



Enterprise Foundations Lab Guide

Lab 1 | Creating an Image Source VM

1. Log into the sandbox.

- See your email for an access link.

2. Click the [Desktop Images blade](#).



3. Click [Add from Azure Library](#).



4. Configure the following:

Name	Enter a unique name. <i>Save the name for later!</i>
Description	Leave this blank
Network	Leave at default.
Azure Image	Windows 11 (22H2) Enterprise multi-session + Microsoft 365 Apps - Gen2 (multi-session)
VM Size	D2s_v5
OS Disk	P10
Resource Group	Leave at default.
Security Type	Leave at default.
Join to AD	Uncheck this box.
Do not create image	Check this box.
Set Time Zone	Set to the local time zone.
Optimize Disk Type when Desktop Image is Stopped	Check this box.
Provide custom credentials for local admin	Create local administrator credentials for the image source VM.

Lab 1 | Creating an Image Source VM

ADD DESKTOP IMAGE ⓘ

Add desktop image from Azure image library.

NAME:	<input type="text" value="medi-DI"/>	ⓘ
DESCRIPTION:	<input type="text"/>	ⓘ
NETWORK:	<input type="text" value="Sub2-WestUS-Vnet (HP-Subnet)"/>	ⓘ
	<small>Available IP addresses: 248 (3 of 251 used)</small>	
AZURE IMAGE:	<input type="text" value="Windows 11 (22H2) AVD + Microsoft 365 Apps - Gen2 (multi-session)"/>	ⓘ
VM SIZE:	<input type="text" value="D2s_v5 (2C & 8GB)"/>	ⓘ
OS DISK:	<input type="text" value="128 GB (P10 Premium SSD)"/>	ⓘ
RESOURCE GROUP:	<input type="text" value="NME-Resources"/>	ⓘ

Security type: ⓘ

Join to AD

Do not create image object ⓘ

Skip removal of local profiles ⓘ

Enable time zone redirection ⓘ

Set time zone:

Remove FSLogix apps ⓘ

Install App Attach certificates ⓘ

Optimize disk type when desktop image is stopped ⓘ

Provide custom credentials for a local administrator user

On

USERNAME:

PASSWORD:

Applications Management ⓘ

Off

> Apply tags ⓘ

This task may take up to an hour to complete. You can monitor progress in the Desktop Images Tasks section.

Lab 2.1 | FSLogix Overview & Best Practices

What is FSLogix?

- A user profile container technology.
- Allows user profiles to roam without losing their customizations.

How does it work?

- Requires a storage service for profile containers.
 - (E.g., Azure Files / Azure NetApp Files / File Server).
- Installation of the FSLogix application.
 - *Nerdio automatically installs by default when a new session host is created.*
- Create FSLogix configuration profiles in Nerdio.
 - Assign these profiles to host pools for centralized management.

Azure Files

- Microsoft recommends Premium storage in Azure Files.
- Premium Storage for Azure Files is Nerdio auto-scale compatible.
- Nerdio auto-scaling ensures there is always enough storage available.
- Lower tiers of storage may cause errors in daily operations.

Storage Options

- UNC Path (File Server)
- Azure Files (Premium)
- Azure NetApp Files (1 TiB minimum required)

Lab 2.2 | RDP Best Practices for Profile Settings

What is an RDP Profile?

- A configuration created in Nerdio that defines the RDP experience for users.

How do RDP Profiles work?

- Can be created at the settings menu and then assigned to host pools
 - *You can also create them on a per-host pool basis.*
- This allows you to centralize management and make changes from one location.

Audiocapturemode

- Determines whether input can be redirected from the local device to the session.

Camerastoredirect

- Makes local webcam / camera available in the session.

Devicestoredirect

- Allows plug in devices to appear in the session
 - ***E.g., Flash Drives***

Drivestoredirect

- Redirects drives from the local machine to the session.

Redirectprinters

- Allows local printers to be made available in the session.

Redirectclipboard

- Allows clipboard sharing between the local device and the session.

Lab 3.1 | Creating an AVD Workspace

1. Click the [Workspace blade](#).



2. Click [Add Workspace](#).



3. Configure the following:

Name (internal only)	Enter a unique name. <i>Save the name for later!</i>
Friendly Name (visible to users)	Enter a unique name.
Description	Leave blank.
Resource Group	Leave at default.
Location	select US East .

CREATE WORKSPACE ⓘ

Name (not visible to user and cannot be changed later) ⓘ

Friendly Name (visible to user and can be changed later) ⓘ

Description ⓘ

Resource group ⓘ

Location ⓘ

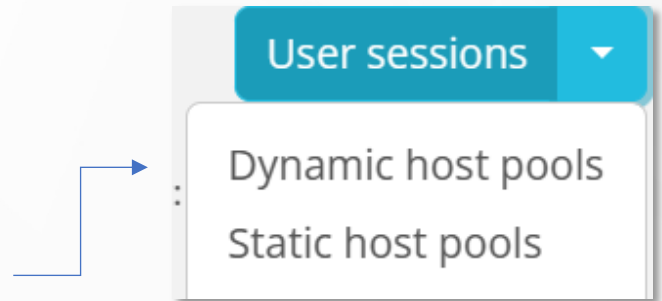
> Apply tags ⓘ

Cancel

Lab 3.2 | Creating a Dynamic Host Pool

1. Find your Workspace.

2. Click the dropdown arrow next to Workspace and select Dynamic Host Pools.



3. Click Add dynamic host pool.



4. Configure the following:

HP Name (internal only)	Enter a unique name. <i>Save the name for later!</i>
Description	Leave blank.
Desktop Experience	Multi user desktop (pooled)
Directory	Leave at default.
FSLogix	Set to OFF .
Hosts Name	Enter a name.
Network	Leave at default.
Desktop Image	Windows 11 (22H2) Enterprise multi-session + Microsoft 365 Apps - Gen2 (multi-session)
VM Size	D2s_v5
OS Disk	E10
Resource Group	Leave at default.
Quick-Assign	Leave at default (Empty).

Lab 3.2 | Creating a Dynamic Host Pool

ADD DYNAMIC HOST POOL ⓘ

Name ⓘ

demo-HP

Description ⓘ

Enter description for admin users

DESKTOP EXPERIENCE:

Multi user desktop (pooled) ▼ ⓘ

DIRECTORY:

Default (partnersc.onmicrosoft.com) ▼ ⓘ

FSLOGIX:

OFF ▼ ⓘ

NAME:

demo

Prefix ▼ ⓘ

NETWORK:

Sub2-WestUS-Vnet (HP-Subnet) ▼ ⓘ

Available IP addresses: 244 (7 of 251 used)

DESKTOP IMAGE:

Windows 11 (22H2) AVD + Microsoft 365 Apps - Gen... ▼ ⓘ

VM SIZE:

D2s_v5 (2C & 8GB) ▼ ⓘ

OS DISK:

128 GB (E10 Standard SSD) ▼ ⓘ

RESOURCE GROUP:

NME-Resources ▼ ⓘ

QUICK ASSIGN:

Type user or group name ▼ ⓘ

> Apply tags ⓘ

> App group settings

> Application policies

This task may take a long time to complete. You can monitor progress in the Host Pools Tasks section.

Cancel

OK

Lab 3.3 | Creating Session Hosts

1. Find the host pool you created.

2. Click [manage Hosts](#).



Manage Hosts

3. Click [Add session host](#).



Add session host

4. Configure the following:

Host Count	2
Host Name	Enter a name.
Network	Leave at default.
Desktop Image	Windows 11 (22H2) Enterprise multi-session + Microsoft 365 Apps - Gen2 (multi-session)
VM Size	D2s_v5
OS Disk	E10
Resource Group	Leave at default.
Process Hosts in Groups of	2

Lab 3.3 | Creating Session Hosts

ADD HOST TO DYNAMIC POOL ⓘ

▶ Run now



Manually add session host to Medi-HP.

You are adding a session host VM to a dynamic host pool. If Autoscaling is enabled the newly added host may be deleted or stopped to comply with dynamic auto-scaling parameters.

HOST POOL NAME: Medi-HP

DESCRIPTION:

DESKTOP EXPERIENCE: Multi user desktop (pooled)

HOST COUNT: ⓘ

HOST NAME: Prefix ⓘ

NETWORK: ⓘ
Available IP addresses: 244 (7 of 251 used)

DESKTOP IMAGE: ⓘ

VM SIZE: ⓘ

OS DISK: ⓘ

RESOURCE GROUP: ⓘ

> Apply tags ⓘ

PROCESS HOSTS IN GROUPS OF: ⓘ

NUMBER OF FAILURES BEFORE ABORTING: ⓘ

Cancel

Run now

Lab 4.1 | Updating the Image Source VM

1. Click the [Desktop Images blade](#).



2. Find the desktop image you created.

Power off & set as image

3. Click the dropdown arrow next to [Power off & Set as Image](#) and select [Run Script](#).

Change log

Deploy apps

Run script

Manage tags

4. Select [Install Google Chrome via Chocolatey](#).

5. Click [Run Now](#).

RUN SCRIPT ON TRAVISTEST

▶ Run now



Run the following Scripted actions on desktop image TravisTest. ⓘ

1.  Install Google Chrome via Chocolatey (Combined) [Nerdio, Apps install, Chocolatey]

Pass AD credentials ⓘ

Restart VM after script execution ⓘ

Cancel

Run now

Note: Wait for the task to finish before moving to the next labs

Lab 4.2 | Creating Desktop Images

1. Find the Desktop Image you created.

2. Click [Power off & Set as Image](#).



Power off & set as image

3. Configure the following:

Run the following scripted actions before set as image	OFF
Host Name	OFF
Schedule	OFF
Security type	Leave at default (Standard).
Geographic distribution & Azure compute gallery	ON
AZURE COMPUTE GALLERY	Select the existing one
Hibernation supported	Leave UNCHECKED .
Stage new image as inactive	Leave UNCHECKED .
Replica Count (Per Region)	Leave at default (1).
Save current image as a backup	ON
Install App Attach certificates	Leave UNCHECKED .
Skip removal of local profiles	Leave UNCHECKED .
Leave desktop image VM running	Leave UNCHECKED .

Lab 4.2 | Creating Desktop Images

SET MEDI-DI AS AN IMAGE ⓘ

Do you want to set medi-DI as an image?

Note: Please ensure that Azure agent is installed and AVO agent is not installed.

Run the following scripted actions before set as image: ⓘ

Off

Applications Management ⓘ

Off

With the schedule set to OFF action will be performed immediately. With schedule turned ON, the task will be performed according to the specified schedule.

SCHEDULE ⓘ

Off

Security type:

Standard

ⓘ

Geographic distribution & Azure compute gallery ⓘ

On

AZURE COMPUTE GALLERY:

Nerdio5G x

x ⓘ

AZURE REGIONS:

North Central US x

x ⓘ

Hibernation supported ⓘ

Stage new image as inactive ⓘ

Activate staged image after ⓘ

1 days

Current image action: ⓘ

Remove current version after activation v

Replica Count (Per Region):

1 ⓘ

Save current image as a backup ⓘ

Install App Attach certificates ⓘ

Skip removal of local profiles ⓘ

Leave desktop image VM running ⓘ

Change log: ⓘ

> Apply tags ⓘ

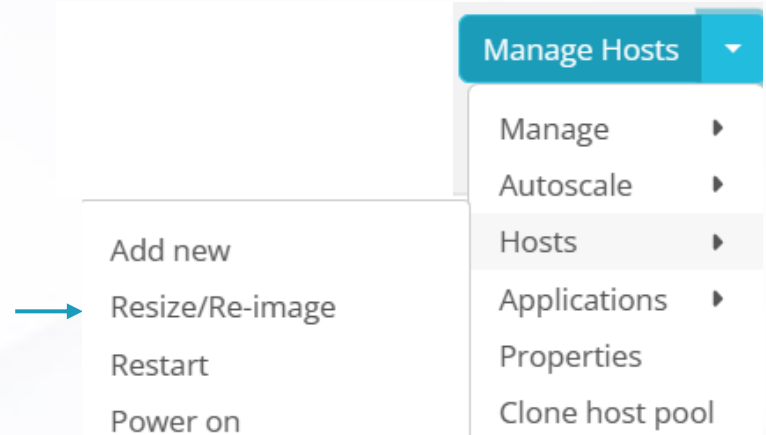
Cancel

Run now

Lab 5 | Updating Host Pools

1. Find the Host Pool you created.

2. Click the dropdown arrow next to **Manage Hosts**, select **Hosts**, and select **Resize / Re-image**.



3. Configure the following:

Desktop Image	toggle to the Desktop Image you just created
VM SIZE	No Change
OS DISK	No Change
PROCESS HOSTS IN GROUPS OF	2
NUMBER OF FAILURES BEFORE ABORTING	1
After first group is done, set remaining hosts to drain mode	Leave UNCHECKED .
FORCE USERS TO LOG OFF	NEVER
Set hosts to drain mode while waiting for users to log off	Leave UNCHECKED .
Send message while waiting for users to log off	Leave UNCHECKED .
WAIT UP TO	Leave at default (1 day).

Lab 5 | Updating Host Pools

RESIZE OR RE-IMAGE HOSTS ⓘ

▶ Run now



Resize or re-image all hosts in the Host Pool. You can change the desktop image, VM size and/or OS disk. Changes will apply to all session hosts. The selected parameters will also be set as the default for future hosts that are added.

HOST POOL NAME: Medi-HP

DESKTOP IMAGE: medi-DI (Apr 19, 2024 03:25 PM) ⓘ

VM SIZE: No change ⓘ

OS DISK: No change ⓘ

PROCESS HOSTS IN GROUPS OF: 2 ⓘ

NUMBER OF FAILURES BEFORE ABORTING: 1 ⓘ

After first group is done, set remaining hosts to drain mode ⓘ

FORCE USERS TO LOG OFF Never | v

Set hosts to drain mode while waiting for users to log off

Send message while waiting for users to log off

Sorry for the interruption. We are doing some maintenance and need you to log out. We will be terminating your session in 10 minutes if you haven't logged out by then.

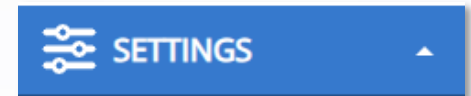
WAIT UP TO 1 day | v ⓘ

Cancel

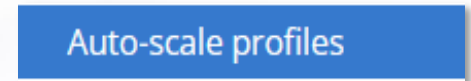
Run now

Lab 6.1 | Configuring Auto-Scale – User-driven

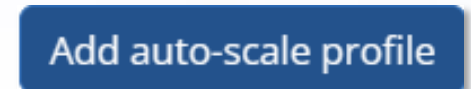
1. Click [Setting Blade](#).



2. Click [Auto-scale Profiles](#).



3. Click [Add Auto-scale Profiles](#).



4. Configure the following:

Auto-scale mode	User-Driven (Personal)
Name	Enter a name.
Start VM on connect	Leave UNCHECKED .
Desktop Start and Stop	ON
Desktops are stopped after	Leave at default (10 minutes).
Bypass drain mode for desktops in this pool	Leave UNCHECKED .
PRE-STAGE HOST OS DISKS	ON (leave default setting)
AUTO-GROW	ON (leave default setting)
AUTO-SHRINK	ON (leave default setting)
AUTO-HEAL BROKEN HOSTS	ON (leave default setting)

5. Click [CANCEL](#), don't save this profile.

Lab 6.1 | Configuring Auto-Scale – User-Driven

CREATE AUTO-SCALE PROFILE

PROFILE SETTINGS

Auto-scale mode:

Name: *

Description:

1 HOST POOL PROPERTIES ⓘ

Start VM on connect ⓘ

2 DESKTOP START AND STOP ⓘ

Desktops are started when users connect

Desktops are stopped after

Bypass drain mode for desktops in this pool ⓘ

On

3 PRE-STAGE HOST OS DISKS ⓘ

: to :

Leave desktops that are not assigned to a user with STOPPED OS disk type ⓘ

Use intelligent disk pre-staging for users **BETA** ⓘ

This feature only works if the types of Running and Stopped disks are different.

On

4 AUTO-GROW ⓘ

Add a new host when the number of available (not assigned to a user) falls below

On

5 AUTO-SHRINK ⓘ

Delete VM if the user hasn't logged in for: days ⓘ

Desktop will be set to "Pending deletion" state and deleted after:

Exclude the following groups (or individual users):

Exclude unassigned Desktops from Auto-shrink ⓘ

Notify user when their desktop is about to be deleted ⓘ

Notify an additional email recipient when desktops are scheduled to be deleted ⓘ

On

6 AUTO-HEAL BROKEN HOSTS ⓘ

Auto-scale can automatically attempt to repair "broken" session hosts by restarting them or running scripted actions (e.g. re-install AVD agent).

Host is broken if AVD agent status is: and

Minutes before first action:

Recovery actions:

- Restart VM
- Restart VM

Minutes between recovery actions:

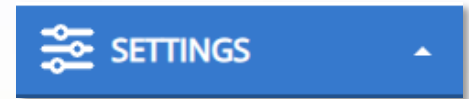
On

IMPORTANT: Click Cancel

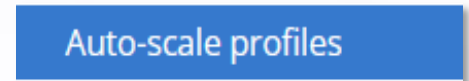
Cancel Save

Lab 6.2 | Configuring Auto-Scale – Schedule-based

1. Click Setting Blade.



2. Click Auto-scale Profiles.



3. Click Add Auto-scale Profiles.



4. Configure the following:

Auto-scale mode	Schedule-based (Personal)
Name	Enter a name.
Start VM on connect	Leave UNCHECKED .
Working Hours	Leave at default.
HOST OS DISKS	Leave at default.
AUTO-GROW	ON (leave default setting)
AUTO-SHRINK	ON (leave default setting)
MESSAGING	Leave at default.
AUTO-HEAL BROKEN HOSTS	ON (leave default setting)

5. Click CANCEL, don't save this profile.

Lab 6.2 | Configuring Auto-Scale – Schedule-based

CREATE AUTO-SCALE PROFILE

PROFILE SETTINGS

Auto-scale mode:

Name: *

Description:

1 HOST POOL PROPERTIES ⓘ

Start VM on connect ⓘ

2 WORKING HOURS ⓘ

8 a.m. : to 6 p.m. :

Power off aggressiveness: ⓘ

Power on timing: ⓘ

Power off timing: ⓘ

Include hosts without assigned user ⓘ

3 HOST OS DISKS ⓘ

Set all hosts to running OS disk type during work hours ⓘ ⚠

Use intelligent disk pre-staging for users **BETA** ⓘ

4 AUTO-GROW ⓘ

Add a new host when the number of available (not assigned to a user) falls below

On

5 AUTO-SHRINK ⓘ

Delete VM if the user hasn't logged in for: days ⓘ

Desktop will be set to "Pending deletion" state and deleted after: ⓘ

Exclude the following groups (or individual users): ⓘ

Exclude unassigned Desktops from Auto-shrink ⓘ

Notify user when their desktop is about to be deleted ⓘ

Notify an additional email recipient when desktops are scheduled to be deleted ⓘ

On

6 MESSAGING ⓘ

Send a warning message to active users: before powering off the desktop.

The message should say: ⓘ

7 AUTO-HEAL BROKEN HOSTS ⓘ

Auto-scale can automatically attempt to repair "broken" session hosts by restarting them or running scripted actions (e.g. re-install AVD agent).

Host is broken if AVD agent status is: and

Minutes before first action:

Recovery actions:

Minutes between recovery actions:

On

IMPORTANT: Click Cancel

Cancel

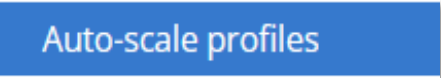
Save

Lab 6.3 | Configuring Auto-Scale – Shared

1. Click [Setting Blade](#).



2. Click [Auto-scale Profiles](#).



3. Click [Add Auto-scale Profiles](#).



Auto-scale mode	Shared
Name	Enter a name.
Session limit per host	10
Load balancing	Breadth First.
Start VM on connect	Leave UNCHECKED .
Active host defined as	AVD agent Available
Base host pool capacity	1
Min active host capacity	0
Bust beyond base capacity	2
multiple auto-scale triggers (advanced)	Leave UNCHECKED .
Select auto-scale trigger	CPU Usage
Start or create (scale out) up to	Leave default
Stop or remove (scale in) up to	Leave default
Stop or remove (scale in) hosts only from	Leave default
Scale in aggressiveness	Leave default
ROLLING DRAIN MODE	ON (leave default setting)
PRE-STAGE HOSTS	ON (leave default setting)
MESSAGING	Leave default
AUTO-HEAL BROKEN HOSTS	ON (leave default setting)

4. Click [CANCEL](#), don't save this profile.

Lab 6.2 | Configuring Auto-Scale – Shared

CREATE AUTO-SCALE PROFILE

PROFILE SETTINGS

Auto-scale mode:

Name: *

Description:

1 HOST POOL PROPERTIES ⓘ

Session limit per host:

Load balancing:

Start VM on connect

2 HOST POOL SIZING ⓘ

Active host defined as:

Base host pool capacity: host(s) in the pool

Min active host capacity: host(s) in the pool

Burst beyond base capacity: up to extra host(s) in the pool

3 SCALING LOGIC ⓘ

Use multiple auto-scale triggers (advanced)

Select autoscale trigger:

Start or create (scale out) up to host(s) if CPU utilization across all hosts exceeds % for minutes

Stop or remove (scale in) up to host(s) if CPU utilization across all hosts drops below % for minutes

Scale in restrictions

Stop or remove (scale in) hosts only from:

Scale in aggressiveness:

4 ROLLING DRAIN MODE ⓘ

Window name Start time % hosts in drain mode +

5 PRE-STAGE HOSTS ⓘ

Use multiple schedules

Work days:

Start of work hours: :

Scale in delay:

6 MESSAGING ⓘ

Send a warning message to users on the host: before scaling in host

The message should say:

Sorry for the interruption. This desktop will be powered off in 10 minutes. Please save your work and log out.

7 AUTO-HEAL BROKEN HOSTS ⓘ

Auto-scale can automatically attempt to repair "broken" session hosts by restarting, running scripted actions (e.g. re-install AVD agent), and deleting/recreating them.

Host is broken if AVD agent status is: and

Minutes before first action:

IMPORTANT: Click Cancel

Cancel Save

Lab 7 | WinGet commands Basics

Get Winget Info: *Winget --info*

- Shows the version of winget and the default locations of install folders, etc.

```
C:\Windows\system32\cmd.e. x + v
C:\>winget --info
Windows Package Manager v1.7.10861
Copyright (c) Microsoft Corporation. All rights reserved.

Windows: Windows.Desktop v10.0.22631.3447
System Architecture: X64
Package: Microsoft.DesktopAppInstaller v1.22.10861.0

Winget Directories
-----
Logs                                     %LOCALAPPDATA%\Packages\Microsoft.DesktopAppInstaller_8wekyb3d8bbwe\LocalState\Diag...
User Settings                           %LOCALAPPDATA%\Packages\Microsoft.DesktopAppInstaller_8wekyb3d8bbwe\LocalState\sett...
Portable Links Directory (User)          %LOCALAPPDATA%\Microsoft\WinGet\Links
Portable Links Directory (Machine)      C:\Program Files\WinGet\Links
Portable Package Root (User)            %LOCALAPPDATA%\Microsoft\WinGet\Packages
Portable Package Root                   C:\Program Files\WinGet\Packages
Portable Package Root (x86)             C:\Program Files (x86)\WinGet\Packages
Installer Downloads                      %USERPROFILE%\Downloads

Links
-----
Privacy Statement   https://aka.ms/winget-privacy
License Agreement   https://aka.ms/winget-license
Third Party Notices https://aka.ms/winget-3rdPartyNotice
Homepage            https://aka.ms/winget
Windows Store Terms https://www.microsoft.com/en-us/storedocs/terms-of-sale
```

View Winget Source: *Winget source list*

- Use this command to list and manage sources for Windows Package Manager
- You can add, remove, update, reset or export repositories.

```
C:\Windows\system32\cmd.e. x + v
C:\>winget source list
Name      Argument
-----
msstore   https://storeedgefd.dsx.mp.microsoft.com/v9.0
winget    https://cdn.winget.microsoft.com/cache

C:\>|
```

Lab 7 | WinGet commands Basics

List Winget Apps on PC: *Winget list*

- Lists all the applications on your computer, its versions and whether or not there is an available manifest in winget's sources.
- All applications can be managed regardless of whether they were first installed with winget

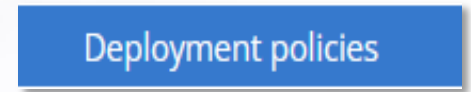
```
C:\Windows\system32\cmd.e: x + v
C:\>winget list
Name                Id                Version           Available         Source
-----
Visual Studio Pr... Microsoft.Visual... 17.9.5            17.9.6           winget
Netflix              4DF9E0F8.Netflix... 6.99.5.0
Intel@ Connectiv... AppUp.IntelConne... 2.1123.505.0
Ubuntu              Canonical.Ubuntu... 2204.3.49.0      winget
Microsoft Clipch... Clipchamp.Clipch... 3.0.10220.0
Docker Desktop      Docker.DockerDes... 4.28.0            4.29.0           winget
Dolby Access OEM    DolbyLaboratorie... 3.21.16.0
Dolby Vision Ext... DolbyLaboratorie... 2.20301.388.0
Microsoft Teams ... Microsoft.Teams    24074.2321.2810.3... winget
Microsoft Azure ... Microsoft.Azure ... 2.9.8999.43
Microsoft Edge      Microsoft.Edge     123.0.2420.97    124.0.2478.51   winget
Microsoft Edge U... Microsoft.Edge U... 1.3.185.29
Microsoft Edge W... Microsoft.EdgeWe... 123.0.2420.97    124.0.2478.51   winget
Cortana             Microsoft.549981... 4.2308.1005.0
News                Microsoft.BingNe... 4.55.62231.0
MSN Weather         Microsoft.BingWe... 4.53.60911.0
OpenCLTM, OpenGL... Microsoft.D3DMap... 1.2404.1.0
App Installer       Microsoft.AppIns... 1.22.10861.0      winget
Xbox                Microsoft.Gaming... 2404.1001.25.0
Get Help            Microsoft.GetHel... 10.2308.12552.0
Microsoft Tips      Microsoft.Getsta... 10.2312.1.0
HEIF Image Exten... Microsoft.HEIFIm... 1.1.861.0
HEVC Video Exten... Microsoft.HEVCVi... 2.0.61931.0
Ink.Handwriting.... Microsoft.Ink.Ha... 0.237.110.0
Ink.Handwriting.... Microsoft.Ink.Ha... 0.237.110.0
Ink.Handwriting.... Microsoft.Ink.Ha... 0.237.110.0
Ink.Handwriting.... Microsoft.Ink.Ha... 0.237.110.0
MPEG-2 Video Ext... Microsoft.MPEG2V... 1.0.61931.0
Microsoft Edge      Microsoft.Micros... 123.0.2420.97
Microsoft Journal   Microsoft.Micros... 1.23306.1292.0
Microsoft 365 (O... Microsoft.Micros... 18.2311.1071.0
Solitaire & Casu... Microsoft.Micros... 4.19.3280.0
Microsoft Sticky... Microsoft.Micros... 4.0.6002.0
```


Lab 8 | Creating UAM Policies

1. Click [Application Blade](#).



2. Click [Deployment Policies](#).



3. Click [Add](#).



4. Configure the following:

Name	Enter a name.
Description	Leave this blank
Install / Uninstall	INSTALL
Reboot after installation	Leave UNCHECKED .
Show favorites only	UNCHECK
Select application	Google Chrome Notepad++
Deploy to...	Pooled AVD host pools (The host pool you created)
Concurrency balancer (AVD)	Leave default.
MAINTENANCE WINDOW (AVD)	ON (Leave default)

Lab 8 | Creating UAM Policies

ADD POLICY

Deployment policies ensure that target devices meet their desired configuration state. Policy compliance will be reassessed on a regular basis to ensure that devices have the applications specified in the policy installed. If a maintenance window is specified, application management tasks will only be performed during the window.

Name ⓘ

Description ⓘ

Applications ⓘ

- 1. Install **Google Chrome (EXE) [latest]** (Winget Pu...
- 2. Install **Notepad++ [latest]** (Winget Public)
- 3. Add new application...

Install Uninstall

Reboot after installation ⓘ

Show favorites only ⓘ

Deploy to... ⓘ

- 1. AVD Pooled (1 host pool)
- 2. Add new target...

Concurrency balancer (AVD): ⓘ

Maximum jobs:

MAINTENANCE WINDOW (AVD) ⓘ On

Use pool maintenance window ⓘ

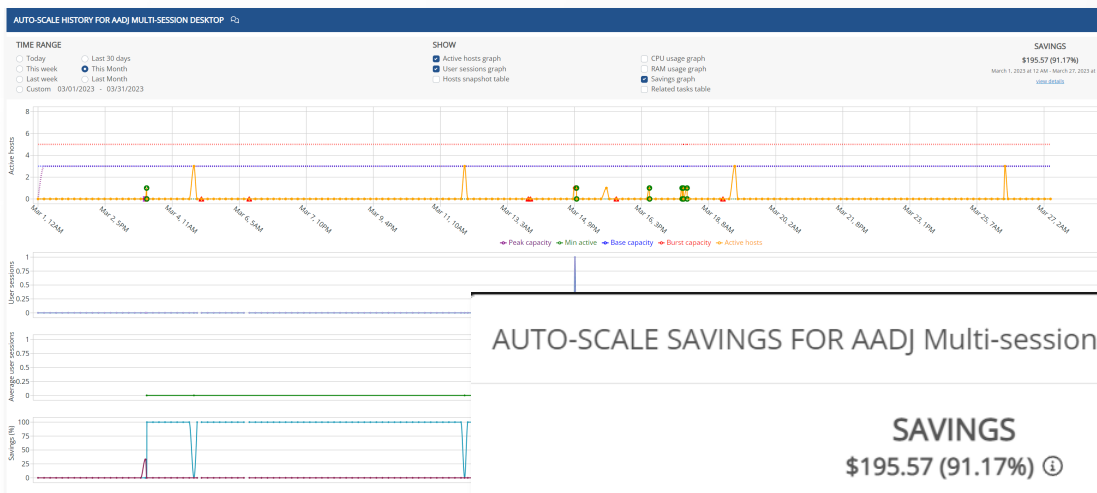
:

:

Settings for Success | Review Auto-scale Savings

Check Auto-scaling monthly savings for each host pool.

- The minimum should be around 40% – 60% depending on usage.
- Review Auto-scaling history and filter by **User Sessions** and **Savings Graph**.
- Review Autoscaling savings for each Host pool.



AUTO-SCALE SAVINGS FOR AADJ Multi-session Desktop

SAVINGS
\$195.57 (91.17%) ⓘ
March 1, 2023 at 12 AM - March 27, 2023 at 8 AM

	MAXIMUM ⓘ	PEAK ⓘ	ACTUAL ⓘ	SAVINGS ⓘ
COMPUTE ⓘ	\$315.50	\$163.40	\$3.09	\$160.31 (98.11%)
STORAGE ⓘ	\$85.19	\$51.11	\$15.84	\$35.27 (69.00%)

OK

https://nerdio.co/NME_Auto-scale_History

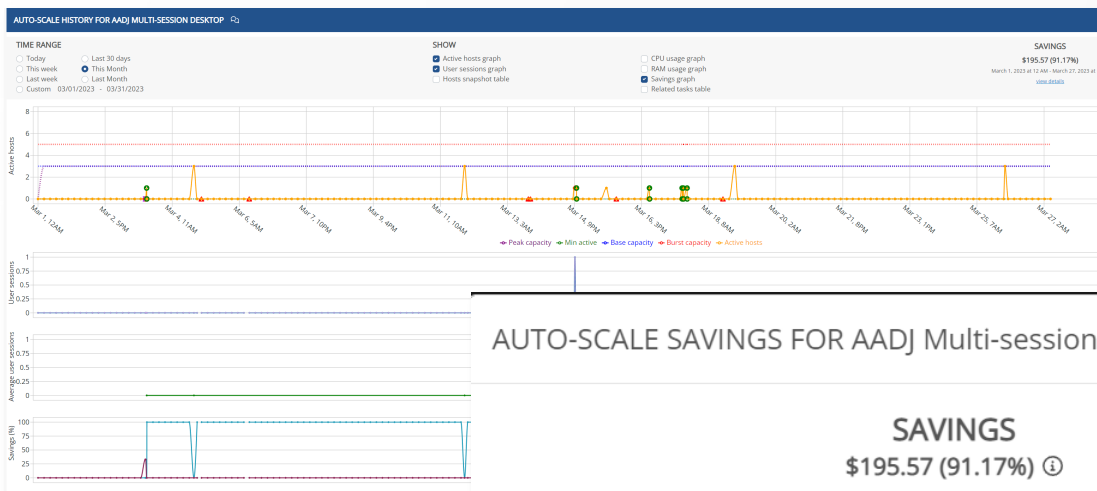
Settings for Success | Optimize Auto-scale for Hosts

Is Auto-scale configured optimally?

- Determine if hosts are properly sized.
- Are there too many or too few sessions per host?
- Is the best load balancing option in place?



Make incremental changes and monitor – don't set and forget!



AUTO-SCALE SAVINGS FOR AADJ Multi-session Desktop

SAVINGS
\$195.57 (91.17%) ⓘ
March 1, 2023 at 12 AM - March 27, 2023 at 8 AM

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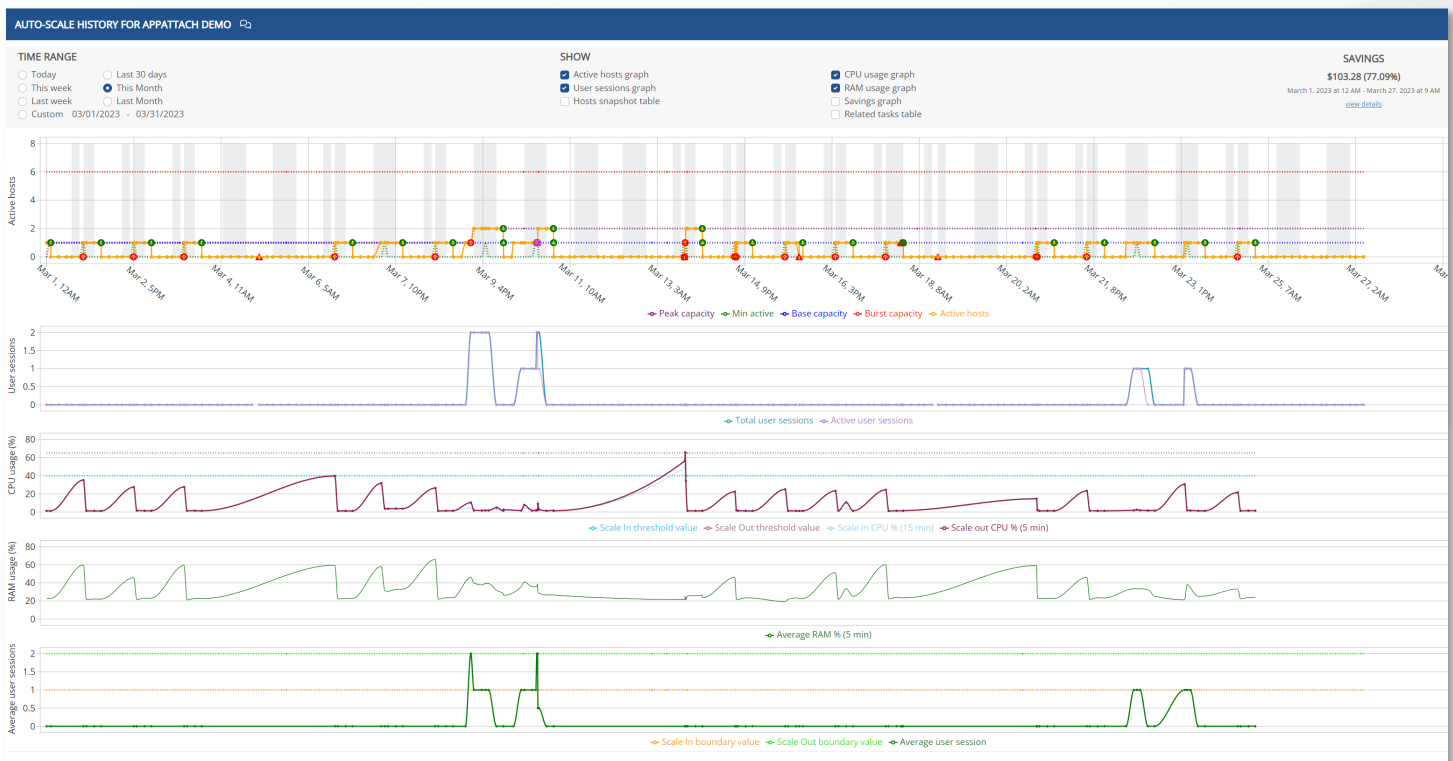
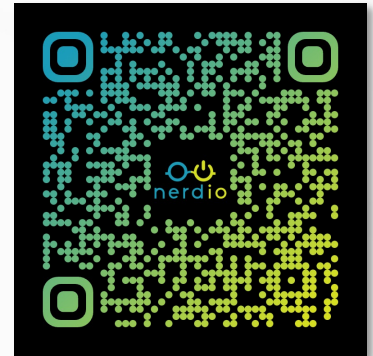
OK

https://nerdio.co/NME_Auto-scale_History

Settings for Success | Review Host Sizing

Check utilization and sizing.

- Are host CPU and memory resources being used predictably?
- Are hosts sized correctly?
 - *Are you under or over-spec'd?*
 - *Is your environment cost-efficient?*



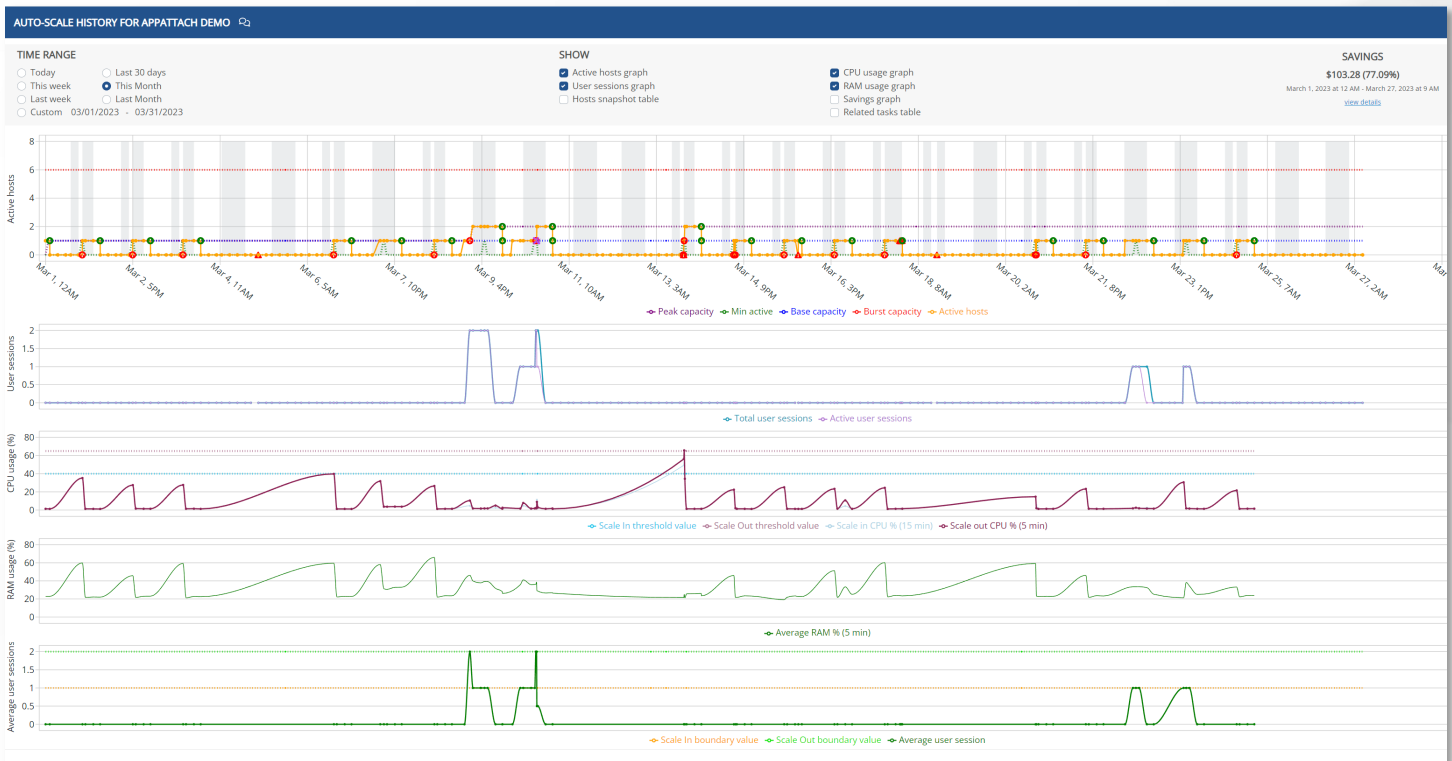
https://nerdio.co/NME_Auto-scale_History

Settings for Success

Use FSLogix

Deliver a consistent user experience.

- Configure FSLogix and apply settings within Nerdio Manager.
- Create multiple FSLogix configurations.
- Centrally manage FSLogix.
- Simplify images – install and hide apps with app masking, built into Nerdio.

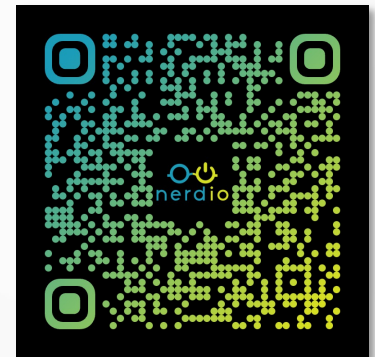


https://nerdio.co/NME_FSLogix_Settings_and_Config

Settings for Success | Review Storage Sizing

Check utilization and sizing.

- Is storage sized appropriately for FSLogix? Consider performance
 - *IOPS, throughput, latency*
- Enable auto-scaling in Nerdio Manager to reduce unnecessary costs.



MANAGE AUTOSCALE FOR FSLOGIX

AUTO-SCALE On

A premium file share is billed by provisioned share size, regardless of the used capacity. Share sizes can range from 100 GiB to 102,400 GiB. IO and network bandwidth limits scale with the provisioned share size.

When turned on, storage auto-scale will grow the provisioned share size in response to anticipated usage demand or increased storage latency. It will also decrease the provisioned capacity to reduce costs when the extra performance is no longer needed (not more than once every 24 hours).

1 PROVISIONED SIZE (QUOTA)

Quota unit: **Absolute (GiB)**

Minimum size: **10** GiB (100 GiB)

Maximum size: **15** GiB, less than **102400** GiB (100 GiB)

PERFORMANCE		
	MINIMUM	MAXIMUM
BASELINE IO/S	500	500
BURST IO/S	4000	4000
EGRESS RATE	66.00 MiBytes/s	66.00 MiBytes/s
INGRESS RATE	44.00 MiBytes/s	44.00 MiBytes/s

2 SCHEDULED QUOTA INCREASE

Off

3 SCALING LOGIC

Select auto-scale trigger: **Success Server Latency (avg)**

Increase quota (scale out) by **10** GiB if Success Server Latency exceeds **20** ms for **5** minutes (current latency: 2.75 ms)

Decrease quota (scale in) by **20** GiB if Success Server Latency drops below **10** ms for **15** minutes (current latency: 2.75 ms)

Provisioned size (quota) can be decreased only 24 hours after the last quota increase. Last quota increase: **Oct 29, 2022 05:28 AM**

https://nerdio.co/NME_Auto-Scale_Azure_NetApp_Files

https://nerdio.co/NME_Auto-Scale_Azure_Files

Settings for Success | Log Analytics Workspace (LAW)

Review utilization and sizing.

- Modify retention period to suit requirements.
 - *Consider user cost attribution and auto-shrink.*
- Change counters in Nerdio Manager to suit your needs.



nmw-app-law-y2pj2xm7slpds
Created: Apr 6, 2022 01:54 AM
Workspace type: AVD diagnostics (default)

Retention period: 30 days
Monthly usage (last 31 days): 1.7 GB ⓘ
Log data retention (beyond 31 days): 0 GB ⓘ

CONFIGURE NMW-APP-LAW-Y2PJ2XM7SLPDS WINDOWS COUNTERS

Collect performance counters from Log Analytics agents at custom intervals to gain insight into the performance of hardware components, operating systems, and applications.

PRESET: ⓘ

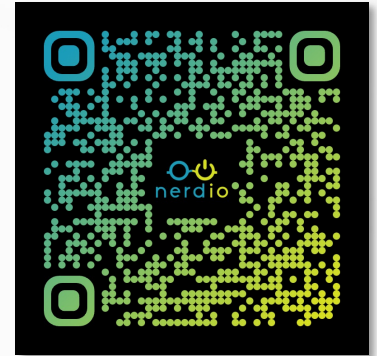
NAME ↕	SAMPLE RATE (SECONDS) ↕ ⓘ	CURRENT USAGE (%) ↕
User Input Delay per Process(*)\Max Input Delay	<input type="text" value="60"/> ⓘ	87 %
User Input Delay per Session(*)\Max Input Delay	<input type="text" value="60"/> ⓘ	3.4 %
PhysicalDisk(*)\Avg. Disk sec/Read	<input type="text" value="60"/> ⓘ	1 %
PhysicalDisk(*)\Avg. Disk sec/Write	<input type="text" value="60"/> ⓘ	1 %
PhysicalDisk(*)\Avg. Disk Queue Length	<input type="text" value="60"/> ⓘ	0.79 %
Processor Information(_Total)\% Processor Time	<input type="text" value="60"/> ⓘ	0.77 %
Memory(*)\Available Mbytes	<input type="text" value="60"/> ⓘ	0.77 %
Memory(*)\Pages/sec	<input type="text" value="60"/> ⓘ	0.71 %
PhysicalDisk(*)\Avg. Disk sec/Transfer	<input type="text" value="60"/> ⓘ	0.67 %
Memory(*)\Page Faults/sec	<input type="text" value="60"/> ⓘ	0.66 %
Memory(*)\% Committed Bytes In Use	<input type="text" value="60"/> ⓘ	0.49 %
LogicalDisk(C:)\Avg. Disk Queue Length	<input type="text" value="60"/> ⓘ	0.43 %

https://nerdio.co/NME_LAW_Management

Settings for Success | Enable Auto-heal

Automate common fixes via script.

- Define what you consider to be a broken host.
- Configure reboots and recovery actions to take to resolve the issue.



AUTO-HEAL BROKEN HOSTS ⓘ

Auto-scale can automatically attempt to repair "broken" session hosts by restarting, running scripted actions (e.g. re-install AVD agent), and deleting/recreating them.

Host is broken if AVD agent status is:

Unavailable x

x | v

and

Has no active sessions | v ⓘ

Minutes before first action:

10 ⓘ

Recovery actions:

1. 🔄 Restart VM x

2. 🔄 Restart VM x

3. 🗑️ Delete VM (and re-create by auto-scale) x

x | v ⓘ

Minutes between recovery actions:

10 ⓘ

Settings for Success | Use Reserved Instances

Reserved Instances reduce the cost of session hosts.

- Especially useful if there is an always-on base capacity present.
- Use the modeler to project the impact of reserved instances.
- RIs can be analyzed on a per-host pool basis.



Monthly savings: **\$227.15**
(94.6%)
Named user cost: \$2.16/month ⓘ
Monthly active user cost: \$12.96/month ⓘ

Monthly (92.21%)
Named

Monthly savings: **\$154.11**
(79.53%)

Manage Hosts ▾

- Manage ▶
- Autoscale ▶
- Hosts ▶
- Applications ▶
- Properties
- Clone host pool
- Delete host pool

- Configure
- History
- RI analytics
- Force start

RI ANALYTICS FOR MULTI SESSION DESKTOP

- Today
- Last 30 days
- This week
- This Month
- Last week
- Last Month
- Custom 10/03/2023 - 11/01/2023

CPU-hours for selected dates: 62.72 ⓘ

Projected CPU-months: 0.09 ⓘ

Reserved Instances (RI) Recommendation:

Region: southcentralus
VM family: D2as_v4
Total CPU cores: 0 ⓘ

Close

Settings for Success | Use Azure Capacity Extender (ACE)

How does it work?

- ACE is enabled on host pools.
- It allows Nerdio Manager to provision machines on alternative VM sizes if the default is unavailable.
- Unless you have specific requirements, we recommend using ACE!



MULTI SESSION DESKTOP PROPERTIES

Directory

AVD

VM Deployment

Azure Capacity Extender

RDP settings

FSLogix

Azure Monitor

Sepago

Session time limits

Backup

Disaster Recovery

ENABLE AZURE CAPACITY EXTENDER On

Enabling Azure Capacity Extender allows administrators to specify additional VM sizes in the event that sufficient resources are not available in the Azure region to complete Create and Power On tasks with the preferred VM Size

HOST POOL DEFAULT VM SIZE ⓘ

D2as_v4 (2C & 8GB @ \$0.12/hr) x v

ALTERNATE PREFERENCE VM SIZES ⓘ

1. D2ads_v5 (2C & 8GB @ \$0.12/hr) x v

Use intelligent Azure Capacity Extender ⓘ

Cancel Save Save & close

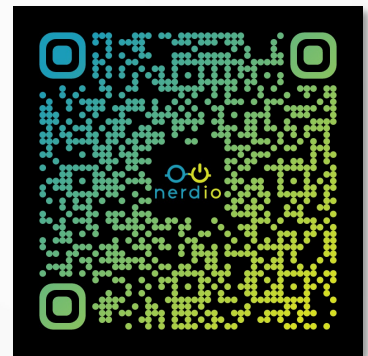
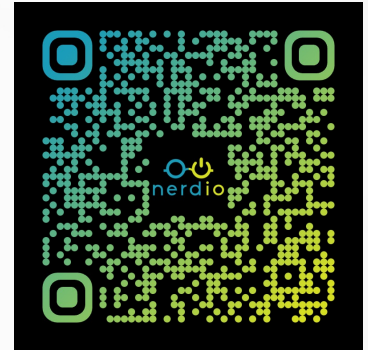
https://nerdio.co/NME_ACE_Configuration

Settings for Success

Use the VM Rightsizing Service

How does it work?

- VMRSS gathers and assesses resource demand over time.
 - This produces data-driven recommendations to resize over / under-provisioned desktop VMs.
- VMRSS works for both personal and pooled desktops.



D2as_v5 (2C & 8GB) CPU MEM

More data is required... **2%** [50%–80%] **50%** [50%–80%]

D2as_v4 (2C & 8GB) CPU **+1.1%**

D2a_v4 (2C & 8GB) MEM **+2.6%**

D2s_v4 (2C & 8GB) SAVINGS **+46.1%**

MONTH EST. **-\$21.23**

VM RIGHT SIZING FOR DEDICATED PERSONAL HOST POOLS CONFIGURATION

It is a predefined rule. It cannot be changed, but can be cloned and/or disabled.

NAME: VM Right sizing for dedicated personal host pools

DESCRIPTION:

HOST POOLS: Any

ANALYZERS: VM Right Sizing

VM Right Sizing Settings

NAME:

CPU INCREASE TRIGGER: 80 %

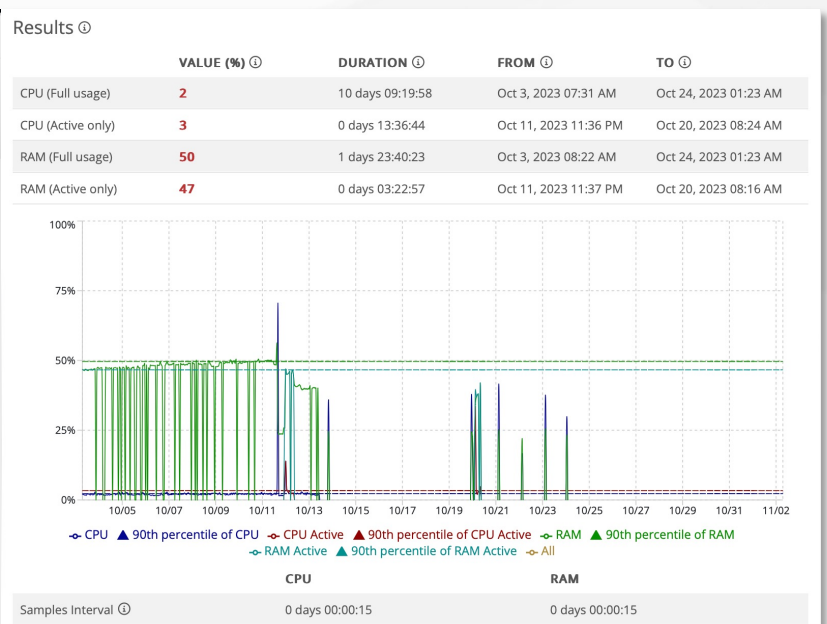
CPU DECREASE TRIGGER: 60 %

RAM INCREASE TRIGGER: 80 %

RAM DECREASE TRIGGER: 60 %

Active Sessions Only

Cancel OK



https://nerdio.co/NME_ACE_Configuration

Support Framework



NERDIO MANAGER FOR ENTERPRISE SCOPE OF SUPPORT

USER EXPERIENCE	APPLICATIONS	END POINT/INTUNE	OPERATING SYSTEM
SESSION HOST PRE-STAGING	SCRIPTED ACTION EXECUTION	POLICY DEPLOYMENT	CUSTOM IMAGE DEPLOYMENT
ENABLING START ON CONNECT	FSLOGIX APP MASKING	CONFIGURATION PROFILE MANAGEMENT	AZURE MARKETPLACE IMAGE DEPLOYMENT
END USER NERDIO ACCESS	UNIFIED APPLICATION DEPLOYMENT	CONDITIONAL ACCESS POLICY MANAGEMENT	SCRIPTED ACTION EXECUTION
AVD DESKTOP ASSIGNMENT	MSIX APPATTACH INTEGRATION		

OUT OF SCOPE

FSLOGIX PROFILE TROUBLESHOOTING	MSIX APP PACKAGE CREATION	CUSTOM POLICY CREATION	TROUBLESHOOTING OS ERRORS
END USER CONNECTIVITY TROUBLESHOOTING	CUSTOM SCRIPTED ACTION	CONDITIONAL ACCESS POLICY CREATION	TROUBLESHOOTING PERFORMANCE
LOCAL DEVICE (PRINTER/SCANNER) SUPPORT	TROUBLESHOOTING UNIFIED APPLICATION PACKAGE CREATION	INTUNE BEST PRACTICE AND ARCHITECTURE SUPPORT	MONITORING
REMOTE DESKTOP CLIENT SUPPORT	OS LEVEL APPLICATION ERRORS/TROUBLESHOOTING	INTUNE PORTAL ERRORS	RMM AND AV BEST PRACTICE
ENABLING START ON CONNECT PREREQUISITES			LICENSING
END USER AUTHENTICATION			