Microsoft

Windows 365 PoC

Windows 365 Overview

Agenda

What is Windows 365?

Deployment process and requirements

End-user experience

Azure AD – MyApps integration

Endpoint client features

End-to-end security

Monitoring and analytics

Universal Print

Next Steps

What is Windows 365?

Welcome to your Windows 365 Cloud PC

A new solution for today's hybrid workforce

Your content
wherever you go

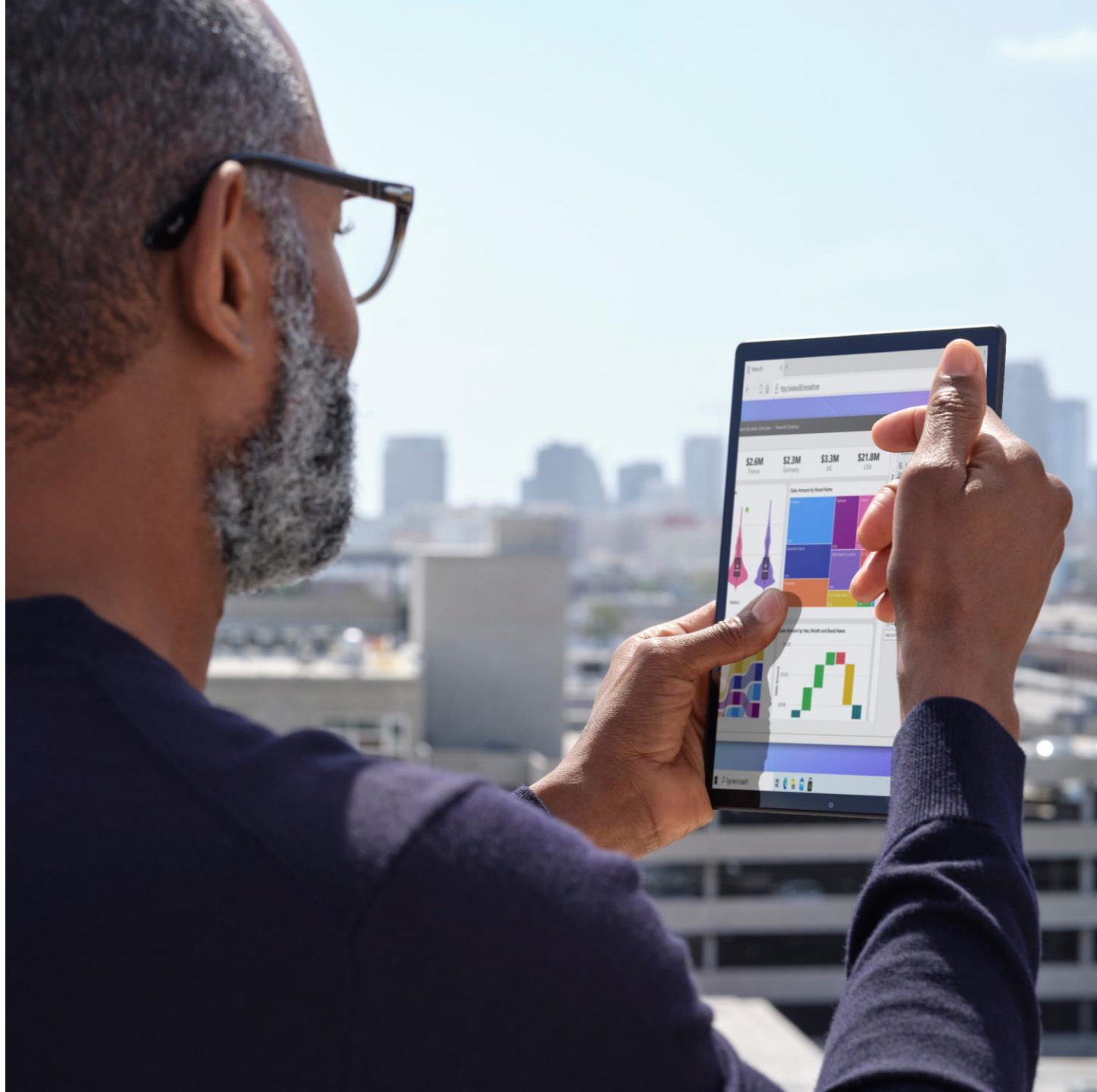
Compute options
for different users

Consistent settings
across devices

The **apps** you need,
when you need them

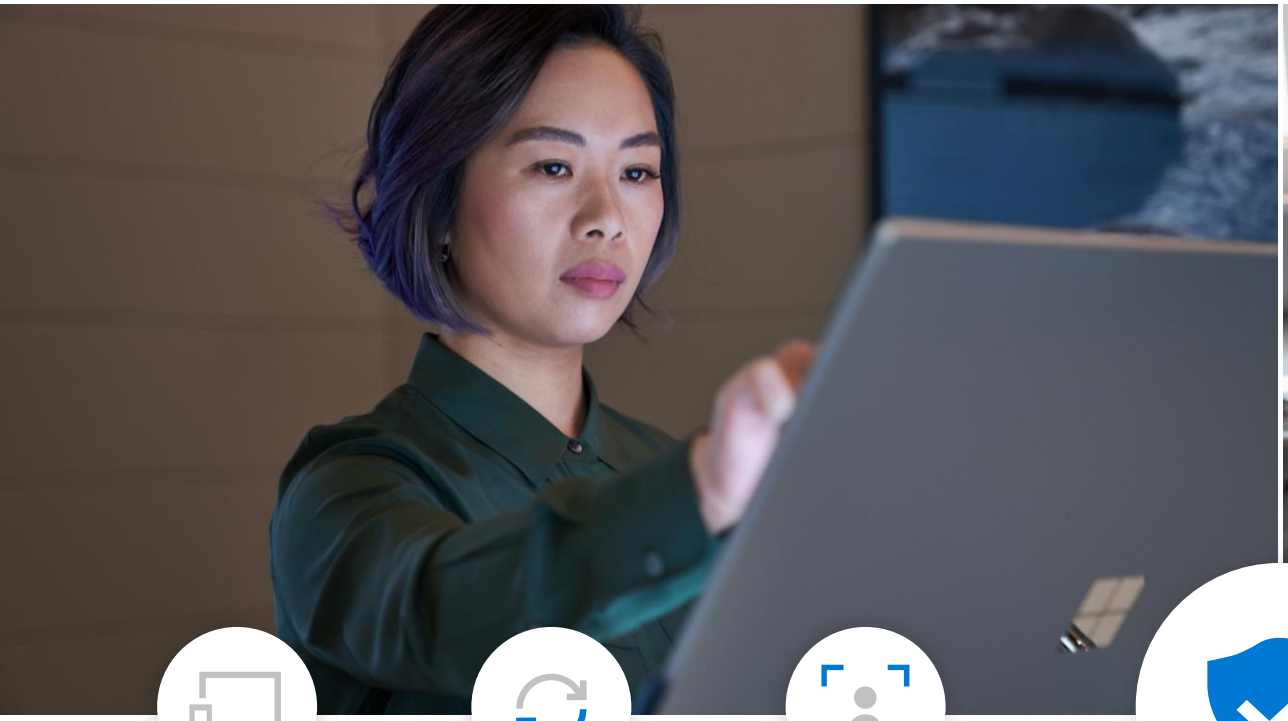
Scalable storage
based on your needs

Integrated **unified security** and **identity management**



Windows 365, your Windows in the cloud

Loved by users

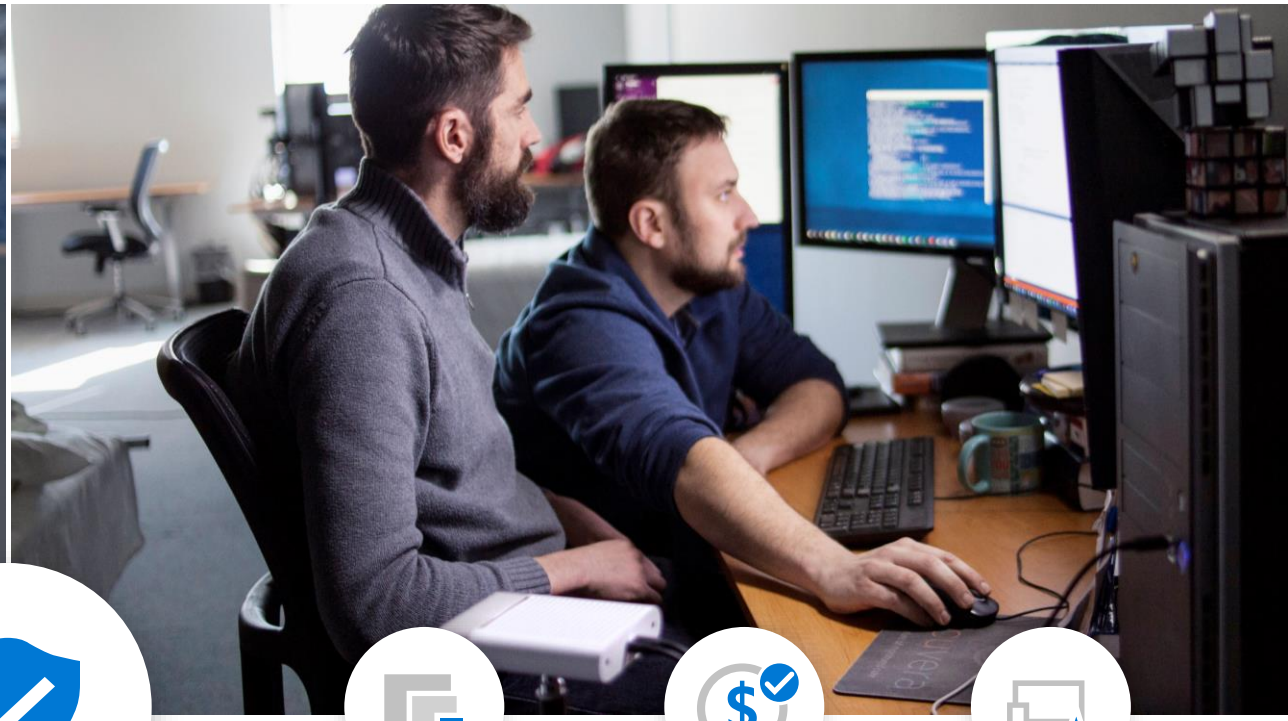


Streamed to any devices

Always ready and updated

Personal and familiar

Trusted by IT

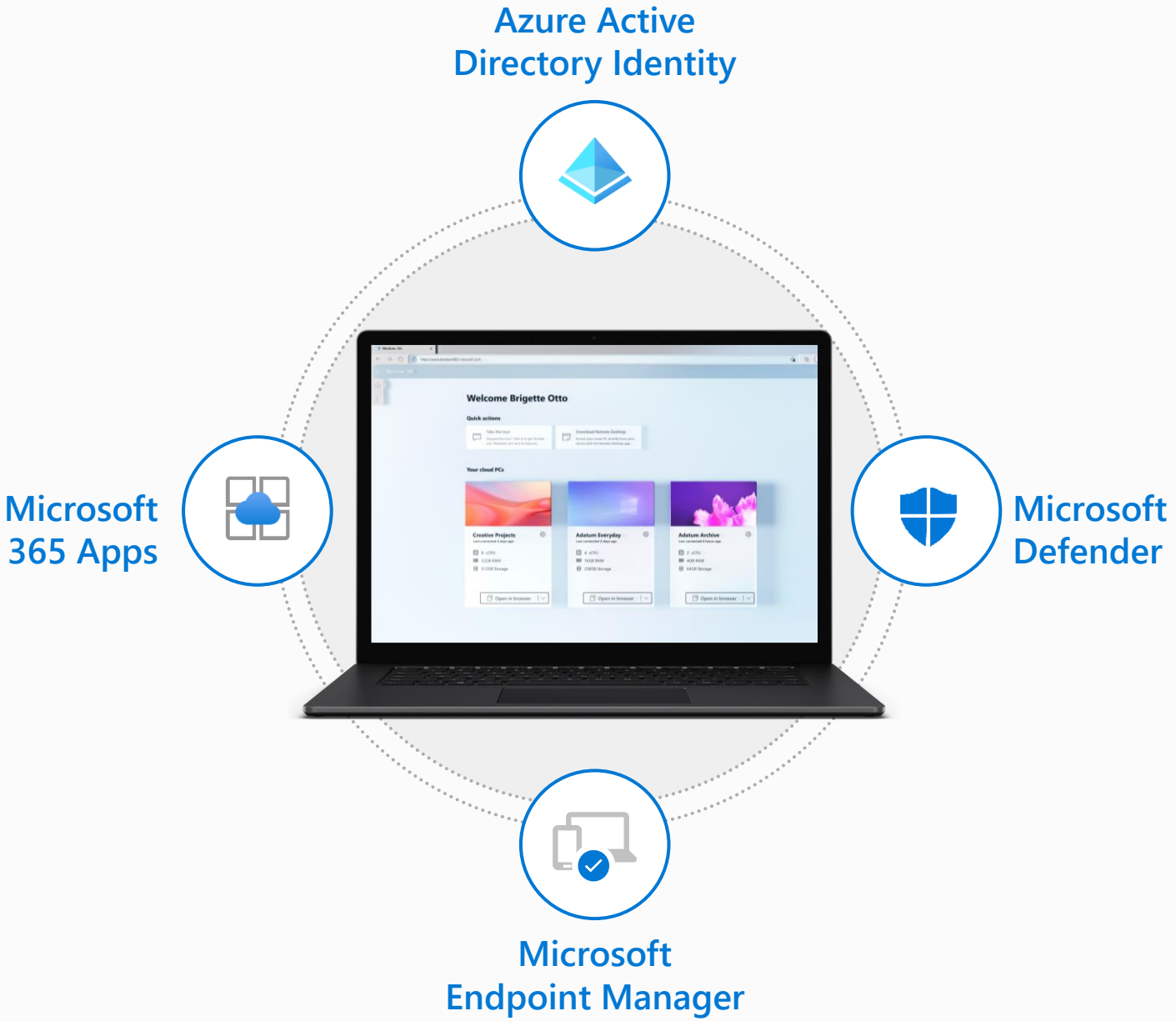


Scalable and resilient

Predictable costs

Simple to buy, deploy, and manage

Works seamlessly with Microsoft cloud services



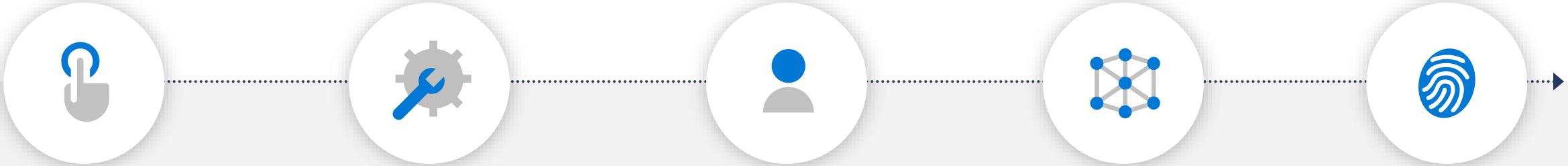
Technical and license requirements

License	Users w/ Windows Pro endpoints: W10/11 E3 + EMS[1] E3 or M365 F3/E3/E5/BP Users w/ Non-Windows Pro endpoints: Win VDA E3 + EMS[1] E3 or M365 F3/E3/F5/BP
Azure Subscription	At least 1 needed for an Azure Virtual Network
Network	Azure Virtual Network with line of sight to Domain Controller
Machine Identity	Hybrid Azure AD Join (HAADJ)
User Identity	Hybrid users (AD + AAD)
Image	Gallery or BYO in Azure (Win10 Ent 19H1+)
Management	Microsoft Endpoint Manager (supports MECM co-management)
Admin Permissions	M365: Intune Service Admin (standard MEM RBAC after provisioning) Azure: Subscription Owner (setup network connection)

1. Intune + AADP1 can be used as substitute for EMS E3

Deployment process

Deployment process



Azure subscription

Configure Azure Active Directory (Hybrid AADJ)

Windows 365 licenses in Microsoft Endpoint Manager Admin Portal

All associated Azure resources (virtual network, optional: custom image) **per Windows 365 region**

Required credentials (Azure AD, AD service-account, Intune Service Admin, Azure subscription owner, etc.)

Deployment process

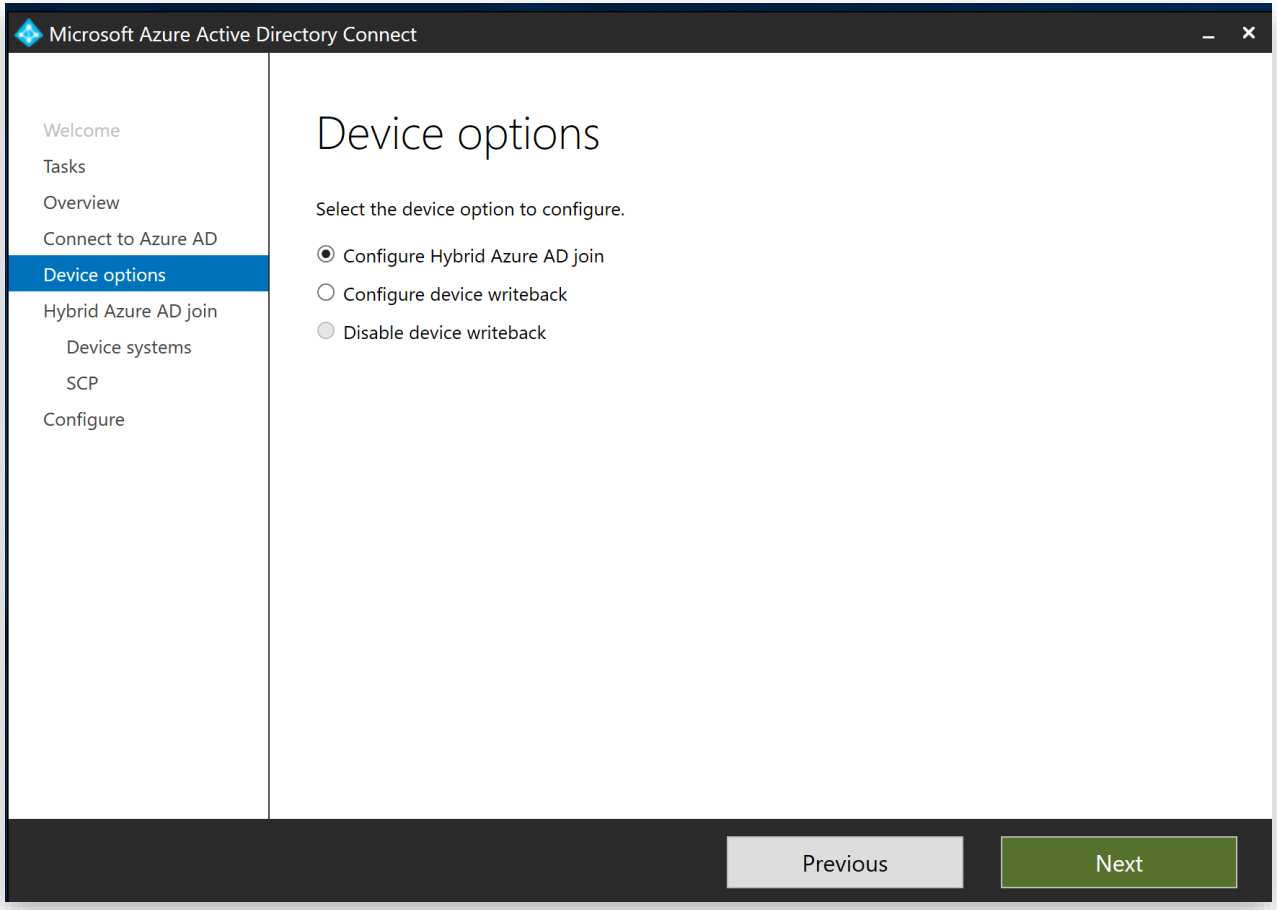
Identity requirements

Hybrid Azure AD (HAADJ)

Bringing your users to Azure AD maximizes user productivity and increases security.

Configure **Hybrid Azure AD** — join as part of your Azure AD Connect configuration.

Note: **Azure AD (AADJ)** support is coming soon.



Deployment process

Network requirements

Network requirements and considerations

Requirements

Virtual Network (vNET) in **customer's** Azure **subscription** is strongly recommended to be in same region as Windows 365.

Azure vNET virtual Network must **route** to a **DNS** server that can resolve Active Directory records either on-premises or on Azure.

This **AD** must be **in sync** with **Azure AD** to provide hybrid identity in AAD via Azure AD Connect.

VMs are **joined** to **Active Directory** and hosted by Microsoft.

Considerations

	Connectivity Type	Special Considerations
ExpressRoute	Hybrid	Dedicated network through service provider
Site-to-Site VPN	Hybrid	Limited bandwidth compared to ExpressRoute

Bandwidth costs

Customers are charged for outbound network bandwidth utilization of their Cloud PCs via their **Azure subscription**

Outbound Data Transfers	Costs
First 5 GB/month[1]	Free
5 GB - 10 TB/month[2]	$0.087 per GB
Next 40 TB (10-50 TB)/month	$0.083 per GB
Next 100 TB (50-150 TB)/month	$0.07 per GB
Next 350 TB (150-500 TB)/month	$0.05 per GB

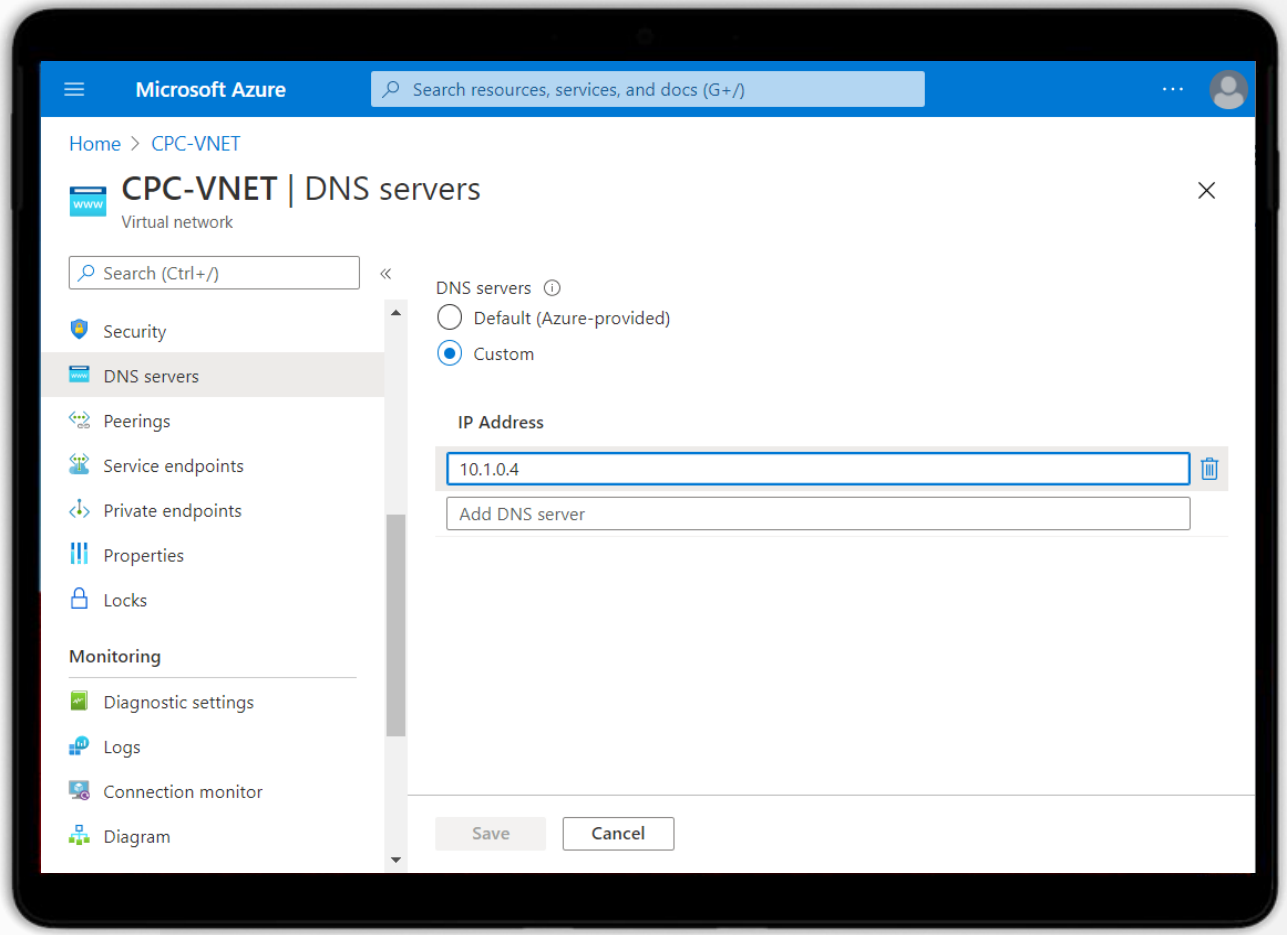
[1] Inbound data transfers (i.e., data going into Azure data centers) is free.

[2] Azure ExpressRoute provides unlimited data bundles for outbound traffic.

Active Directory | Network requirements

The **Azure Virtual Network** must **route** to a DNS server that can **resolve** on-premises **Active Directory** records.

Make sure that your Azure vNET is pointing to your AD DS – DNS server.



Deployment process

Required service URLs

Required service URLs

Windows 365 service URLs and ports

The Azure Virtual Network(s) (VNET) you create for Windows 365 is required to have **outbound TCP** access to the underlying services we use as part of the firewall rules in the customer's Azure subscription.

Find the full list of all the required Azure Virtual Desktop URLs at https://aka.ms/W365URLs

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Find the full list of all the required MEM URLs at aka.ms/MEMURLs

Deployment process

Configure licenses

Product licenses SKUs available

The following per user, per month licenses are available during launch; more will be added later.

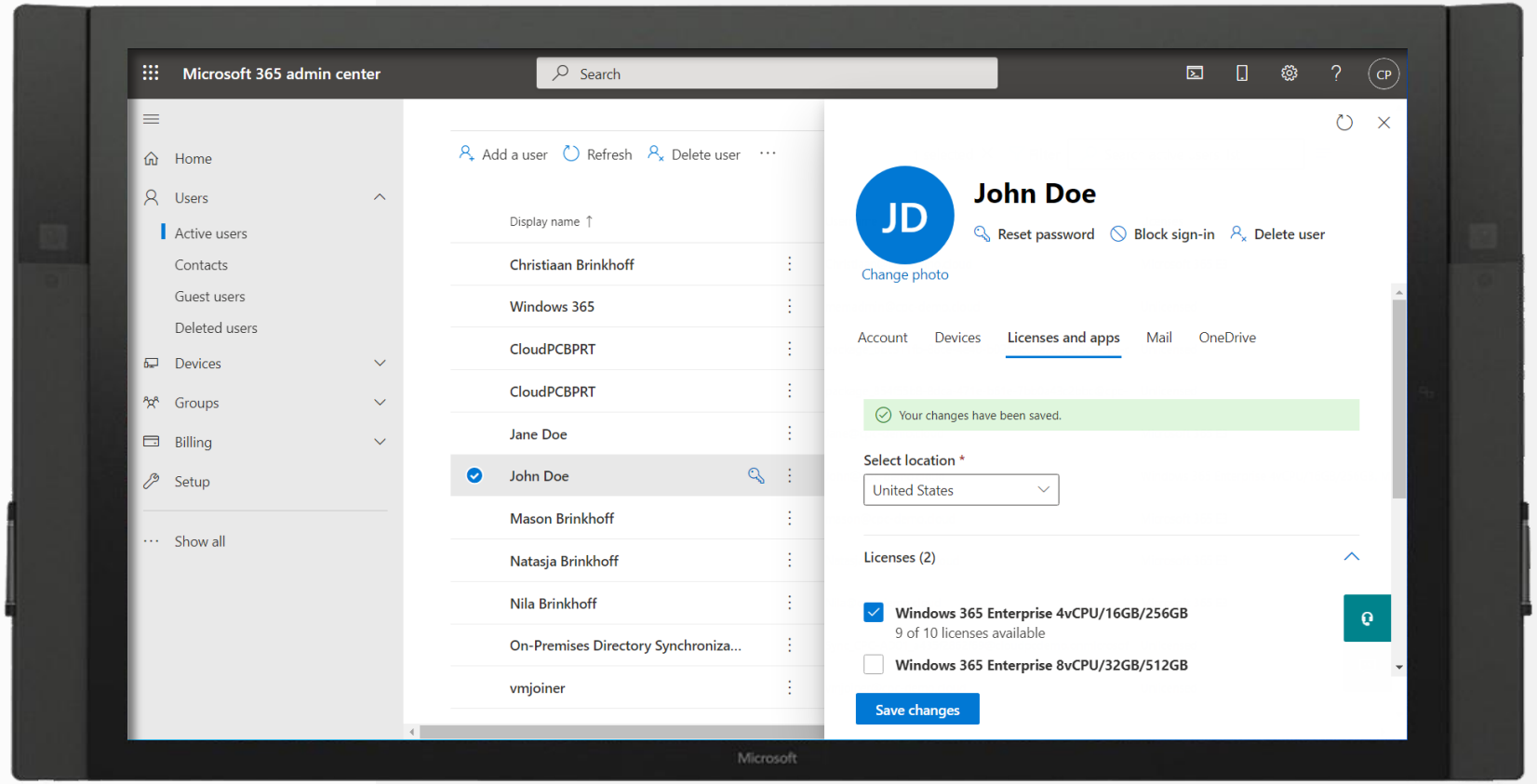
VM/OS Disk Size	Example Scenarios	Recommended Apps
1 vCPU/2 GB/64 GB	Firstline Workers, Call centers, Education/Training/CRM access	Office light (web-based), Microsoft Edge, OneDrive, lightweight line-of-business app (e.g., call center application—web-apps), Defender support
2 vCPU/4 GB/256 GB **2 vCPU/4 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, 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, 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, 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**	Software developers, Engineers, Content creators, Design and engineering workstations	Microsoft 365 Apps, Microsoft Teams, Outlook, Access, OneDrive, Adobe Reader, Edge, Power BI, Visual Studio Code, Line-of-business app(s), Defender support

Assign the licenses

Assign Windows 365 licenses in the Microsoft 365 admin center portal.

- Go to **active users**
- Open the **user(s)**
- **Assign** the Windows 365 Cloud PC size **license**

These steps can also be performed from the Azure Portal or automatically via Azure AD group assignment for bulk scenarios.



Deployment process

Connect to on-premises

Connect to on-premises

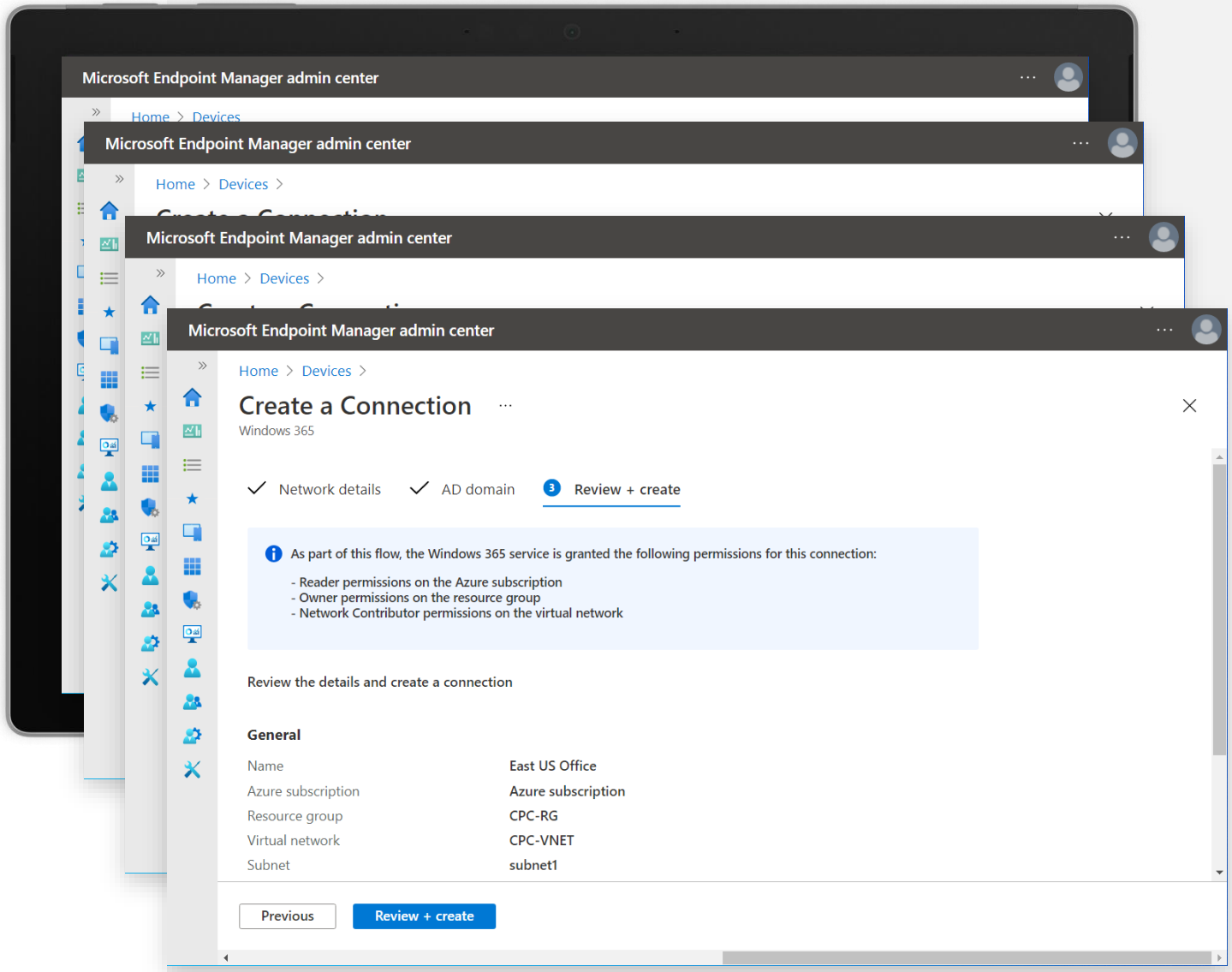
Create the connection to the on-premises environment for your line-of-sight connection to AD DS.

You should have Network Contributor Rights on the VNET to perform the steps above.

- Click the On-premises network connection tab
- Click Create connection
- Enter the AD DS required information

Notes:

- The **Organizational Unit** (OU) section is optional. If you enter in the OU location, make sure you enter in the distinguished name (DN).
- The **AD domain username** is a service account that must have permission to join computers to the domain and, if set, the target OU.

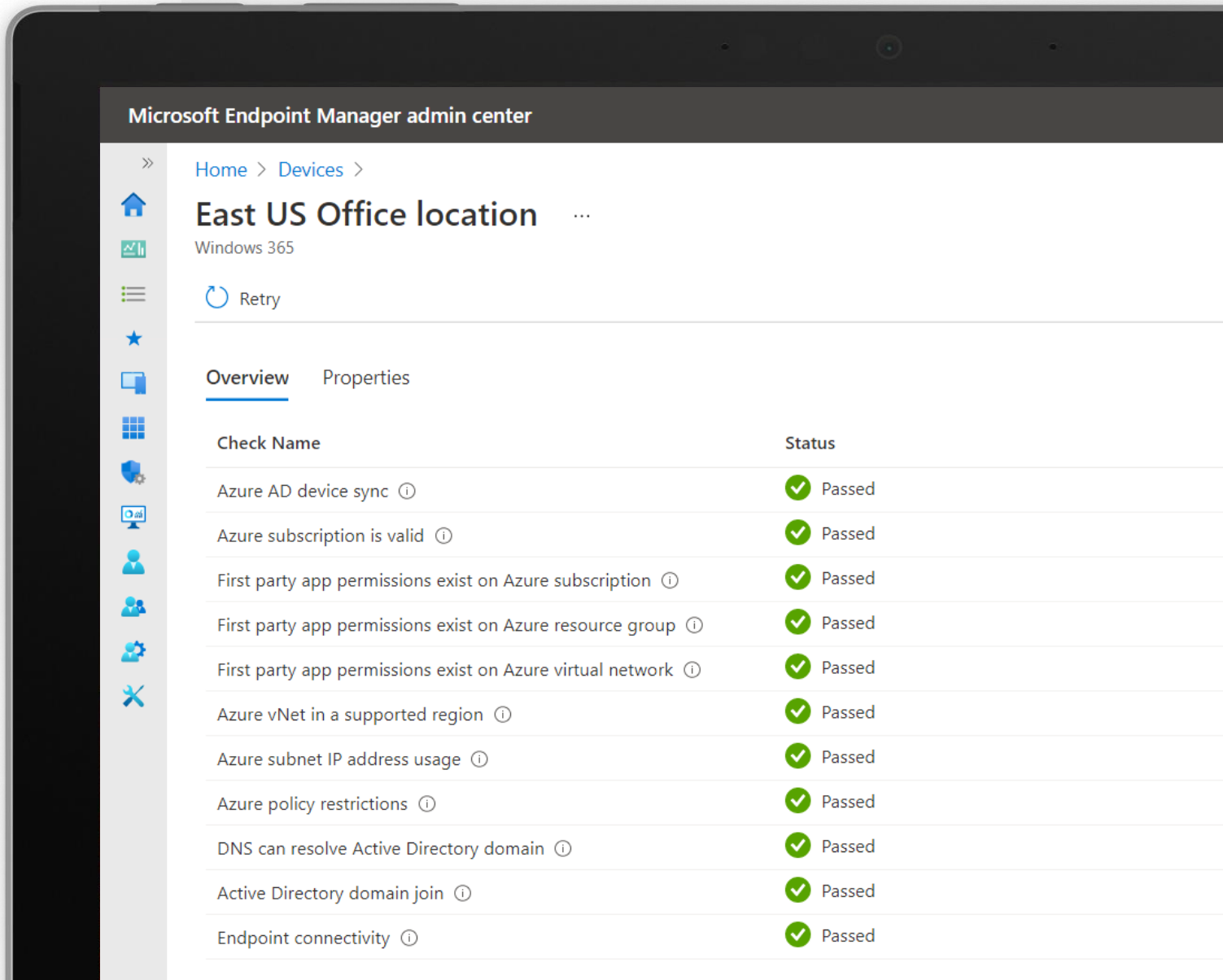


Deployment process

Watchdog Service

Network config Watchdog Service

Unblocks every deployment



Deployment process

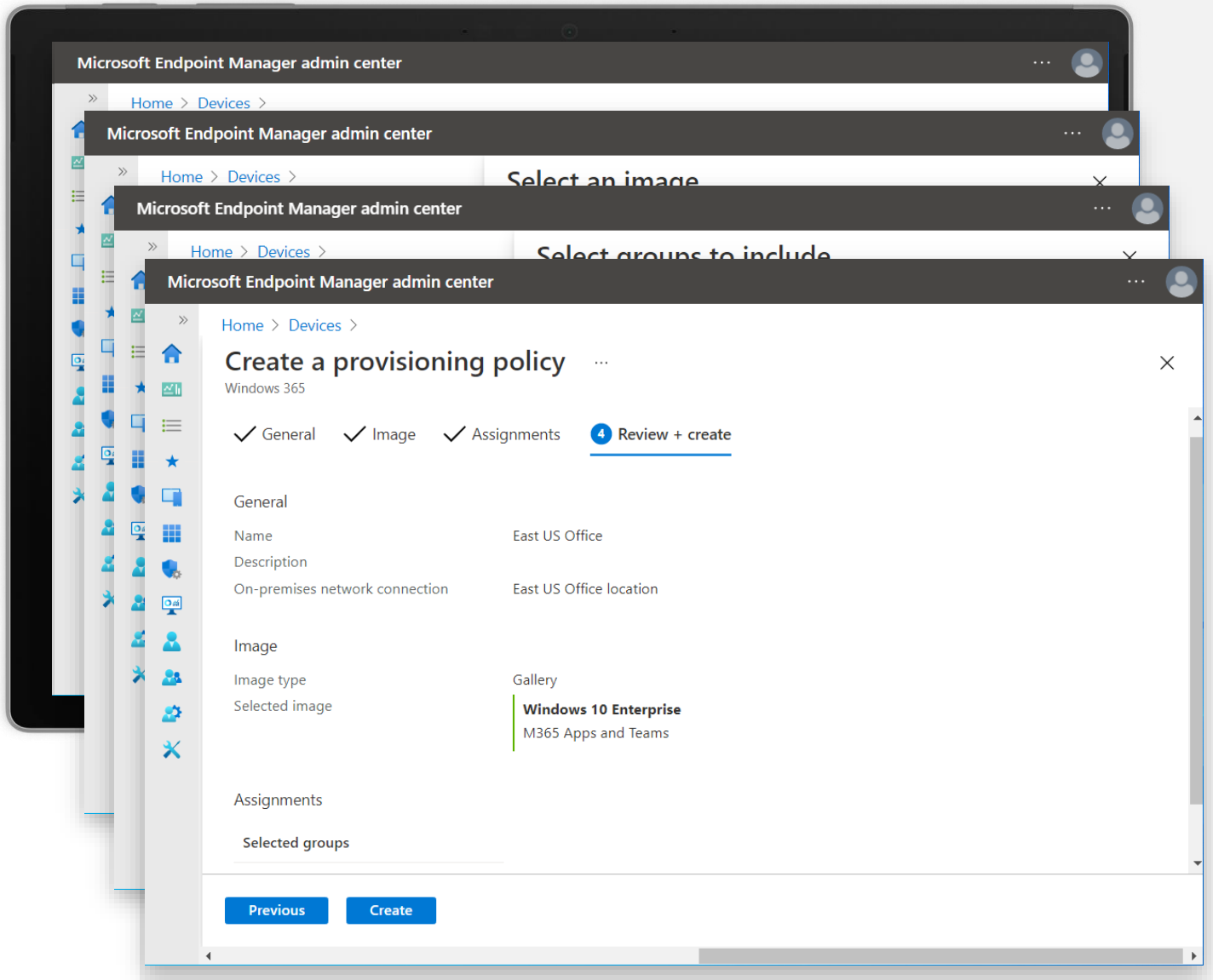
Create the provisioning policy

Create the provisioning policy

The provisioning policy includes fundamental configuration settings for the Cloud PC provisioning process.

- Click on the **Provisioning policies** tab
- Click **Create policy**
- Enter the **name**
- Select your **On-premises network** connection
- Select your **Windows image**
- Assign the **Azure AD group**

Note: We recommend that you use Microsoft Endpoint Manager to publish line-of-business applications to your users—and use our gallery images as baseline.



Cloud PC gallery images

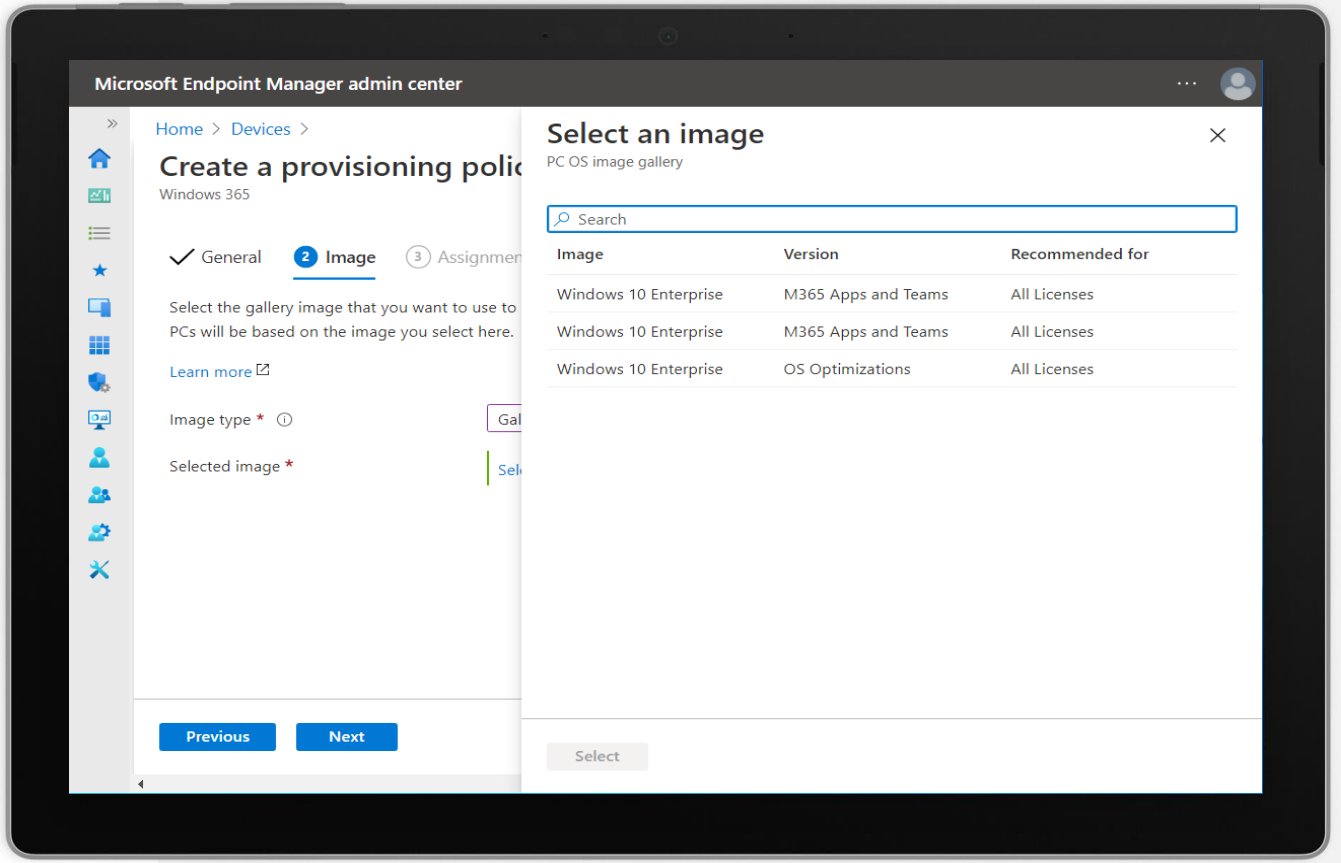
Microsoft Cloud PC provides a built-in gallery for Windows Enterprise images.

Images with pre-installed M365 Apps

These are images with M365 Apps and Teams optimizations installed by default, ready to go for your users' productivity.

Images with VDI/OS optimizations

These are base Windows Enterprise images with optimizations applied to perform well on virtualized environments and lower-end hardware configurations.



Custom images | Add your own image

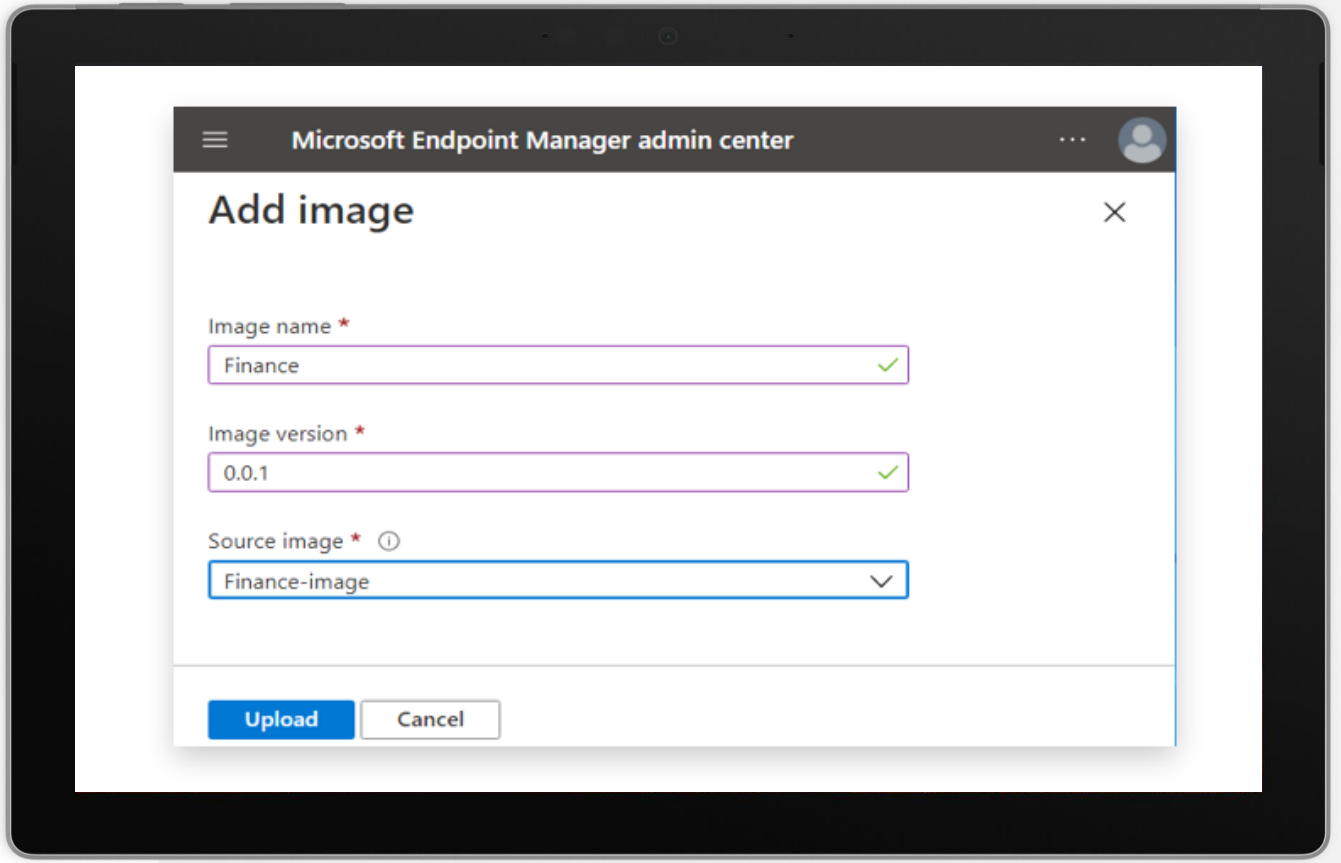
Personalize your Windows 365 Endpoints.

If you need to use your own existing **custom images** as baseline, you can add your own images with applications to your Windows 365 Endpoints.

During the **creation** of the **provisioning policy**, you have the option to provide **versioning** of images for easier management.

Microsoft provides the **global replication** of custom images to any datacenter region.

Note: Customers must create an Azure Managed Image in the same resource group and region as their on-prem network connection.



Deployment process

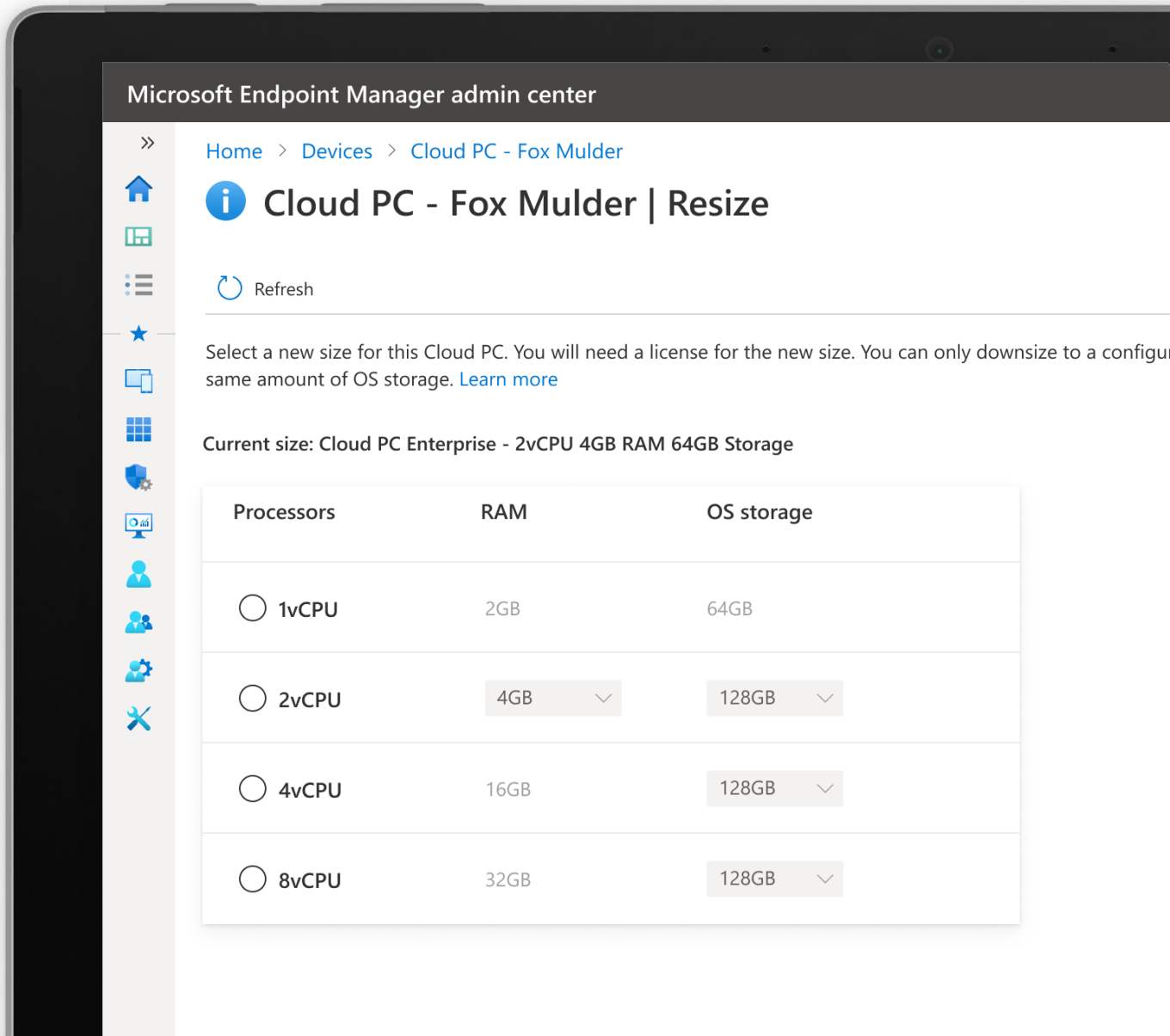
Cloud PC resize (preview)

Resize your Cloud PC (preview)

Upgrade your users' Cloud PCs instantly for more resources and performance.

- Click on **Devices**
- Click on the **Cloud PC device**
- Select the **new Cloud PC size**

Note: This feature is currently available in preview. User data and settings remain the same after the resize.



End-user experience

Web portal access

Cloud PC web access

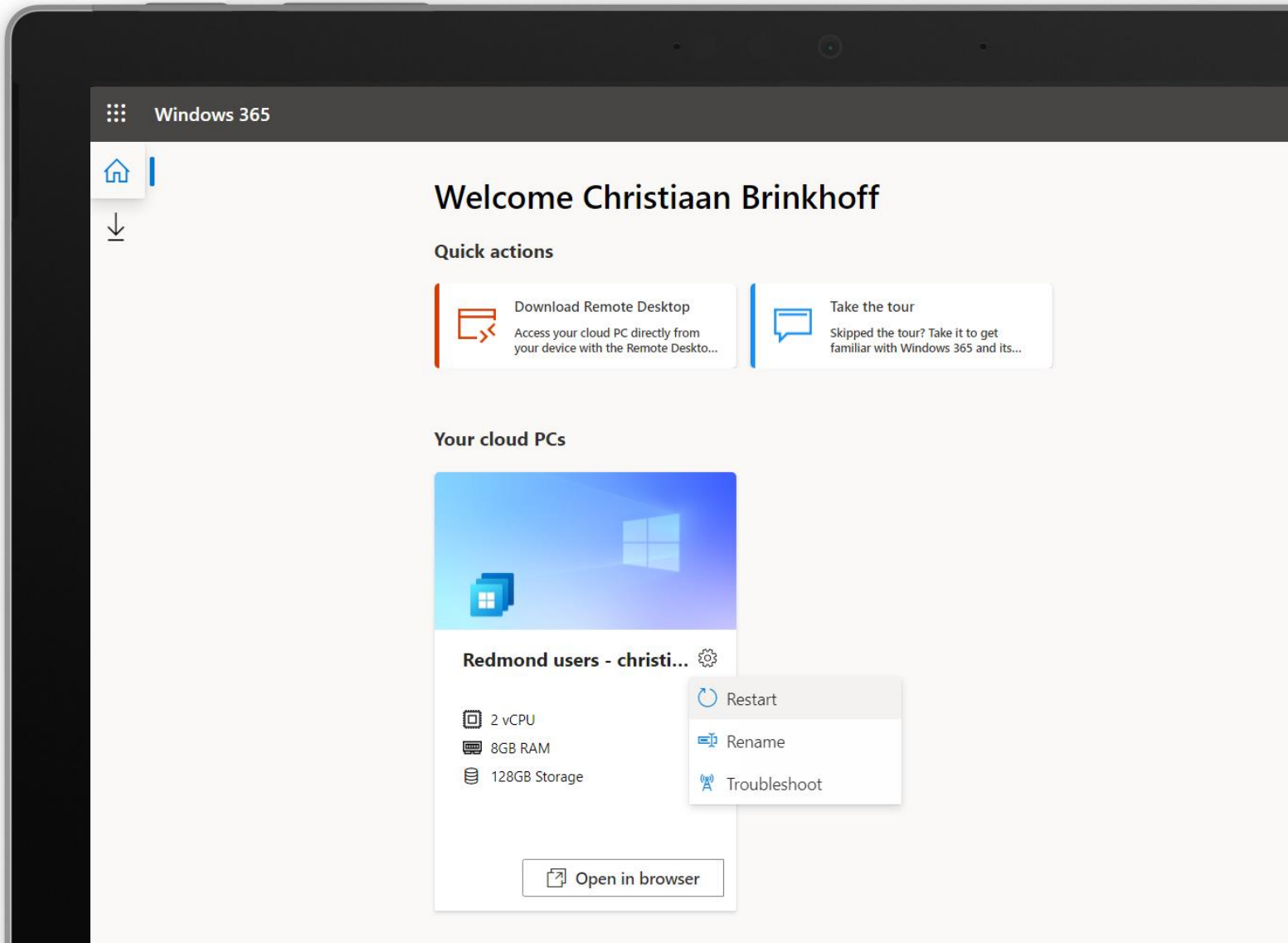
Work smarter.
Work from anywhere.

Navigate to cloudpc.microsoft.com

You will see your **desktops** and the option to connect to it

Self-service user capabilities

- Reboot your workspace
- Rename your desktop
- Troubleshoot your connection



Azure AD - MyApps integration

Cloud PC | Azure AD MyApps

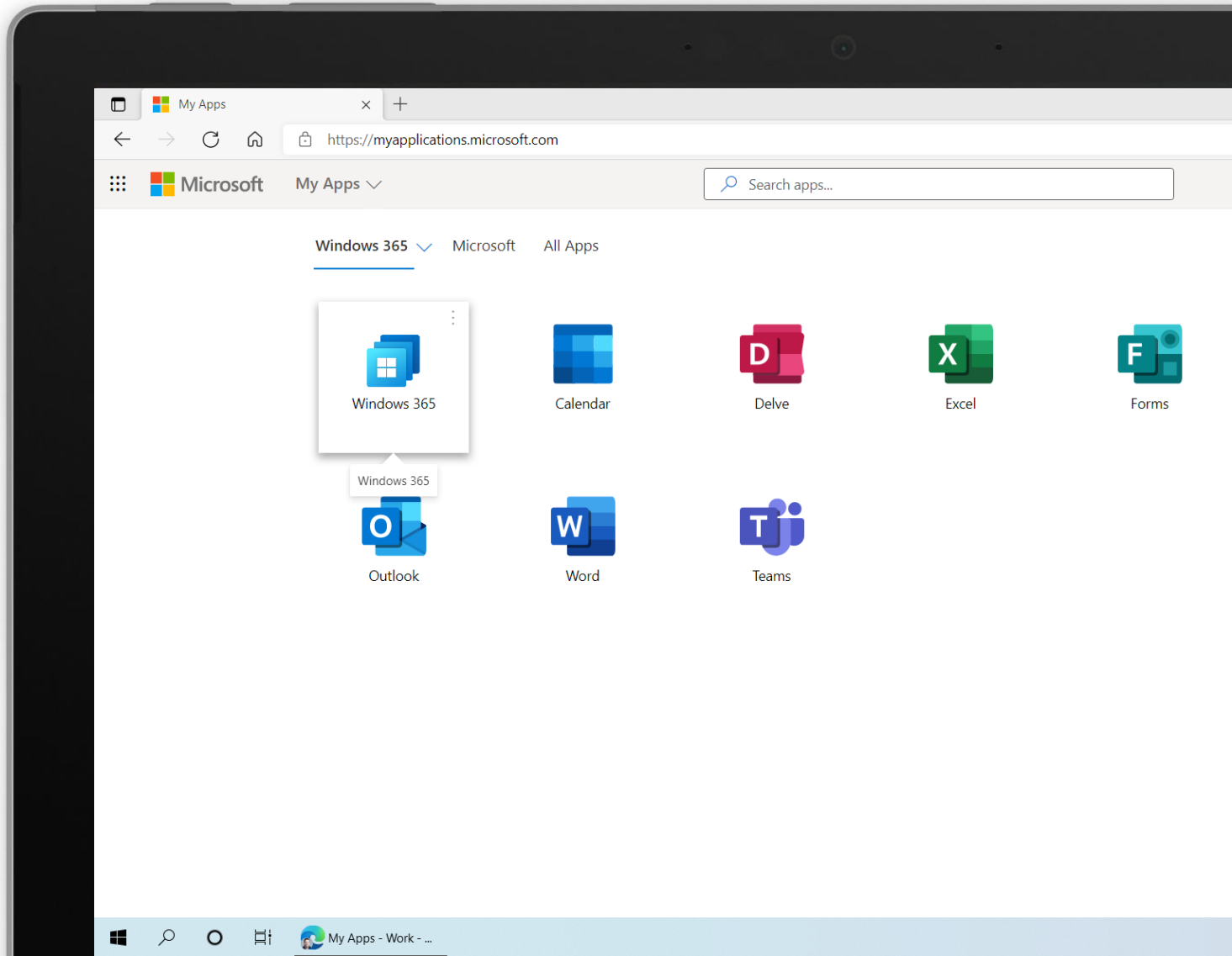
All your apps combined.
In one place.

You can access and use the MyApps portal on your computer, or from the mobile version of the Edge browser on an iOS or Android mobile device.

Navigate to myapplications.microsoft.com

You can **access** your **Cloud PC** and your other SaaS applications

Create collections to group your favorite apps



Endpoint client features and protocol improvements

Client features | What's supported per endpoint device?*

	Windows Desktop (MSRDC)	Microsoft Store client (URDC)	Android	iOS/iPadOS	macOS	Web Portal
Keyboard	X	X	X	X	X	X
Mouse	X	X	X	X	X	X
Touch	X	X	X	X		X
Pen	X		X (as touch)	X (as touch)		
Serial port	X					
USB	X					
Teams AV redirection	X					
Multimedia redirection	Coming soon					
Cameras	X			X	X	
Clipboard	X	X	Text	Text, images	X	text
Local drive/storage	X		X	X	X	X
Location	X					
Microphones	X	X	Coming soon	X	X	In preview
Printers	X				X (CUPS only)	PDF print
Scanners	X					
Smart Cards	X				X (Windows logon not supported)	
Speakers	X	X	X	X	X	X

* Go to this page for the latest information: https://docs.microsoft.com/en-us/windows-server/remote/remote-desktop-services/clients/remote-desktop-app-compare

Protocol improvements

RDP 7.0 (2007)

- RemoteApp
- True Multimonitor
- Easy Print

RDP 7.1 (2009)

- RemoteFX Bitmap remoting
- RemoteFX vGPU
- RemoteFX USB redirection

RDP 8 (2012)

- Adaptive graphics support
- Low bandwidth support (UDP)
- RemoteFX Progressive Calista Codec
- Video-optimized remoting using H.264/AVC
- Multitouch

RDP 8.1 (2014)

- H.264 desktop remoting support for low-powered devices such as Windows RT

RDP 10.x (2015-2020)

- H.264/AVC 444 codec
- Pen remoting
- Clients for MacOS, iOS, Android, and Linux
- Camera redirection
- 4K remoting improvements
- RD sessions can be load balanced across multiple GPUs on the server
- Improve graphics encoding performance when misclassification is detected
- Display drives redirected over RDP in a dedicated File Explorer group
- Lift 4 GB limit when copying files via clipboard redirection
- URCP
- 4K DDS Dynamic Downsampling
- mGPU—E Smart Load Balancing
- RemoteFX vGPU deprecation
- Camera Controls Redirection
- MFT-based codecs
- Toast notifications for RemoteApp
- Performance Improvements on networks with inherent loss
- GPU-P
- RDPIDD single user
- Teams AV redirection
- Web client—disk redirection
- X1 (UDP support)
- Reverse-connect

12 features in 8 years

24 features in 5 years

End-to-end security

Windows 365 Security | Built on Zero Trust principles

Cloud Value

Reliable patching
Always online means timely and consistent updates applied across all your PCs

Reduced threat exposure
Intelligent access control and real-time monitoring/mitigations

Prevent data leakage
Clean isolation of sensitive data prevents employee mistakes

Unlock BYOPC
Unmanaged personal devices securely access all corporate apps and data

Standard Cloud PC users
Users don't have local administrator rights by default

Intelligent and tightly integrated cloud security stack

Identity

Azure Active Directory

Security management

Microsoft Endpoint Manager

Endpoint security

Microsoft Defender for Endpoint

Microsoft Defender for Windows 365 in MEM

Microsoft Defender for Endpoint supports Windows 365 Cloud PC

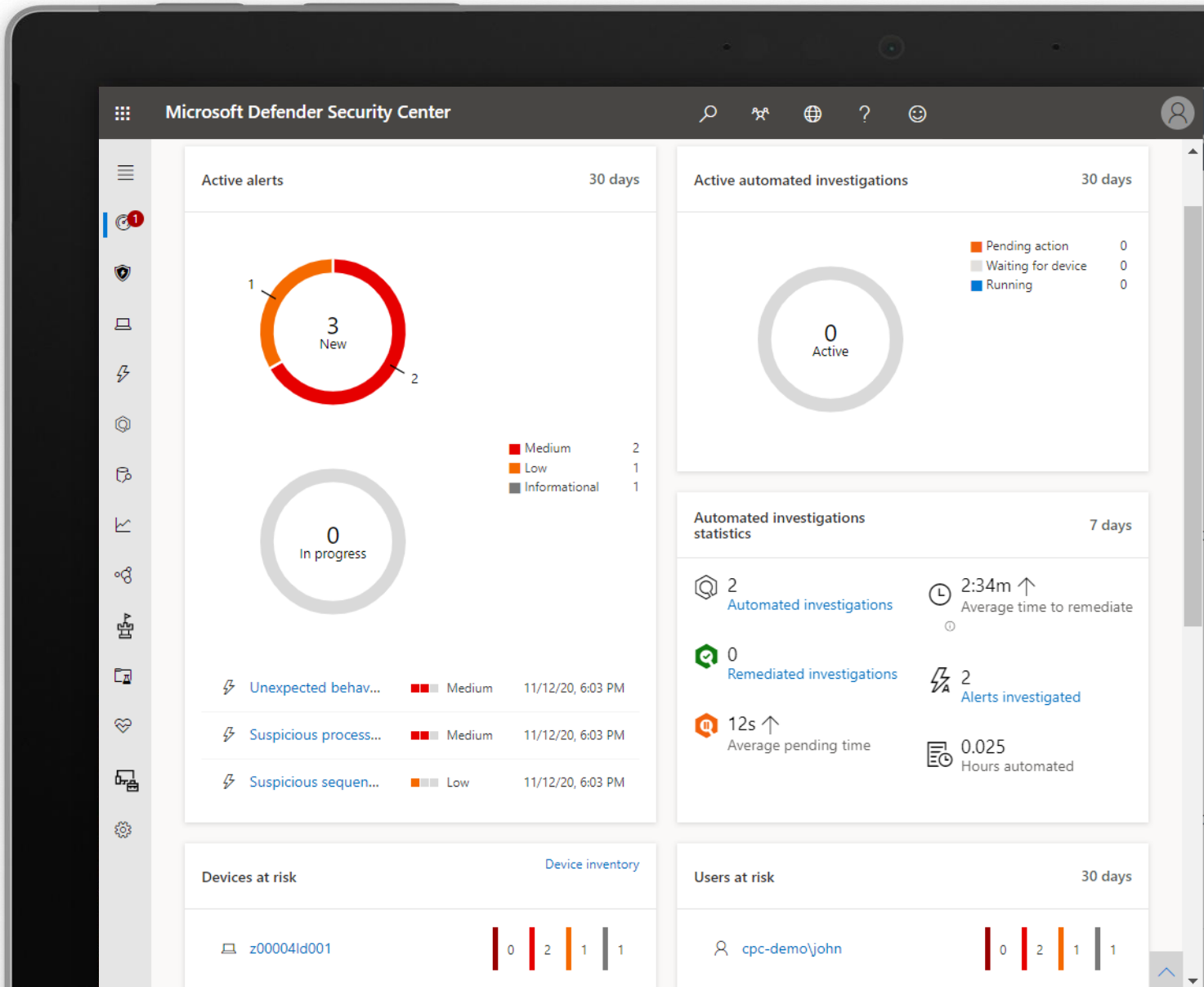
Next-generation antivirus

Endpoint detection and response

Threat vulnerability management

Patch software vulnerabilities

Update live host or redeploy using latest gallery image



Monitoring and analytics

Windows 365 Endpoint analytics | Six categories

***NEW report in EA**

Resource performance

CPU Spike time %

RAM Spike time %

***NEW report in EA**

Remoting connection

RD Client log-in time

RD Client log-in failure

Round Trip Time (RTT)

Include CPC sign-in time

Start-up performance

Boot time for Windows 365 Endpoint

Logon duration/time for Windows 365 Endpoint

Include CPC remediation scripts

Proactive Remediations

Automated actions to remediate common issues with Windows 365

Include CPC devices

Recommended Software

Windows 10 version

AAD devices

Intune devices

Include CPC devices

Application Health

Cloud PC App usage and crashes

Endpoint analytics

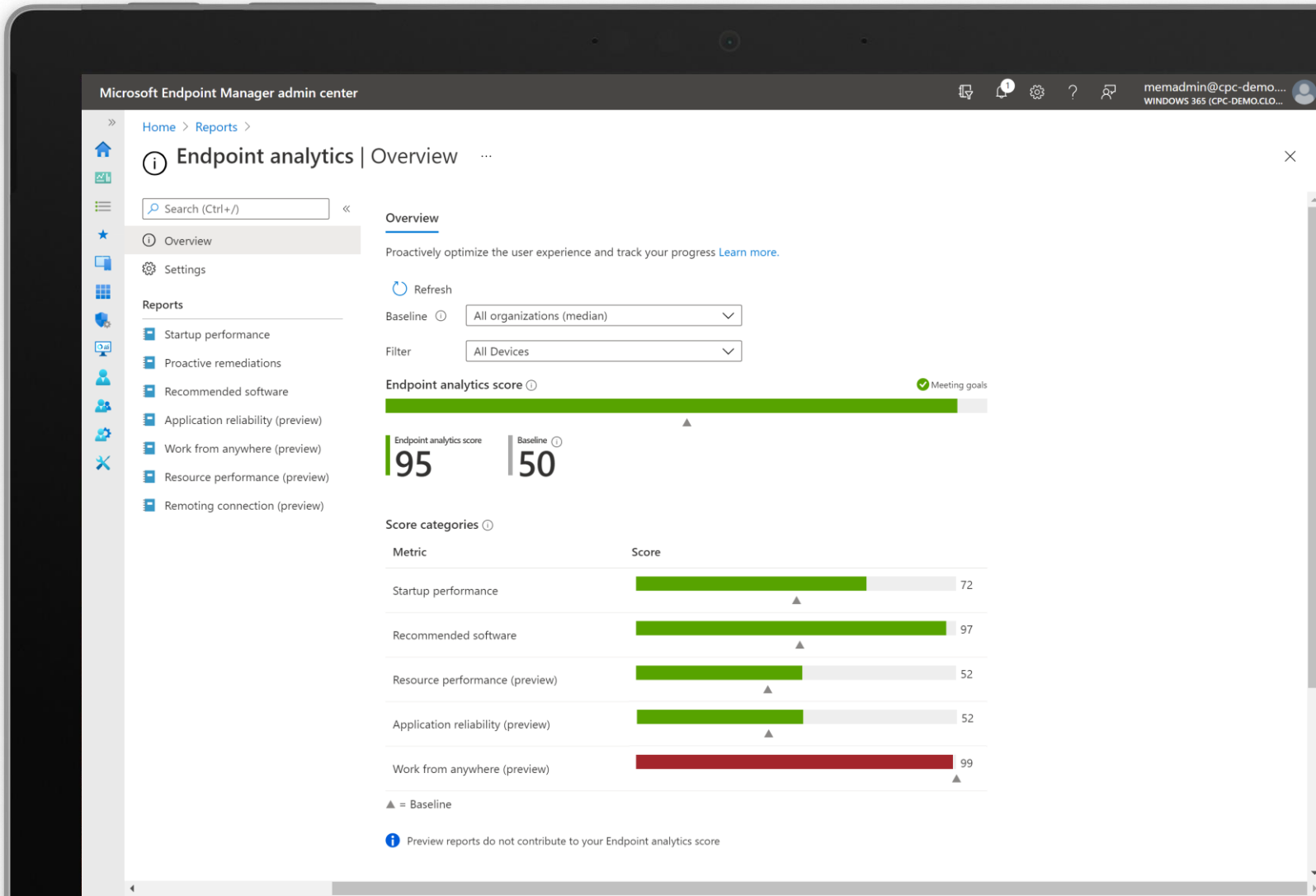
Measures how your organization is working and **quality of the experience** for end users.

Quantifies performance and projected improvements

Includes log-on duration, RD Client metrics: Round Trip Time, RD Client log-on time, and failures

Provides support for recommended actions: Upgrade actions

Endpoint analytics is part of Productivity Score



Endpoint analytics

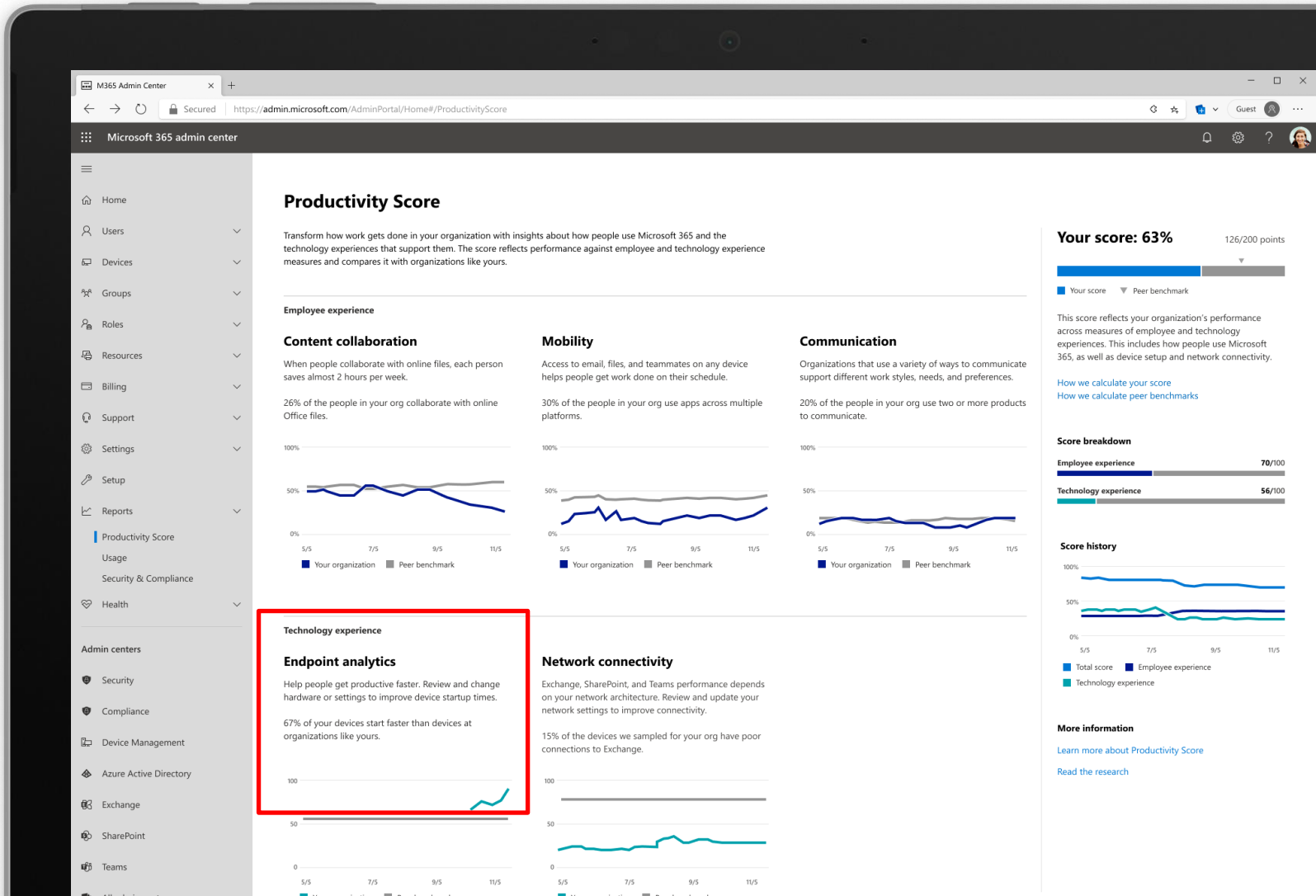
Improve your Productivity Score with Windows 365

Quantifies how technology is enabling **productivity** through Endpoint analytics

Understand how user productivity is impacted by underlying technology **performance** factors

Drive **focus** on areas for improvement

Assigns points across technology areas based on overall experience **impact**



Universal Print

Universal Print for users

Users enjoy a user-friendly, no-learning-curve experience

View, add, and print only to printers that user has access to

Search from a large catalog of printers both near and outside of the current location

Eliminate the need to install printer drivers

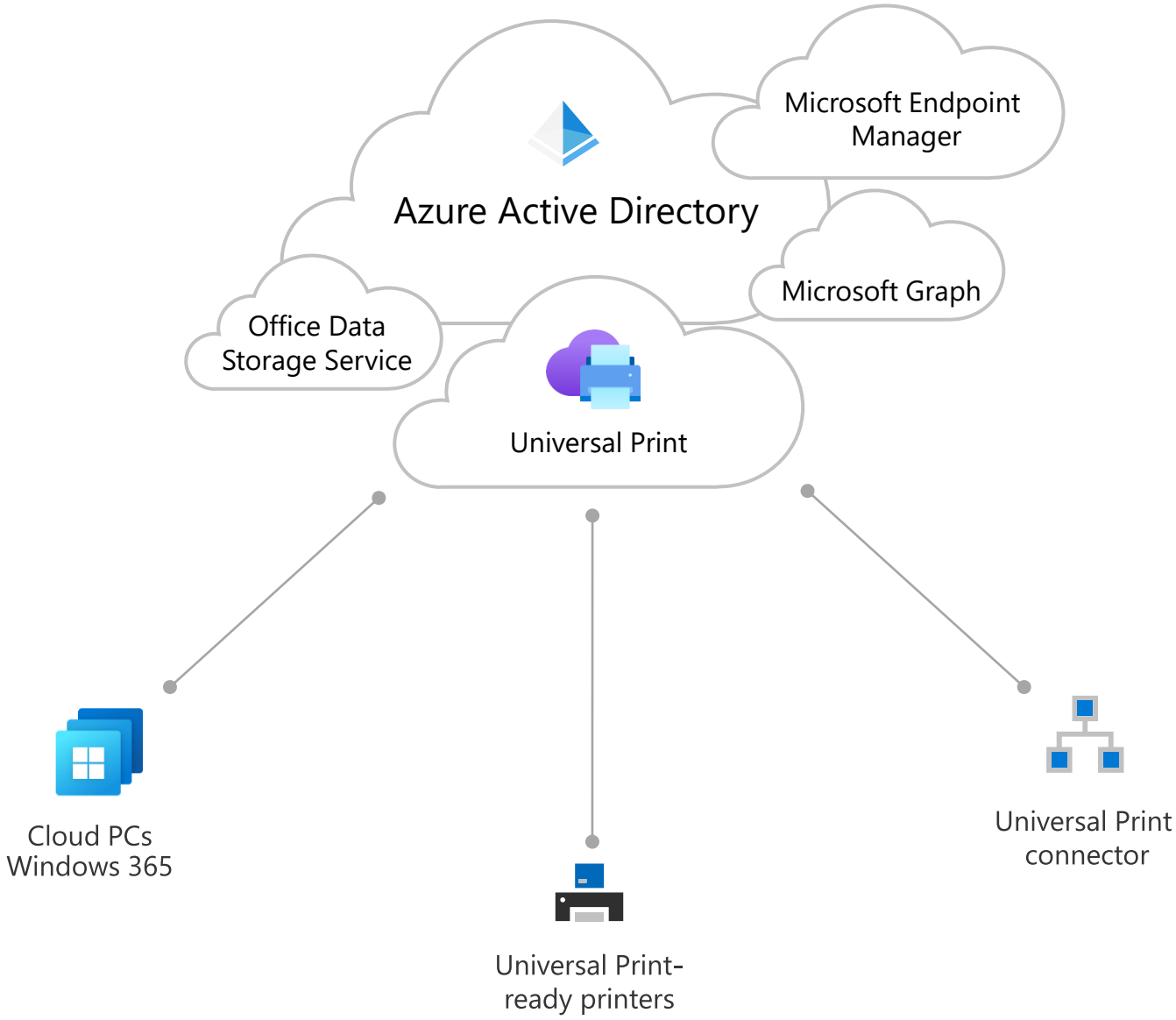
Print from anywhere when connected to the internet and authenticated to Azure AD

How it works

IT registers printers in Azure AD, and publishes attributes such as location

Users easily discover nearby pre-configured printers, add the desired printer, and simply print

IT manages print and receives reports and insights into print usage



Next steps

Next steps

1. Review recorded settings for the Enable Windows 365 session
2. Continue with the Azure Virtual Desktop Overview session

Questions and answers

Microsoft

Thank you.