

NezidioCon

2025

— PALM SPRINGS







# Fix it or forfeit: The ultimate AVD challenge



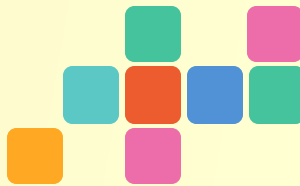
# Agenda

Learn a bit about your hosts

Explain the rules of the game

Play the game and learn along the way

Announce the prizes





# Dave Stephenson

MSP Escalation Engineer

Frequently found in the NMM Forums

Nerdio fan since 2021 & employee since 2024

Has been described as "a quiet wildcard"





# Chuck Mikuzis

NMM Product Manager

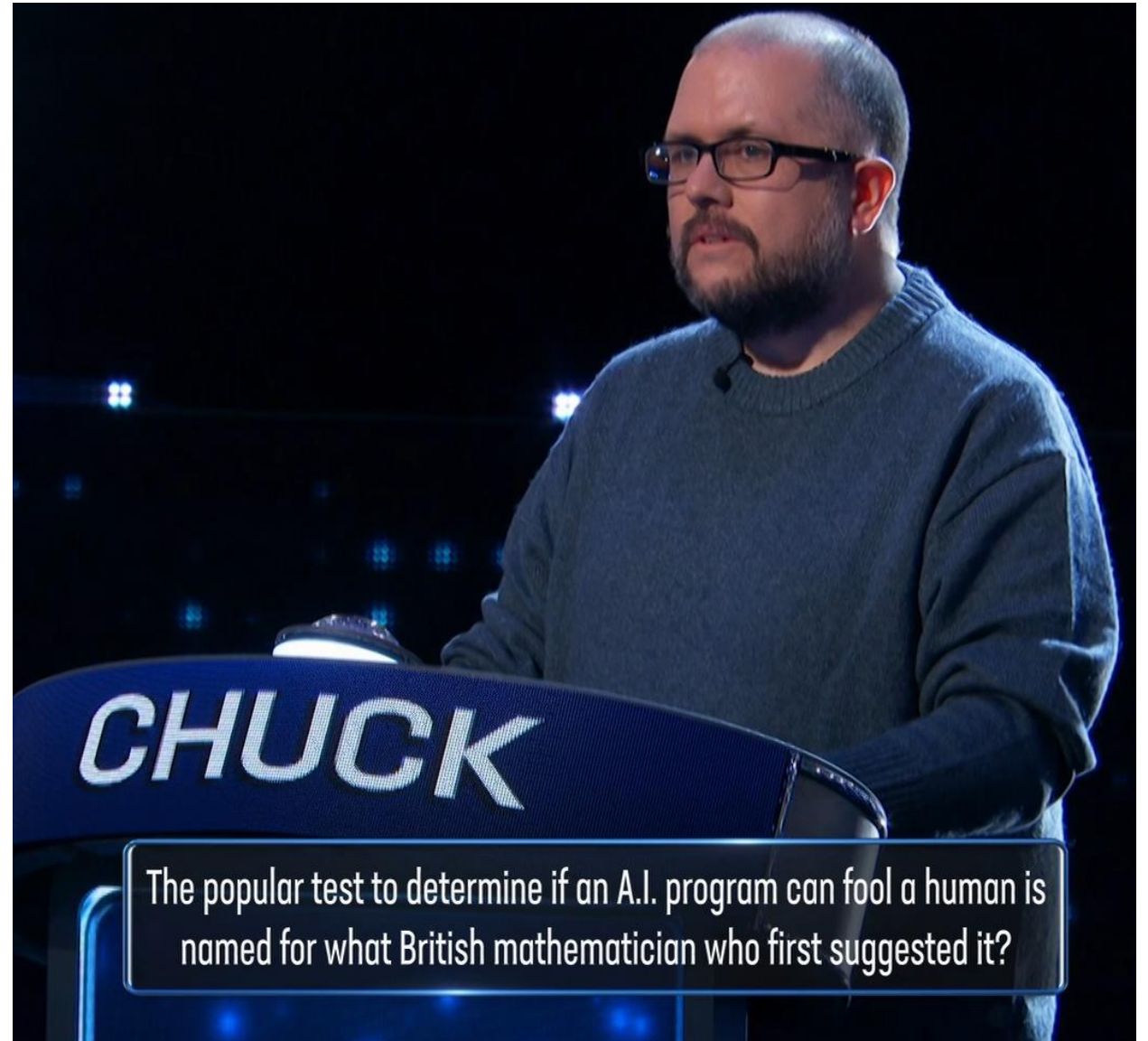
Joined Nerdio in 2016

AZ-140 (AVD Specialty) and AZ-104 certified

Known to crack under pressure during  
gameshows



**It's okay not  
knowing all  
the answers!**





# Unified Application Management (UAM)

## Source

### Public Winget repository

- Linked by default in Nerdio
- Hosted in github
- 1,000s of common applications available
  - Windows
  - Android
  - iOS
  - MSStore\*

### Private Repo

- Managed by you!
- Can be linked in Nerdio

### Shell Apps available

- Private and public Repos

## Delivery

### Intune

- Deployment policy created via Nerdio
- Creates a policy and installs/updates/uninstalls via winget as "system" user

### VM extension for Azure VMs

- Custom VM extension
- Requires powershell and winget to be permitted
- Can install/update/uninstall apps

### "Groups" available

- Apps can be "grouped"

## Target

### Intune

- Physical devices
- Users and groups
- Mobile devices

### VM Extension

- AVD
- Server VMs
- Users/Groups assigned to AVDs
- Immediate or during maintenance window

## UNIFIED CATALOG ⓘ

### SEARCH ⓘ

### REPOSITORY

All 



### FILTERS

Show all



APP NAME ⓘ ⓘ	APP ID ⓘ ⓘ	VENDOR ⓘ	REPOSITORY ⓘ ⓘ	VERSIONS ⓘ	ASSIGNED TO ⓘ	
<input type="radio"/> 7-Zip ☆	7zip.7zip	Igor Pavlov	Public WinGet Community	12 (exe, wix, nullsoft)	All accounts All accounts [NG-test-app-grp-01, Common Apps]	<div>Properties</div>
<input type="radio"/> 7-Zip ☆	7zip.7zip	Igor Pavlov	ng-MSP-001	2 (exe, wix)	All accounts	<div>Properties</div>
<input type="radio"/> Adobe Acrobat Reader DC (64-bit) ★	Adobe.Acrobat.Reader.64-bit	Adobe	Public WinGet Community	50 (exe)	All accounts All accounts [Common Apps]	<div>Properties</div>
<input type="radio"/> Adobe Acrobat Reader: Edit PDF ★	UUID ⓘ	Adobe	Android Apps	N/A		<div>Properties</div>
<input type="radio"/> Adobe DNG Converter ★	Adobe.DNGConverter	Adobe Systems, Inc.	Public WinGet Community	5 (inno)	All accounts	<div>Properties</div>
<input type="radio"/> Advanced Driver Updater ★	SystweakSoftware.AdvancedDriver Updater	Systweak Software, 1999-2021 All rights reserved.	Public WinGet Community	1 (inno)	Nube Hart, Inc. (1)	<div>Properties</div>
<input type="radio"/> AI Chat - Ask Bot Assistant ★	1663687958	HAPPYPIXEL - LDA	iOSStore	N/A	All accounts	<div>Properties</div>
<input type="radio"/> AI Chat Assistant - ChatAI Bot ☆	6447167650	DARF SERVICE Sp. z o.o	iOSStore	N/A	All accounts	<div>Properties</div>
<input type="radio"/> AI Chatbot - Ask Me Anything ★	1668805457	EVOLLY.APP PTE. LTD	iOSStore	N/A		<div>Properties</div>
<input type="radio"/> Apple Maps ☆	915056765	Apple Inc.	iOSStore	N/A	All accounts	<div>Properties</div>



# Unified Application Management (UAM)

What can go wrong? (Computers never break)

## App not present

### Check the “Deployment Status” in Nerdio

- Policies for AVD can take up to 15 minutes to detect
- Intune can take hours

### App does not support a silent install.

- `Winget [install/remove] --id [Application.ID] --silent`

## System requirements not met

### OS Supported

- Win10/11
- Server 2019+
- Android
- iOS

### Winget available in Windows OS (present by default)

### Powershell is available on Windows OS

## Errors in Nerdio

### Attack surface reduction or AV disruptions

- Blocking Powershell (PSEXEC) or WMI
- Scripts being blocked
- Exclusion details on Nerdio help sites

### For other errors, email Nerdio support:

- NMM: [nmm.support@getnerdio.com](mailto:nmm.support@getnerdio.com)
- NME: [nme.support@getnerdio.com](mailto:nme.support@getnerdio.com)

FSLogix troubleshooting

# Anatomy of FSLogix

- Microsoft's recommended profile solution for AVD
- Microsoft product since 2018
- Not limited to AVD/VDI, can be used on-prem
- Made up of 3 core components
  - Storage
  - FSLogix service
  - User container

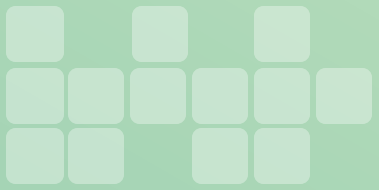
**20%+ of all 2024 Nerdio support cases involved FSLogix**





# Storage

- File share where the user's FSLogix container (VHD/VHDX) will be stored
- Options for storage:
  - Azure Files
  - File Server
  - Azure NetApp Files
  - Blob storage (Entra ID)
- Potential storage issues
  - Performance (IOPS)
    - Use Premium Azure files, premium disks.
  - Share permissions
    - SMB Share contributor role for Azure Files, read/write to the share for Fileserver
  - Space constraints (full storage)
    - Utilize Nerdio's auto-scale!



## FSLogix troubleshooting

# FSLogix service

- Service runs on session host
- Nerdio can install/configure/maintain versions for you
- Does not need to be running where the user doesn't login
- Includes App Masking to set app permissions/hide applications

### Potential Service issues

- Service not running
  - Users login with a “blank” profile
- Slow Login
  - Potential machine resource exhaustion (CPU/Memory/IOPS)
  - AV/EDR scanning taking place on user profile
    - Add exceptions as needed
- Misconfigured registry settings
  - Configure it via Nerdio's UI
  - Understand the impact of changes

**Name**

Hi Nerdiocon!

**Global profile** ⓘ

Skip use of Global configuration ▼

☐ Use Cloud Cache ⓘ

☐ Configure session hosts registry for Microsoft Entra Joined storage ⓘ

☒ Exclude the Nerdio stored admin account from FSLogix ⓘ

☒ Exclude the domain admin account from FSLogix ⓘ

**Domain admin username**

Leave empty for using domain admin username from AD config

**FSLogix version** ⓘ

Latest - FSLogix 2210 hotfix 4 (2.9.8884.27471) ▼

**App Services Settings** ⓘ

CleanupInvalidSessions ⓘ	Not configured ⓘ	<a href="#">Reset</a>
RoamRecycleBin ⓘ	Not configured ⓘ	<a href="#">Reset</a>
VHDCompactDisk ⓘ	Not configured ⓘ	<a href="#">Reset</a>

**FSLogix Profiles path (VHDLocation):** ⓘ

Select or type UNC path... ▼

**FSLogix Registry Options:** ⓘ

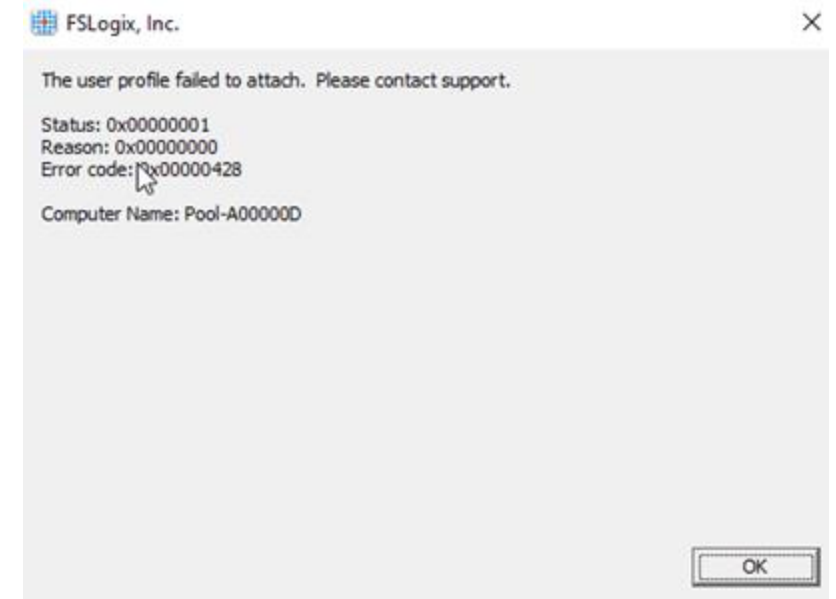
Common settings ▼

DeleteLocalProfileWhenVHDShouldApply	1 ⓘ	<a href="#">Reset</a>
FlipFlopProfileDirectoryName	0 ⓘ	<a href="#">Reset</a>
PreventLoginWithFailure ⓘ	1 ⓘ	<a href="#">Reset</a>
PreventLoginWithTempProfile ⓘ	1 ⓘ	<a href="#">Reset</a>
RedirXMLSourceFolder ⓘ	Not configured ⓘ	<a href="#">Reset</a>
SizeInMBs ⓘ	Not configured ⓘ	<a href="#">Reset</a>
VolumeType ⓘ	vhdv ⓘ	<a href="#">Reset</a>



# User container

- Profile stored in VHD/VHDX file
- Mounted/unmounted from the file share to session upon login
- Default settings store all profile contents within VHD(x) file
  - Exclusions can be enabled to direct data to other locations
  - Office container available but not recommended
- Cloud Cache an app option for user profiles
  - Caches a local copy of profile
  - Impacts performance
- Common errors/issues
  - Profile locked
  - Container size limit reached (**SizeInMBs**)
    - 30GB Default limit
  - Permission issue reading/writing to share
- Errors specific to a single user point to a container issue
  - Corrupted files will have “corrupted” in file name

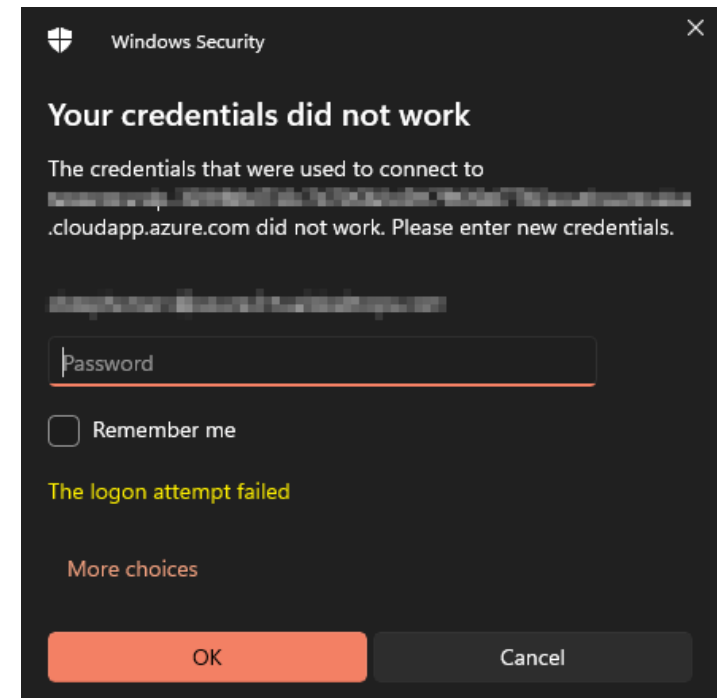


# Common Entra ID “gotchas”

Prompt to sign-in to Office  
Apps on every logon

RoamIdentity

RDP from device in the  
same Entra tenant





# Common Entra ID “gotchas”

## Single sign-on



### Allow remote desktop connection?

You are attempting to connect to a remote device with the following details:  
**AVDHostname**

Allowing this connection means that you allow the remote device to access your account and sign you in.

No

Yes

## Computer Auth for FSLogix

EDIT SCRIPTED ACTION

NAME: AADJWindowsCredentialManager ⓘ

DESCRIPTION: ⓘ

TAGS: Type to create new or select existing... ⓘ

SCRIPT EXECUTION MODE: Combined ⓘ

ENABLE FOR INTUNE MANAGED ENDPOINTS ☐ Off ⓘ

SCRIPT ⓘ

```
cmdkey.exe /add:f[redacted]@file.core.windows.net /user:localhost\administrator /pass:UPxPpa1V61qOfckuvr[redacted]K3+ASteEKwTA==

# Check if the key exists
if (-not(Test-Path "HKLM:\Software\Policies\Microsoft\AzureADAccount")) {
    # Create the key if it doesn't exist
    New-Item -Path "HKLM:\Software\Policies\Microsoft\AzureADAccount" -Force
}

# Add or modify the property
New-ItemProperty -Path "HKLM:\Software\Policies\Microsoft\AzureADAccount" -Name "LoadCredKeyFromProfile" -Value 1 -Type DWord -Force

New-ItemProperty -Path "HKLM:\SYSTEM\CurrentControlSet\Control\Lsa" -Name "LsaCfgFlags" -Value 0 -force
```

# Azure changes

## 📌 Important

The legacy [Log Analytics agent](#) is deprecated as of **August 31, 2024**. Microsoft will no longer provide any support for the Log Analytics agent. If you use the Log Analytics agent to ingest data to Azure Monitor, [migrate now to Azure Monitor agent](#).

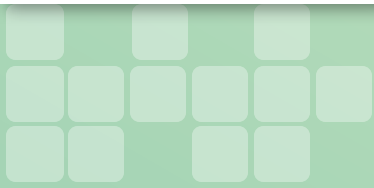
## 📌 Important

Windows 10 will reach end of support on October 14, 2025. The current version, 22H2, will be the final version of Windows 10, and all editions will remain in support with monthly security update releases through that date. Existing LTSC releases will continue to receive updates beyond that date based on their specific lifecycles.

## Upgrade to Standard SKU public IP addresses in Azure by 30 September 2025— Basic SKU will be retired

**On 30 September 2025, Basic SKU public IP addresses will be retired in Azure.** You can continue to use your existing Basic SKU public IP addresses until then, however, you'll no longer be able to create new ones after 31 March 2025.

**On 30 September 2025, [default outbound access](#) connectivity for virtual machines in Azure will be retired.** After this date, all new VMs that require internet access will need to use explicit outbound connectivity methods such as Azure NAT Gateway, Azure Load Balancer outbound rules, or a directly attached Azure public IP address.



# Attack Surface Reduction



Nerdio Support

February 5, 2025 at 2:43 AM



## Attack Surface Reduction - AVD Exclusions

**Warning:** This topic contains recommendations. Be sure to check with your security team before implementing any of the recommendations.

When Nerdio Manager deploys packages or runs scripts, we deploy and run them on the local VM or machine.

The main directories are:

- **C:\Packages\Plugins\Microsoft.PowerShell.DSC\<version>\DSCWork** (for most Nerdio Manager packages)
- **C:\Packages\Plugins\Microsoft.Compute.CustomScriptExtension\<version>\Downloads** (for scripted actions and custom scripts)

Because we want to protect our proprietary information, we often obfuscate or hide our code that we use to run the scripts. This can manifest as a security risk for a lot of Attack Surface Reduction (ASR) rules/platforms. When this is blocked or restricted, it prevents Nerdio Manager from being able to perform its automation tasks on a session host.



Nerdio Support

February 5, 2025 at 2:44 AM



## Attack Surface Reduction – UAM Exclusions

When Nerdio Manager deploys UAM packages, the packages are run from a local PC. The two main directories for these packages are:

- For most Nerdio Manager UAM packages: **C:\Windows\Temp\NME-SHELL-FILE-CACHE\**
- For UAM packages deployed on Intune devices: **C:\Windows\Temp\NMWLogs\**

To protect proprietary information, the code used to run scripts is often obfuscated or hidden. However, this obfuscation can pose a security risk for certain Attack Surface Reduction (ASR) rules and platforms. When these scripts are blocked or restricted, Nerdio Manager cannot perform its automation tasks on Intune devices or session hosts.

The two main ASR rules that commonly cause conflicts are:

- [Block execution of potentially obfuscated scripts](#)
- [Block process creations originating from PSEXEC and WMI commands](#)

Below are examples of errors that may occur in the Nerdio Manager logs:



# Dos and Don'ts of desktop images



- Install Windows updates
- User a single local admin account
- Make sure you've set up a Local Admin account in Nerdio
- Set up notifications for set as image failures

- Join images to your identity provider
- Install apps from the Microsoft Store and/or in a per-user context
- Install your security software
- Enable Bitlocker
- Manually Sysprep your desktop image VM



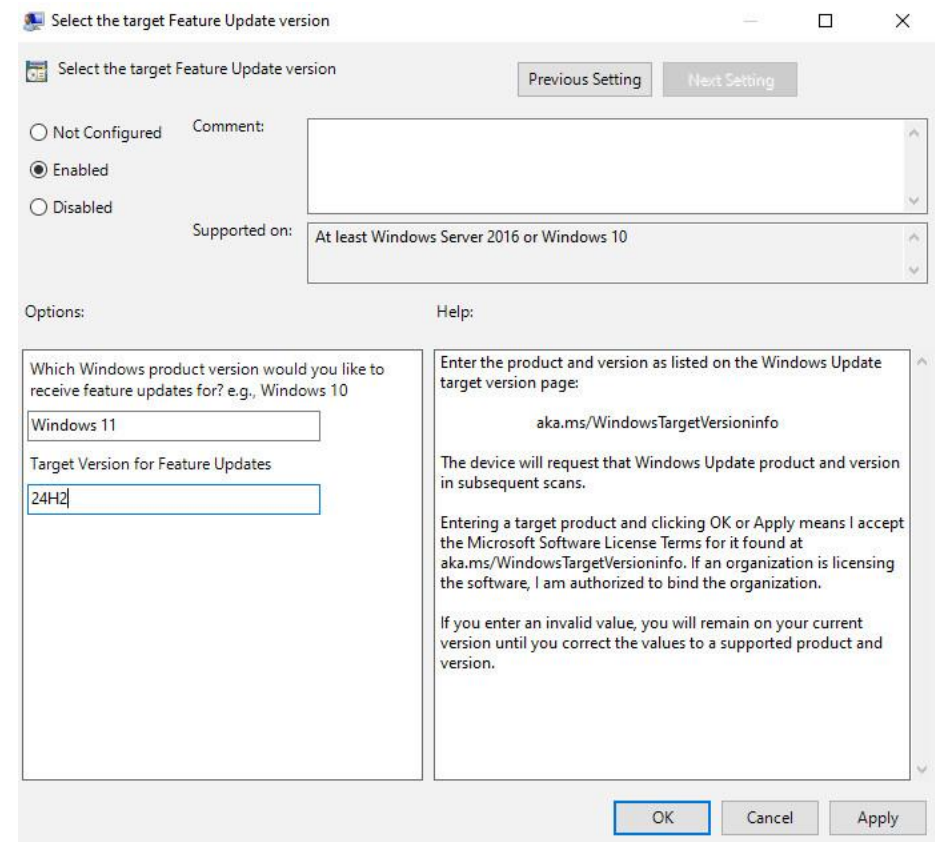
# Can I update my desktop images?

## Officially

Windows versions not yet supported for in-place system upgrades  
(consider using a workaround)

- Windows 10 and 11 Enterprise multi-session, all versions
- Windows 8.1
- Windows 7 Enterprise

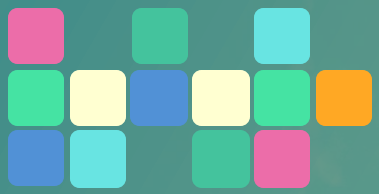
## Unofficially



The screenshot shows a Windows dialog box titled "Select the target Feature Update version". It has a "Previous Setting" button and a "Next Setting" button. The dialog is divided into several sections:

- Configuration:** Three radio buttons: "Not Configured", "Enabled" (selected), and "Disabled". A "Comment:" text box is next to them.
- Supported on:** A dropdown menu showing "At least Windows Server 2016 or Windows 10".
- Options:** A section with two text boxes:
  - "Which Windows product version would you like to receive feature updates for? e.g., Windows 10": Contains "Windows 11".
  - "Target Version for Feature Updates": Contains "24H2".
- Help:** A large text area containing instructions:
  - "Enter the product and version as listed on the Windows Update target version page:"
  - A link: [aka.ms/WindowsTargetVersionInfo](https://aka.ms/WindowsTargetVersionInfo)
  - "The device will request that Windows Update product and version in subsequent scans."
  - "Entering a target product and clicking OK or Apply means I accept the Microsoft Software License Terms for it found at [aka.ms/WindowsTargetVersionInfo](https://aka.ms/WindowsTargetVersionInfo). If an organization is licensing the software, I am authorized to bind the organization."
  - "If you enter an invalid value, you will remain on your current version until you correct the values to a supported product and version."

At the bottom right, there are three buttons: "OK" (highlighted with a blue border), "Cancel", and "Apply".



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How does  
the game  
work?





Go to [flexiquiz.com/live](https://flexiquiz.com/live) and enter the access code

join at:

[flexiquiz.com/live](https://flexiquiz.com/live)

access code:

0581126

or scan  
the QR  
code



Enter a  
**name** and  
wait for the  
quiz to start

nickname:

Nerdio the Great



# Question #1

An easy throwaway question

You have something in your AVD Environment happening that you can't figure out.  
What do you do?

☐ Suffer in silence

☐ Rant on Reddit

☐ Ask Nerdio

☐ Offer-up one of your Tier 1 techs to the Elders of the Internet

# Question #1

An easy throwaway question



You have something in your AVD Environment happening that you can't figure out.  
What do you do?

 Suffer in silence **-200 Points**

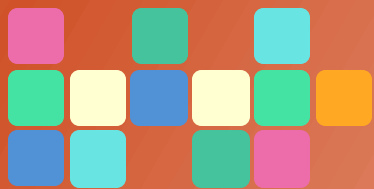
 Rant on Reddit **1 Point**

 Ask Nerdio **100 Points**

 Offer-up one of your Tier 1 techs to the Elders of the Internet

**1 Point**





# And now, a word from our sponsors



# Forums

## NERDIO MANAGER FOR MSP

WELCOME TO THE HELP CENTER



**Nerdio Manager for MSP**  
Start Here



**Feature Update Release Notes**  
See what's new in NMM



**Community Forums**  
Ask, Answer, Grow



**Nerdio Legacy Support**  
NFA and NPC

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Release Notes

Knowledge Base

FAQs

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See what's new in the product



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## NERDIO ENHANCED SUPPORT

User Experience	OS + Applications	Endpoint/ Intune	Infrastructure	AVD Resources	Identity
Performance right-sizing End-user access to AVD AVD Desktop management AVD Insights	Application management Microsoft Teams/Office Advanced FSLogix Image management	Conditional access policy management Configuration profile management CIS Benchmark adoption Intune adoption guidance	VM performance AVD networking Azure files Windows 365	Host pool FSLogix Cost management AVD agent	Entra Active Directory Entra Connect Entra Domain Service

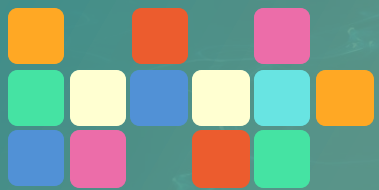
*\*Program requires 1 year commitment. Pricing is a percentage of your monthly Nerdio license spend. Successful resolution of your ticket is not guaranteed and will be based on our team's best efforts. Exclusions may apply.*





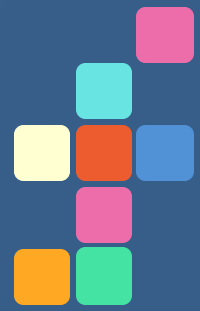
Enterprise

	Standard	Plus
<b>Pricing</b>	Included	20% of monthly bill
<b>Technical support</b>	7 am to 7 pm local hour support, website form with email response	Access 24/7/365. Dedicated phone support or submission via website form with email response.
<b>SLA</b>	4 hours or less	<p>Priority 1 – (1 hour SLA): Critical incidents or requests threaten business continuity</p> <p>Priority 2 – (1 hour SLA): High-priority issues impact critical services, affecting multiple users</p> <p>Priority 3 – (4-hour SLA): Medium-priority issues affecting specific users or services</p> <p>Priority 4 – (4-hour SLA): Low-priority issues have minimal business impact</p>
<b>Technical account management</b>	None	Designated technical account manager
<b>Technical training</b>	<ul style="list-style-type: none"><li>• Product documentation &amp; knowledge base</li><li>• Technical videos</li><li>• Certification courses</li><li>• In-person training at Nerdio Training Camps</li></ul>	Instructor-led remote training, up to four two-hour sessions (plus all features included in Standard)
<b>Customer success services</b>	<ul style="list-style-type: none"><li>• Self-guided onboarding</li><li>• 30-day go-live success sync</li><li>• New feature educational webinars</li></ul>	<ul style="list-style-type: none"><li>• Designated customer success manager</li><li>• Live onboarding sessions over the first 90 days</li><li>• Recurring success syncs</li><li>• Quarterly business reviews</li></ul>

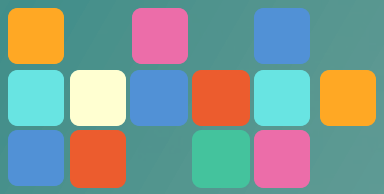


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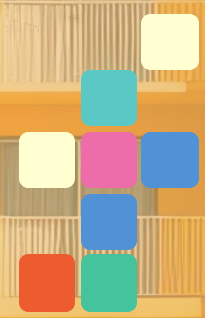
# BACK TO THE QUIZ



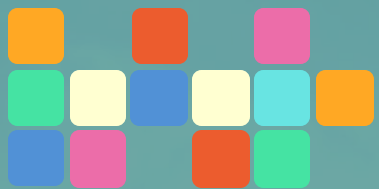




# Q&A

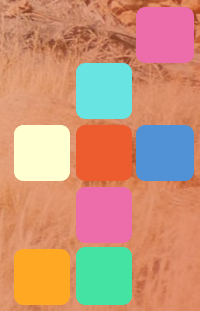






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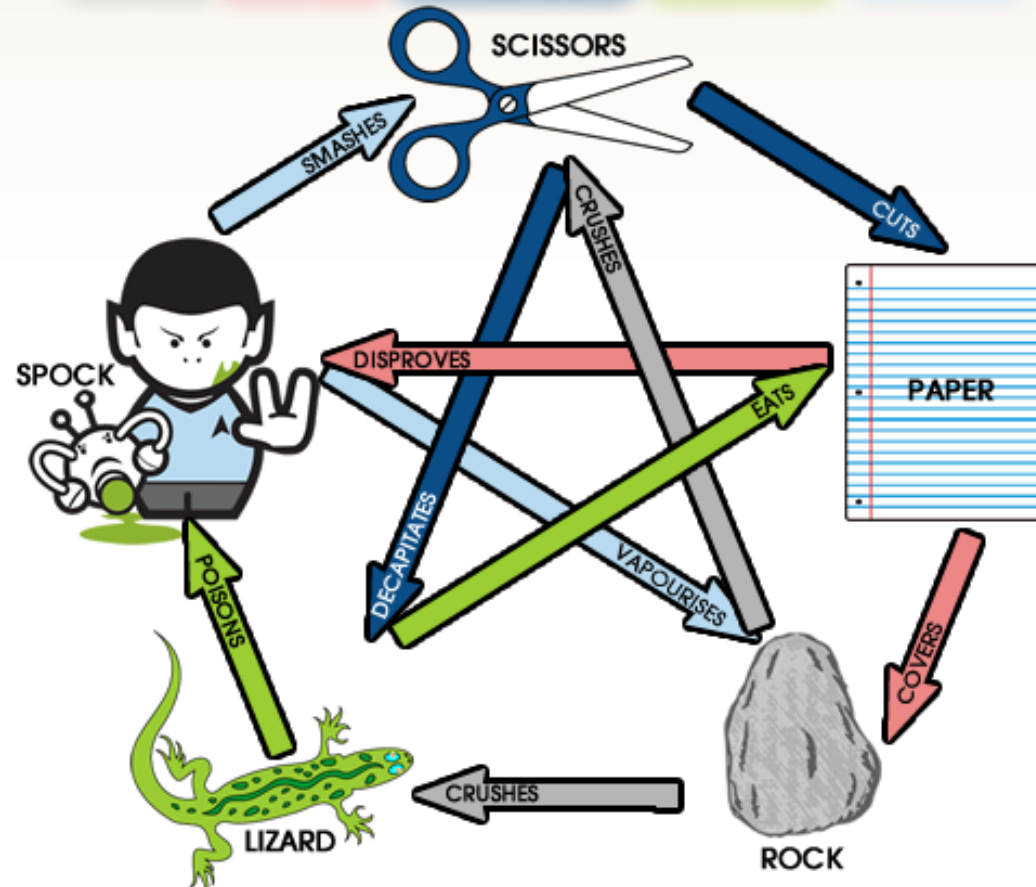
# BACK TO THE QUIZ

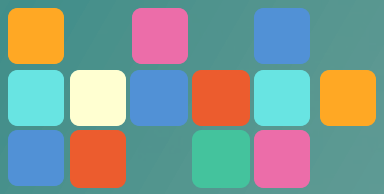




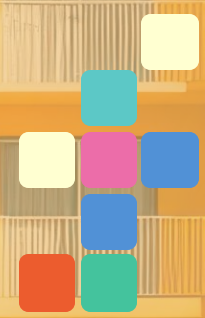
# It's a tie

ROCK, PAPER, SCISSORS, LIZARD, SPOCK





# Q&A

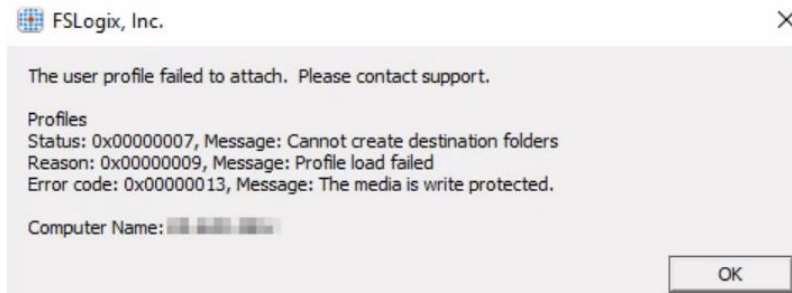


# Access the quiz answers

## Fix It or Forfeit NerdioCon 2025

Resources from the Presentation

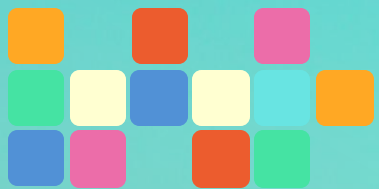
- A user reports this error message  
What is the first thing you check?



- **MSP:** <https://nmmhelp.getnerdio.com/hc/en-us/articles/26125556178701-Troubleshoot-Common-FSLogix-Issues>
  - **Enterprise:** <https://nmehelp.getnerdio.com/hc/en-us/articles/26124310088205-Troubleshoot-FSLogix-Profile-Mount-Errors>
- When logging-in to their virtual desktop, a user needs to sign-in to their office apps every time. How do you permanently solve the problem?  
NOTE: Re-authenticating is NOT the answer 🤔







Thank you!  
Don't forget to  
fill out your  
breakout survey.

