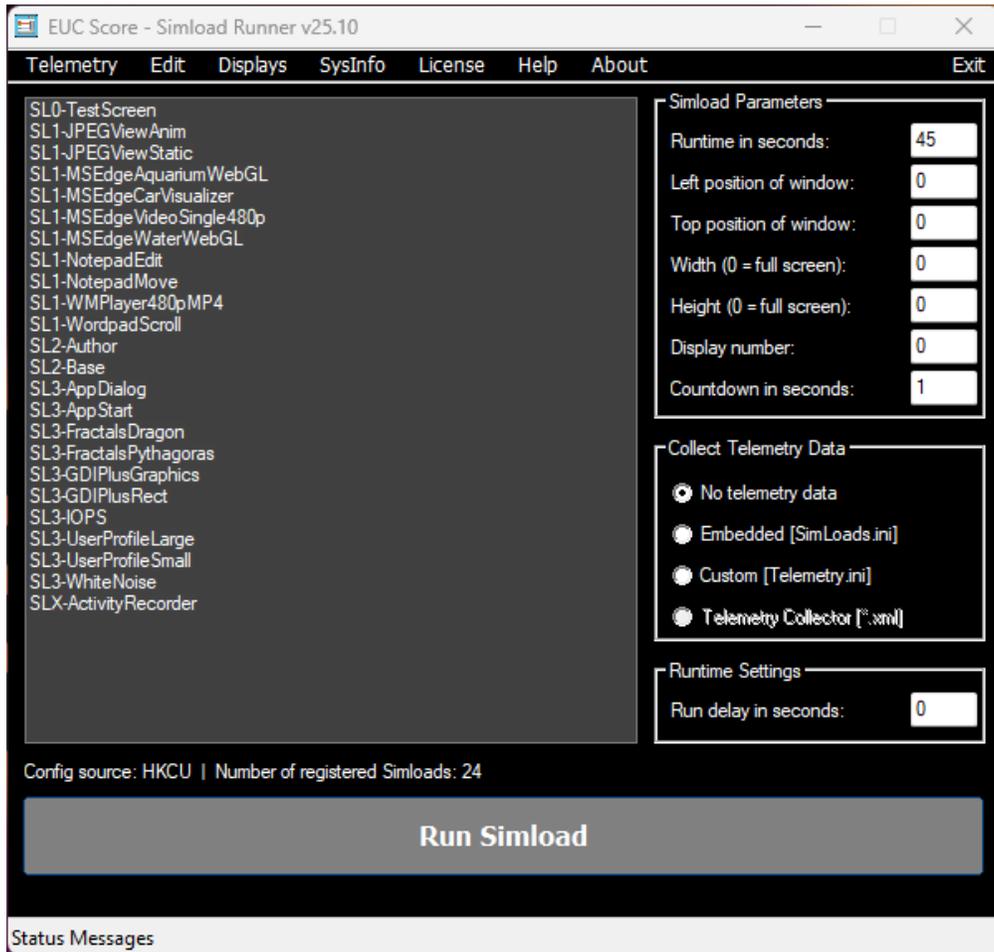
**NOTE:** Each Simload stores system and user activities in a .ref file and may collect telemetry data into a .csv file if configured accordingly

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

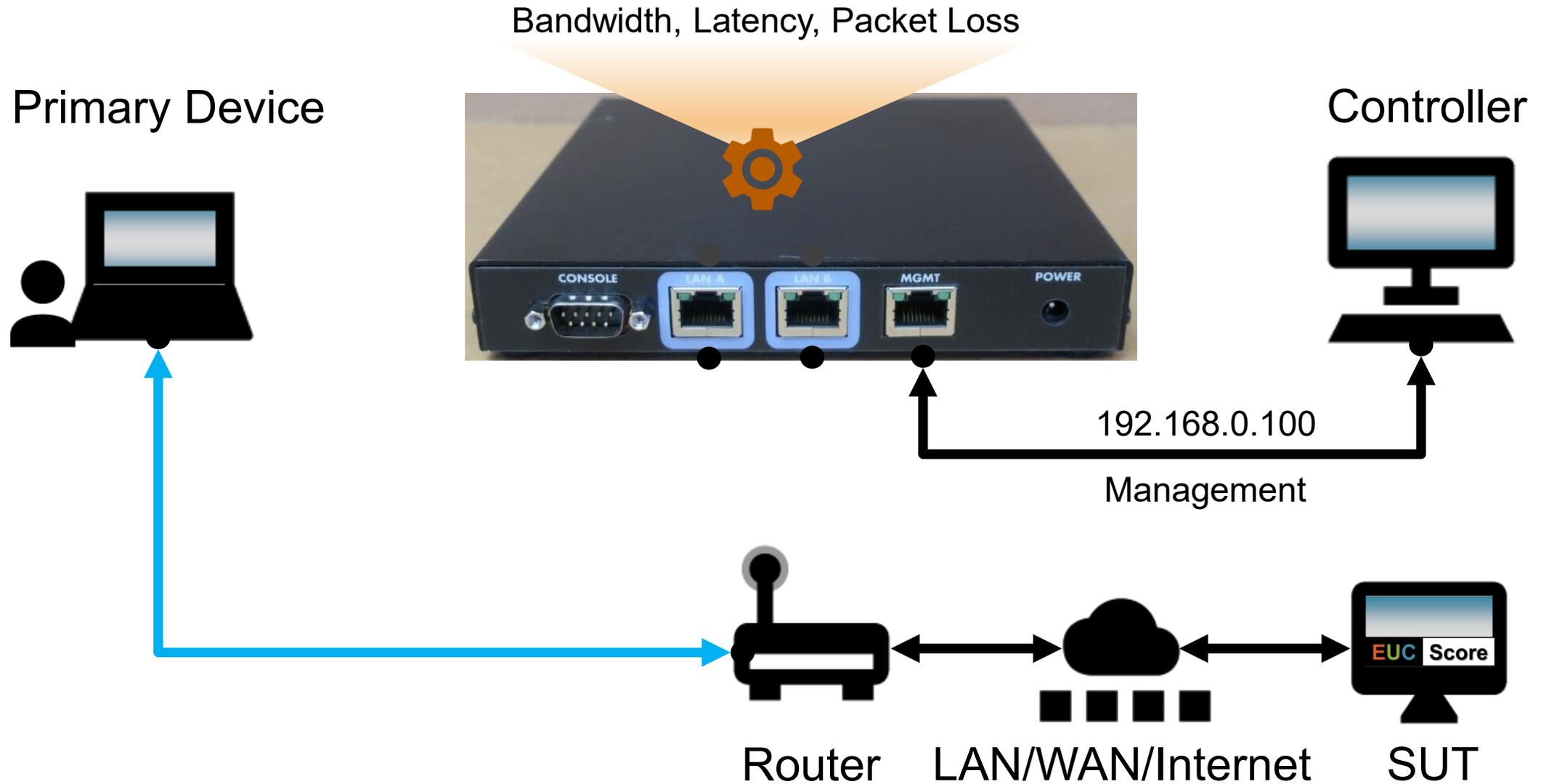
Thumbnail	Simload Type	Description
	<b>System</b> Light user type SL0-System folder	<b>SL0-TestScreen</b> Open an animated test pattern screen and save system information in the EUCScore\Results folder. The system information can be used to document the system under test.
	<b>Primary</b> Light user type SL1-Base folder	<b>SL1-NotepadEdit</b> Open Notepad2 and start writing a novel with random type speed. The Notepad2 executable is located in the EUCScore\Data\Bin\Notepad2\ folder.
	<b>Primary</b> Light user type SL1-Base folder	<b>SL1-NotepadMove</b> Open Notepad2 and move the application window randomly across the screen. The Notepad2 executable is located in the EUCScore\Data\Bin\Notepad2\ folder.
	<b>Primary</b> Light user type SL1-Base folder	<b>SL1-WordpadScroll (deprecated)</b> Open local DOCX file with PNG images in Microsoft Wordpad and randomly move pages up and down every second. <b>NOTE:</b> WordPad will be removed from all editions of Windows starting in Windows 11, version 24H2 and Windows Server 2025.
	<b>Primary</b> Light user type SL1-JPEGView folder	<b>SL1-JPEGViewStatic</b> Open JPEG image in JPEG View. The executable is located in the EUCScore\Simloads\SL1-JPEGView\Bin\JPEGView64\ folder. <b>NOTE:</b> This is the most basic Simload as it includes neither animations nor user interactions.
	<b>Primary</b> Medium user type SL1-JPEGView folder	<b>SL1-JPEGViewAnim</b> Open animated GIF image in JPEG View. The executable is located in the EUCScore\Simloads\SL1-JPEGView\Bin\JPEGView64\ folder.

**+ custom  
or manual  
Simloads  
with real user  
playbooks**

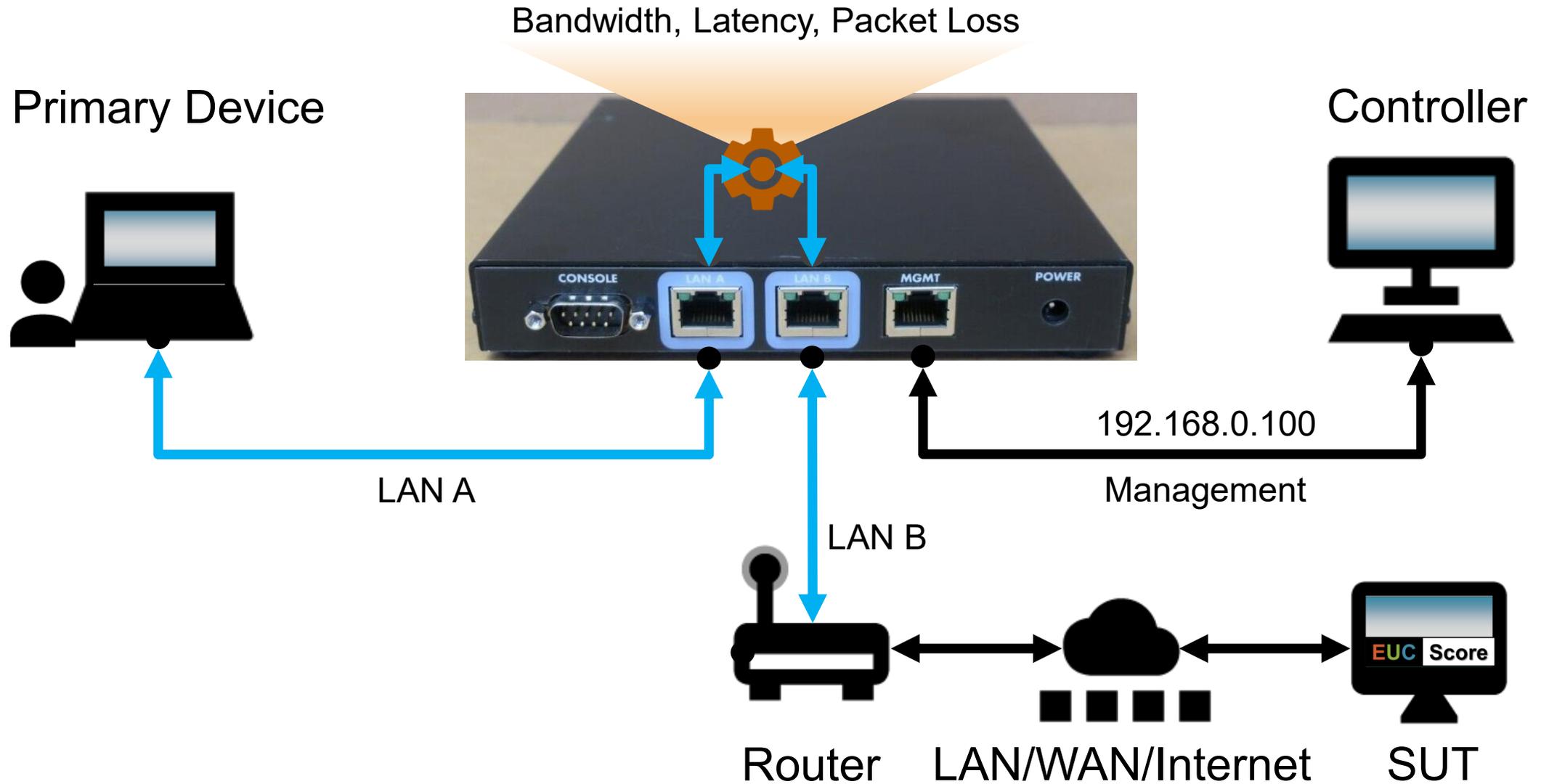
# Run Simloads and Collect Test Data



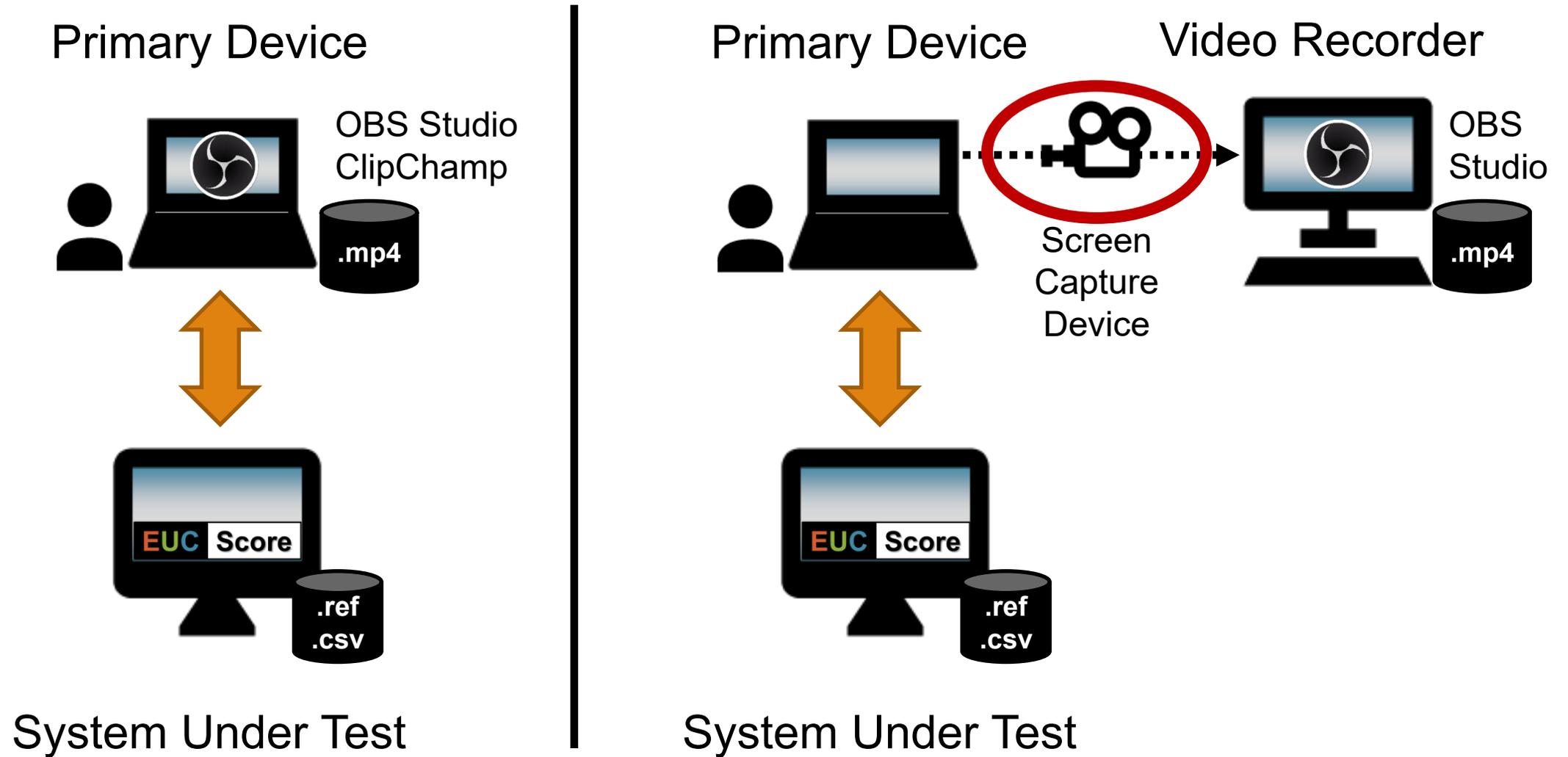
# Adding a WAN Emulator



# Adding a WAN Emulator



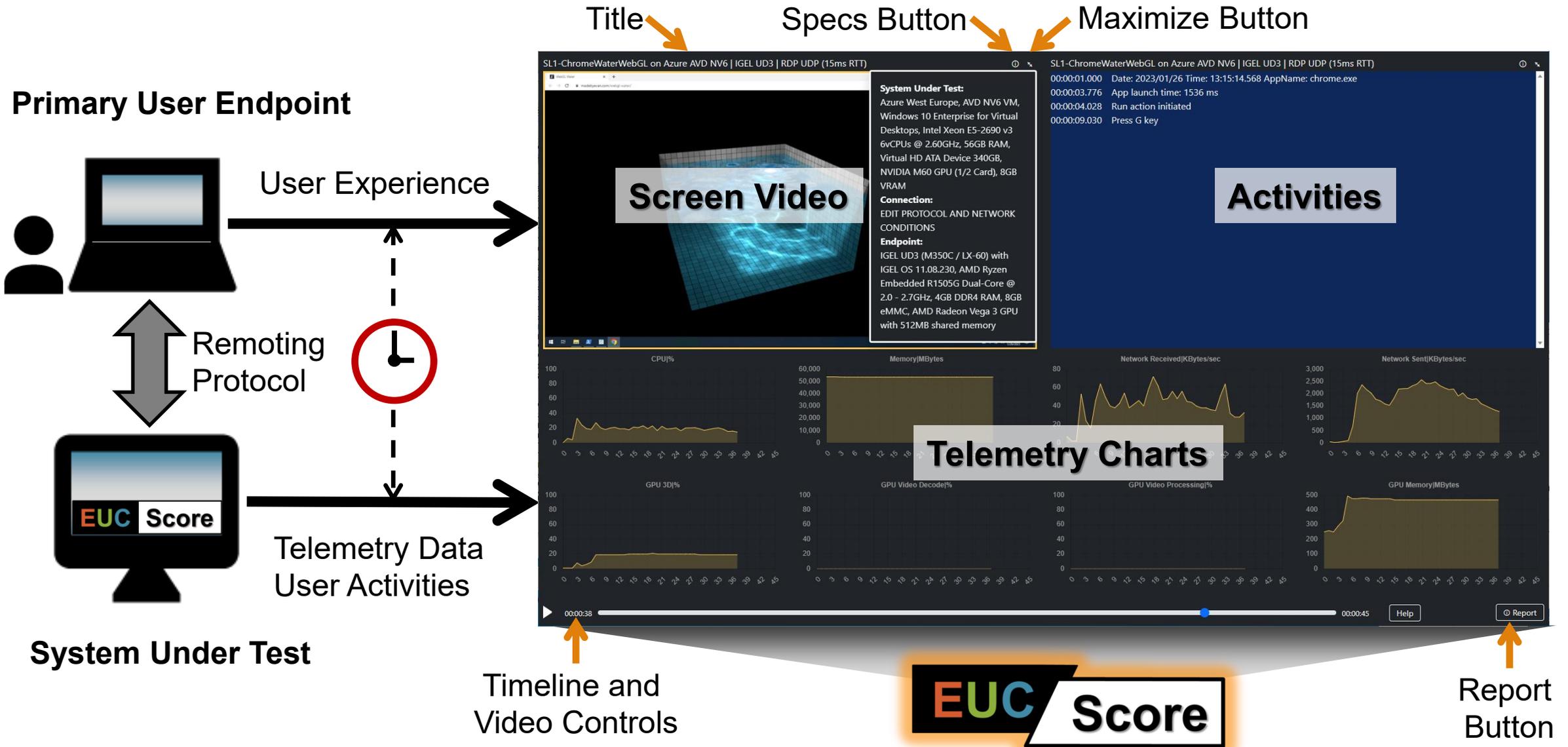
# Screen Video Recording Options





# EUC Score Test Lab

# Visual Data Analytics – Sync Player



Left Media Tile  
“Screen Recording”  
[.mp4]

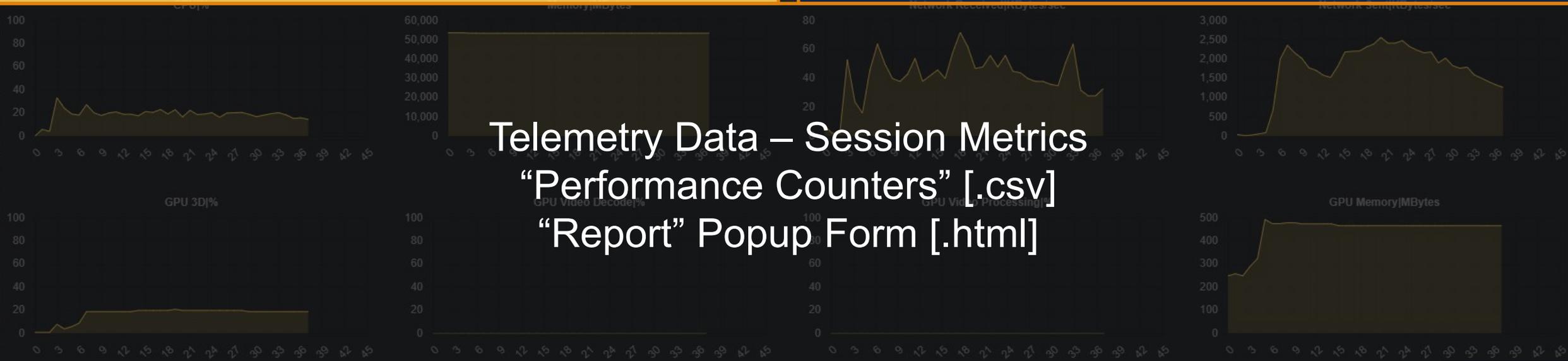
Description

System & User Activities  
[.ref]

```

00:00:01.000 Date: 2023/01/26 Time: 13:13:14.508 AppName: chrome.exe
00:00:03.776 App launch time: 1536 ms
00:00:04.028 Run action initiated
00:00:09.030 Press G key

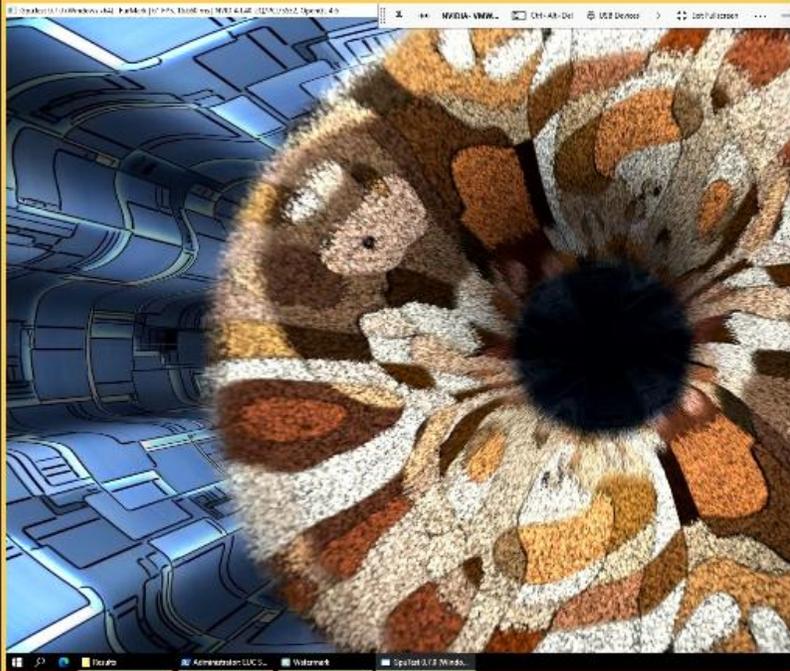
```



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]



**System Under Test:**

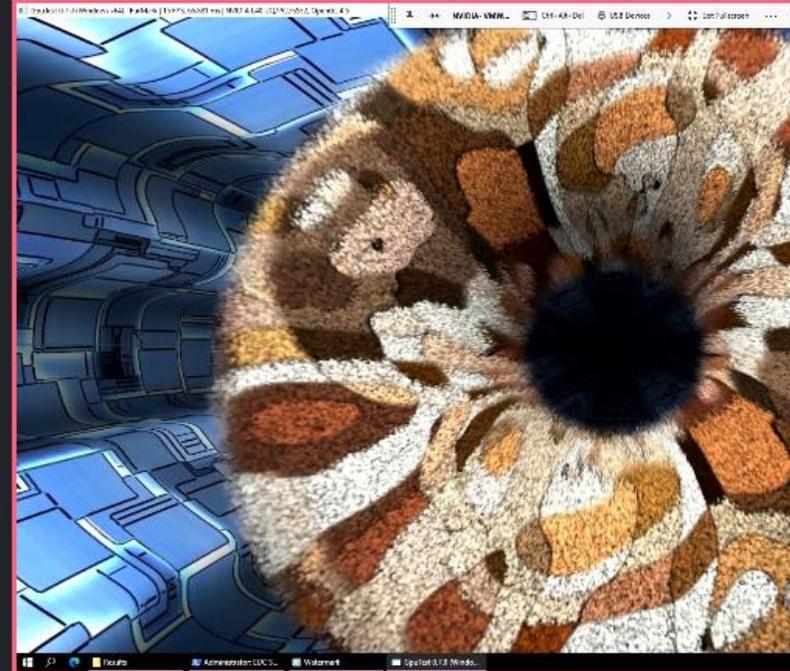
VMware TestDrive, Windows 11,  
Intel Xeon Gold 6330 2x2vCPUs  
@ 2.00GHz, 8GB RAM, 120GB  
Storage, NVIDIA L40-2Q,  
VMware Horizon Display Driver

**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:**

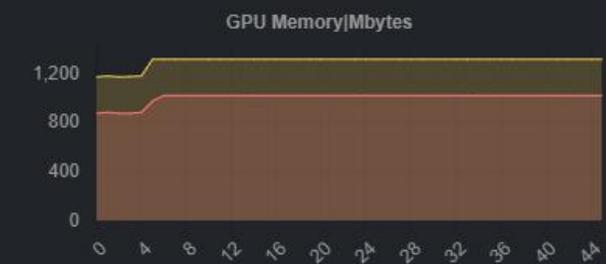
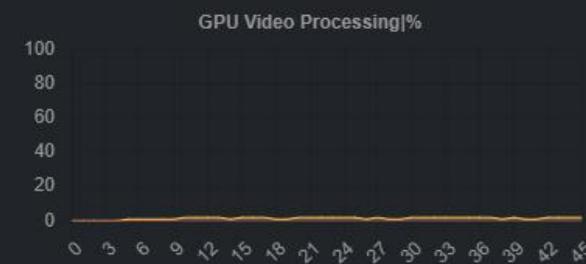
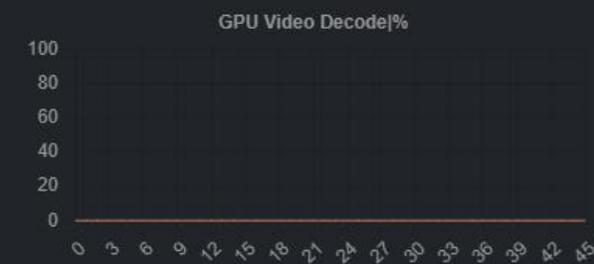
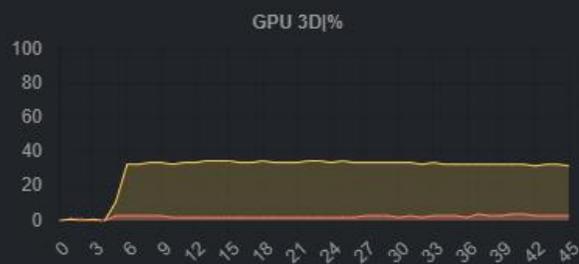
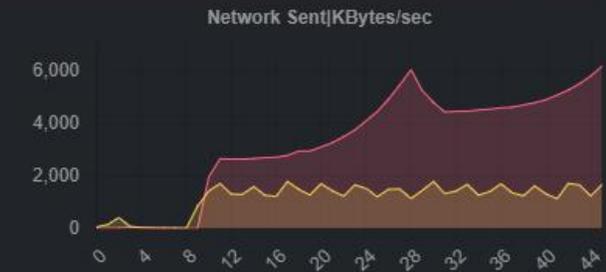
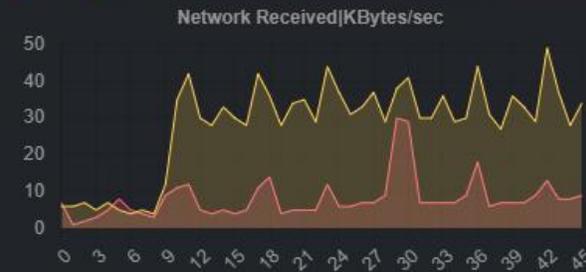
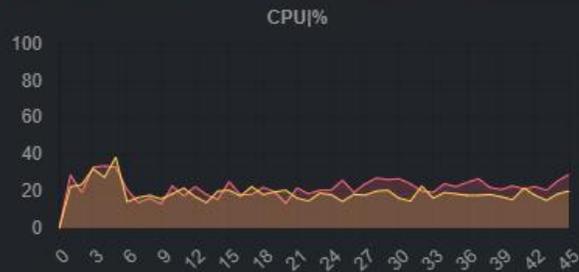
VMware TestDrive, Windows 11,  
Intel Xeon Gold 6330 2x2vCPUs  
@ 2.00GHz, 8GB RAM, 120GB  
Storage, NVIDIA L40-2Q

**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



**Left Media Tile  
“Pacemaker” Video  
[.mp4]**

**Right Media Tile  
Comparison Video  
[.mp4]**

**Left System & User Activities  
[.ref]**

**Right System & User Activities  
[.ref]**

```

00:00:00.000 Date: 2023/11/20
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!

```

```

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
00:00:09.220 LEFT MOUSE button pressed - Explorer icon clicked
00:00:11.520 LEFT MOUSE button pressed - This PC item clicked
00:00:14.160 LEFT MOUSE button pressed - C drive item clicked
00:00:17.420 LEFT MOUSE button pressed - Windows folder selected
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...

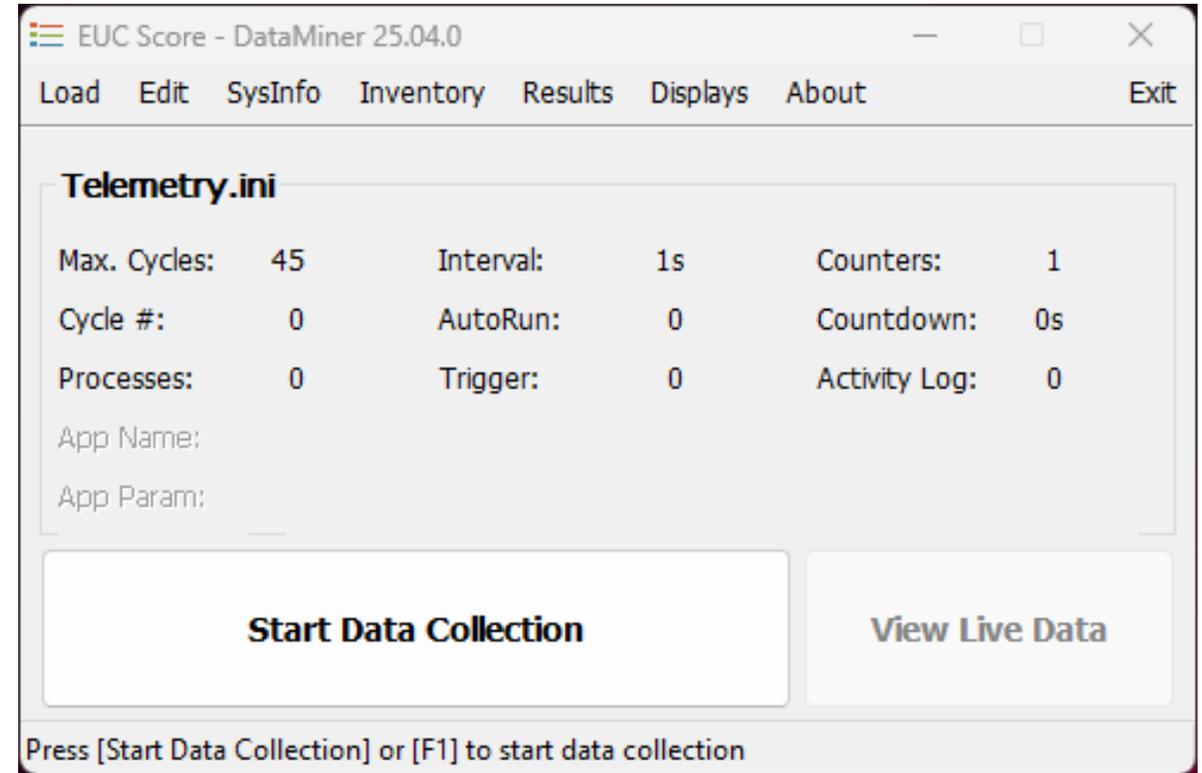
```

00:00:42 00:01:33

00:00:40.000 Still Working on it...

# Extra Tool: EUC Score Data Miner

- Data Miner integrates several supplementary tools
  - Collects performance counters independently of Simloads
  - Writes system information to a text file in the results folder
  - Writes multiple CSV files with inventory data in the results folder
  - Collects process information
  - Launches applications
- Data Miner can be used stand-alone by copy & paste deployment



Data Miner runs both with a GUI and from the command line

# EUC Score Editions

## Community Edition

- EUC Score Toolbox subscription: €0 (yes, it's completely free)
- Requires license and registration
- The test results must be made freely available to the public
- No Simload SDK
- EUC Score consulting services are offered at a discounted rate (and we share the results)

## Business Edition

- EUC Score Toolbox subscription: €5,000/year or €1,500/quarter
- Requires license and registration
- The customer owns the test results exclusively
- Simload SDK included
- Full daily consulting rate, with or without extra equipment (frame grabbers or WAN emulators)

Individual Commercial Edition (for Consultants): €495/year or €149/quarter

<b>EUC Score Components</b>	<b>Freeware Edition Free Download</b>	<b>Community Edition Requires Free License</b>	<b>Pro Edition (Single User) Requires License</b>	<b>Enterprise Edition Requires License</b>
<b>Base Simloads (single app)</b>	✓	✓	✓	✓
<b>Simple Personas (multiple apps)</b>	✓	✓	✓	✓
<b>Score Simloads</b>	✓	✓	✓	✓
<b>Simload Runner</b>	✓	✓	✓	✓
<b>Core Telemetry / Base Counters</b>	✓	✓	✓	✓
<b>Command-Line Automation</b>	✓	✓	✓	✓
<b>Data Miner</b>	✓	✓	✓	✓
<b>Shared Results</b>	(✓)	✓	—	—
<b>For Community Usage</b>	(✓)	✓	—	—
<b>Advanced Simloads (single app)</b>		✓	✓	✓
<b>Advanced Personas (multiple apps)</b>		✓	✓	✓
<b>Avatar (tray app)</b>		✓	✓	✓
<b>Telemetry Collector (CSV file &amp; GUI)</b>		✓	✓	✓
<b>PowerShell Object &amp; Automation</b>		✓	✓	✓
<b>Sync Player</b>		✓	✓	✓
<b>Protected Results</b>			✓	✓
<b>For Individual Commercial Usage</b>			✓	✓
<b>Simload SDK</b>				✓
<b>Online Training (2h/quarter)</b>				✓
<b>For Enterprise Commercial Usage</b>				✓
<b>Support</b>	Community	Community	Email	Email
<b>Subscription Fee</b>	Free	Free	€495/year €149/quarter	€5,000/year €1,500/quarter

# Commercial Options

- Enterprise (Vendor): Quarterly or annual subscription fee, no services
- Partner (Consulting): Hourly or daily rates for contributions of guided POCs
- Customer Project: Hourly or daily rates + 3-month usage fee (SOW)
- Community Project: Discounted hourly or daily rates, free license

## Guided POC details

1. EUC Score consulting partner builds and optimizes POC environment
2. EUC Score consulting partner installs EUC Score toolset (requires EUC Score license)
3. Dr. Tritsch IT Consulting conducts EUC Score benchmarking tests as part of the guided POC project, including visualizations, analysis and comparisons to reference systems
4. EUC Score consulting partner presents POC details and EUC Score benchmarking results to the customer

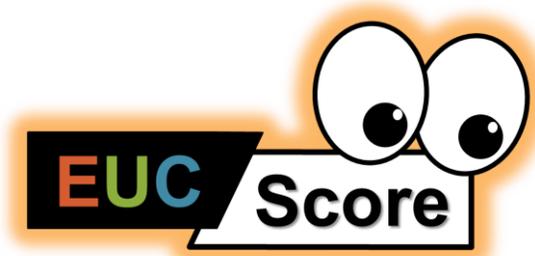
# EUC Score Project Phases

- Preparation Phase
  - Define test goal, identify target user group (persona) and select EUC Score Simloads
  - Identify all individual test scenarios and define test conditions accordingly
- Design and Build Phase
  - Install/update and configure the remoting client software (+ screen recording)
  - Deploy/provide system under test and install the EUC Score Toolset
- Perform and Test Phase
  - Run selected Simloads under the conditions defined by the test scenarios and collect data
- Visualize, Analyze & Publish Phase
  - Build Sync Player clips and review test results
  - Side by side comparison of test results with reference data

# Call to Action

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

**info@eucscore.com**



<https://eucscore.com>

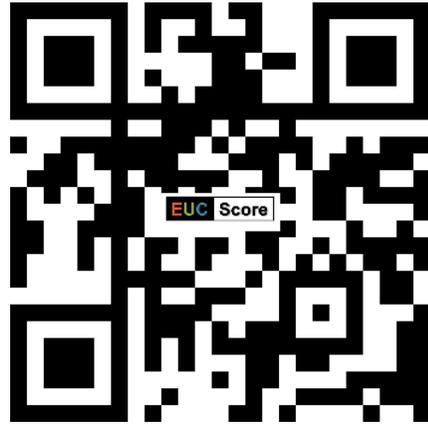
<https://eucscore.com/results>

**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>

**Thank You**

**Benny Tritsch | [info@eucscore.com](mailto:info@eucscore.com)**

---