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Modern app management at scale: KPMG UK's switch from SCCM & Intune to Shell Apps

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WHO ARE WE?

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Agenda

1. The Windows 10 baseline and its operational pain
2. What KPMG UK wanted from a Windows 11 AVD reset
3. How Shell Apps enabled an imageless runtime architecture
4. Deep dive: Shell Apps deployment model
5. Operational outcomes, lessons learned, and Q&A

Why this story matters

This is not just a migration story.
It is an operating model shift.

- KPMG UK needed to move from a high-touch Windows 10 VDI model to a modern Windows 11 AVD platform.
- The legacy stack relied on image maintenance, SCCM, on-premises AD, and weekend patch windows.
- The target state was Entra ID-based, highly automated, and manageable by a small engineering team.
- Shell Apps became the enabler for runtime app delivery without maintaining golden images.

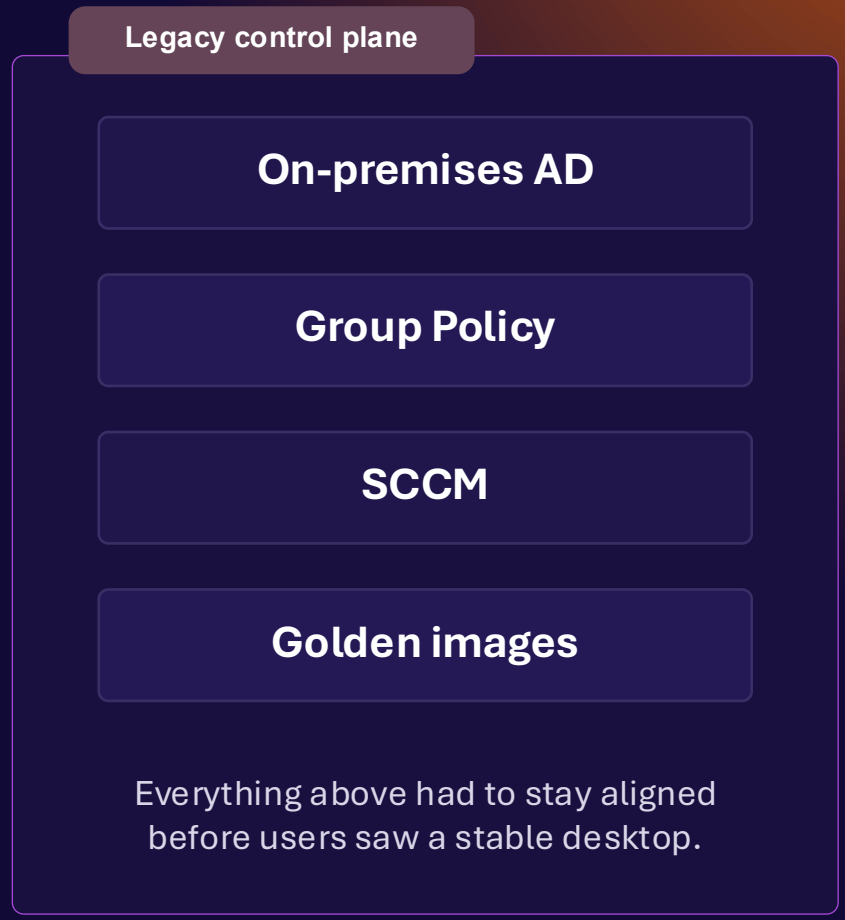
6,000
AVD users in scope

5,500
Personal desktops

500
Multi-session hosts

The Windows 10 AVD landscape before transformation

- Hybrid operating model: On-premises Active Directory, Group Policy, SCCM, and image-led desktop management
- A globally distributed user base connecting from the UK, Europe, India, and South Africa
- Different requirements across personal desktops and multisession hosts
- A very small engineering team protected and maintained multiple golden images month after month



Why the old model became unsustainable

Weekend maintenance	Desktops had to be powered on for patching, app updates, and security changes.
Image sprawl	Multiple images needed monthly patching, testing, sealing, and gallery publishing.
SCCM failure handling	Patch and app deployment issues created extra troubleshooting overhead.
Team bottleneck	A small number of engineers owned every image and every sensitive change.
Cost and risk	High operational cost, delayed change windows, and more opportunity for drift.

Net effect: The team spent too much time servicing the platform and not enough time improving it.

What KPMG UK wanted from the Windows 11 reset

Move away from	Move toward
On-premises AD and GPO dependencies	**Entra ID and modern cloud-first identity**
SCCM-led app and patch motion	Automated delivery through Nerdio and selective Intune use
Monthly golden image maintenance	No-image platform with runtime app provisioning
Manual maintenance windows	Policy-driven deployments when no sessions are active
Inconsistent multi-session policy results	A model tuned for AVD reliability and scale

The new operating model: Dynamic, imageless runtime delivery

- Keep the base image as thin and standard as possible.
- Attach core apps dynamically instead of baking them into golden images.
- Use automation to power on, deploy, and return hosts to their original state when required.
- Make auto-scale practical, because apps can arrive in real time.

Why Shell Apps changed the economics of app delivery

45 min
Early Office deployment to one AVD

~5 min
Office after Nerdio improvement

15–20 min
One personal desktop

20–30 min
One multi-session host

Operational meaning

- Deploying apps at this speed made real-time host readiness viable.
- Auto-scale became useful because new capacity no longer depended on pre-staged images.
- The team could standardize personal and multi-session app sets: 18 core apps for personal, 24 for multi-session.
- Performance feedback directly influenced Nerdio engineering improvements.

How Shell Apps works in the real deployment flow

What makes this different from legacy tooling:

- Deployment is aware of session state.
- Power management is built in.
- No dependence on users leaving devices online.
- Ideal for evening and unattended fixes.

Policy targets host pool/ring

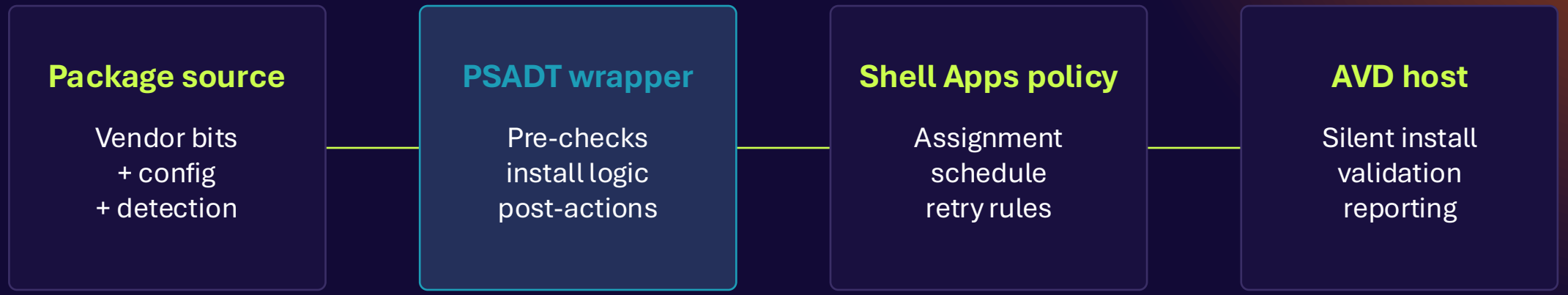
Nerdio powers on host if needed

Checks for zero active sessions

Launches scripted install package

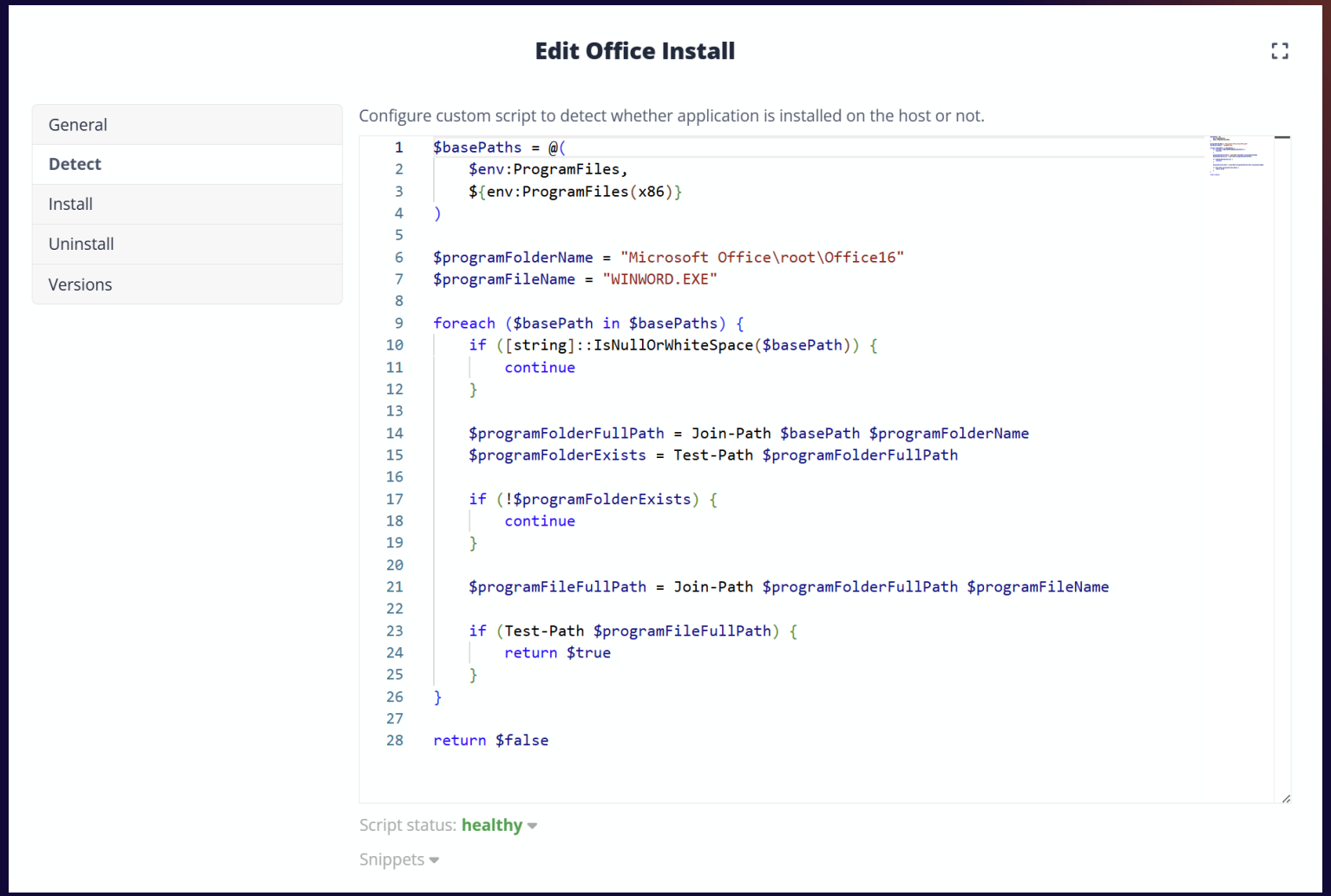
Validates and returns host state

Shell Apps + PSAppDeploy Toolkit: a practical packaging pattern



- Use PSADT to standardize install, uninstall, logging, user messaging, and exit handling.
- Keep Shell Apps focused on orchestration, targeting, timing, and state-aware execution.
- This separation makes the application lifecycle easier to test, update, and roll back.

Example Shell App deployment script



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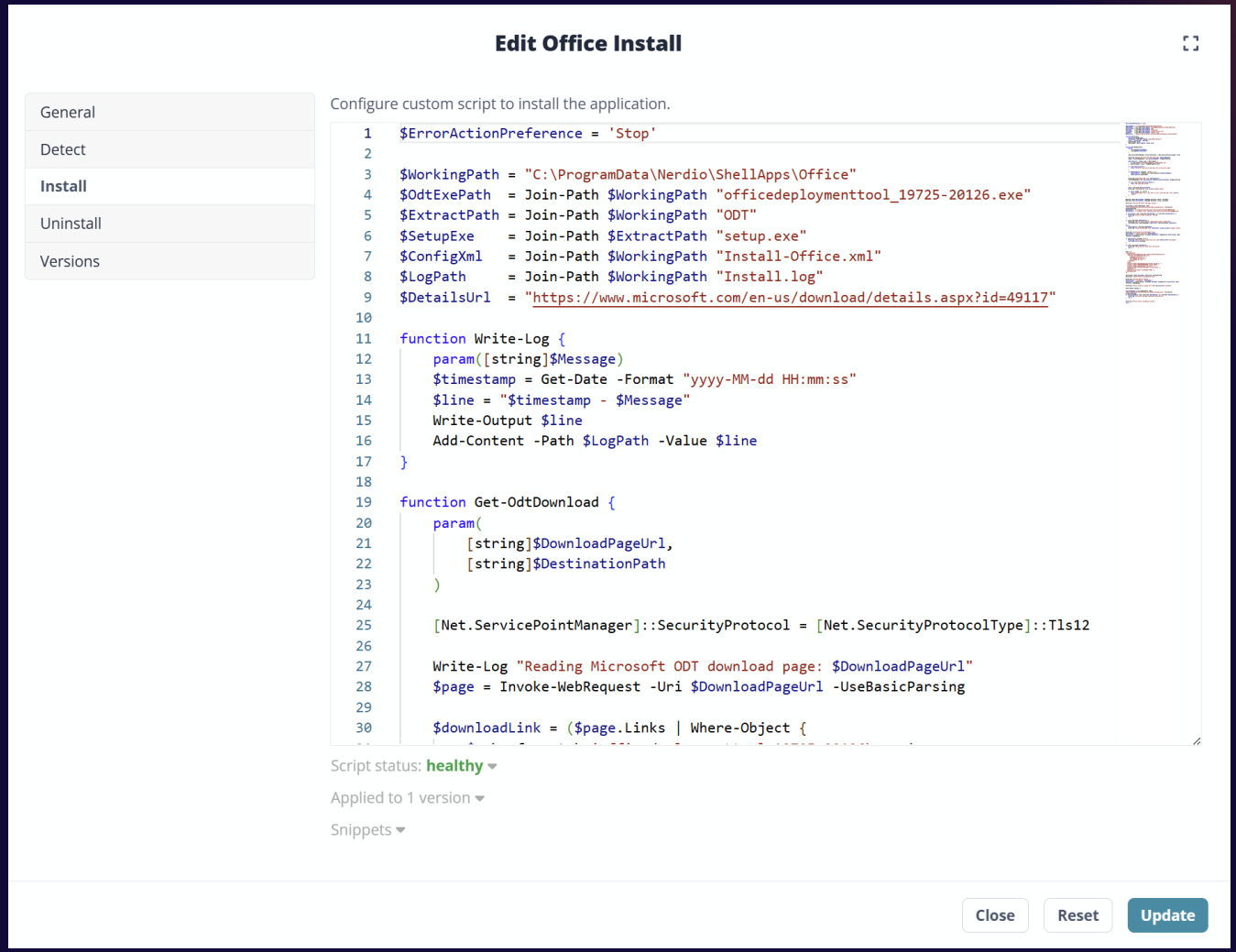
Example Shell App deployment script



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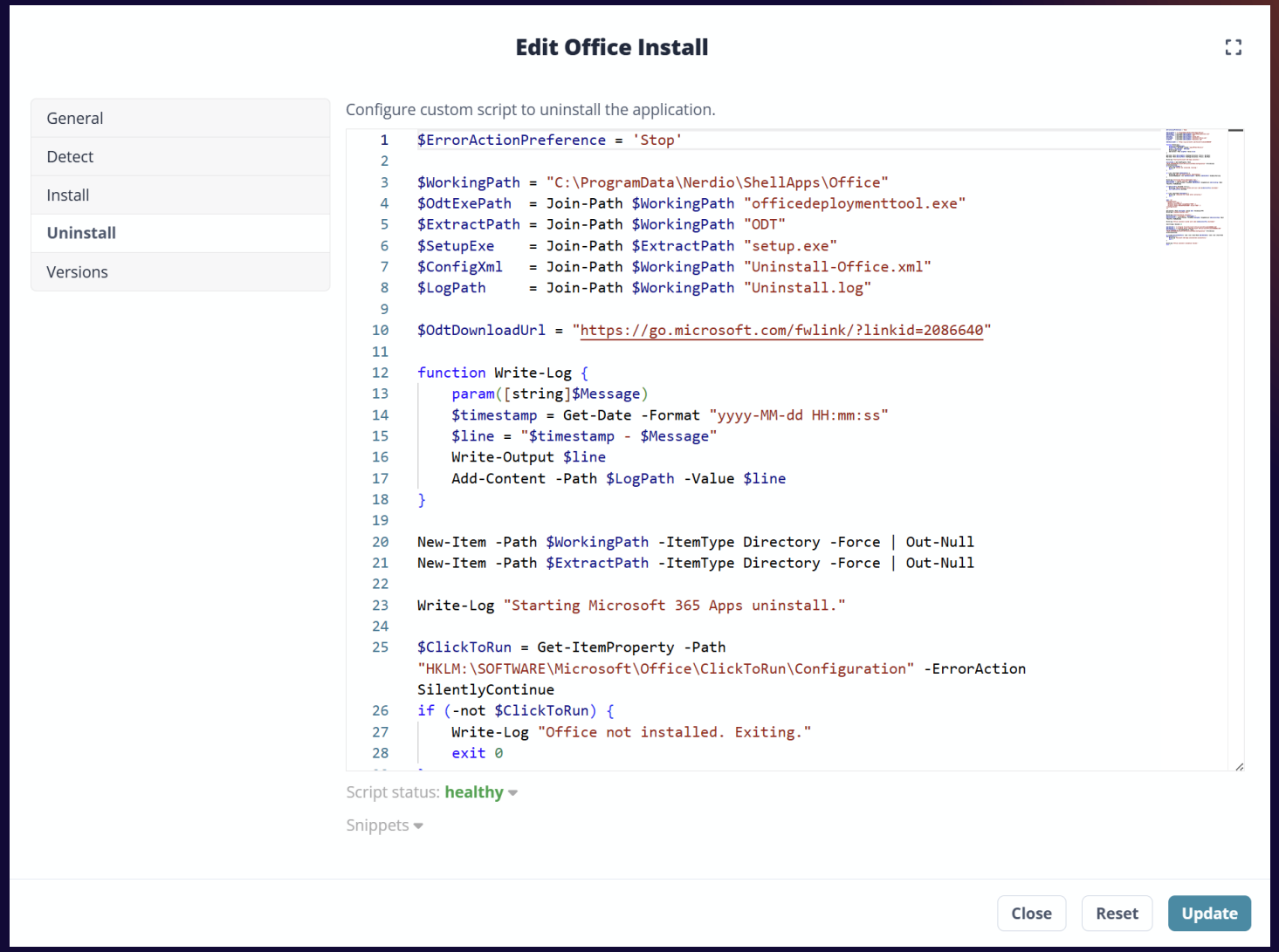
Example Shell App deployment script



Job Details - Host Application Management : nerdiocon-0216

User
<Automatic task>

Name	Timing	Status	Result
Set API context	Apr 8, 2026 08:18 PM 1s	COMPLETE	> Success
Prepare actions	Apr 8, 2026 08:18 PM 1s	COMPLETE	Install Office Install [1.0]: OK All actions are valid
Get VM	Apr 8, 2026 08:18 PM 1s	COMPLETE	Success
Get AD config	Apr 8, 2026 08:18 PM 1s	COMPLETE	Identity type: EntraID Enroll with Intune: True
Get service account credentials	Apr 8, 2026 08:18 PM 1s	COMPLETE	Trying get service account for domain Azure AD Service account was not found, local admin credential will be used
Check VM state	Apr 8, 2026 08:18 PM 1s	COMPLETE	VM is not running
Start	Apr 8, 2026 08:18 PM 2m 41s	COMPLETE	Success
Waiting for proper vm configuration	Apr 8, 2026 08:20 PM 3m	COMPLETE	Wait for 3 minutes
Prepare config	Apr 8, 2026 08:23 PM 1s	COMPLETE	Install Office Install [1.0] app added to config

Get or create config-ec6237be72f4d8a2a41c8c6ba2a2b813 blob	Apr 8, 2026 08:23 PM 1s	COMPLETE	Created new blob Container: app-management-configs Result file: 50e1c370-8de3-4011-ada4-37540c9177fa.json
Get or create result-ec6237be72f4d8a2a41c8c6ba2a2b813 blob	Apr 8, 2026 08:23 PM 1s	COMPLETE	Created new blob Container: app-management-configs Result file: 2768dd56-2476-4a90-8428-d234c37671fc.json
Upload text to blob	Apr 8, 2026 08:23 PM 1s	COMPLETE	Success
Get host pool properties	Apr 8, 2026 08:23 PM 1s	COMPLETE	Success
Install Application Management Extension	Apr 8, 2026 08:23 PM 1m 31s	COMPLETE PII ISSUES	VM agent status: ProvisioningState/succeeded **VM extension details:** Success Extension added successfully Request App management logs
Load results from storage container	Apr 8, 2026 08:25 PM 1s	COMPLETE PII ISSUES	**Result**
Process response to database	Apr 8, 2026 08:25 PM 1s	COMPLETE	Saving actions: success
Remove extension	Apr 8, 2026 08:25 PM 1m 30s	COMPLETE	Extension was removed
Stop VM	Apr 8, 2026 08:26 PM 30s	COMPLETE	Success

Export | Export as CSV | Close

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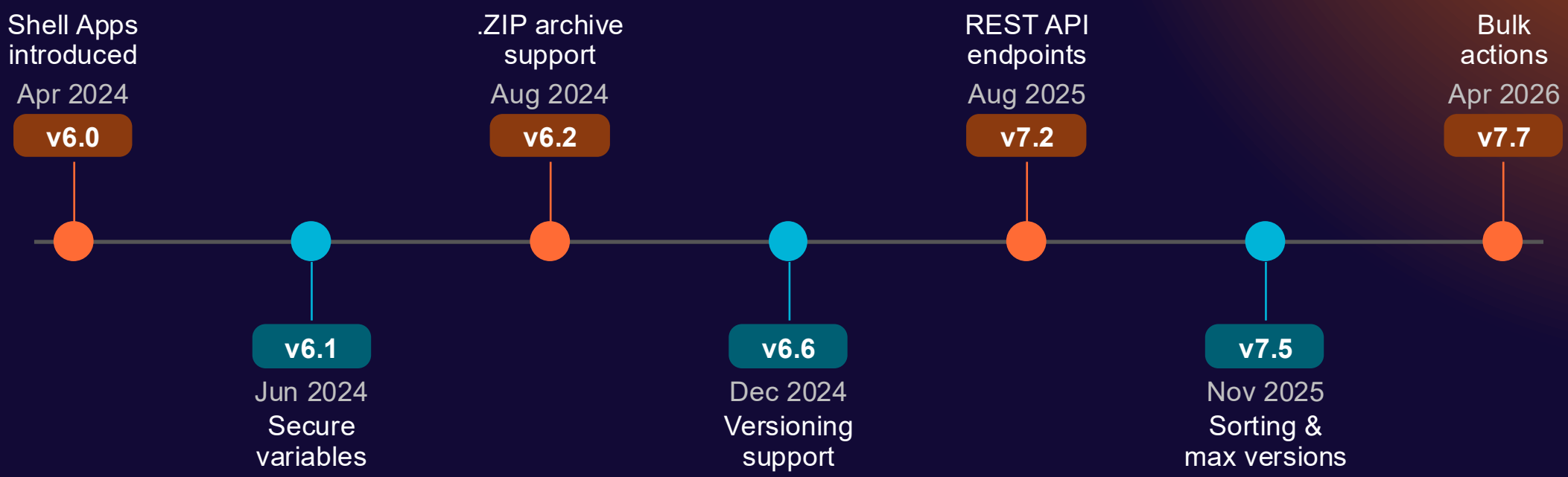
Demo

Shell App feature release timeline

Nerdio Manager for Enterprise | Unified Application Management



Source: Nerdio NME Release Notes

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Packaging standards that scale with a small team

Recommended package structure

- Source files
- Deploy-Application.ps1
- Detection logic
- Parameters/transforms
- Logging and return-code map
- Version metadata

Engineering guardrails

- Separate core apps from optional or ring-based apps.
- Use consistent detection logic so reruns are safe and idempotent.
- Track versioning in the package, not in the image.
- Pilot on a small host subset before broad rollout.
- Treat registry fixes and configuration changes as packaged artifacts, too.

Windows 10 to Windows 11: the migration sequence that kept things manageable

1. Start with a clean Windows 11 AVD baseline
2. Move identity and profile strategy to Entra ID/FSLogix aligned model
3. Define personal and multi-session core application sets
4. Package apps for Shell Apps orchestration
5. Pilot, measure deployment times, and tune problem apps
6. Scale out with auto-scale and phased cutover

The crucial mindset shift: Migrate the platform and its delivery method together, not as two disconnected projects.

Operational outcomes: less servicing, more engineering

Before	After
Weekend patch windows and powered-on estates	Policy-driven unattended deployment
Image patching, sealing, and gallery uploads	Thin base image with runtime apps
SCCM troubleshooting overhead	Central orchestration through Nerdio
Limited agility for auto-scale	Real-time host readiness becomes practical
Small team tied up in BAU maintenance	Small team can focus on reliability and improvement

What we learned along the way

- Do not try to reproduce every old management pattern in the new platform.
- Multi-session needs purpose-built testing; assumptions from single-session or physical endpoints do not always hold.
- Performance testing matters. A single slow app can undermine the whole operating model.
- Treat packaging as product engineering—with standards, telemetry, and release discipline.
- Keep the customer feedback loop tight. In this case, Nerdio product improvements materially changed the outcome.

Best advice to peers

Start with the thinnest possible base image, package the top apps well, and prove the runtime model early.

That gives you evidence, confidence, and executive air cover to go further.

Key takeaways for your own AVD transformation

1. An imageless AVD architecture is viable at enterprise scale when orchestration is strong.
2. Shell Apps reduced the operational burden of app delivery and made auto-scale more valuable.
3. PSADT complements Shell Apps by making packaging repeatable, supportable, and automatable.
4. **The biggest win is not just faster installs. It is a simpler platform that a small team can run confidently.**

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Q&A

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Thank you

Please remember to fill out the post-breakout survey in the app.