NerdioCon 2025 PALM SPRINGS

Windows 365— Cloud PC mastery

Meet the Team

NerdioCon

2025

PALM SPRINGS

nerdio

Mehdi Sebbane
Technical Trainer

Stefan Georgiev
Principal Product Manager

Andrej Radinger
Senior Program Manager

Mehdi Sebbane

Technical Trainer at Nerdio

- Started as Java Developer, Networks and Systems Engineer
- 15 Years at Microsoft
    - Identity, Active Directory Premier Field Engineer.
    - Technical Trainer, content development, speaker
- FC Barcelona Fan
- Scuba diving and camping

Stefan Georgiev

Principal Product Manager at Microsoft

Specializing in the remote protocols, performance and user experience for Azure Virtual Desktop (AVD), Remote Desktop Services (RDS), and Windows 365 (W365).

Andrej Radinger

Senior Program Manager at Microsoft

Agenda

Azure Virtual Desktop

Windows 365

Windows 365 Link

RD Multi Path / HEVC / Redirection

How Nerdio Manager enhances Windows 365

The Windows Cloud revolution

IT priorities are shifting as we move to a new era for innovation

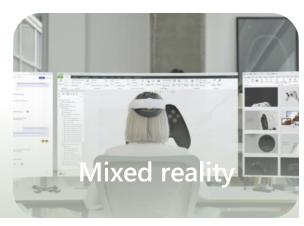| Digital transformation	Distributed workforces	Economic pressures	AI mania
95%	**39%**	**45%**	**71%**
of new initiatives will be cloud-native by 2025	of global knowledge workers will work in hybrid environments	of all IT spend will be on cloud by 2026	of companies say they are already using AI

Unrelenting security threats

The future of
Windows is
AI and the cloud

Copilot+ PCs

Copilot+ features

Windows App

Windows 365 Link

Copilot Runtime

Mixed reality

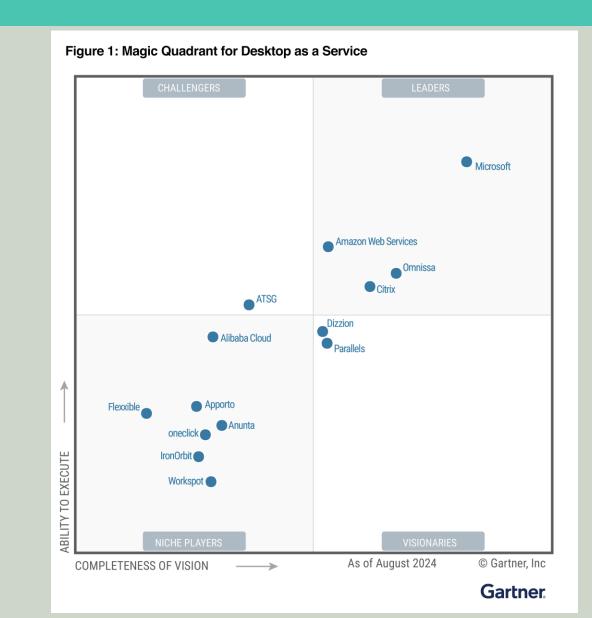# Gartner Magic Quadrant for DaaS

Microsoft has been named a Leader in the 2024 Gartner® Magic Quadrant™ for Desktop as a Service (DaaS) for the second consecutive year.

Windows 365, Azure Virtual Desktop, and Microsoft Dev Box provide a full range of solutions for businesses of all sizes that are scalable, flexible, and secure:
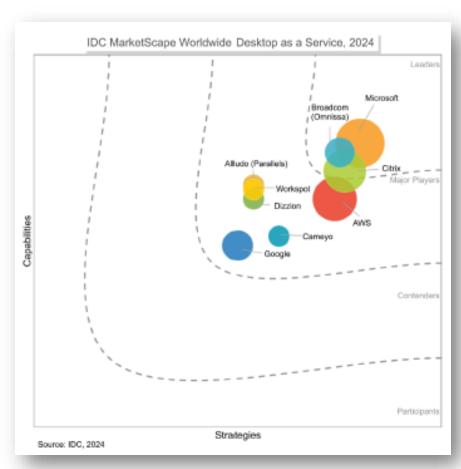
▶ Seamless integration with Windows, Microsoft Intune, Microsoft 365, and Azure.

▶ Comprehensive security, adaptable policy frameworks, and reliable compliance measures.

▶ Costs optimized while ensuring employees easy, personalized access to Windows in the cloud.

▶ Read the full report

Gartner, Magic Quadrant for Desktop as a Service, Stuart Downes, Craig Fisler, Sunil Kumar, Eri Hariu, Mark Margevicius, Tony Harvey, 16th September 2024. GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally, and MAGIC QUADRANT is a registered trademark of Gartner, Inc. and/or its affiliates and are used herein with permission. All rights reserved. Gartner does not endorse any vendor, product or service depicted in its research publications and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose. This graphic was published by Gartner, Inc. as part of a larger research document and should be evaluated in the context of the entire document. The Gartner document is available upon request from Microsoft.

Figure 1: Magic Quadrant for Desktop as a Service

Microsoft positioned as a Leader in 2024 IDC MarketScape for worldwide desktop as a service 2024

IDC MarketScape Worldwide Desktop as a Service, 2024

Source: IDC, 2024

IDC MarketScape vendor analysis model is designed to provide an overview of the competitive fitness of ICT suppliers in a given market. The research methodology utilizes a rigorous scoring methodology based on both qualitative and quantitative criteria that results in a single graphical illustration of each vendor's position within a given market. The Capabilities score measures vendor product, go-to-market and business execution in the short-term. The Strategy score measures alignment of vendor strategies with customer requirements in a 3-5-year timeframe. Vendor market share is represented by the size of the circles. Vendor year-over-year growth rate relative to the given market is indicated by a plus, neutral or minus next to the vendor name.

"Customers consistently commented that a W365 instance is functionally identical to an instance running on a physical endpoint"

"It allows for the rapid provisioning of templated desktop designs with regular, stable, and projectable costs."

"Microsoft, through both its position as the developer of Windows and its long history in the market, has a broad and deep ecosystem of both relationships and technology related to virtualization."

"In the last cycle, Microsoft has greatly increased its accessibility and manageability through APIs for access through infrastructure-as-code tools."

Source: IDC MarketScape: Worldwide Desktop as a Service 2024 Vendor Assessment, By: Shannon Kalvar, June 2024, IDC #US51272024
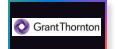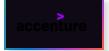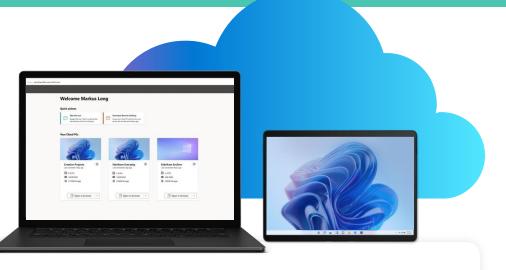
How Windows 365 supports your hybrid workforce needs

Windows 365 provides a personalized, powerful, simple, and secured full Windows 11 or Windows 10 experience

Personalized
All your apps, content, and settings, streamed from the Microsoft Cloud to any device

Powerful
Scalable Cloud PCs bring the Windows 11 or Windows 10 experience to you, on any device

Simple
Provision and deploy Windows on a Cloud PC today, right from Microsoft Intune or at windows365.microsoft.com

Secured
Enhancing the security benefits of Cloud PCs with new Windows 11 and Windows 10 security features

How Azure Virtual Desktop supports your hybrid workforce needs

Azure Virtual Desktop enables a secured remote desktop experience from anywhere

Flexible
Access Windows 11 and Windows 10 from anywhere

Controlled
Maintain full control over configuration and management

Backed by industry-leading features
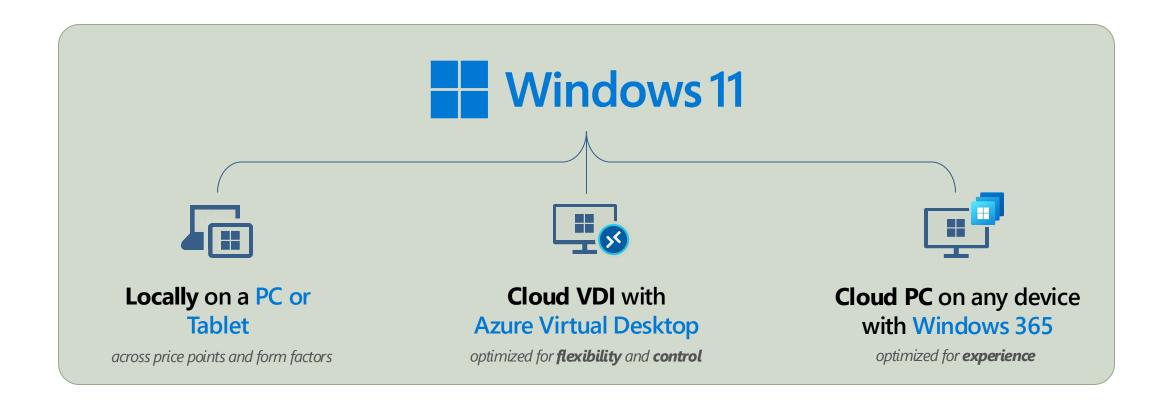Get the security and reliability of Microsoft Azure

Efficient and transparent
Optimize cost with pooled VMs and multi-sessions; pay for only what you use with metering

Windows for hybrid work

Options for maximum flexibility

Windows 11

Locally on a **PC or Tablet**

across price points and form factors

Cloud VDI with **Azure Virtual Desktop**

*optimized for **flexibility** and **control***

Cloud PC on any device with **Windows 365**

*optimized for **experience***

Customers are embracing Azure Virtual Desktop and Windows 365

Azure Virtual Desktop

A cloud VDI platform that delivers hosted desktops and apps with maximum flexibility and control

Windows 365

A complete Software as a Service (SaaS) solution that securely streams your personalized Windows desktop, apps, settings, and content from the Microsoft Cloud to any device

	Optimized for flexibility and control	Optimized for simplicity and experience
OS support	Windows 11, Windows 10, single- or multi-session, Windows Server	Windows 11 or Windows 10
Admin	Azure Portal	Microsoft Intune
Service	PaaS: granular controls over configuration and management	SaaS: complete end-to-end Microsoft service
Pricing	Consumption-based pricing	Predictable per user, per month pricing
End User	Rich app and desktop remoting experience	Rich app and desktop remoting experience. Self Service Actions (restart, restore, reset, troubleshoot, etc).
Clients	Windows App, HTML5, Thin Clients	Windows App, HTML5, Thin Clients, Windows 365 Link

Windows 365 product plans

The following per-user, per-month licenses are currently available:

VM/OS disk size	Example scenarios	Recommended apps
2 vCPU/4 GB/256 GB 2 vCPU/4 GB/128 GB 2 vCPU/4 GB/64 GB	Mergers and acquisitions, short-term and seasonal, customer services, Bring-Your-Own-PC, work from home	Microsoft 365 Apps, Microsoft Teams (audio-only), Outlook, Excel, PowerPoint, OneDrive, Adobe Reader, Microsoft Edge, line-of-business app(s), Defender support
2 vCPU/8 GB/256 GB 2 vCPU/8 GB /128 GB	Bring-Your-Own-PC, work from home, market researchers, government, consultants	Microsoft 365 Apps, Microsoft Teams, Outlook, Excel, Access, PowerPoint, OneDrive, Adobe Reader, Microsoft Edge, line-of-business app(s), Defender support
4 vCPU/16 GB/512 GB 4 vCPU /16 GB /256 GB 4 vCPU /16 GB /128 GB	Finance, government, consultants, healthcare services, Bring-Your-Own-PC, work from home	Microsoft 365 Apps, Microsoft Teams, Outlook, Excel, Access, PowerPoint, Power BI, Dynamics 365, OneDrive, Adobe Reader, Microsoft Edge, line-of-business app(s), Defender support
8 vCPU /32 GB /512 GB 8 vCPU /32 GB /256 GB 8 vCPU /32 GB /128 GB	Engineers, content creators, design and engineering workstations	Microsoft 365 Apps, Microsoft Teams, Outlook, Access, OneDrive, Adobe Reader, Microsoft Edge, Power BI, Visual Studio Code, line-of-business app(s), Nested Virtualization support; Windows Subsystem for Linux/Android, Hyper-V, Defender support
16vCPU/64GB/512GB 16vCPU/64GB/1TB	Engineering, data analysis and visualization, financial services and wealth management	Microsoft 365 Apps, Microsoft Teams, Outlook, Excel, Access, Adobe Reader, Microsoft Edge, Power BI, Tableau, Visual Studio Code, Blackrock Aladdin, Bloomberg, Eclipse, line-of-business apps, Defender support

Windows 365 licensing requirements

Licensing requirements

- You must have an Intune license to use Intune to manage the devices.
- Windows 365 Enterprise: Users must have licenses for Windows E3, Intune, Microsoft Entra ID P1, and Windows 365 to use their Cloud PC.
- Windows 365 Frontline: Users must
  - Have licenses for Windows E3, Intune, Microsoft Entra ID P1.
  - Be added to the Microsoft Entra security group in the provisioning policy to use their Cloud PC.

Windows Cloud security

What makes Windows Cloud solutions secure

Securing your users

Secured platform

Secured by default
Windows Cloud solutions security protections are enabled by default, require no extra effort for security admins, and are not optional to choose. Cloud PCs and VMs are **secure out-of-the-box**

Secured identity
Establish secure identities for **Windows experience** while **minimizing risks**

Secured access
Access to apps and data based on *device* management state and **user's** risk profile

Secured data
Securing customer **data** by design with session hosts using Microsoft **Zero Trust** standards

Secured by design
Security is integral to our designs, ensuring each update is rigorously vetted for access control and vulnerabilities.
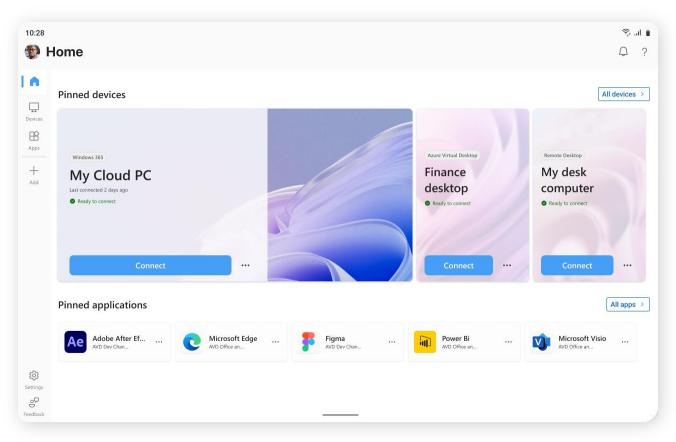
Secured operations
Security controls and monitoring are continuously improved to mitigate current and future threats.

Microsoft Zero Trust foundation

Windows App

One client across

- Windows 365
- Azure Virtual Desktop
- Remote Desktop
- Remote Desktop Services
- Microsoft Dev Box

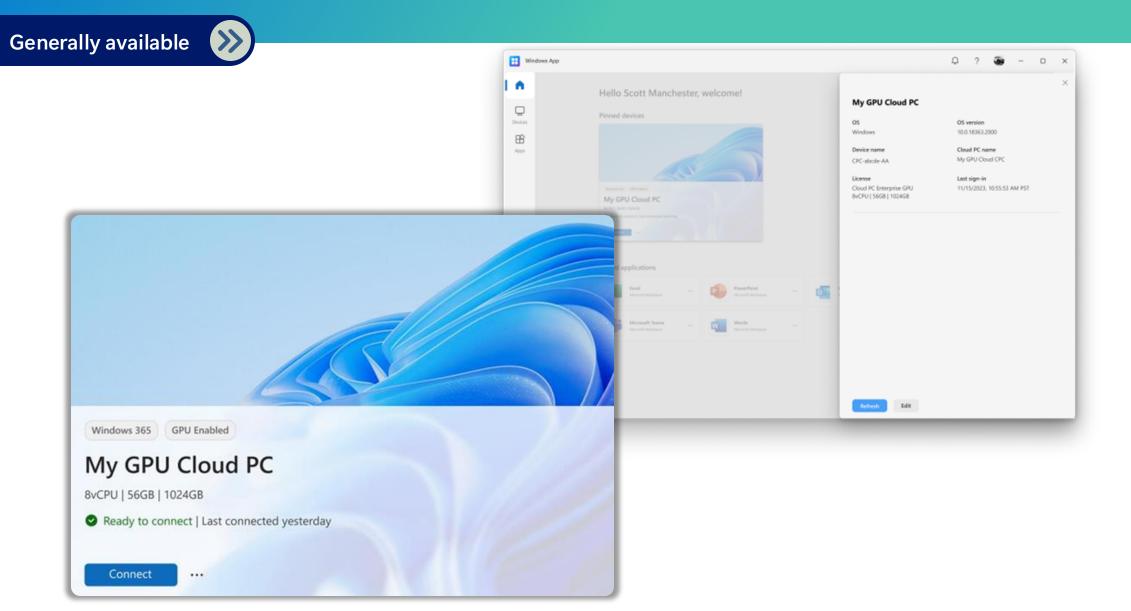Windows 365   Azure Virtual Desktop   Remote Desktop   Remote Desktop Services
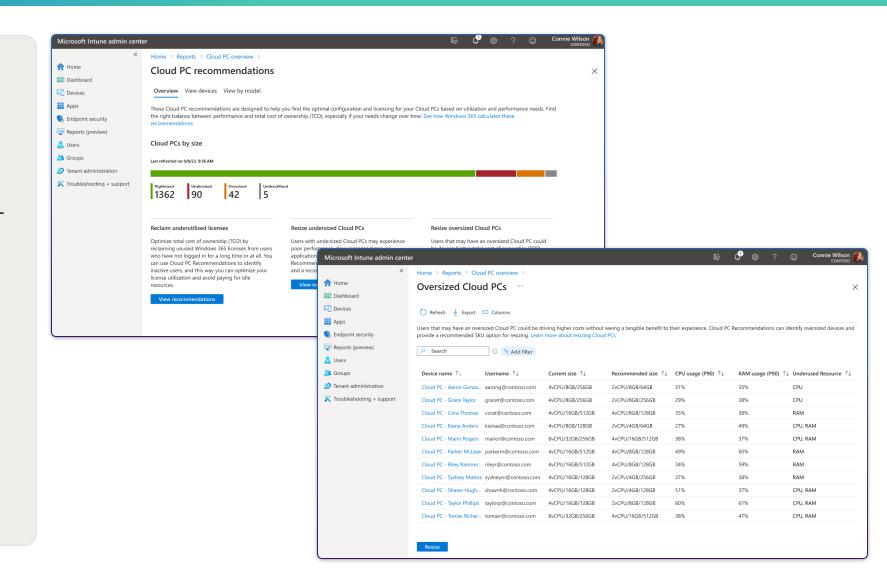
Windows 365 AI Powered Management

Cloud PC Recommender:

- **CPC Size Evaluation:** Performance evaluation of CPU and RAM to determine – Oversized, Undersized, or Right-sized

- **CPC Usage Evaluation:** Identify underutilized Cloud PCs, re-assign licenses based on usage

- **CPC Location Evaluation:** Move CPC based on user experienced latency

Spotlight: Windows 365 Frontline

DEDICATED MODE
Personalized Cloud PCs

For employees needing regular and personalized experiences

Dedicated Cloud PC access only during their shift

One Windows 365 Frontline license enables up to three dedicated and personalized Cloud PCs to be used non-concurrently

Personalized, full Windows experience

Deploy and manage in Microsoft Intune

SHARED MODE
Designed for task productivity

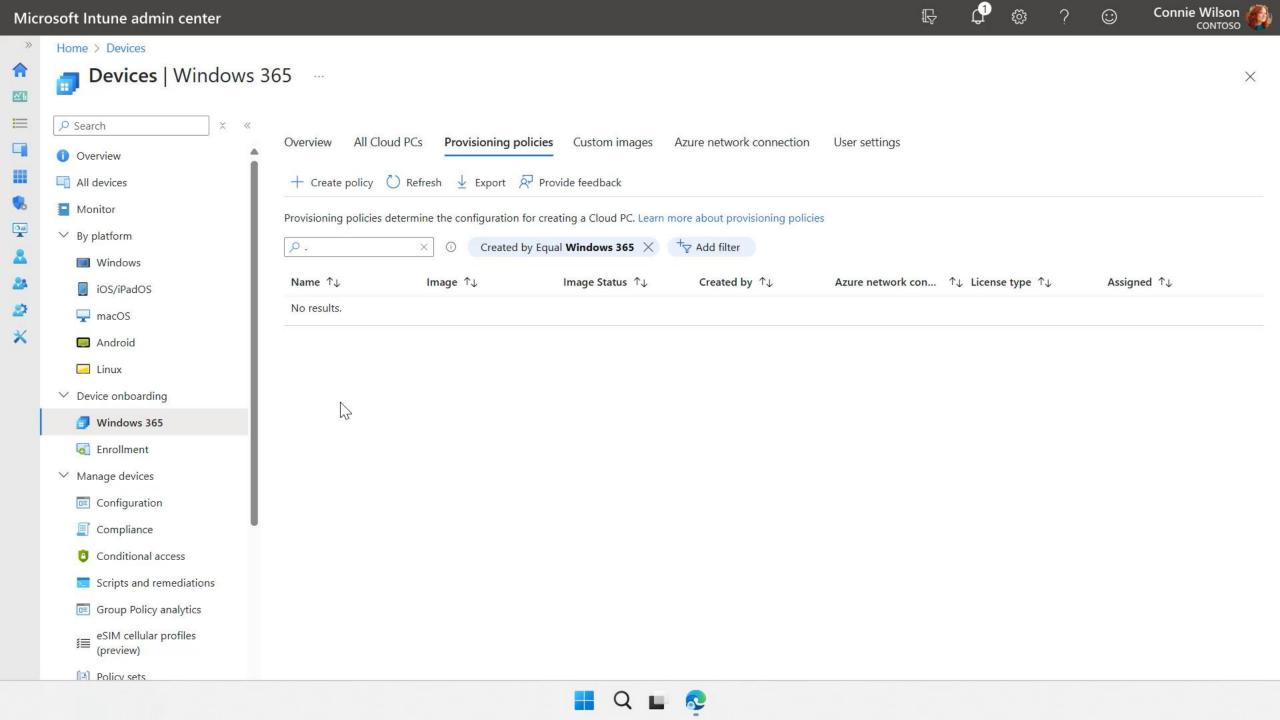**For employees who need brief access to complete tasks**

Public Preview

Cloud PC access for productive specialized use

One Windows 365 Frontline license enables a single Cloud PC that can be shared across a group of users non-concurrently (one active session at a time)
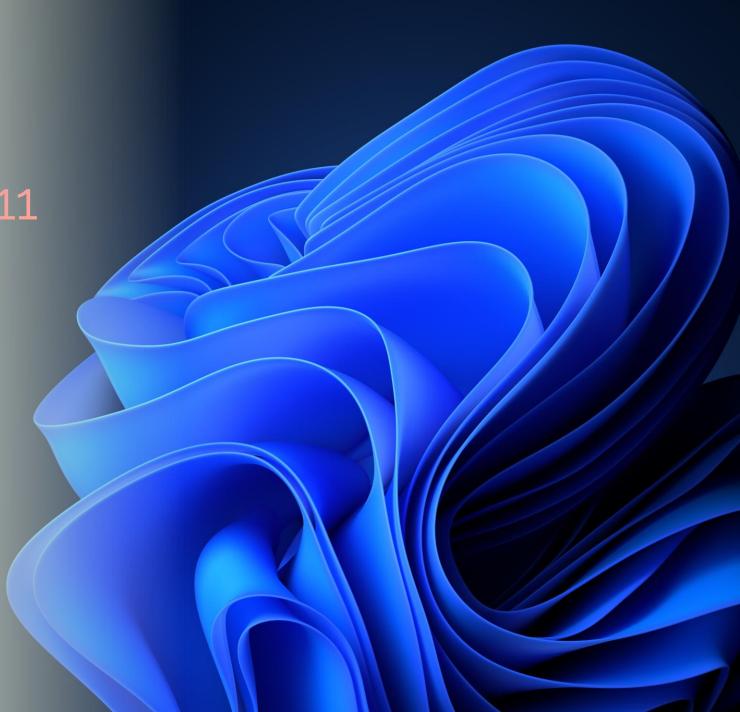
Non-personalized desktop experience that resets between sessions (user profile data removed after sign off)

Deploy and manage in Microsoft Intune

Home > Devices

Devices | Windows 365 ...

Overview   All Cloud PCs   **Provisioning policies**   Custom images   Azure network connection   User settings

+ Create policy   ↻ Refresh   ↓ Export   Provide feedback

Provisioning policies determine the configuration for creating a Cloud PC. Learn more about provisioning policies

🔍 .   ⓘ   Created by Equal **Windows 365** ✕   ⤋ Add filter

Name ↑↓	Image ↑↓	Image Status ↑↓	Created by ↑↓	Azure network con... ↑↓	License type ↑↓	Assigned ↑↓
No results.						

Navigation sidebar:

- ⓘ Overview
- 🖥 All devices
- 📋 Monitor
- ∨ By platform
  - 🖥 Windows
  - 📱 iOS/iPadOS
  - 🖥 macOS
  - 📱 Android
  - 🗂 Linux
- ∨ Device onboarding
  - 🟦 Windows 365
  - Enrollment
- ∨ Manage devices
  - Configuration
  - Compliance
  - Conditional access
  - Scripts and remediations
  - Group Policy analytics
  - eSIM cellular profiles (preview)
  - Policy sets

Move to Windows 11 your way

Upgrade your existing PCs

Purchase new Windows 11 PCs

Go to Windows 11 with Windows 365

Paths to move from Windows 10

Recommended

Migrate to Windows 11

It's an upgrade not an update

99.7% Application compatibility

Simplified management

👍

Leverage Windows 365 Enterprise

Cloud PCs running Windows 11

Windows 10 ESU for the client endpoint

👍

+ Windows 365 Link

Cloud PCs running Windows 11

Windows 365 Link devices as hardware solution

👍

Alternatives

Extended Security Updates (ESU)
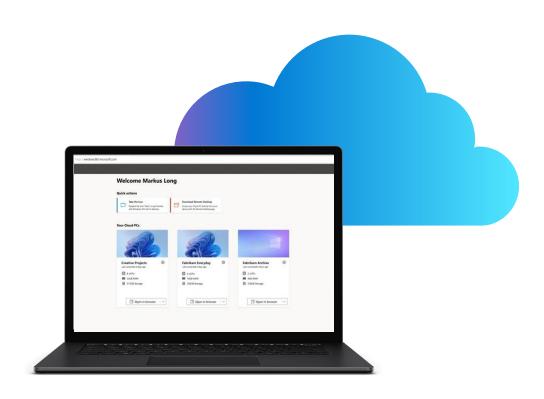
Take advantage of cloud management

Discounted ESU when using cloud management

Purchase ESU outright
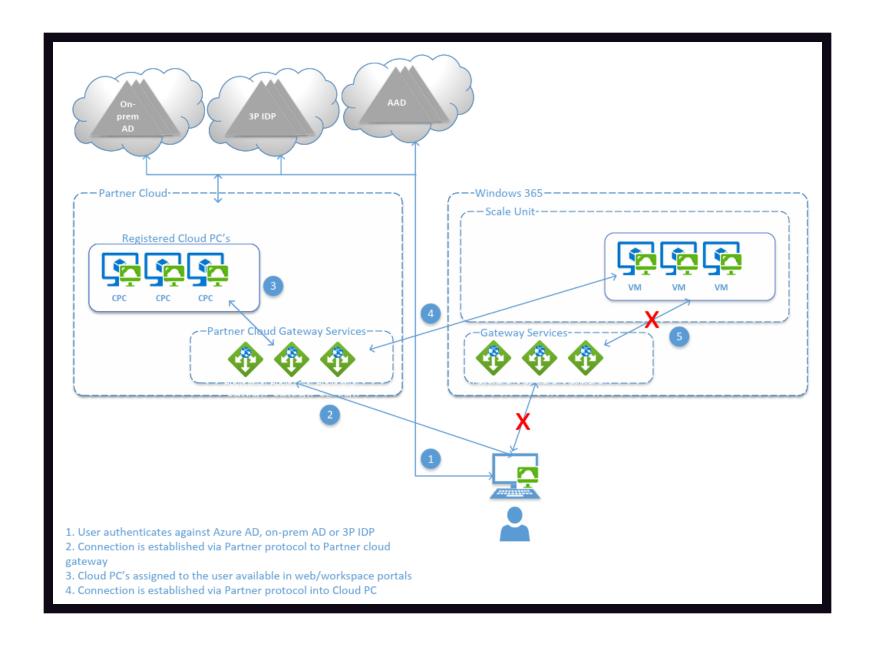
Protect any Windows 10 devices

Protect Windows 10 devices for up to three years

Partner integrations on Windows 365

- Minimal-click onboarding of Partner Cloud to Windows 365
- Partner protocol enabled automatically for licensed users
- No new gateways, connectors*, infrastructure, delivery groups, etc. required
- Cloud PC's appear native in Partner client apps
- Connect via partner gateway and protocol from the Windows 365 end-user portal
- Automated offboarding when removing the Partner license
- Partners completed integration:
  - Citrix
  - Omnissa
  - HP Anyware

Partner integration connectivity

1. User authenticates against Azure AD, on-prem AD or 3P IDP
2. Connection is established via Partner protocol to Partner cloud gateway
3. Cloud PC's assigned to the user available in web/workspace portals
4. Connection is established via Partner protocol into Cloud PC

Windows 365 Link

Introducing the first Cloud PC device
purpose-built by Microsoft to connect securely to Windows 365 in seconds

Security on by default

dTPM 2.0

Virtualization-based security

Hypervisor-protected code integrity

Secure boot

BitLocker

Security baselines on by default

Cloud

Identity

Application

OS

Hardware

Nothing is on the device

No local apps

No local data

No local users

Strict App Control policy

Embraces passwordless

Entra ID users with no admin rights

Single sign-on to Cloud PC

Entra joined device

Intune managed
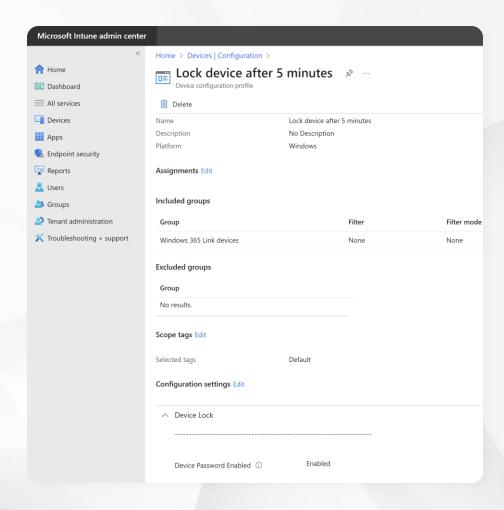
Conditional access policies
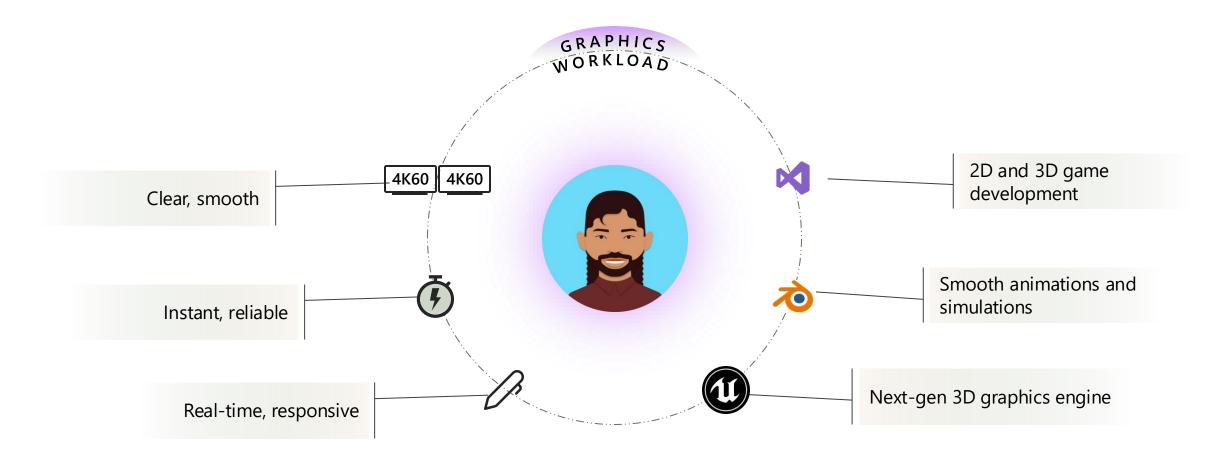
Delivering like-local

w/ Stefan Georgiev

Delivering like-local experiences

GRAPHICS WORKLOAD

Clear, smooth

4K60 4K60

Instant, reliable

Real-time, responsive

2D and 3D game development

Smooth animations and simulations

Next-gen 3D graphics engine
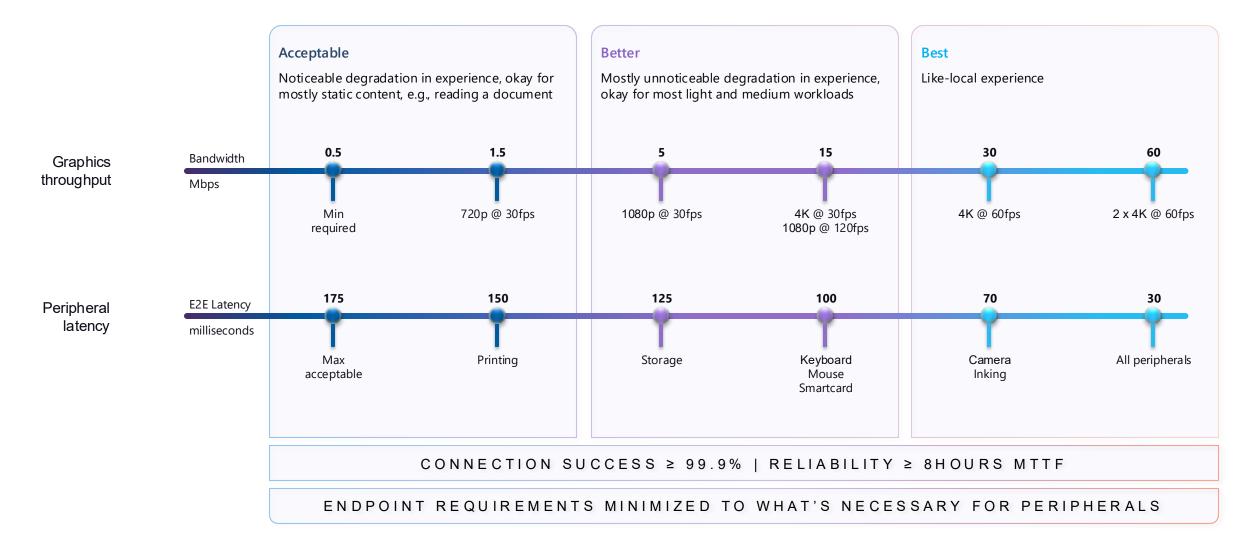
Game Developer
Multiple 4k monitors, camera, pen | Visual Studio, Blender, Unreal Engine

Delivering like-local experiences—adapts to user environment

	Acceptable	Better	Best
	Noticeable degradation in experience, okay for mostly static content, e.g., reading a document	Mostly unnoticeable degradation in experience, okay for most light and medium workloads	Like-local experience

Graphics throughput

Bandwidth Mbps

	0.5	1.5	5	15	30	60
	Min required	720p @ 30fps	1080p @ 30fps	4K @ 30fps 1080p @ 120fps	4K @ 60fps	2 x 4K @ 60fps

Peripheral latency

E2E Latency milliseconds

	175	150	125	100	70	30
	Max acceptable	Printing	Storage	Keyboard Mouse Smartcard	Camera Inking	All peripherals

CONNECTION SUCCESS ≥ 99.9% | RELIABILITY ≥ 8HOURS MTTF

ENDPOINT REQUIREMENTS MINIMIZED TO WHAT'S NECESSARY FOR PERIPHERALS

Note: Designed to deliver performance with minimal cloud hardware. Graphics throughput improves with additional hardware.

Delivering like-local experiences – always available

Time to connect to an active session

Time to connect

seconds

Today
Noticeable time to connect to Cloud PC

> 30

In-development
Acceptable time to connect to Cloud PC

10

CONNECTION SUCCESS ≥ 99.9% | RELIABILITY ≥ 8HOURS MTTF

ENDPOINT REQUIREMENTS MINIMIZED TO WHAT'S NECESSARY FOR PERIPHERALS

Innovation at every layer

Streaming

Windows Cloud
Windows 365 & Azure Virtual Desktop
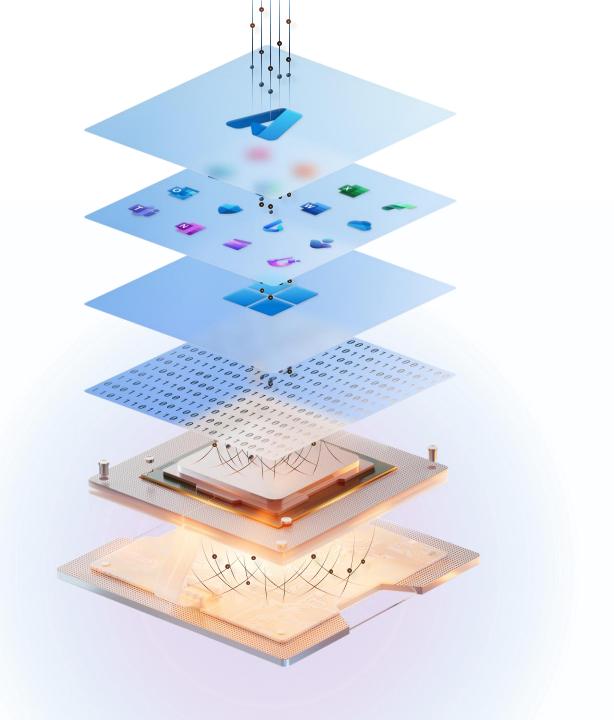
Windows

Systems

Silicon
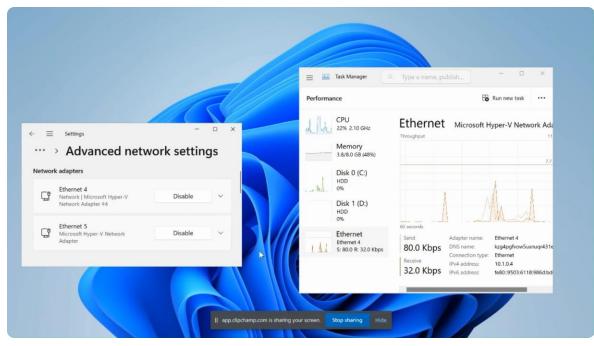
Innovation at every layer—features
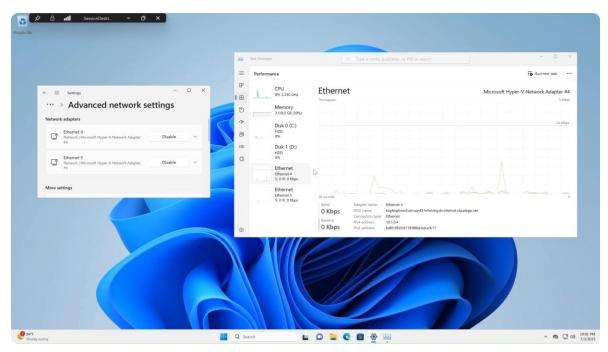
Streaming

Shipped recently
- RDP Shortpath
- TURN

In-development
- RDP Multipath
- Fast connectivity
- Always connected

Windows Cloud
Windows 365 & Azure Virtual Desktop

Shipped recently
- Multimedia redirection
- Teams optimizations
- Single sign-on for Entra ID
- Support for all popular endpoints

In-development
- Driver/folder Enumeration Performance
- Performance improvements for peripherals

Windows

Shipped recently
- Passwordless Auth
- Faster logons

Systems

Shipped recently
- HEVC h/w encode/decode
- Graphics Quality (4:4:4, 4:2:0)

Silicon

Shipped recently
- GPU, CPU silicon optimizations

RD Multipath

Demo

RDP Multipath–Demo
Time to recover when network drops

~53 seconds

< 1 second

Global TURN Relay Expansion

Enhancing reliability and optimizing W365 and AVD traffic
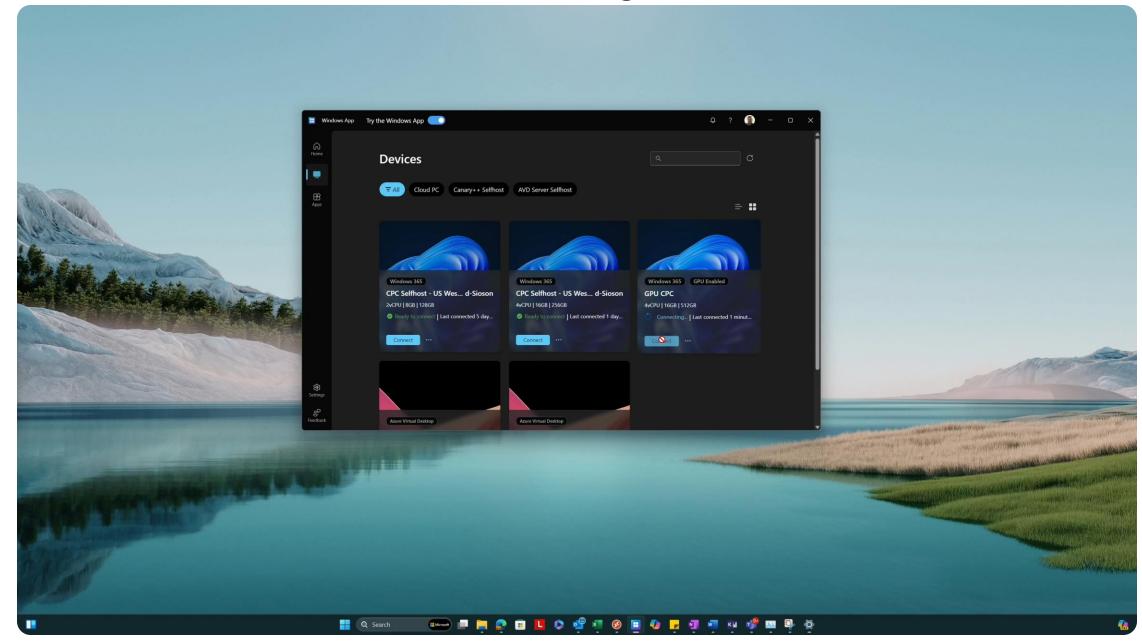
HEVC

Demo

4K60 with HEVC/H.265 encode using GPU h/w-Demo
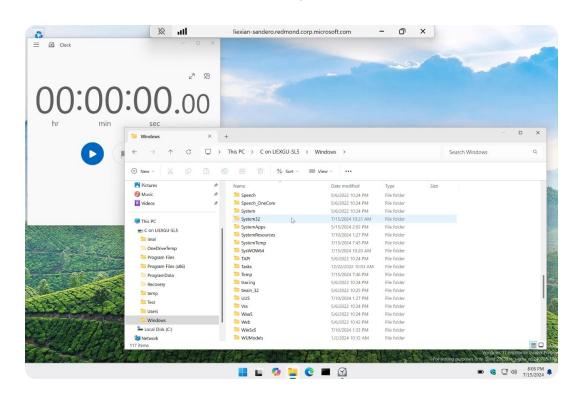
What are other encoders customers are asking for?

Redirection drive performance
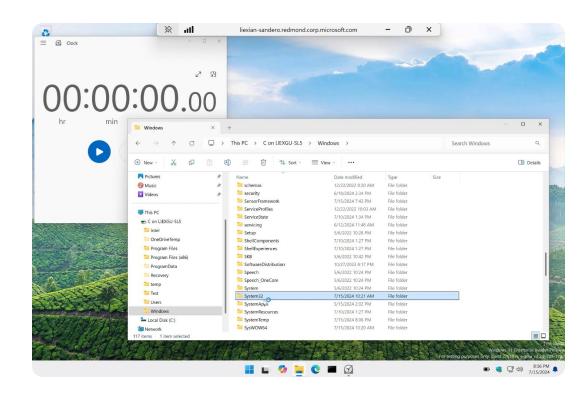
Demo

Redirection Drive Performance - Demo

Previous Experience
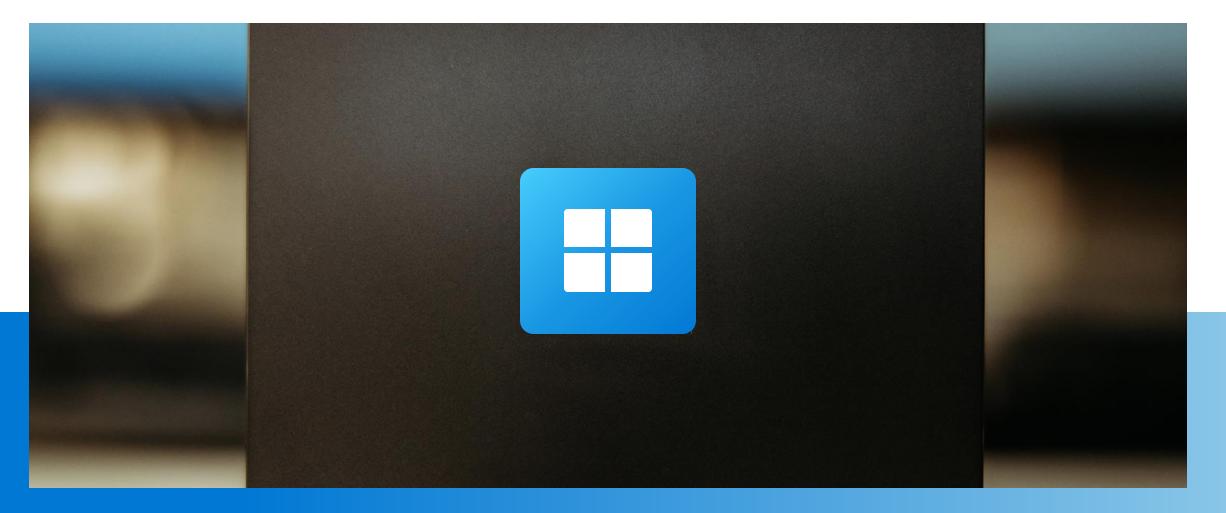
Starting March 2025 (24H2)

~5 min 18 seconds

~7.5 seconds

Help us prioritize redirection improvements.

Thank you!

The future begins with you.

NerdioCon
2025
PALM SPRINGS

How Nerdio Manager for Enterprise enhances Windows 365

Streamlining Windows 365 management for IT professionals

Windows 365 day 2 operations

Dynamic app delivery

- Unified App catalog
- Ongoing policy-driven updates
- App testing

Monitoring & troubleshooting

- Apps
- Compliance
- Updates
- Security

Unified Endpoint Management

Device actions: Restore, re-provision, restart, resize, etc.

Granular RBAC

Reporting: CPC usage, app usage, app licensing

The future

Windows 365 sizing, migration, unified management, and optimization platform

SIZING

MIGRATION

MANAGEMENT

OPTIMIZATION

Windows 365

Nerdio Unified Endpoint Management

Streamlined management interface

- Overlay that exposes common Intune tasks.
- Simplified management interface *(changelog, versions, statuses, rollbacks)*
- Surface endpoint details in the Nerdio Portal.

Reduce management overhead

- Increase productivity and avoid additional Intune administration.
- Focus on common management tasks.
- Streamline common tasks with fewer clicks.
- View endpoint status with device compliance and performance reports.

Increase security

- Build-in and custom, granular RBAC roles.
- Delegate common tasks with just-enough access to common endpoint settings.

W365 + Nerdio

Extend your management of Windows 365 and Intune with Nerdio:

✓ Manage Windows network connections, provisioning policies, and 365 images.

✓ Create, modify, back up, and track changes to Intune Policies over time.

✓ Monitor device performance and compliance with advanced reporting.

✓ Create granular RBAC roles for endpoint management.

Windows 365

DEMO

- Assign user a W365 License

- Enable UEM

- Portal navigation
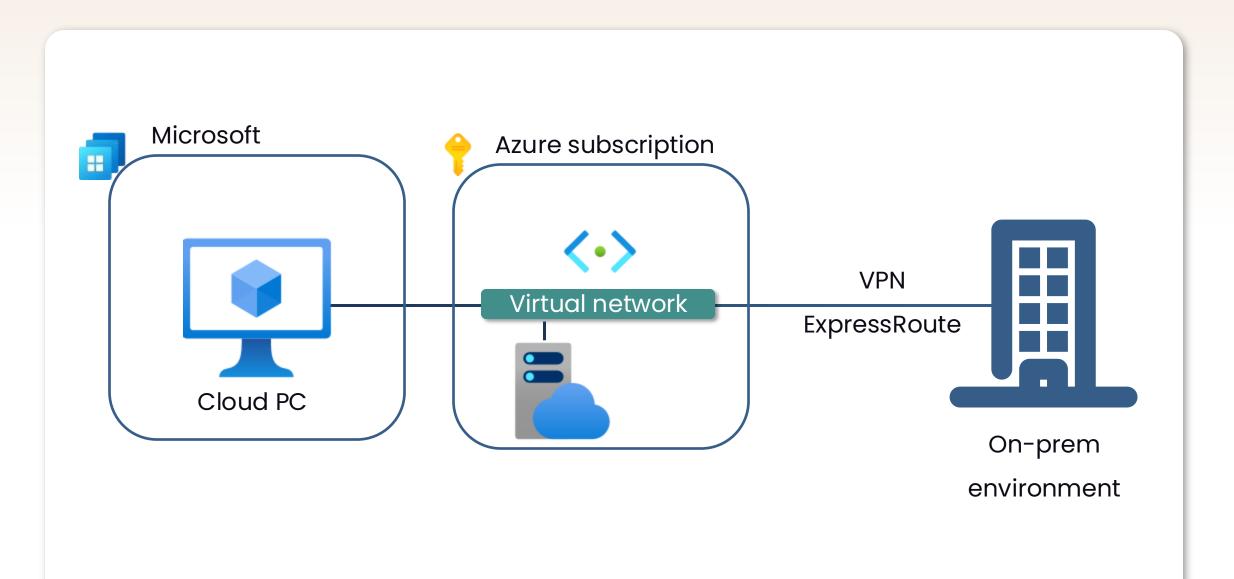
Network connections

A Windows 365 network connection allows Cloud PCs to connect to network-based resources.
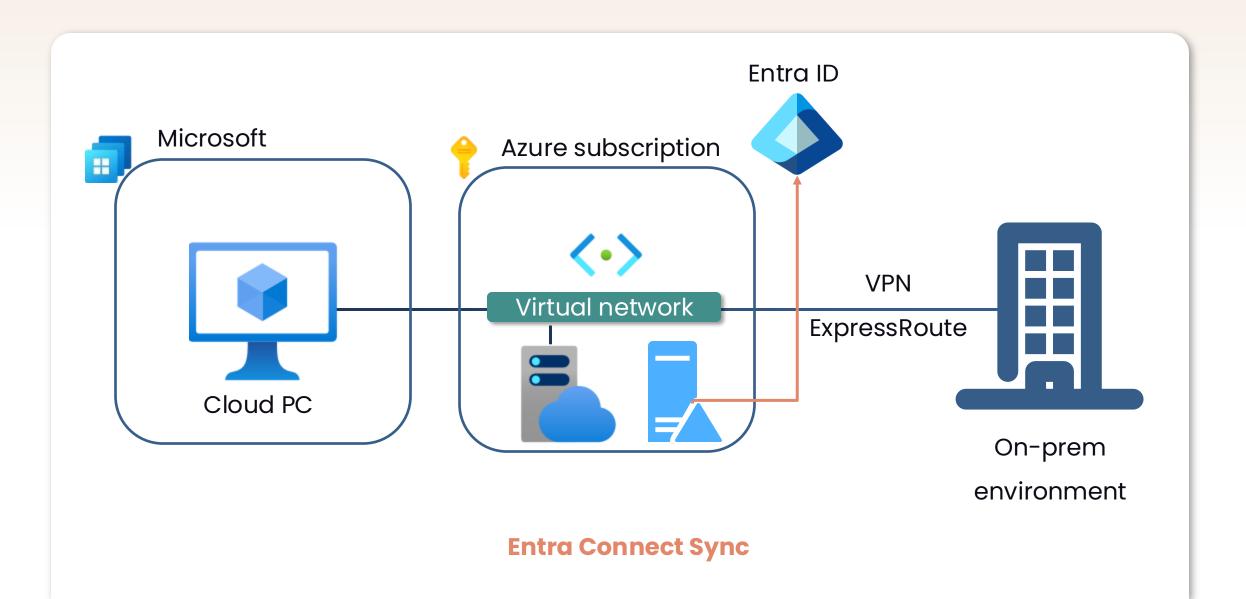
There are two types of network connections:

- Microsoft Entra join.

- Hybrid Microsoft Entra join

  – Requires connectivity to an Active Directory Domain Services (AD DS) domain

Private network connectivity

Entra Hybrid join networking

Microsoft

Cloud PC

Azure subscription

Virtual network

Entra ID

VPN

ExpressRoute

On-prem environment

Entra Connect Sync

Provisioning policies
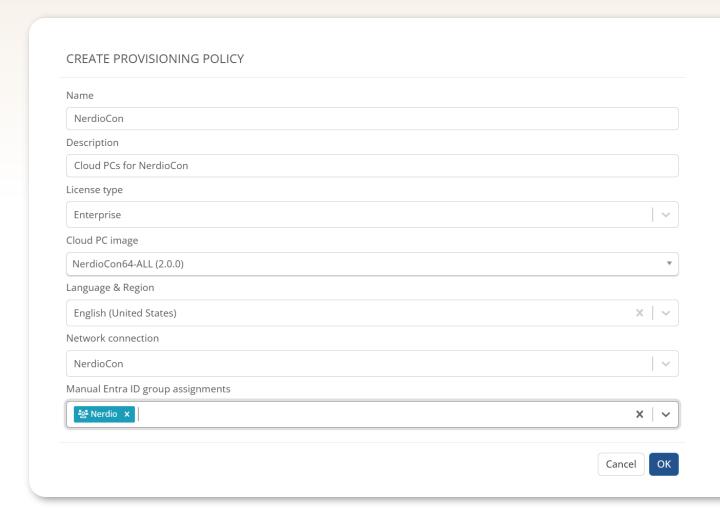
A provisioning policy in Windows 365 is the configuration that defines how Cloud PCs are created and assigned to users.

- Simplified deployment

- Consistency

- Flexibility

- Scalability

Provisioning policies

- **License type**

- **Cloud PC image**

- **Network connection**

- **User group assignments**

CREATE PROVISIONING POLICY

Name

NerdioCon

Description

Cloud PCs for NerdioCon

License type

Enterprise

Cloud PC image

NerdioCon64-ALL (2.0.0)

Language & Region

English (United States)

Network connection

NerdioCon

Manual Entra ID group assignments

Nerdio ✕

Cancel | OK

Provisioning policies

DEMO

- Create network connection

- Create provisioning policy

- Confirm Cloud PC status

Nerdio Windows 365 management

Private virtual network

- Connect Cloud PCs to private Azure virtual network (VNet).
- Private connectivity to Azure resources.
- Connectivity to on-premises resources with VPN or ExpressRoute.
- Use company firewall for content filtering, adhere to organizational internet policies.
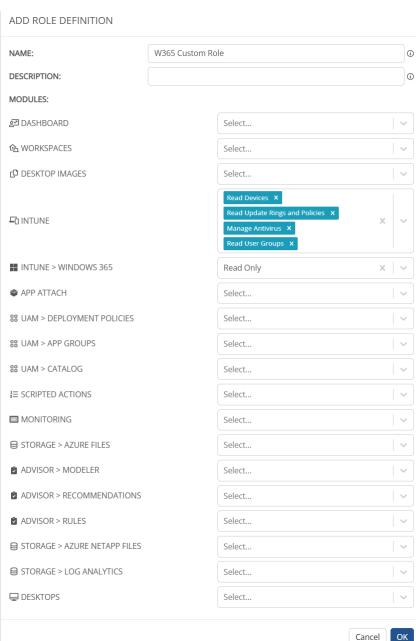
Provisioning policies

- Create and manage W365 provisioning policies from
- Nerdio Manager for Enterprise.

Custom images

- Pre-install applications on a custom image.
- Apply customizations to the image.
- Use Nerdio image management and automation to keep images up-to-date.

Custom RBAC roles for Intune management

ADD ROLE DEFINITION

NAME: W365 Custom Role

DESCRIPTION:

MODULES:

Module	Selection
DASHBOARD	Select...
WORKSPACES	Select...
DESKTOP IMAGES	Select...
INTUNE	Read Devices × / Read Update Rings and Policies × / Manage Antivirus × / Read User Groups ×
INTUNE > WINDOWS 365	Read Only ×
APP ATTACH	Select...
UAM > DEPLOYMENT POLICIES	Select...
UAM > APP GROUPS	Select...
UAM > CATALOG	Select...
SCRIPTED ACTIONS	Select...
MONITORING	Select...
STORAGE > AZURE FILES	Select...
ADVISOR > MODELER	Select...
ADVISOR > RECOMMENDATIONS	Select...
ADVISOR > RULES	Select...
STORAGE > AZURE NETAPP FILES	Select...
STORAGE > LOG ANALYTICS	Select...
DESKTOPS	Select...

Cancel   OK

Custom images

DEMO

- Create cloud image

- Customize the image

- Update the Cloud PC

Nerdio Windows 365 management

Policy management

- Create and edit.
- Backup and restore.
- Assign.
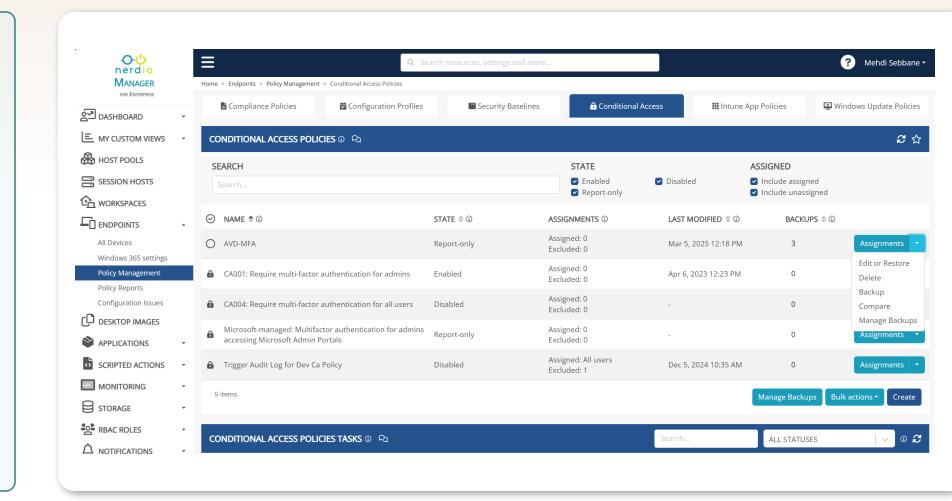
Even more

- Compare versions.
- Automatic backup.

Policy backup & recovery
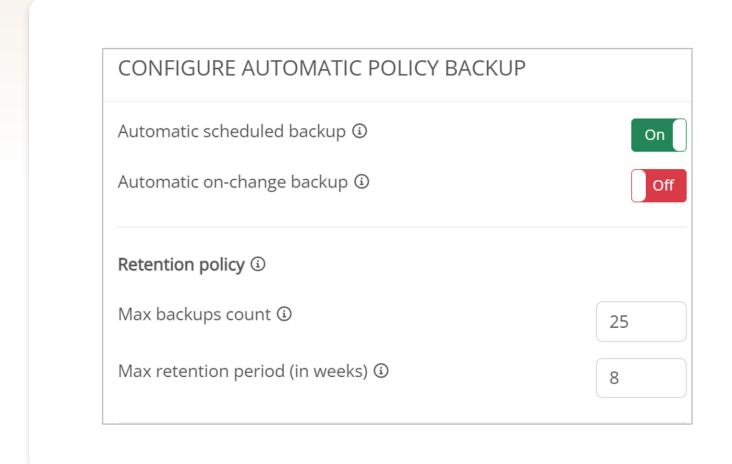
- Policy change tracking & logging
- Policy backup
- Policy Recovery
- Policy change comparisons

Automatic policy backup

- ✓ Scheduled backup every 3 hours for policies created in both Nerdio and Intune natively.

- ✓ Backup on any edit or change made via the Nerdio portal.

CONFIGURE AUTOMATIC POLICY BACKUP

Automatic scheduled backup ⓘ **On**

Automatic on-change backup ⓘ **Off**

Retention policy ⓘ

Max backups count ⓘ | 25

Max retention period (in weeks) ⓘ | 8

Policy comparison

- ✓ Compare policy changes across versions
- ✓ Side-by-side view

COMPARE POLICY BACKUPS - AVD-MFA

Backup version: 3   Backup version: 1

```
1  {
2    "@odata.context": "https://graph.microsoft.com/beta/$metadata#identity/conditiona
3    "conditions": {
4      "applications": {
5        "excludeApplications": [],
6        "includeApplications": [
7          "9cdead84-a844-4324-93f2-b2e6bb768d07"
8        ],
9        "includeAuthenticationContextClassReferences": [],
10       "includeUserActions": []
11     },
12     "clientAppTypes": [
13       "all"
14     ],
15     "locations": {
16       "excludeLocations": [
17         "1b77d6a3-318f-4196-b0b0-c55c6575330f"
18       ],
19       "includeLocations": [
20         "All"
21       ]
22     },
23     "signInRiskLevels": [],
24     "times": null,
25     "userRiskLevels": [],
26     "users": {
27       "excludeGroups": [],
28       "excludeRoles": [],
29       "excludeUsers": [],
30       "includeGroups": [],
31       "includeRoles": [],
```

```
1  {
2    "@odata.context": "https://graph.microsoft.com/beta/$metadata#identity/conditionalA
3    "conditions": {
4      "applications": {
5        "excludeApplications": [],
6        "includeApplications": [
7          "9cdead84-a844-4324-93f2-b2e6bb768d07"
8        ],
9        "includeAuthenticationContextClassReferences": [],
10       "includeUserActions": []
11     },
12     "clientAppTypes": [
13       "all"
14     ],
15     "signInRiskLevels": [],
16     "times": null,
17     "userRiskLevels": [],
18     "users": {
19       "excludeGroups": [],
20       "excludeRoles": [],
21       "excludeUsers": [],
22       "includeGroups": [],
23       "includeRoles": [],
```

OK

Policies management

DEMO

- Review policies

- Changes, backup & restore

- Version Comparision

- Assignment

Quiz time!

- Scan the QR code to the right or open the short link in a browser.

- Complete the exam.

- Once you've passed the exam, bring a screenshot of your completed score to the registration desk to claim your certificate.

Good luck!

https://nerdio.co/Nerdio_PreCon_W365