



Zero to Hero: Building a fully Automated, Self-Healing AVD environment



Agenda

1. Introduction

2. Why Automation and Self-Healing matters

3. The Automation Blueprint

4. Live Demonstration

5. Interactive Discussion

6. Closing and key takeaways



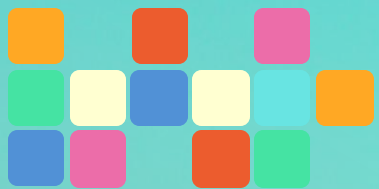
Quinn Simpson

Lead Customer Success for APJ

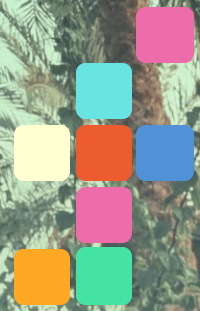
20+ years in EUC, 2 ½ Years with Nerdio

Love anythign outdoors





Introduction



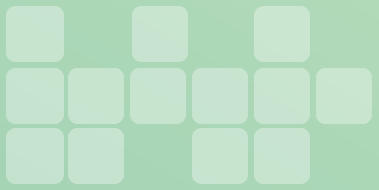


Nerdio's Mission

To simplify the lives of IT professionals and maximize their Microsoft cloud and end user computing investments.

Introduction

- *What if your AVD environment could fix itself before you even knew there was a problem?*
- *How can I automate patching monthly with no downtime?*
- *How is it best to using Rolling Drain mode?*
- *What Auto-Heal settings have the best chance to fix hosts?*
- *How do I use AI to make good decisions?*



Introduction

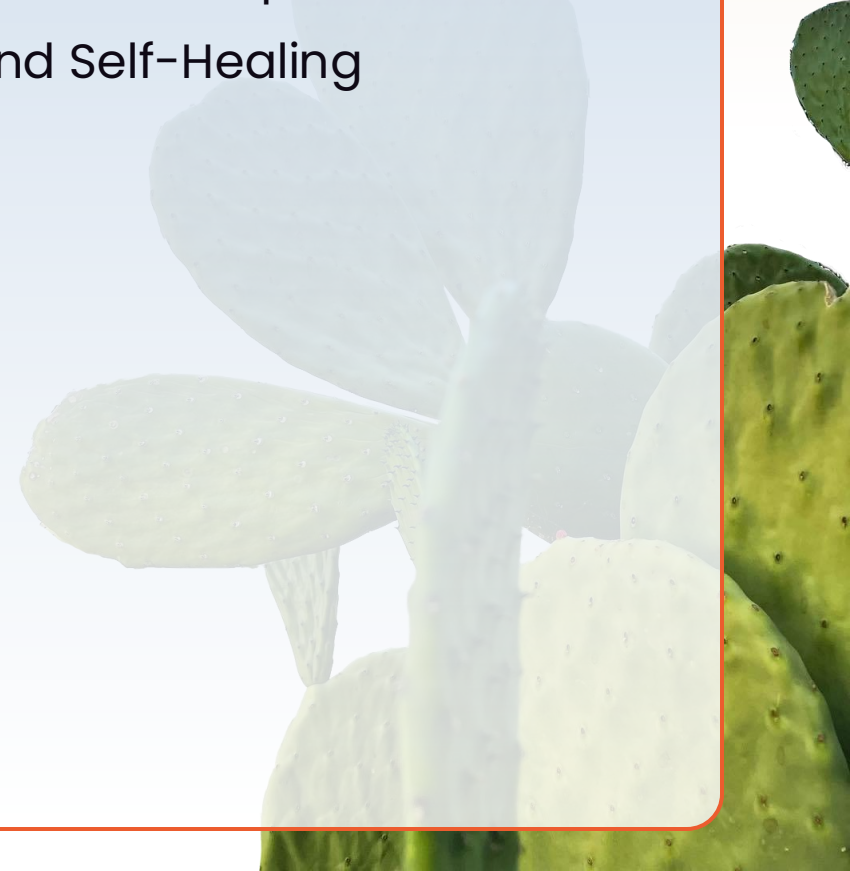
THE PROBLEM

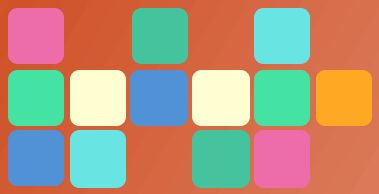
Enterprises spend too much time firefighting AVD and Azure issues, configuration problems and doing 'things' manually

- Common challenges
- 'Stuck in old ways'
- Configuration consistency
- Unsure to trust automation
- Performance degradation

THE SOLUTION

Nerdio Manager for Enterprise Automation and Self-Healing capabilities.





Why does Automation and Self-Healing Matter?!



Why Does Automation and Self Healing matter??

Downtime and
Business
Continuity

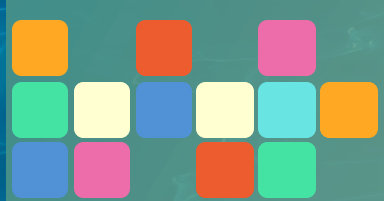
IT Efficiency

Cost
Optimisation

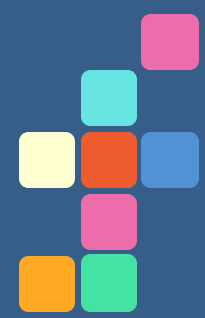
Best User
Experience

Security

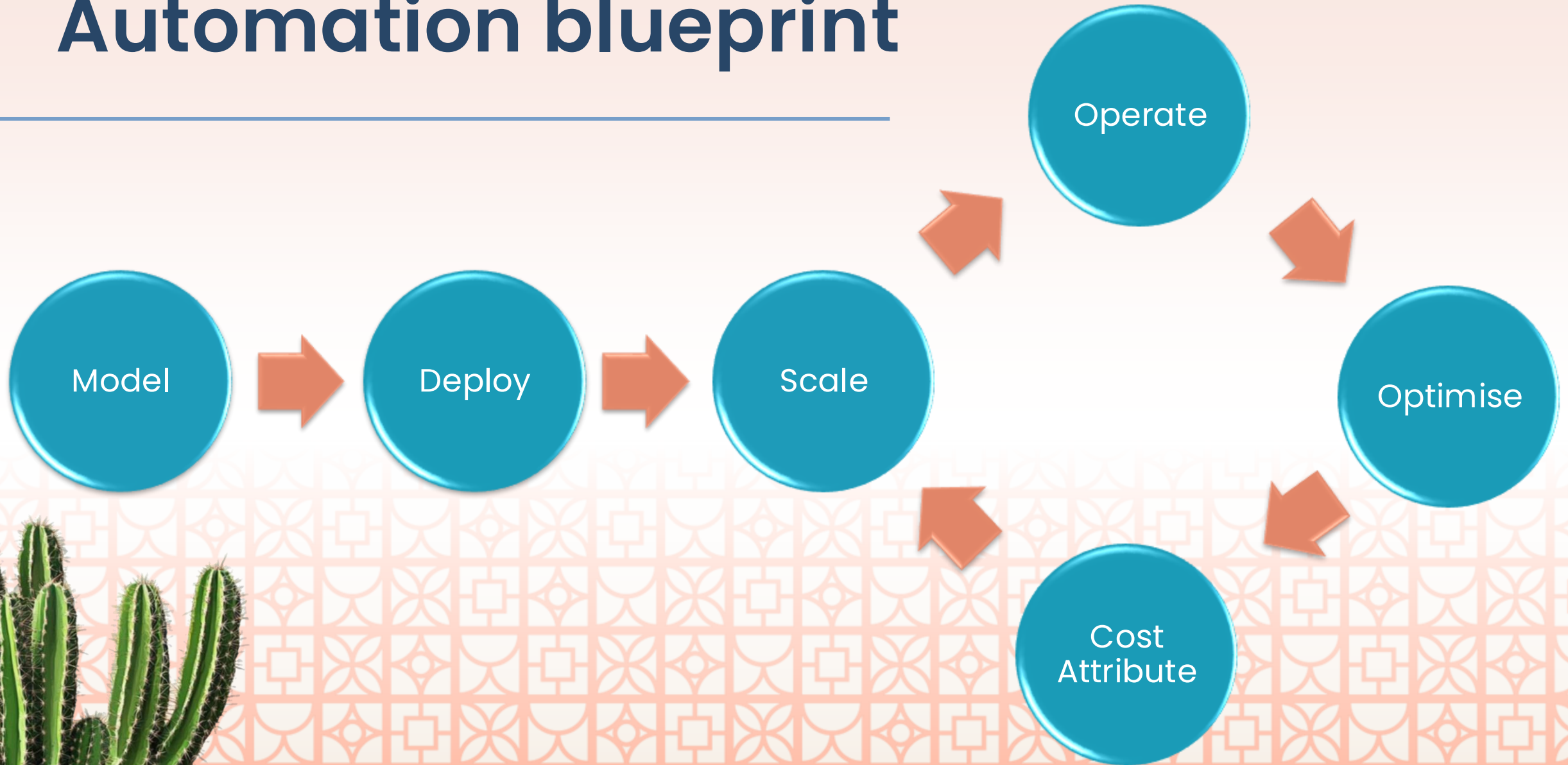




The Automation Blueprint



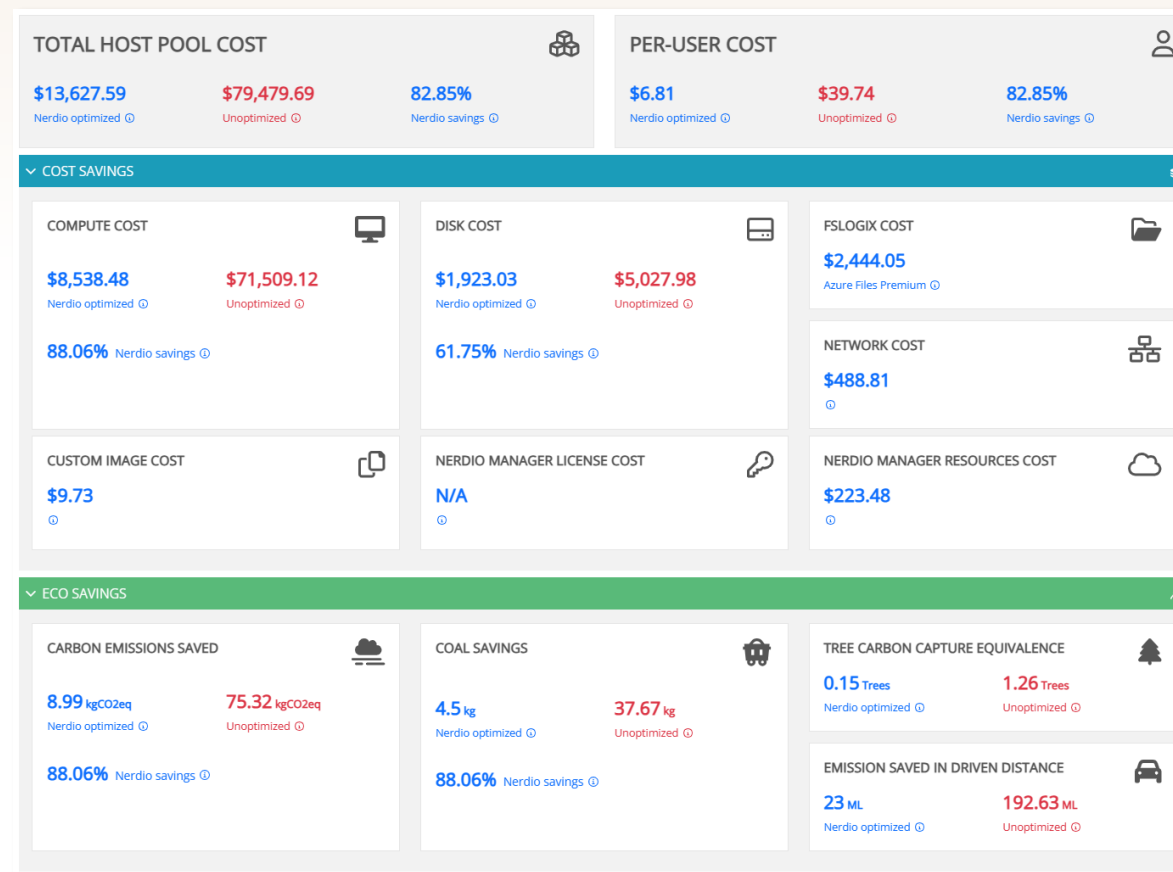
Automation blueprint



Model

Nerdio Advisor: Modeler

- ✓ Eliminate the need for spreadsheets and external calculators – no more guesswork
- ✓ Model your host pool(s) directly inside Nerdio
- ✓ Provides predictability in costs and estimated cost savings prior to deployment
- ✓ Models can be saved, cloned, exported and PDF for input into a business case
- ✓ Emissions and Eco Savings



Deploy

Image Management | Unified Applications | Scripted Actions

- ✓ Streamlined Image Management
- ✓ Allows for low touch through to no touch
- ✓ Integration with MSIX App Attached and App Masking
- ✓ Unified Application Management inc integration with SCCM, Intune, WinGet, Shell Apps with deployment policies
- ✓ Scripted Actions – GitHub and AzureDevOps

Run the following scripted actions before set as image: On

1. Update Windows 11 (individual with restart) [Nerdio] x

☐ Pass AD credentials ⓘ

Applications Management ⓘ On

Applications ⓘ

1. Install Chromium [latest] (Winget Public) x

2. Install Adobe Acrobat Reader DC (64-bit) [latest] x

3. Add new application... x

☒ Install ☐ Uninstall

Adobe Acrobat Reader DC (64-bit) [latest] v

☐ Reboot after installation ⓘ

☒ Show favorites only ⓘ

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 ⓘ On

START DATE: 02/16/2024 ⓘ

TIME ZONE: (UTC+10:00) Brisbane v ⓘ

START TIME: 12 a.m. v : 00 v ⓘ

REPEAT: Monthly after "Patch Tuesday" v ⓘ

DAYS AFTER: 2 ⓘ

Refresh image from Azure Marketplace ⓘ Off

All marketplace images require at least 128 GB OS disk size and current desktop image OS disk size is 64 GB

Geographic distribution & Azure compute gallery ⓘ

AZURE COMPUTE GALLERY: \$E.Demo.Compute.Gallery x v ⓘ

AZURE REGIONS: South Central US x Australia East x v ⓘ

Scale

Auto-Scale

- ✓ Intelligent Auto-Scaling that focuses on both compute and storage
- ✓ Adaptable Scale-out / Scale-in
- ✓ Rolling Drain Mode
- ✓ Just-in-time provisioning to further optimize resources
- ✓ File Storage Auto-Scale, so you are not overprovisioning the amount of profile storage you need on day one

1 HOST POOL SIZING ⓘ

Active host defined as: AVD agent Available ⓘ

Base host pool capacity: 10 host(s) in the pool ⓘ

Min active host capacity: 2 host(s) in the pool ⓘ

Burst beyond base capacity: up to 5 extra host(s) in the pool ⓘ

2 SCALING LOGIC ⓘ

☒ Use multiple auto-scale triggers (advanced) ⓘ

Start or create (scale out) in groups of up to 3 host(s)

Stop or remove (scale in) in groups of up to 2 host(s)

Triggers (scale out on **ANY** condition, scale in on **ALL** conditions) ⓘ

Select autoscale trigger: CPU usage ⓘ

Start or create (scale out) host(s) if CPU utilization across all hosts exceeds 65 % for 5 minutes ⓘ

Stop or remove (scale in) host(s) if CPU utilization across all hosts drops below 40 % for 15 minutes ⓘ

Select autoscale trigger: Avg active sessions ⓘ

Start or create (scale out) host(s) if average active sessions across all hosts exceeds 5

Stop or remove (scale in) host(s) if average active sessions across all hosts below 2

Scale in restrictions

Stop or remove (scale in) hosts only from: 2 p.m. ⓘ 00 ⓘ to: 12 a.m. ⓘ 00 ⓘ (UTC-06:00) (-5:00 DST) Central Time ... ⓘ

Scale in aggressiveness: Medium ⓘ

Deactivate (drain mode) hosts: All but 2 ⓘ

Operate

Unified Management | Auto-Heal | Self-Service

- ✓ Unified Management – everything in one place
- ✓ Granular RBAC
- ✓ Auto-Heal – don't pay for broken hosts
- ✓ User Self-Service – put control back in the users' hands
- ✓ REST API – for further integration
- ✓ Manage Intune directly inside Nerdio

☒ Allow end users to **RESIZE** desktop ⓘ

Allowed VM sizes:

1. NV4as_v4 (4C & 14GB @ \$0.28/hr) x

2. NV8as_v4 (8C & 28GB @ \$0.56/hr) x

Allowed disk types: ⓘ

1. 256 GB (P15 Premium SSD @ \$0.05/hr) x

2. 512 GB (P20 Premium SSD @ \$0.10/hr) x

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

Not joined to domain x

Domain trust relationship lost x

FSLogix not healthy x

SxS stack listener not ready x

and Has no active sessions v

Minutes before first action:

10 ⓘ

Recovery actions:

1. Restart VM x

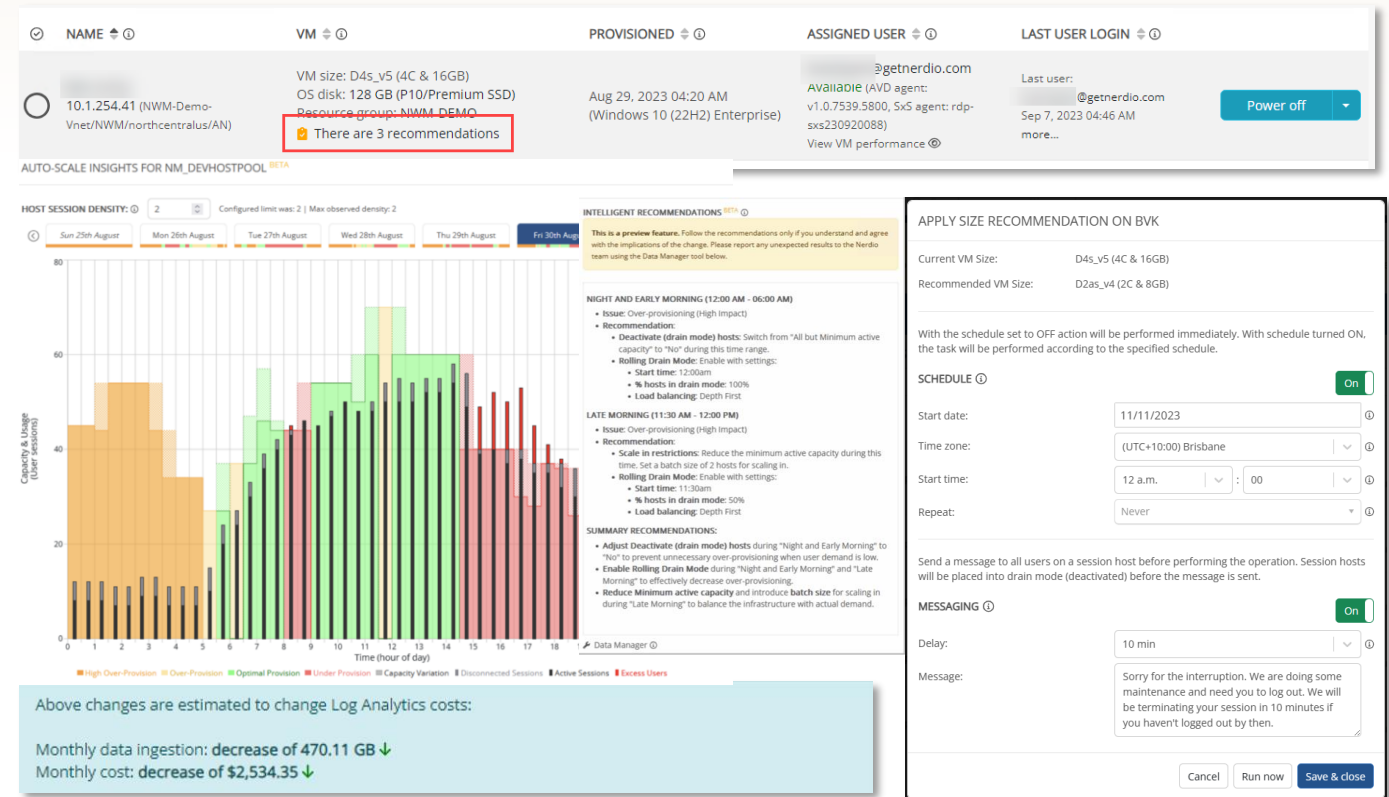
2. Update AVD Agent (Individual) [Nerdio, Preview] x

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

Optimize

VM Right Sizing | Auto-Scale Optimization

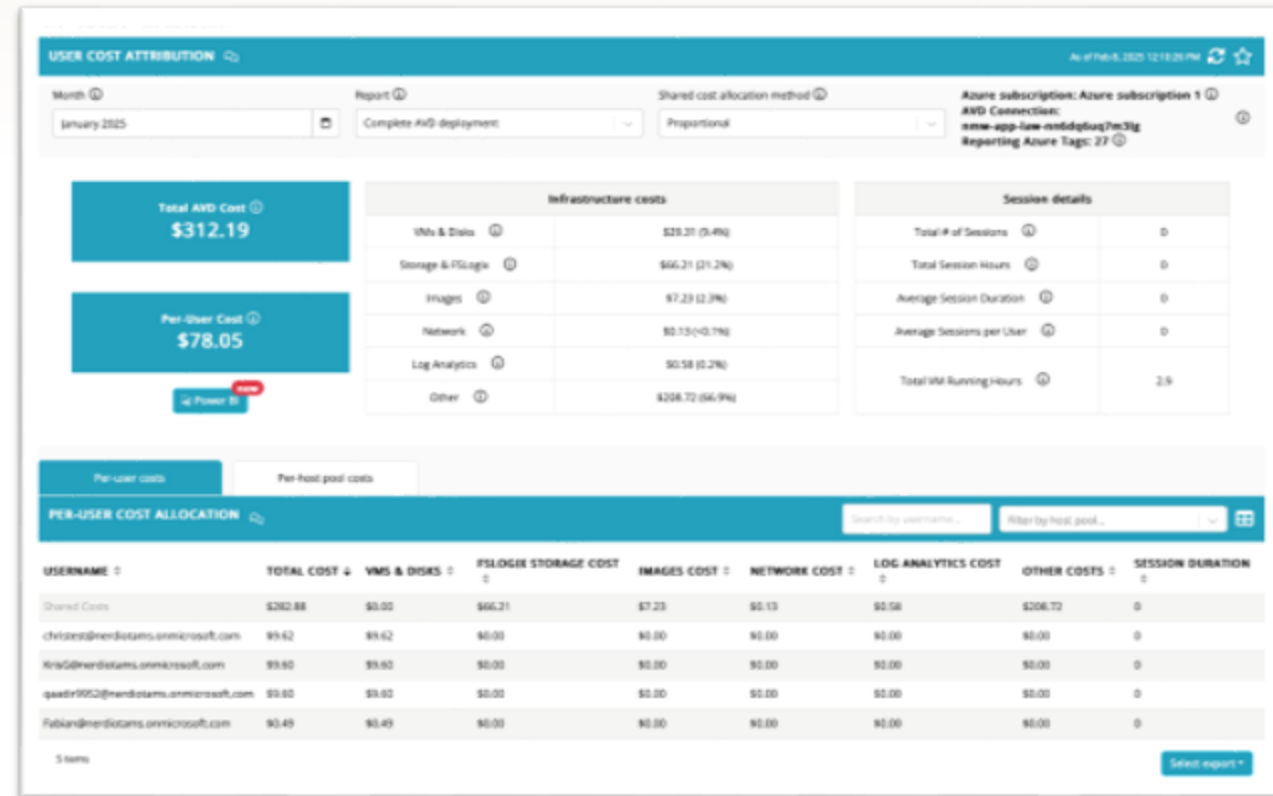
- ✓ Auto-Scale Insights with AI Optimization
- ✓ VM Right Sizing Service which helps identify overprovisioning or bottlenecks
- ✓ Reserve Instance Analytics
- ✓ Log Analytics Cost Optimization

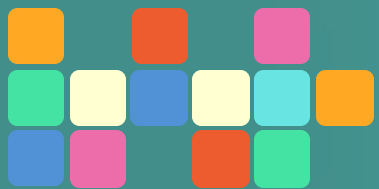


Cost Attribute

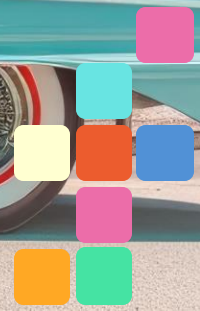
User Cost Attribution

- ✓ Precise per-user cost attribution towards the total cost of an AVD (compute, storage, network, PaaS, SaaS) based on the duration of an individual's usage of AVD.
- ✓ Can be used for visibility, cost optimization, show back and chargeback.
- ✓ Data export and PowerBI connector is available for customers seeking to perform custom reporting and integration of data sets such as Department, Cost Centre or Application Owner.
- ✓ Template dashboards are supplied so that customers can tailor to suit their requirements.





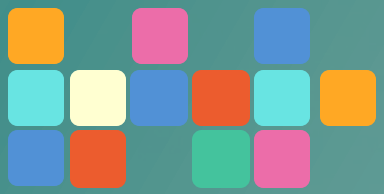
Demonstration



Demo Time!

- Automated patching
- Rolling Drain Mode
- Auto-heal settings
- AI Insights for Auto-scale
- Easy Application Deployments





Discussion and Q&A

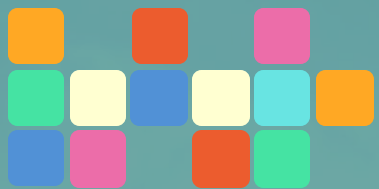


Discussion and Q&A

What are YOUR
significant
challenges related
to AVD
maintenance?

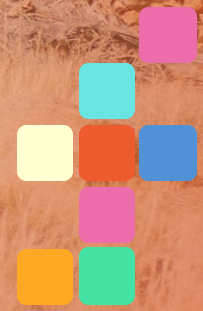
How will you
introduce more
automation to meet
various enterprise
requirements?

How will you start to
adopt or optimize
automation within
Nerdio Manager?



★ *NerdioCon* ★
2025
PALM SPRINGS

Closing and Key Takeaways



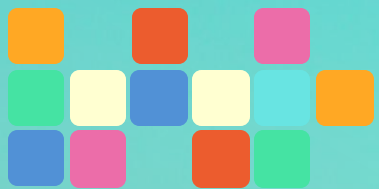
What have we learned?

Use the blueprint!

- Automate as much as you can
- AVD is not set and forget
- Keep up to date with Nerdio's new featuresz

How can I get more help and advice?

- Nerdio University
- Customer Success Plus
- Community Forums
- Help Centre
nmehelp.getnerdio.com



THANK YOU!

