

New EUC Score Features and Community Test Results

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EUC Documentary Cameraman
MVP | CTP | EUC Expert | NEPA

EUC Score

GO—EUC

 **TeamRGE**
Remoting Graphics Experts

 **EUC**
FORUM
DE

info@drtritsch.com
info@eucscore.com

 **Virtualization**
Conference
www.g2evc.com





CMS Experiment at the LHC, CERN

Data recorded:

2009-Dec-16 03:05:08.131031 GMT

Run:

124275

Event:

774693

Lumi section:

3

Orbit:

2735736

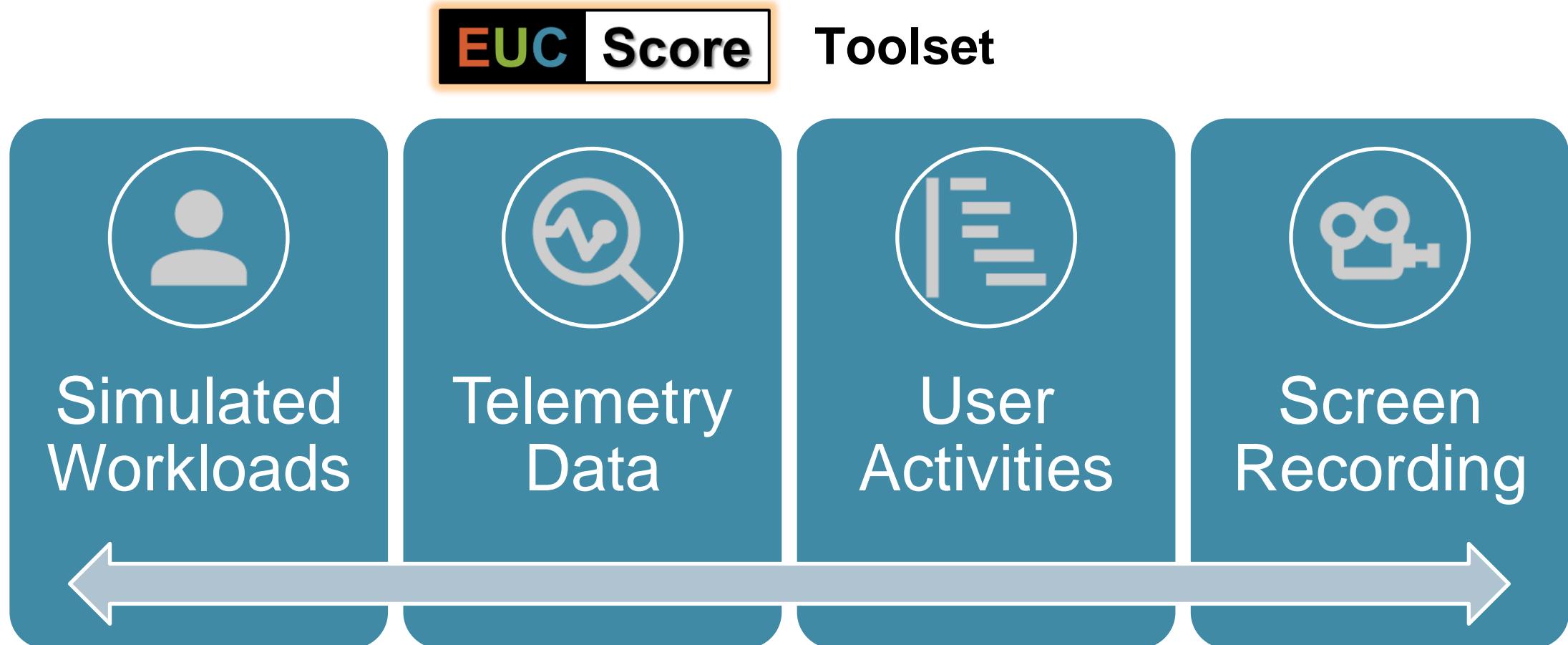
Crossing:

51

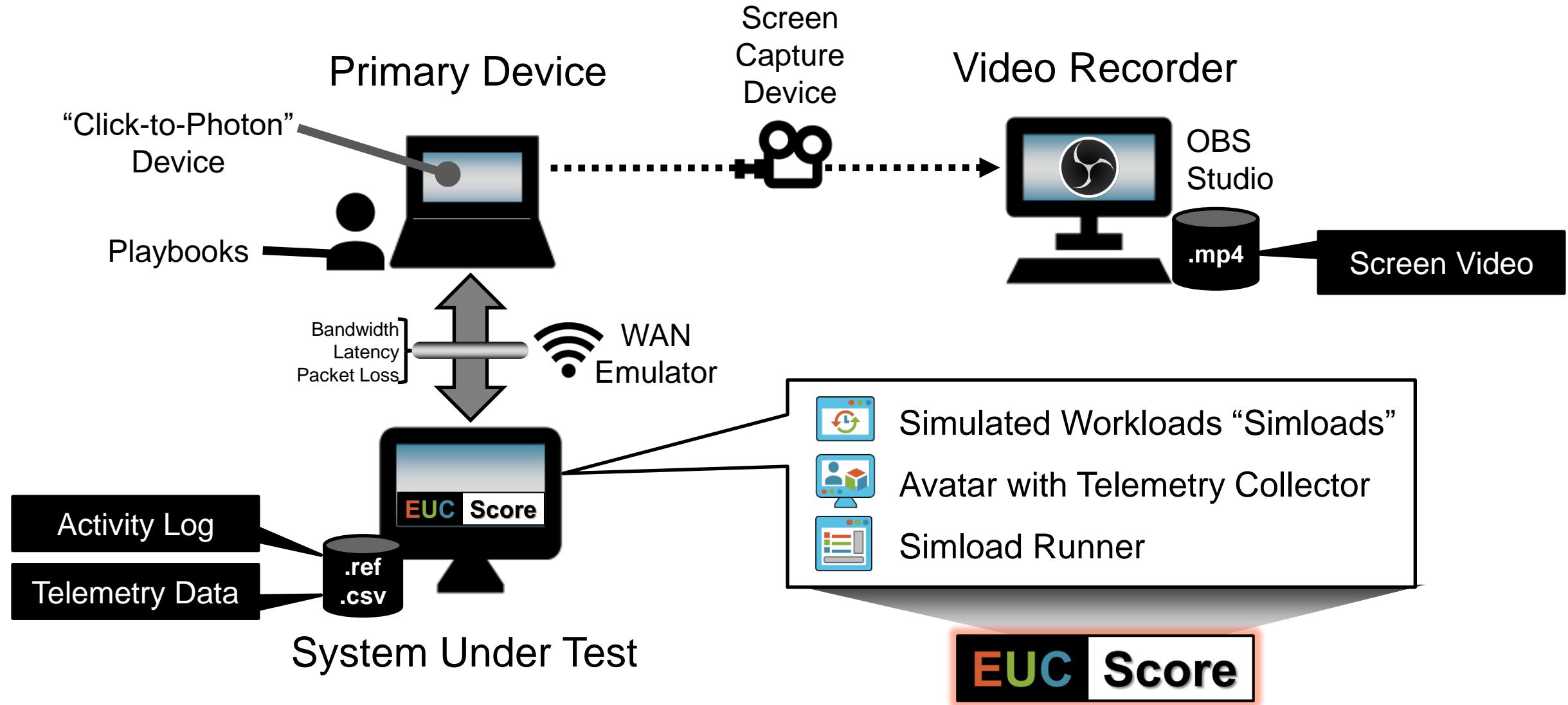
Tech Triggers:
L1 Triggers:
L1_EG10_Jet15
L1_EG5_TripleJet15
L1_MinBias_HTT10
L1_ZeroBias

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

User Experience Benchmarking



Building an EUC Score 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 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.

<https://eucscore.com/gallery.html>

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

https://eucscore.com/gallery.html

Thumbnail	Simload Type	Description
	System	SL0-TestScreen Open a test pattern screen and save system information.
	Primary Base	SL1-NotepadEdit Open Microsoft Notepad and start writing a novel with random type speed.
	Primary Base	SL1-WordpadScroll Open local DOCX file with PNG images in Wordpad and randomly move pages up and down every second.
	Primary JPEGView	SL1-JPEGViewStatic Open JPEG image in JPEG View. NOTE: This is the most basic Simload as it includes neither animations nor user interactions.
	Primary JPEGView	SL1-JPEGViewAnim Open animated GIF image in JPEG View.
	Primary WMPlayer	SL1-WMPlayer480pWMV Open local 480p WMV video in Windows Media Player, switch from windowed to fullscreen mode.
	Persona Base	SL2-Base Foreground: SL3-AppDialog Background: SL1-JPEGViewAnim

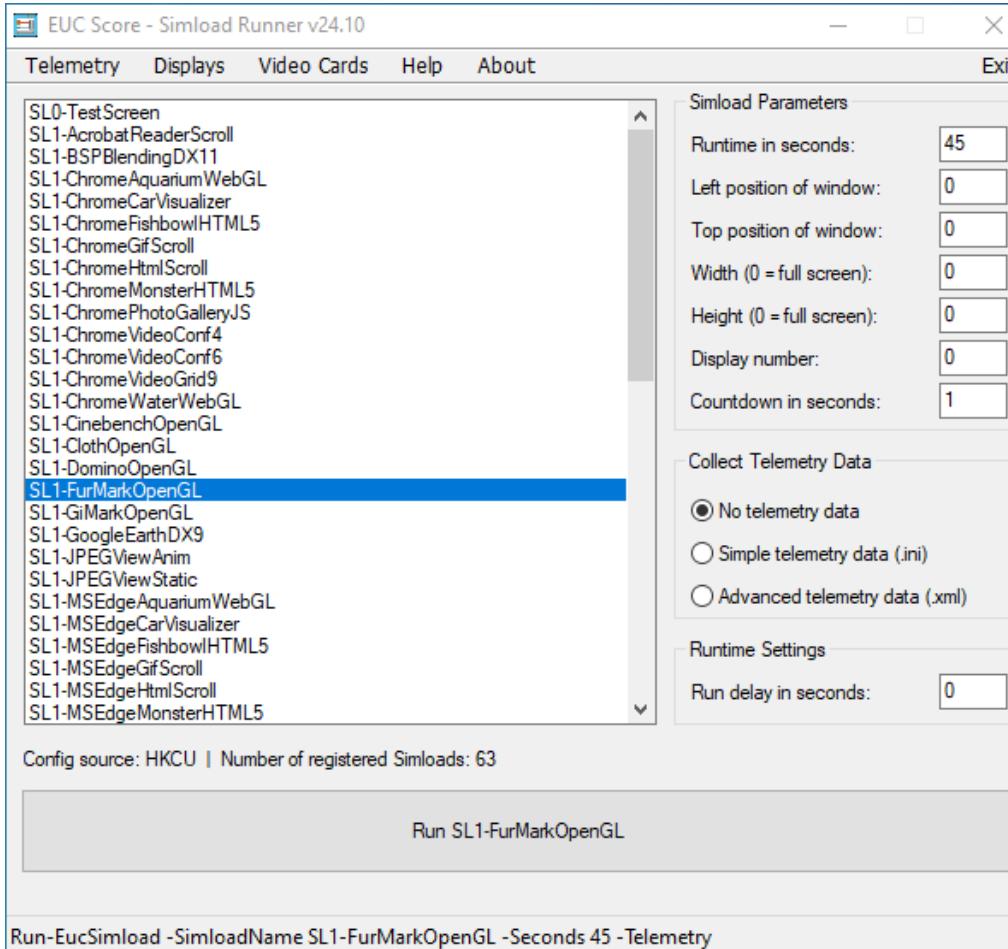
+ custom
or manual
**Simloads with
real user
playbooks**

New Simloads

NotepadMove
MSEdgeGifScroll2

Run Simloads

Simload Runner



New: Run delay + advanced telemetry

Avatar PowerShell Console

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

Instance name: 0 Description: NVIDIA GeForce GTX 1060
Nodes:
Node Index: "0", engine type: "DXGK_ENGINE_TYPE_3D", Name: ""
Node Index: "1", engine type: "DXGK_ENGINE_TYPE_VIDEO_DECODE", Name: ""
Node Index: "2", engine type: "DXGK_ENGINE_TYPE_OTHER", Name: "Security"
Node Index: "3", engine type: "DXGK_ENGINE_TYPE_COPY", Name: ""
Node Index: "4", engine type: "DXGK_ENGINE_TYPE_COPY", Name: ""
Node Index: "5", engine type: "DXGK_ENGINE_TYPE_VIDEO_ENCODE", Name: ""
Node Index: "6", engine type: "DXGK_ENGINE_TYPE_OTHER", Name: "VR"

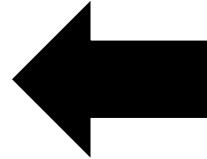
Instance name: 1 Description: Intel(R) UHD Graphics 620
Nodes:
Node Index: "0", engine type: "DXGK_ENGINE_TYPE_3D", Name: ""
Node Index: "1", engine type: "DXGK_ENGINE_TYPE_VIDEO_DECODE", Name: ""
Node Index: "2", engine type: "DXGK_ENGINE_TYPE_COPY", Name: ""
Node Index: "3", engine type: "DXGK_ENGINE_TYPE_VIDEO_PROCESSING", Name: ""
Node Index: "4", engine type: "DXGK_ENGINE_TYPE_VIDEO_DECODE", Name: ""
Node Index: "5", engine type: "DXGK_ENGINE_TYPE_OTHER", Name: ""
Node Index: "6", engine type: "DXGK_ENGINE_TYPE_OTHER", Name: ""
Node Index: "7", engine type: "DXGK_ENGINE_TYPE_OTHER", Name: ""
Node Index: "8", engine type: "DXGK_ENGINE_TYPE_OTHER", Name: ""
Node Index: "9", engine type: "DXGK_ENGINE_TYPE_OVERLAY", Name: ""
Node Index: "10", engine type: "DXGK_ENGINE_TYPE_OTHER", Name: "GDI Render"
Node Index: "11", engine type: "DXGK_ENGINE_TYPE_VIDEO_PROCESSING", Name: ""
Node Index: "12", engine type: "DXGK_ENGINE_TYPE_OTHER", Name: ""

PS C:\EUCScore\Scripts> .\Run-ApsTestScreen.ps1
```

Updated GetVideoAdapters utility

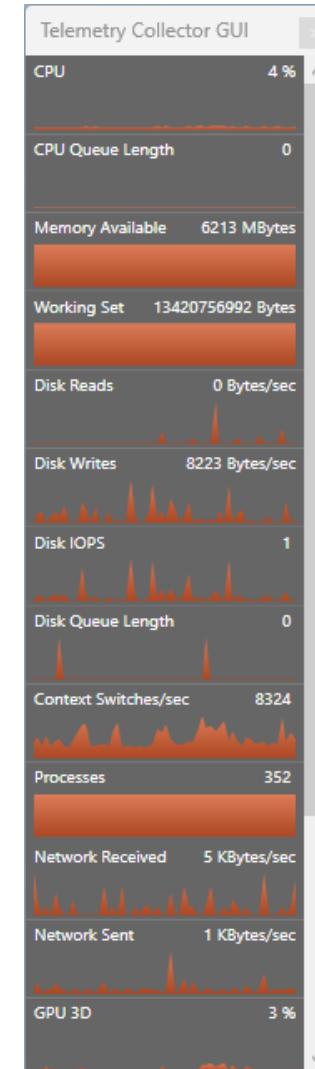
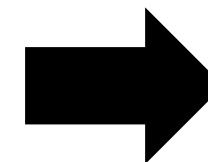
Collect Telemetry Data (= Perf Counters)

EUC Score	
CPU %	11
CPU Queue Length	0
Memory Available MBytes	52773
Working Set Bytes	12491984896
Disk Reads Bytes/sec	65600
Disk Writes Bytes/sec	168102
Disk IOPS	21
Disk Avg. Queue Length	0
Context Switches/sec	17542
Processes	325



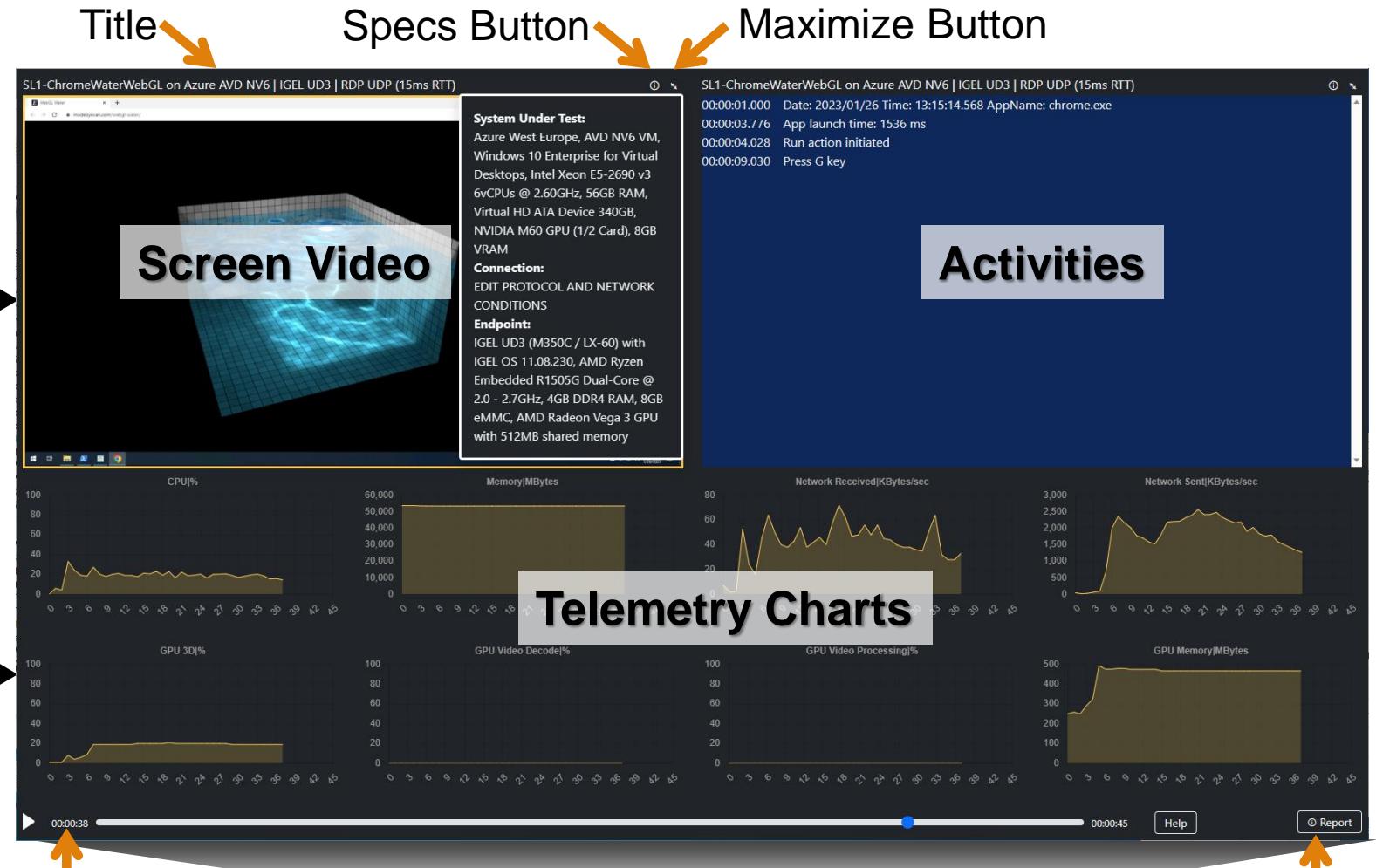
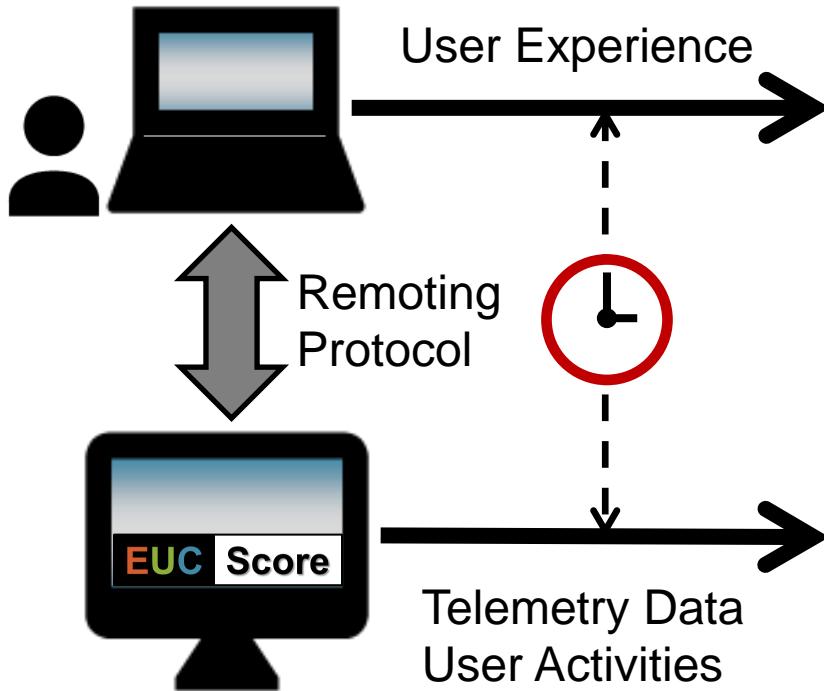
Core Telemetry / Base Counters

Avatar Telemetry Collector



Visual Data Analytics – Sync Player

Primary User Endpoint



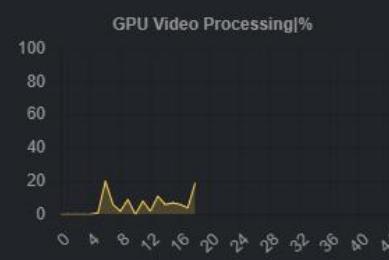
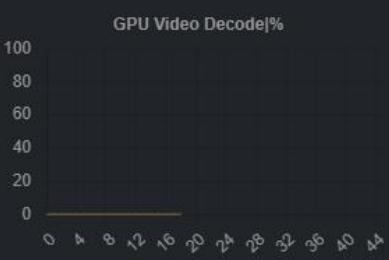
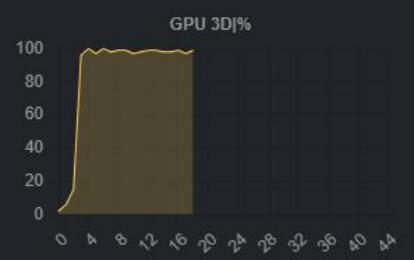
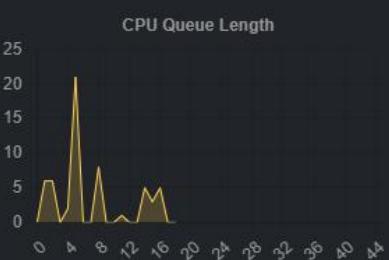
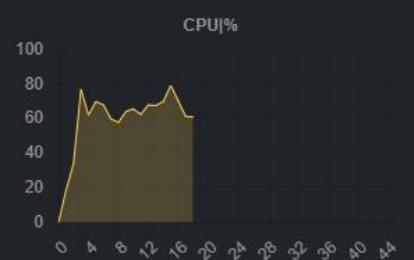
System Under Test

Timeline and
Video Controls

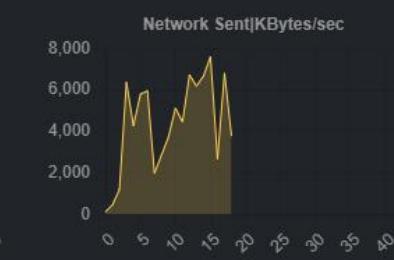
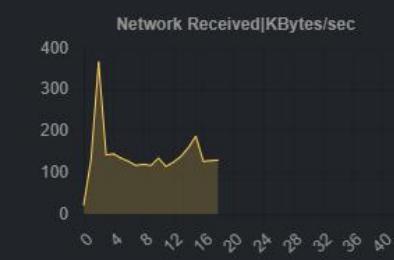
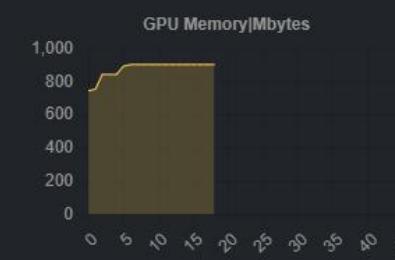
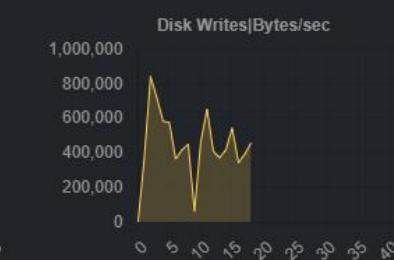
EUC **Score**

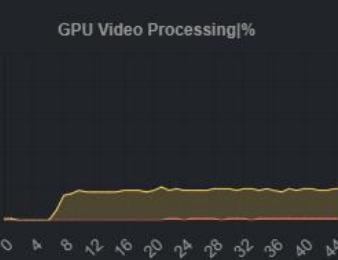
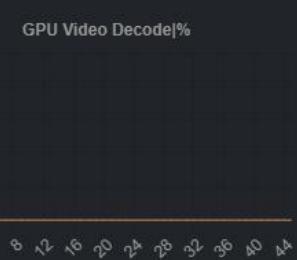
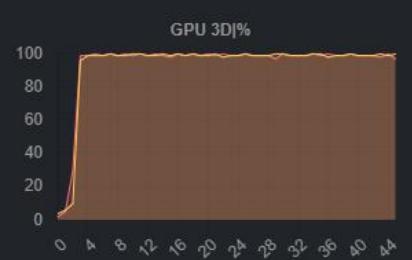
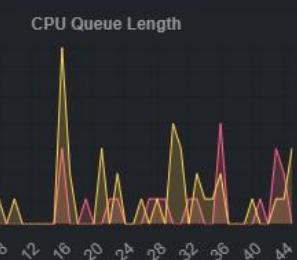
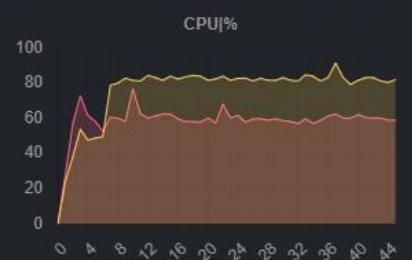
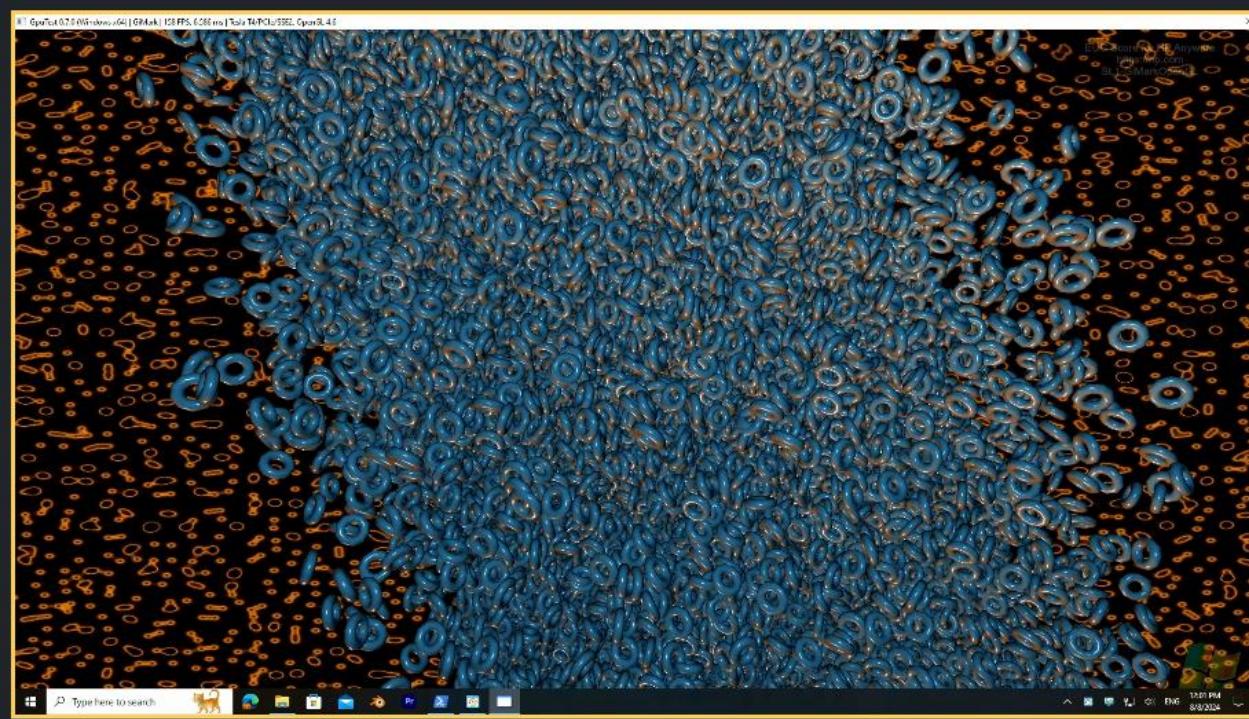
Updated build scripts and HTML5 templates

Report
Button



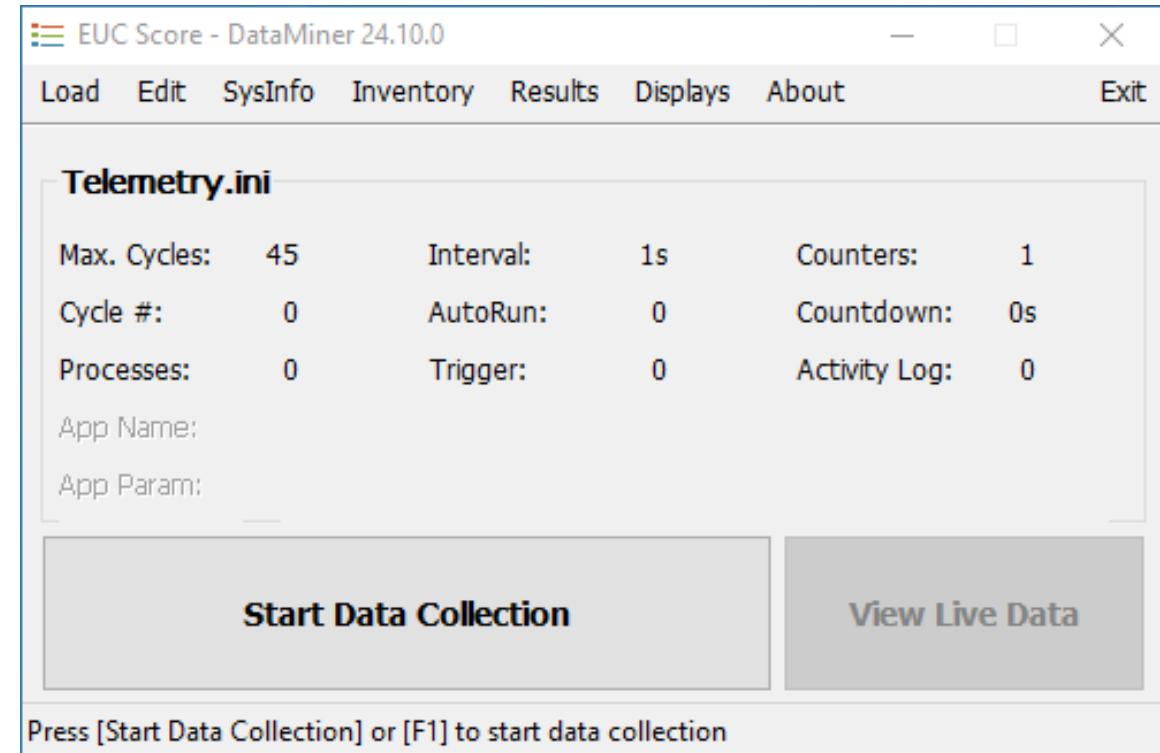
```
00:00:00.000 Date: 2024/08/08 | Time: 11:21:36.466 | AppName: BSPBlending.exe
00:00:00.000 Simload: SL1-BSPBlendingDX11 | Computername: VM-ANYWAREGRAPH | Username: andrew
00:00:00.000 Number of Monitors: 1 | Default Monitor: 1 (0 | 0 | 1920 | 1080)
00:00:00.000 Pre-Simload countdown screen was visible for 1 sec
00:00:00.000 Delay between Simload start time and activity log start time: 1.247 sec
00:00:02.146 App launch time: 876 ms
00:00:02.406 Run action initiated
00:00:04.409 Press left arrow
00:00:05.528 Press left arrow
00:00:06.649 Press left arrow
00:00:07.766 Press right arrow
00:00:08.891 Press left arrow
00:00:10.014 Press left arrow
00:00:11.134 Press right arrow
00:00:12.259 Press right arrow
00:00:13.384 Press up arrow
00:00:14.501 Press down arrow
00:00:15.639 Press down arrow
00:00:16.789 Press right arrow
00:00:17.906 Press up arrow
```





New: 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

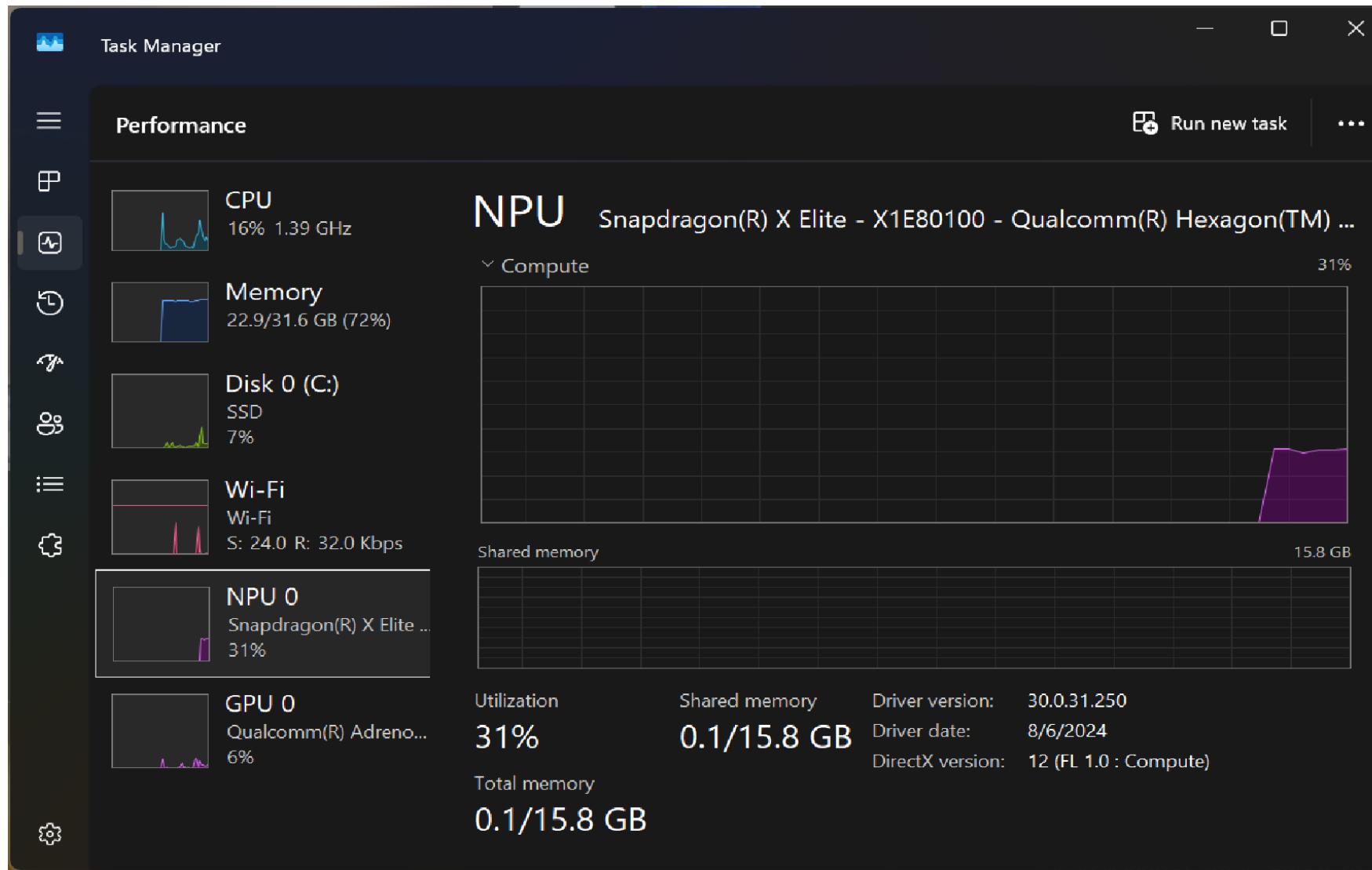
EUC Score Components

- Simulated Workloads (Simloads)
- Simload Runner + Core Telemetry
- Avatar with Telemetry Collector
- TC PowerShell Object & Automation
- Data Miner (“EUC Flight Recorder”)
- Check CSV
- Telemetry Editor
- Simload SDK
- Windows and Process Info Tools
- Inno Setup Installer Packages
- Sync Player HTML5 Templates
- Sync Player Build Scripts
- Sync Player Export Scripts

Backlog (“Simplify & Share”)

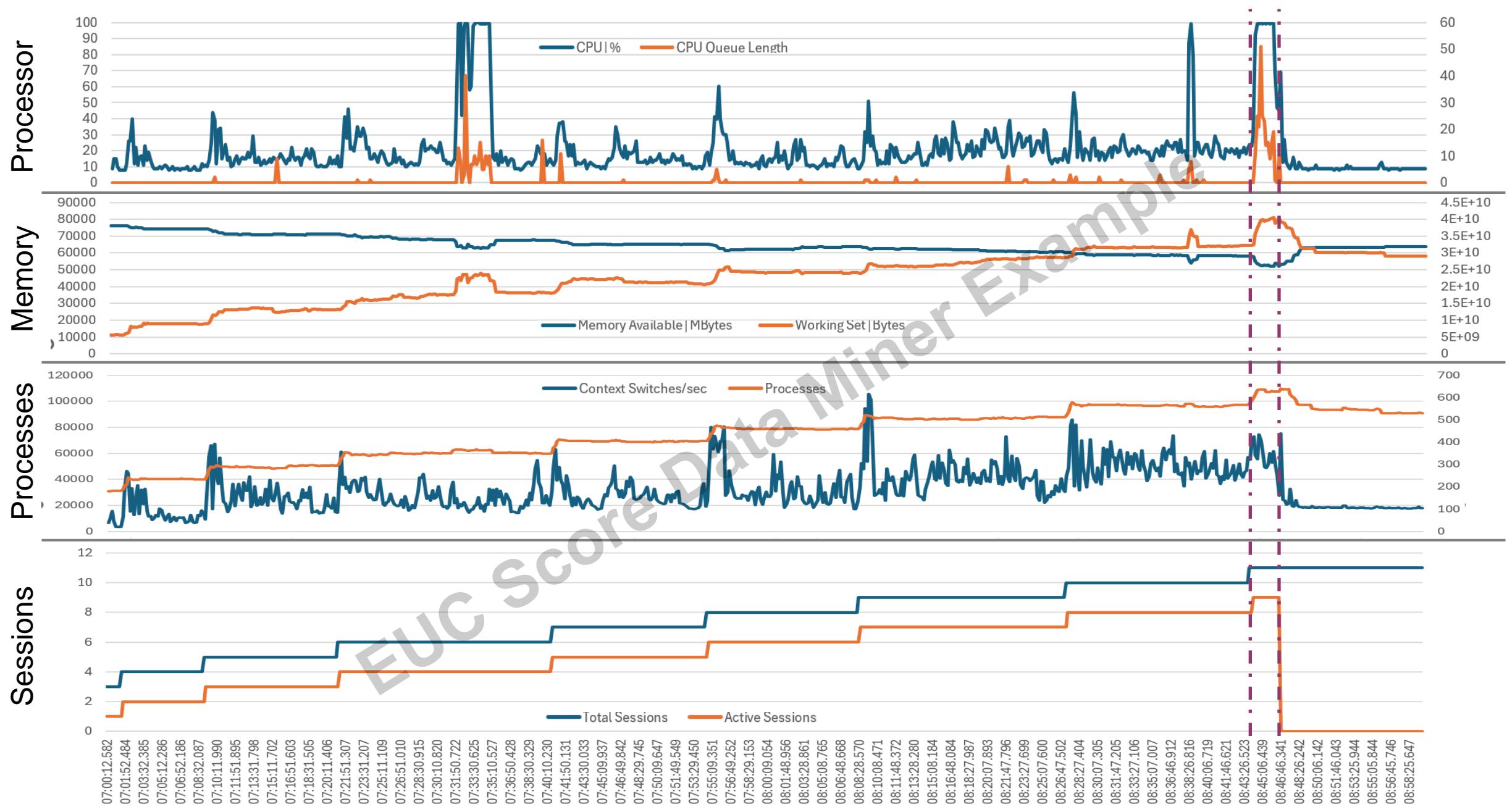
- New Sync Player HTML5 Templates
- Sync Studio (Build Script GUI)
- Controller (Avatar reverse connect)
- Publishing Portal DEXreport.com
- Endpoint Display & Video Analyzer

Future: NPU Simloads and Counters



Some of my recent EUC Score projects

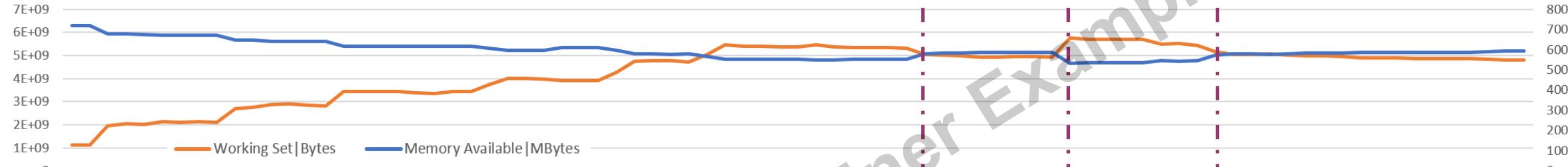
1. Comparison of local workstation, HDX and RDP performance under LAN and WAN (WFH) conditions for urban planners in municipal administrations
2. Measuring the perceived user experience of HDX sessions with CAD/CAM applications in a manufacturing environment over LAN and WAN (WFH)
3. Testing and comparing the perceived user experience when using different GPU-accelerated Azure Windows 365 instances (Standard, Super and Max)
4. Comparison of standard RDP and RDP-SxS when connected to Azure VMs
5. Testing and comparing the perceived user experience of HP Anyware PCoIP on a T4-accelerated Azure VM under different network conditions
6. Analysis of randomly disconnected user sessions on RDSH VMs running on a Hyper-V host with NIC Teaming



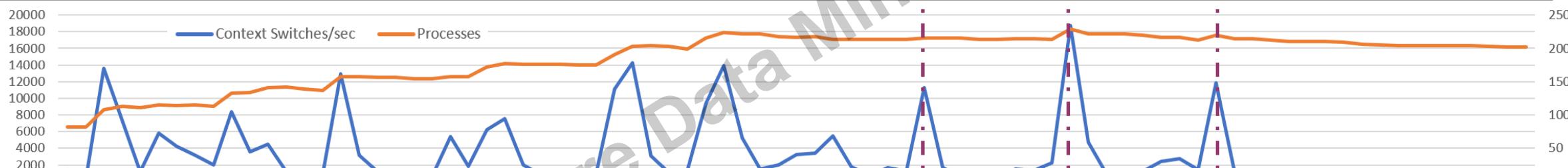
Processor



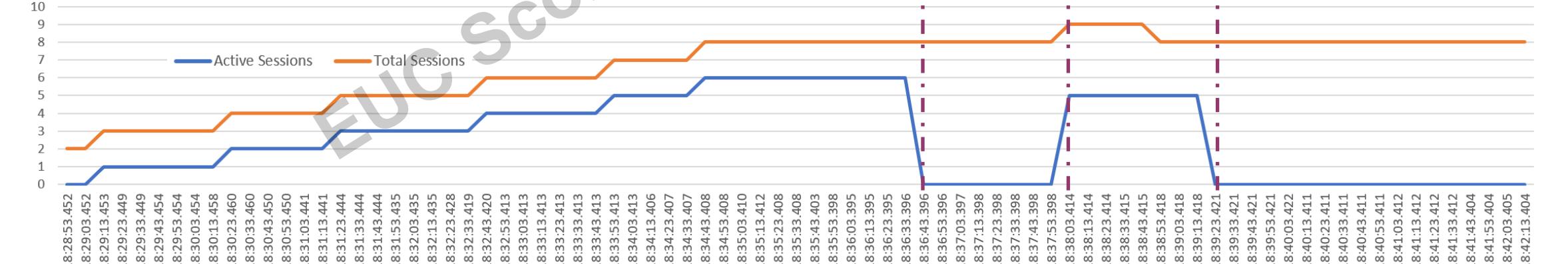
Memory

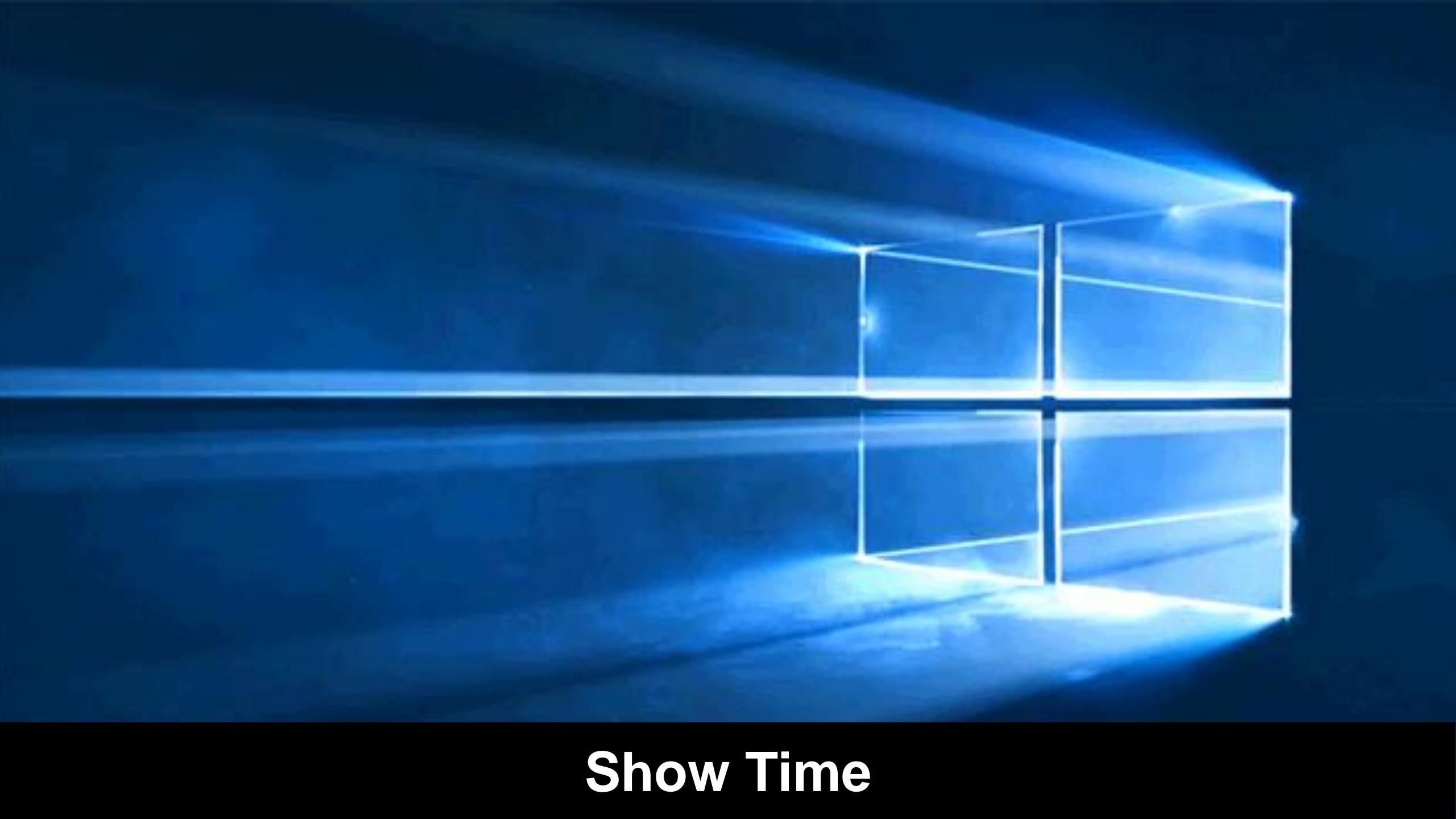


Processes



Sessions





Show Time

Why would you want to use 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 = “Guided POCs”



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

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

Call to Action

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

info@eucscore.com



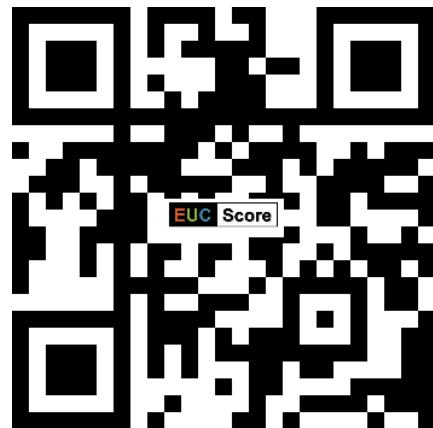
<https://eucscore.com>

<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



Home Page



Freeware Download

- 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

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