



# NerdioCon<sup>★</sup>

2025  
PALM SPRINGS





# We'll Prove It

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The hard facts for  
measuring AVD  
management efficiency





# Agenda

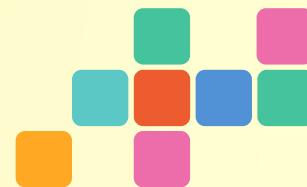
What is SysAdmin Experience Scoring?

Administrative Tasks Under Test

Measuring AVD and NME Console Efficiency

Comparison and Findings

Conclusion and Next Steps



# Dr. Benny Tritsch

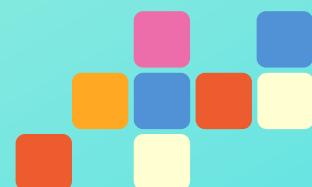
**Performance Data Scientist**

*Creator of the EUC Score Toolset*

<https://drtritsch.com> | <https://eucscore.com>



**NERDIO VALUED  
PROFESSIONAL**



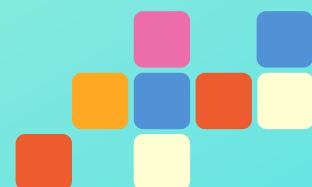
# Aaron Parker

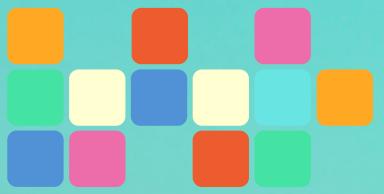
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**Senior Staff Engineer, Office of the CTO**



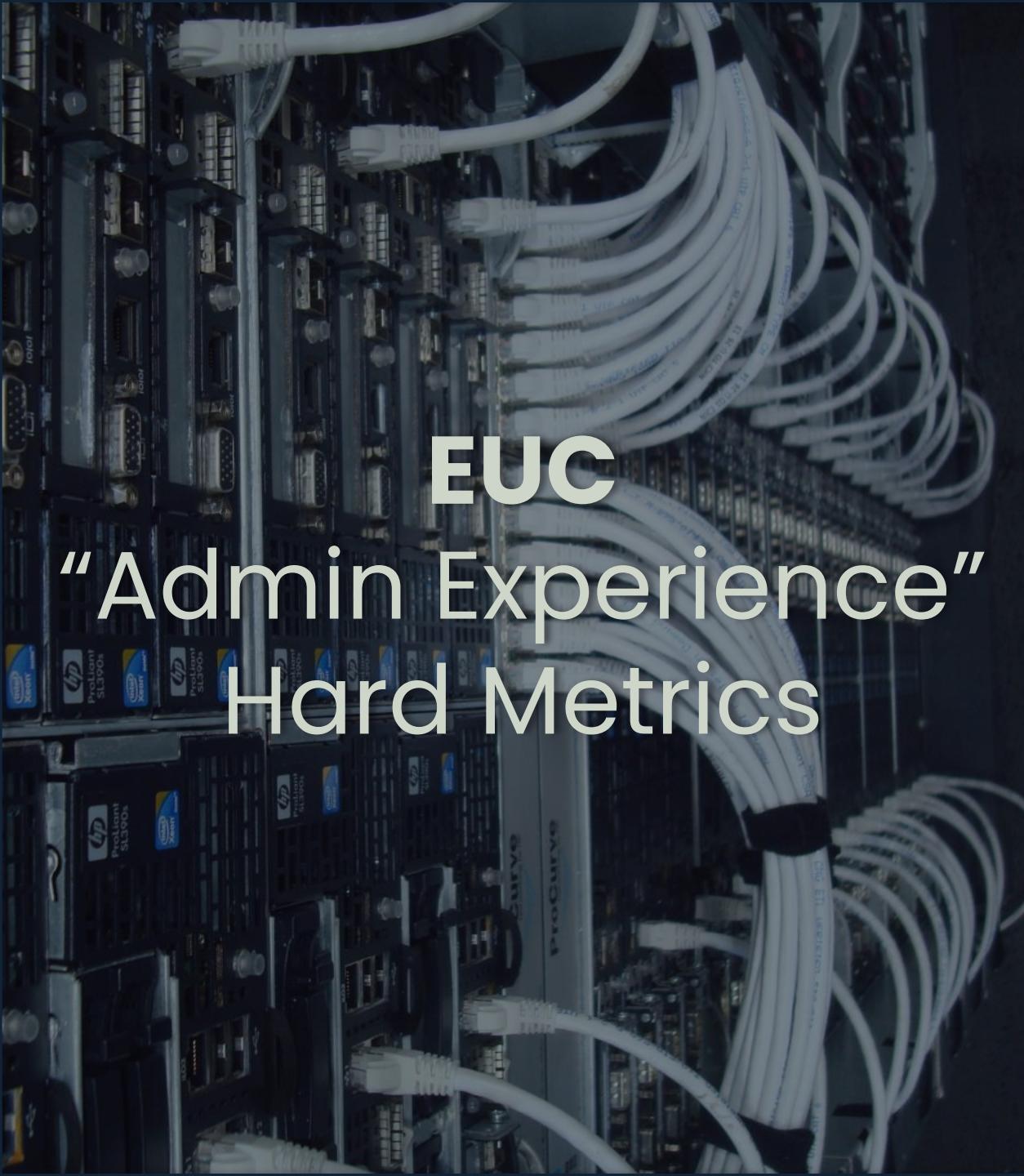
@stealthpuppy.com





# What is **SysAdmin Experience (SAX) Scoring?**



A server rack filled with various network and server components. Numerous white network cables are plugged into the back of the rack, creating a complex web of lines. The server units are labeled with names like 'ProCurve' and 'HP Proliant'.

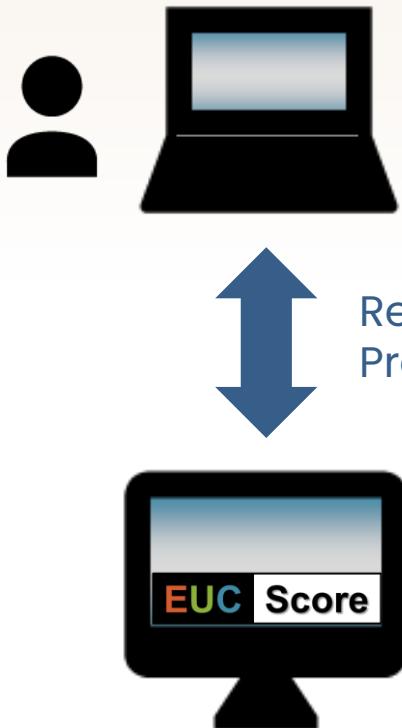
**EUC**  
“Admin Experience”  
Hard Metrics

Two people are sitting in red Adirondack chairs on a wooden deck. They are facing away from the camera, looking out over a body of water. In the foreground, there is a large orange planter with a palm tree. The background shows a clear blue sky with some white clouds and a distant shoreline.

**DEX**  
“User Experience”  
Soft Metrics

# Sync player

## Primary User Endpoint



User Experience

Remoting Protocol

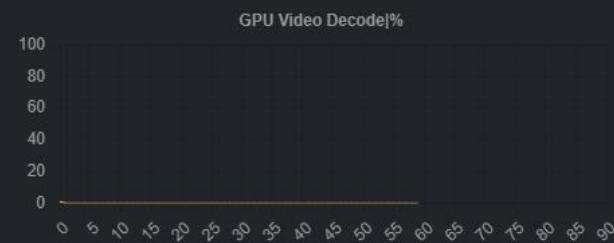
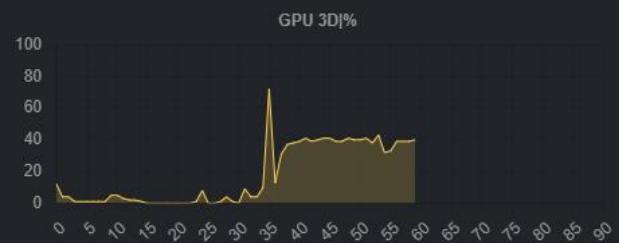
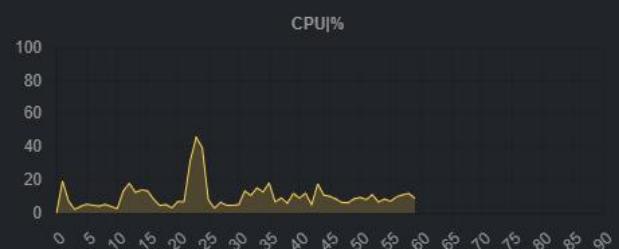
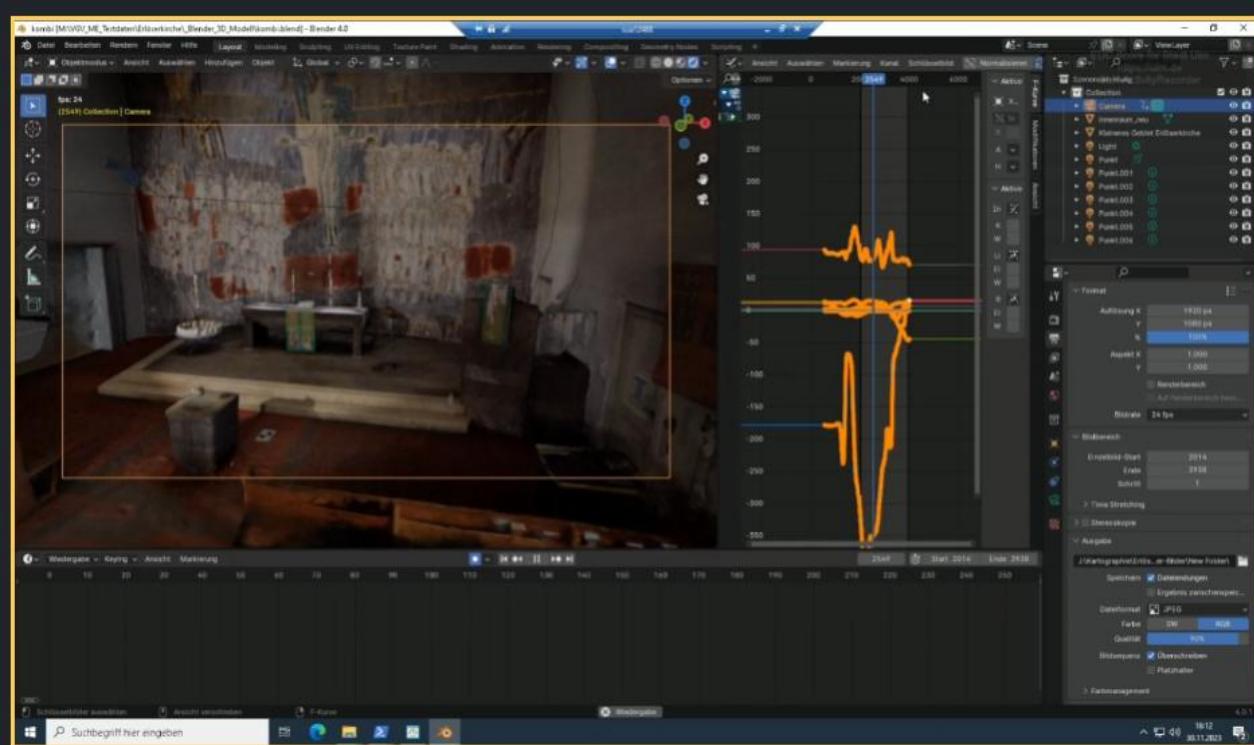
Telemetry Data  
User Activities



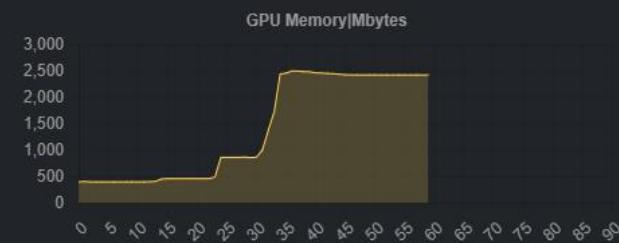
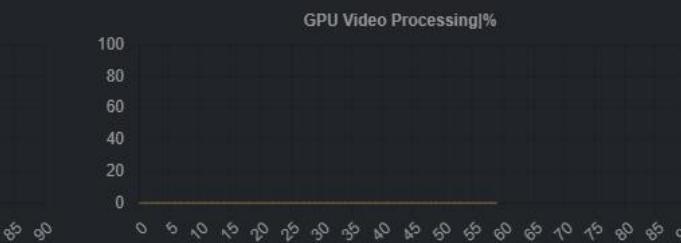
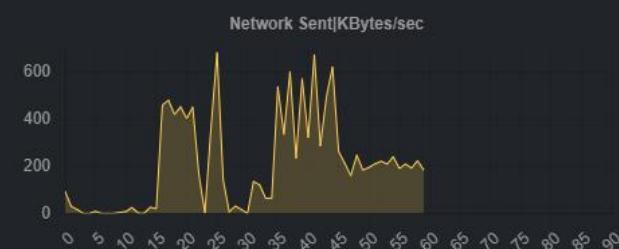
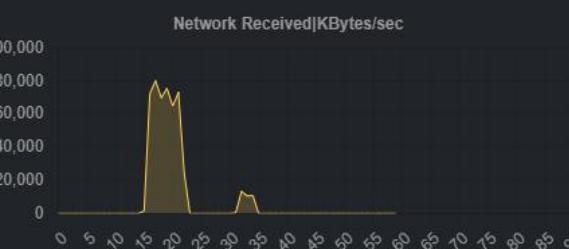
## System Under Test

Report Button

Timeline and  
Video Controls



00:00:00.000 Date: 2023/11/30 | Time: 16:11:59.113 | AppName: SLX-Blender on Remote Desktop Session | Win10 | RTX 4000 | RDP 2Mbps 50ms 0.5%  
00:00:00.000 Simload: SLX-ActivityRecorder | Computername: SUA12488 | Username: sub05078  
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: 1.144 sec  
00:00:01.139 Initialize settings  
00:00:01.141 Run action initiated  
00:00:09.984 LEFT MOUSE button pressed at position [1202] [310]  
00:00:10.217 LEFT MOUSE button pressed at position [1202] [310]  
00:00:29.768 LEFT MOUSE button pressed at position [1044] [54]  
00:00:29.878 LEFT MOUSE button pressed at position [1044] [54]  
00:00:35.684 SPACEBAR pressed



# How can we measure SysAdmin experience?

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1. Define common activities or tasks to manage virtual desktop performed by system administrators (= “Playbooks”)
2. While a system administrator performs a task, record the screen, trace user activities and collect telemetry data
3. Measure the time required to complete the task and count user interactions, such as mouse clicks or keyboard inputs
4. Visualized the results by combining and overlaying screen videos with administrative activity logs
5. Create side-by-side comparisons of different administrative consoles



Microsoft Azure

Search resources, services, and docs (G+/)

Copilot

Home > Azure Virtual Desktop

Microsoft

Search

Overview

Quickstart

Manage

- Host pools
- Application groups
- Workspaces
- App attach
- Scaling plans
- Users
- Custom image templates

Monitoring

- Insights
- Workbooks

Licensing

- Per-user access pricing

Aaron, create a host pool!

Easily scale your VM deployment. Create host pools to easily manage assignments, application groups, and settings for your entire organization.

Create a host pool

Help and learning

Product documentation

Learn about the capabilities of Azure Virtual Desktop

Create your image

Learn about creating custom images and using gallery images

Cost calculator

Plan and estimate the cost for your deployment

Profile containers

Learn how to use FSLogix profile containers for user profiles

What's new

Learn about new features and capabilities released

Community

Forums

Connect with a community of AVD users and experts

@AzureSupport

Quickly connect with our experts

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## WORKSPACES ⓘ 🔎

Search...



NAME ⓘ

USER FRIENDLY NAME ⓘ

USAGE (Past 30 days) ⓘ

ADDITIONAL INFO ⓘ

MONTHLY SAVINGS &amp; COSTS ⓘ

vdws-Avd-australiaeast  
Azure Virtual Desktop workspace for australiaeast  
(rg-Avd-Management-aye / australiaeast)

Australia East

Highest named users: 7  
Monthly active users: 2  
Highest concurrent users: 1  
Highest CPU cores: 24

Multi user desktop & RemoteApp pools: 0 (0 hosts)  
Single user pooled desktop pools: 1 (1 hosts)  
Single user personal desktop pools: 1 (2 hosts)

Monthly savings: \$892.68 (89%) ⓘ  
Named user cost: \$6.80/month ⓘ  
Concurrent user cost: \$95.17/month ⓘ  
Monthly active user cost: \$47.59/month ⓘ

User sessions ▾

1 item

Add Workspace

## WORKSPACES TASKS ⓘ 🔎

Search...

ALL STATUSES



TASK ⓘ

RESOURCE NAME ⓘ

USER ⓘ

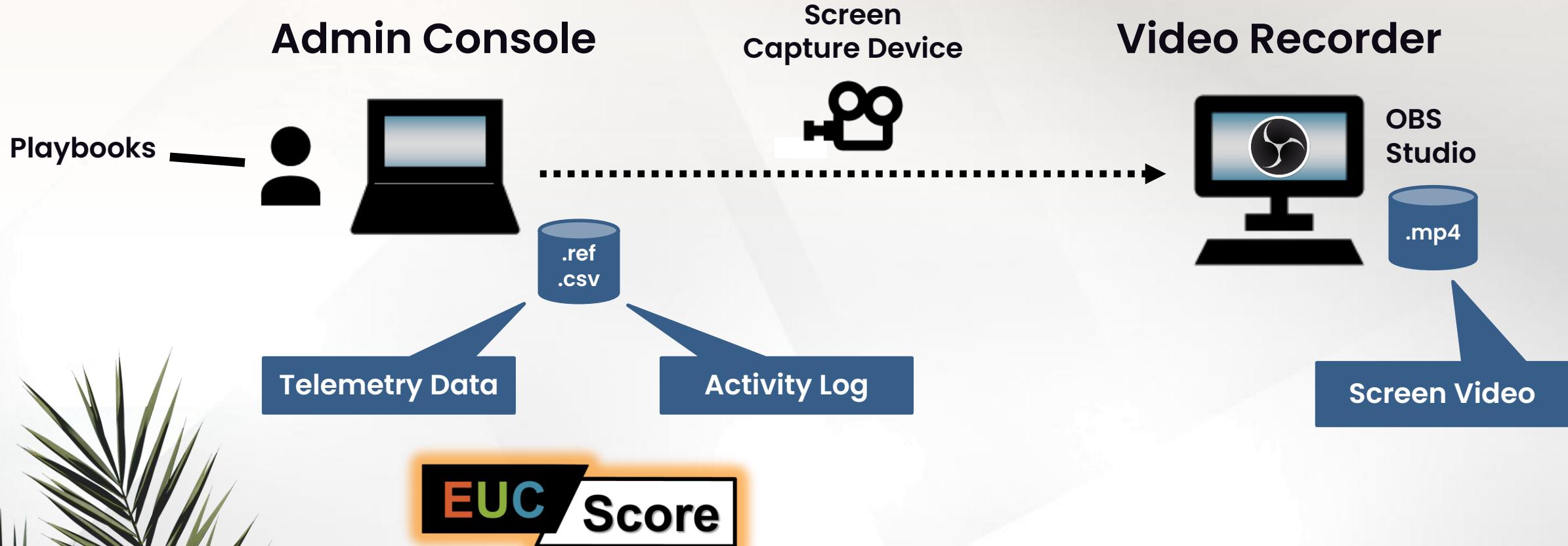
STATUS ⓘ

CREATED ⓘ

COMPLETED ⓘ



# SysAdmin experience (SAX) test lab



## AVD Console: Create a pooled multi-session host pool and deploy session hosts

00:00:00.000 Test Scenario: New Pooled Host Pool with Multiple Hosts on AVD Console  
 00:00:00.000 Date: 2025/01/14 | Time: 17:04:38.838 | AppName:  
 00:00:00.000 Simload: SLX-ActivityRecorder | Computername: HYPERHOST | Username: Aaron  
 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: 1.565 sec  
 00:00:01.089 Delay between Simload start time and core telemetry start time: 0.503 sec  
 00:00:01.094 Initialize settings  
 00:00:01.105 Run action initiated  
 00:00:01.160 Mouse click 1 on the "Host pools" item in the Azure Virtual Desktop resource menu  
 00:00:02.040 The "Host pools" working pane becomes visible  
 00:00:03.200 Mouse click 2 on the "Create" item in the command bar to start the wizard  
 00:00:03.510 The first page ("Basics") of the "Create a host pool" wizard becomes visible  
 00:00:05.270 Mouse click 3 to open the "Resource group" dropdown menu  
 00:00:06.350 Mouse click 4 to select the "rg-Avd\_HostPool02-awe" resource group

## NME Console: Create a pooled multi-session host pool and deploy session hosts

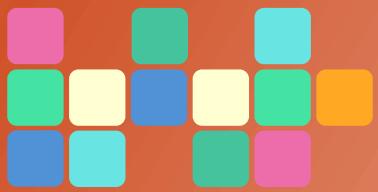
00:00:00.000 Test Scenario: New Pooled Host Pool with Multiple Hosts on NME Console  
 00:00:00.000 Date: 2025/01/14 | Time: 14:41:17.274 | AppName:  
 00:00:00.000 Simload: SLX-ActivityRecorder | Computername: HYPERHOST | Username: Aaron  
 00:00:00.000 Number of Monitors: 1 | Default Monitor: 1 (0 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: 1.571 sec  
 00:00:01.106 Delay between Simload start time and core telemetry start time: 0.494 sec  
 00:00:01.109 Initialize settings  
 00:00:01.116 Run action initiated  
 00:00:03.020 Mouse click 1 on the "vdws-Avd-australiaeast" link in the Nerdio Manager for Enterprise Workspaces page  
 00:00:03.120 The "Dynamic Host Pools" working pane becomes visible  
 00:00:04.400 Mouse click 2 on the "Add dynamic host pool" button  
 00:00:05.060 The "Add Dynamic Host Pool" dialog becomes visible  
 00:00:06.390 Mouse click 3 to set focus on the "Name" text input field  
 00:00:07.210 Keyboard input 1 to press shortcut CTRL-V to paste the image name

00:00:07

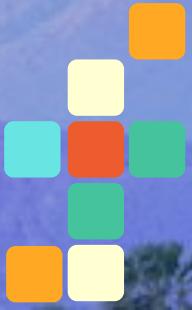
00:07:51

Help

Report



# Administrative Tasks Under Test



# Tasks in focus

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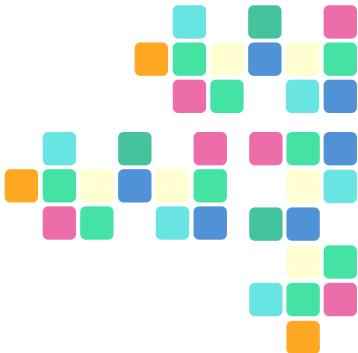


1. Create a custom image template including customizations and tags
2. Select an existing pooled host pool and add multiple session hosts
3. Select an existing pooled host pool and remove multiple session hosts in Azure, Intune, and Entra ID
4. Create a new pooled host pool and configure auto-scale to dynamically add new multi-session hosts
5. Reimage session hosts in a host pool
6. Select an existing host pool with multiple session hosts and initiate a change of the VM type for all session hosts
7. Delete a custom image template and recreate it with updated settings

## More tasks...

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- Add a Scaling Plan
- Add Session Hosts to a Personal Host Pool
- Assign Host Pool
- Create a Premium File Share
- Create a Workspace
- New Personal Single Host Pool
- Schedule Image
- Set Scaling in a Pooled Host Pool



# Challenges

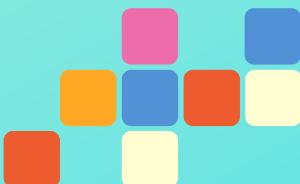
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- How do scrolling, searching and clipboard usage contribute to the measurement of user interaction?
- Is a task finished when all configuration entries have been made or only when all resources are available?
- How can one adequately take into account the administrator's experience when using a console?
- How should the use of templates and scripts be included in time measurement?





# Measuring AVD and NME Console Efficiency





# Individual Test Videos



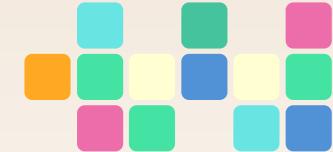
# Comparison and Findings



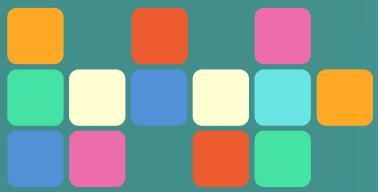


# Side-by-Side Comparisons

# Findings



Task / Scenario	AVD Console	NME Console
Add a Custom Image	3:23 (132   3)	1:31 (30   4)
Add Session Hosts to a Pooled Host Pool	2:38 (66   5)	0:52 (10   2)
Delete Session Hosts in a Pooled Multi-Session Host Pool	1:32 (36   1)	0:28 (7   1)
New Pooled Multi-Session Host Pool	7:51 (111   7)	2:55 (43   4)
Reimage Session Hosts in a Host Pool	4:50 (90   6)	0:44 (10   1)
Resize Session Hosts	1:34 (22   0)	1:43 (8   2)
Update Custom Image	5:09 (146   3)	0:37 (13   1)



# Conclusion and Next Steps



# Risk reduction

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- Simplified administration = fewer inputs = reduced human error
- Safety rails = consistent environment



# Final Remarks and Questions

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1. Different administrators may require different times to complete a task  
– experience matters
2. Did we select the right tasks?
3. How can we take scripts, policies and templates into consideration?
4. How do we deal with the fact that administrators work less efficiently in an unfamiliar console
5. Can we compare our results to fully automated administrative processes – and how common is automation?
6. What are the correct names of the different user interface elements?



# Conclusion

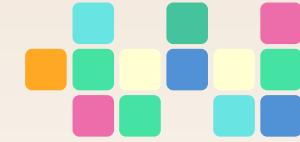
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1. The SysAdmin Experience (SAX) benchmarking method is in its early infancy and still requires some refinements
2. The SAX benchmarking results show a clear indication that AVD management from the Nerdio Manager for Enterprise console is more efficient (take the results with a grain of salt)
3. The VDI-specific layout and the integration of templates and scripts give the Nerdio Manager for Enterprise console an advantage over the more generic Azure portal

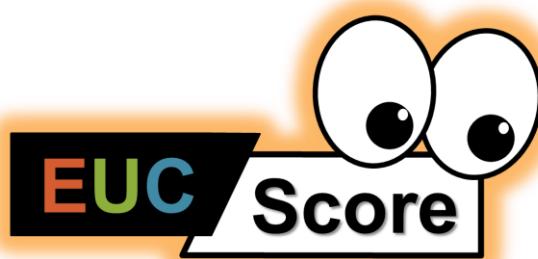
# Call to action

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

**info@eucscore.com**



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

## EUC SCORE LINKS

- Home Page:  
<https://eucscore.com>
- Freeware Download:  
<https://eucscore.com/freeware>
- Community Test Results:  
<https://eucscore.com/results>
- Toolset Documentation:  
<https://docs.eucscore.com>
- Test Methodology:  
<https://eucscore.com/methodology.html>
- Simload Gallery:  
<https://eucscore.com/gallery.html>
- Terminology (Glossary):  
<https://eucscore.com/terminology.html>
- Lab Equipment:  
<https://eucscore.com/equipment.html>

# Contact Us

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