



The definitive **Azure** solution for **MSPs**.™

Windows Virtual Desktop Fundamentals for MSPs

Tony Cai, Partner Sales Executive



Nerdio's mission is to **empower MSPs** to build successful cloud practices in Microsoft **Azure**.



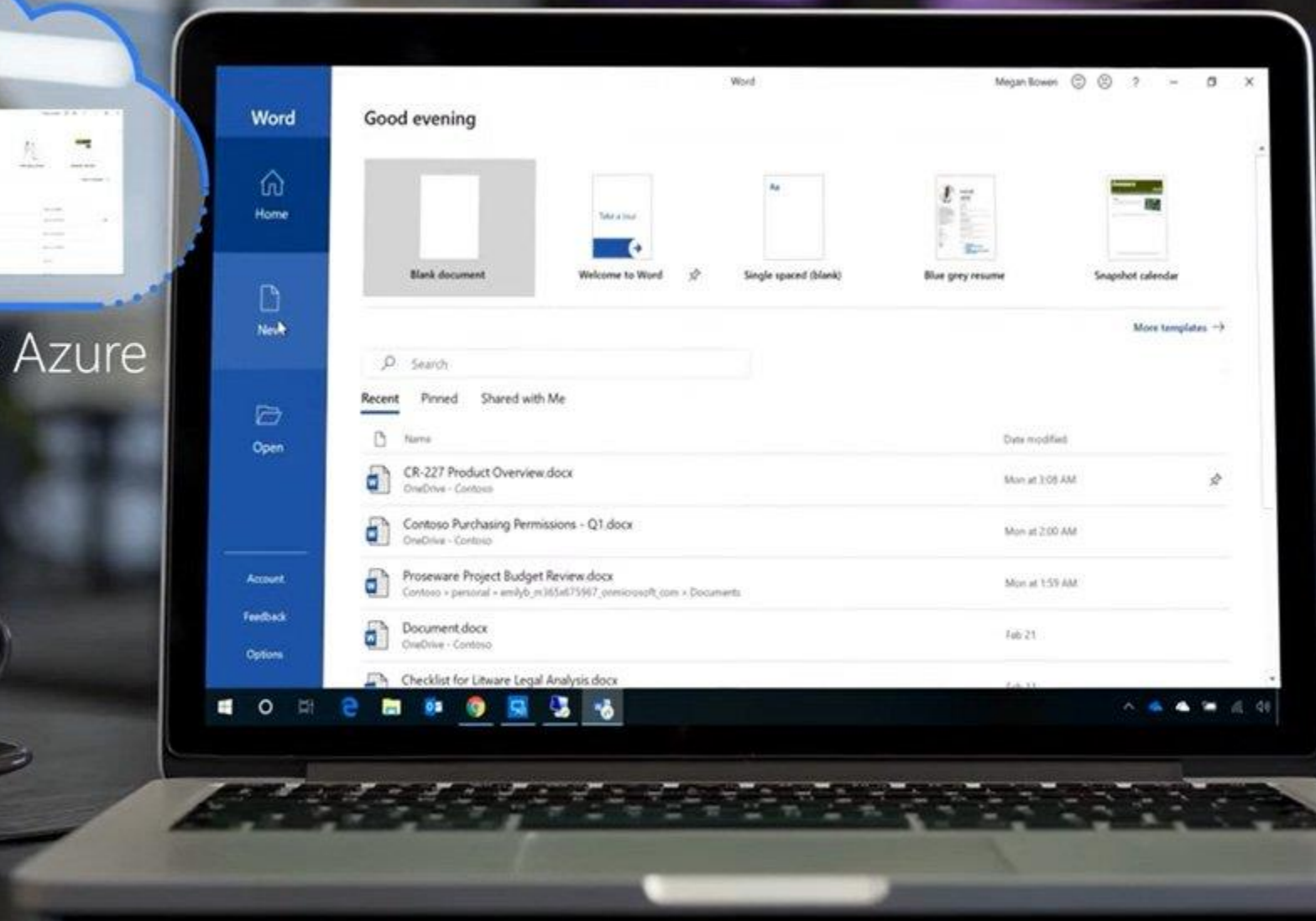
What is the
problem we are
trying to solve?

Get clients into **the cloud**:

- 1) Problems hosting LOB apps over a VPN
- 2) Multi-site office looking to decentralize
- 3) Generating MRR in the cloud, how?
- 4) Increase operation efficiencies, how?
- 5) Work from Home



Microsoft Azure



Good evening

Word

Megan Bowen

Home

New

Open

Account

Feedback

Options



Blank document



Welcome to Word



Single spaced (blank)



Blue grey resume



Snapshot calendar

More templates →

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Name	Date modified
CR-227 Product Overview.docx OneDrive - Contoso	Mon at 1:08 AM
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Document.docx OneDrive - Contoso	Feb 21
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Windows Virtual Desktop



Remote Desktop Services

First version of RDS was Windows Server 2000 aka Terminal Server.

→ Shared Windows Server Desktop Experience

Multi-session Windows Server with a desktop skin experience.

→ User Profile Challenges

RDS environments always had user profile challenges. Outlook OST files, OneDrive support. Issues with roaming multiple hosts.

→ Complex and Expensive Licensing

Windows Server OS, Windows User CAL, RDS CAL, Office 365 E3 for Shared Computer Activation

→ Citrix and VMWare came to the Rescue

3rd Party vendors came to improve on Microsoft base functionality extending security and functional features.

→ Plagued with Security Issues

Non best practice implementations caused security issues by publishing 3389 ports to the world wide web.

→ Application Incompatibility

It was still not a desktop OS, some applications would recognize it as such and would not install.

What is WVD?

- **Evolution of a project called RDMI**
- **Set of technologies that enable MSPs to deploy virtual desktops in Azure**
 1. Multi-session Windows 10
 2. FSLogix user profile containers
 3. Microsoft hosted control plane (PaaS)
 4. Simplified licensing



Multi-session Windows 10



A Real Native Windows 10 OS

Full application compatibility. Any Windows 10 application will run on Windows Virtual Desktop.

Multi-session Support Reduces Cost

Having multi-session support means you can fit more users on a WVD host which dramatically brings down the cost for SMB's

Enhanced Office and Teams Support

Both Office and Windows team to worked together to make Office and Teams work better together.



FSLogix Profile Containers

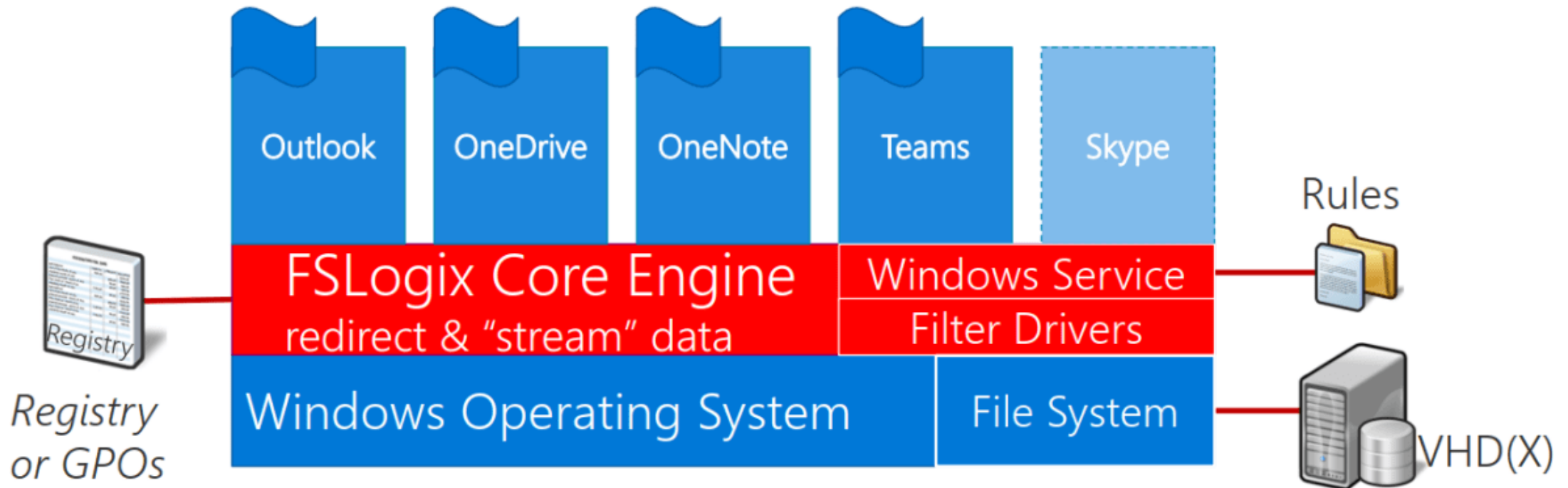
FSLogix

Acquired by Microsoft in 2018 for the WVD project

Acquisition made of FSLogix for their superior User Profile Management solution compared to UPD and Profile Redirection.

Virtualizes the Entire User Profile and AppData Folders

Attaches the VHD File upon user login in seconds and virtualizes each sessions AppData no matter the session host.

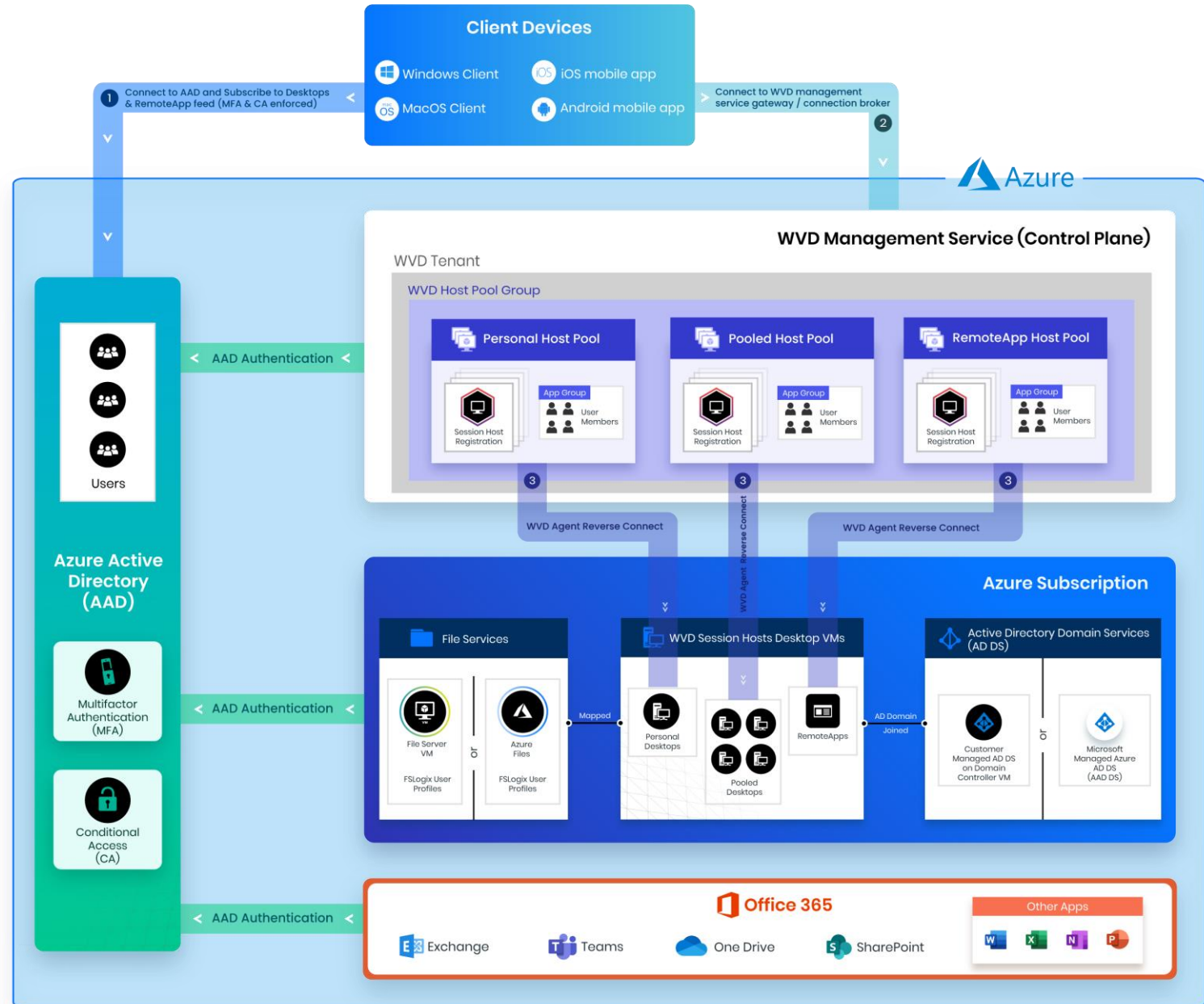




WVD Control Plane (PaaS)

WVD's Control Plane

- RDWeb
- Connection Broker
- Gateway Servers
- Load Balancers
- Microsoft Managed and Patched
- Redundant

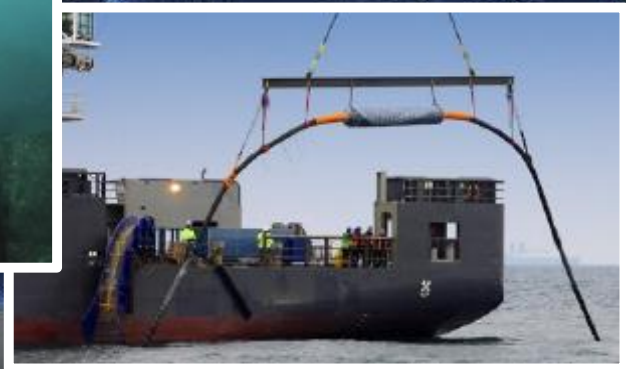
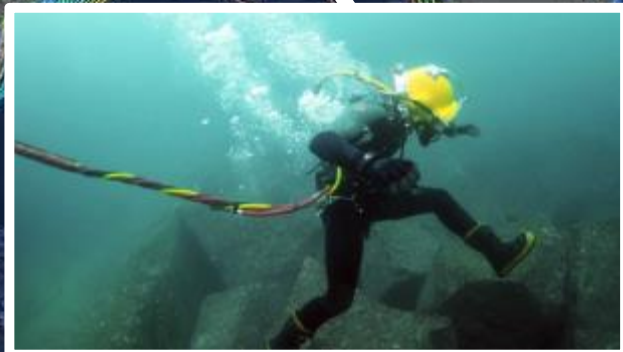
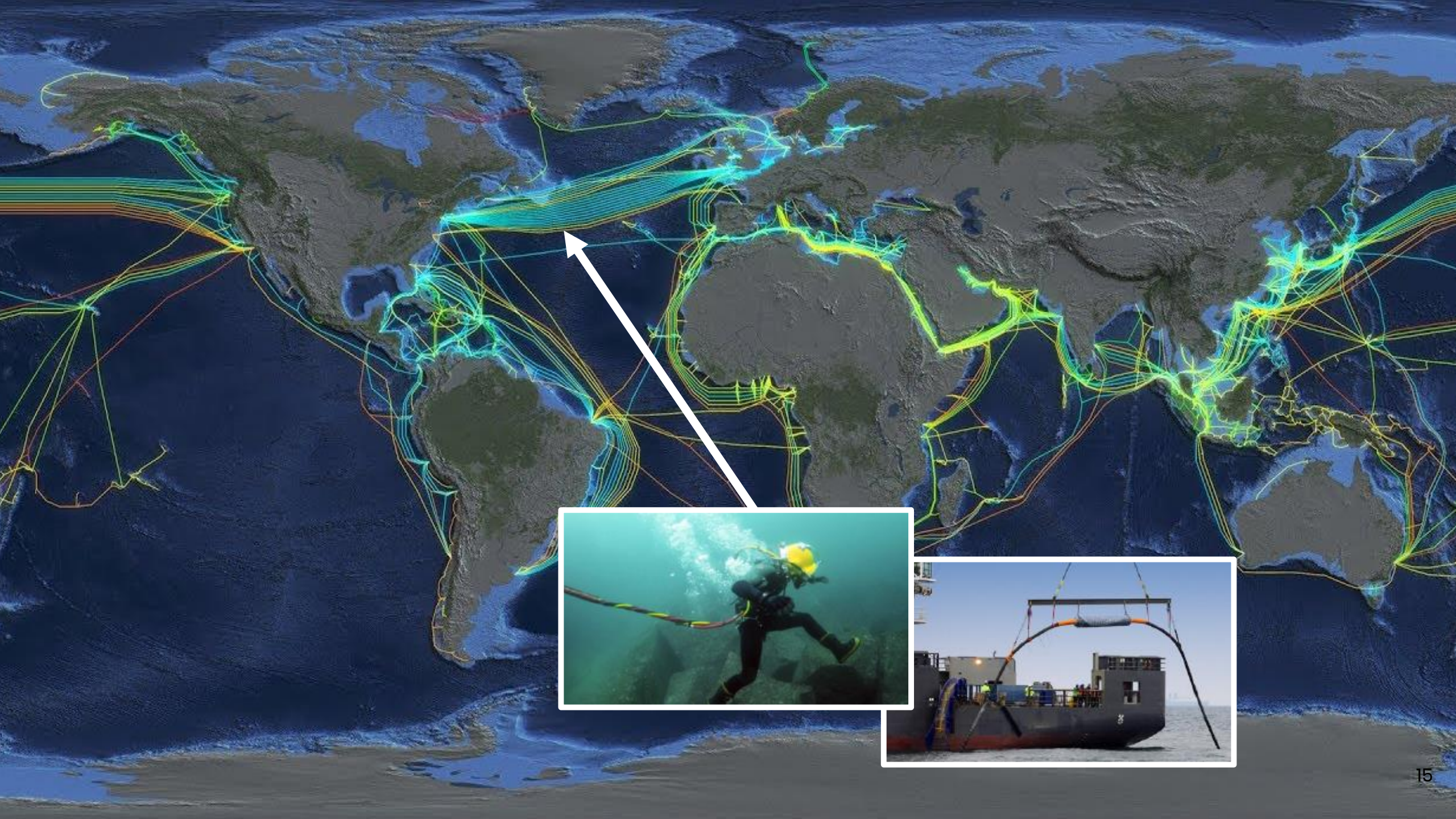


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Azure regions

More than AWS &
Google combined







Simplified Licensing

Microsoft 365 for business

(and old names for reference)

Microsoft 365 Business **Basic**

(Office 365 Business Essentials)



Microsoft 365 Business **Standard**

(Office 365 Business Premium)



Microsoft 365 Business **Premium**

(Microsoft 365 Business)



Microsoft 365 **Apps**

(Office 365 Business)



Comparison of Microsoft 365 Business and Office 365 E3

Features <i>(new in blue)</i>		Office 365 E3	Microsoft 365 BP
	Estimated retail price per user per month USD (with annual commitment)	\$20	\$20
	Maximum number of users	unlimited	300
Office Apps	Install Office on up to 5 PCs/Macs + 5 tablets + 5 smartphones per user (Word, Excel, PowerPoint, OneNote, Access), Office Online	ProPlus	Business
Email & Calendar	Outlook, Exchange Online	100GB	50GB
Chat-based Workspace, Meetings	Microsoft Teams	●	●
File Storage	OneDrive for Business,	Unlimited	1 TB
Social, Video, Sites	Stream, Yammer, Planner, SharePoint Online ¹ , Power Apps ¹ , Flow ¹	●	●
Business Apps	Scheduling Apps – Booking, StaffHub	●	●
	Business Apps – Outlook Customer Manager, MileIQ ¹ Business center ² , Listings ² , Connections ² , Invoicing ²		●
Threat Protection	Office 365 Advanced Threat Protection		●
	Windows Exploit Guard Enforcement		●
Identity & Access Management	Azure Active Directory – SSPR Cloud Identities, MFA, SSO >10 Apps		●
Device & App Management	Office 365 MDM	●	●
	Microsoft Intune, Windows AutoPilot, Windows Pro Management		●
	Upgrade rights to Windows 10 Pro for Win 7/8/8.1 Pro licenses, Windows Virtual Desktop		●
Information Protection	100 GB Exchange Archiving, Office 365 Data Loss Prevention ⁴	●	●
	Azure Information Protection Plan 1, BitLocker Enforcement		●
On-Prem CAL Rights	ECAL Suite (Exchange, SharePoint, Skype)	●	
Compliance	Litigation Hold, eDiscovery, Compliance Manager, Data Subject Requests	●	●

Detailed comparison of plans

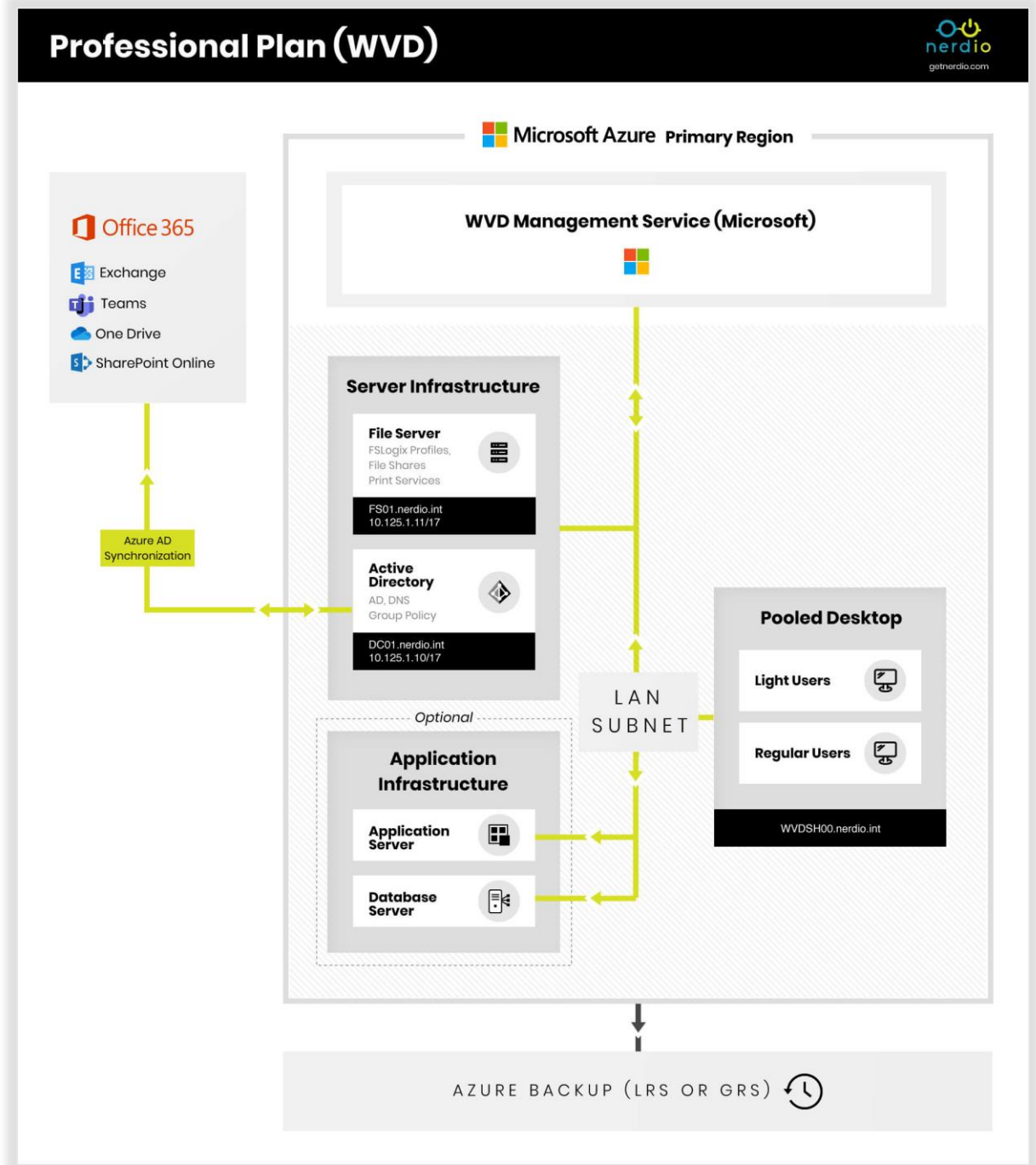
Features (new in blue)		Microsoft 365 Business Sta.	Microsoft 365 BP	Microsoft 365 E3	Microsoft 365 E5
Estimated retail price per user per month USD (with annual commitment)		\$12.50	\$20	\$32	\$57
Maximum number of users		300	300	unlimited	unlimited
Office Apps	Install Office on up to 5 PCs/Macs + 5 tablets + 5 smartphones per user (Word, Excel, PowerPoint, OneNote, Access), Office Online	Business	Business	ProPlus	ProPlus
Email & Calendar	Outlook, Exchange Online	50GB	50GB	unlimited	unlimited
Chat-based Workspace, Meetings	Microsoft Teams	●	●	●	●
File Storage	OneDrive for Business	1 TB	1 TB	unlimited	unlimited
Social, Video, Sites	Yammer, SharePoint Online, Planner	●	●	●	●
	Stream			●	●
Business Apps	Scheduling Apps – Booking, StaffHub	●	●	●	●
	Business Apps – Outlook Customer Manager, MileIQ ¹ Business center ² , Listings ² , Connections ² , Invoicing ²	●	●		
Threat Protection	Microsoft Advanced Threat Analytics, Device Guard, Credential Guard, App Locker, Enterprise Data Protection, Office 365 Advanced Threat Protection		●	●	●
	Windows Defender Advanced Threat Protection				●
	Office 365 Threat Intelligence				●
Identity & Access Management	Azure Active Directory – SSPR Cloud Identities, MFA, SSO >10 Apps		●	●	●
	Azure Active Directory – Conditional Access, SSPR Hybrid Identities, Cloud App Discovery, AAD Connect Health			●	●
	Credential Guard and Direct Access			●	●
	Azure Active Directory Plan 2				●
Device & App Management	Microsoft Intune, Windows AutoPilot		●	●	●
	Microsoft Desktop Optimization Package, VDA			●	●
Information Protection	Unlimited Exchange Archiving ³ , Office 365 Data Loss Prevention*, Azure Information Protection Plan 1		●	●	●
	Azure Information Protection Plan 2, Microsoft Cloud App Security, O365 Cloud App Security				●
On-Prem CAL Rights	ECAL Suite (Exchange, SharePoint, Skype, Windows, SCCM, Win. Rights Management)			●	●
Compliance	Litigation Hold, eDiscovery, Compliance Manager, Data Subject Requests		●	●	●
	Advanced eDiscovery, Customer Lockbox, Advanced Data Governance				●
Analytics	Power BI Pro, MyAnalytics				●
Voice	PSTN Conferencing, Cloud PBX				●

[1] Available in US, UK, Canada; [2] Currently in public preview in US, UK, Canada; [3] Unlimited when auto-expanding turned on.

*Data Loss Prevention Features will be available summer 2018.

Key Components

- Active Directory
- File Server
- WVD Control Pane
- WVD Session Host
- LOB Servers (optional)





Microsoft Azure

Demo



At the end of the day, what Microsoft has created is what we the customers have asked for.

It's been a long time coming, now its here.

A solution built from the ground up to be a cloud native way to deliver application and desktop virtualization.

Windows Virtual Desktop



MSP Challenges

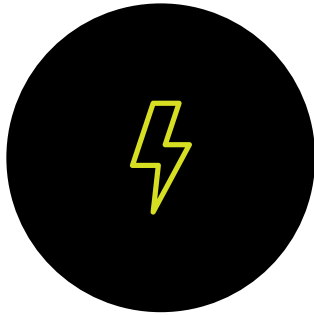
Moving customers' IT to Azure

- ✓ Expensive
- ✓ Complex
- ✓ Risky

What is Nerdio for Azure

- ✓ Deploy
- ✓ Package/Price
- ✓ Manage
- ✓ Optimize

How Nerdio Helps



Less Risk

Pricing and Packaging Help
Cost Optimization
Automation



Less Work

Ease of Deployment
Ease of Management



Bigger Reward

Better Margins
Increased ARPU
Drive ACR

Price



WVD Customer Inc.

\$51 per user

average across 150 user(s)
Includes Azure, AHU, Office 365, WVD & NFA Enterprise



- Azure: \$1,783
- Office 365: \$3,000
- W10E: \$1,050
- AHU: 112 cores
- Nerdio: \$1,800
- Total: \$7,633/month

Estimate only. All costs listed on this page are per month. Actual costs may vary depending on usage, price changes and other factors.

[Back](#)



RESOURCES

150 desktop(s)

140 Pooled desktop(s)


10 Personal desktop(s)

0 GPU enabled desktop(s)

On-ramp regions	No	Office 365 Enterprise licenses	150
Purchasing Windows 10 Enterprise licenses for customer	Yes	In-region backup	Yes
Desktop auto-scale	No	Out-of-region DR	No
Site-to-site VPN	Yes	Azure Hybrid Usage enabled	Yes
Hybrid AD	Yes	Reserved instances	3 years

VM	INSTANCE SIZE	OS DISK	DATA DISK
AD domain controller (three years reserved)	D2sv3 (2C/8GB/SSD)	E10 (128 GB SSD)	

Deploy

☰? Vadim Vladimirovsky


Home > Accounts > Create NFA account

ADD NFA ACCOUNT



There's a few things we need to know in order to provision a Nerdio IT environment in Azure. Follow steps below and click Save when you are ready to kick off the provisioning process. Need some tips on signing up for Office 365 or Azure? See our [KB article](#).

1. Grant access to Azure AD, Office 365 and Azure subscription


[Connect](#)

AZURE AD TENANT: admin@nerdio1013.onmicrosoft.com ✓ 

OFFICE 365: admin@nerdio1013.onmicrosoft.com ✓

SUBSCRIPTION:	MfS Sponsored Subscription (73431e) ▼	REGION:	West US (GPU capable) ▼ 
RESOURCE GROUP:	WVD-ResourceGroup	HYBRID USAGE BENEFIT:	No ▼ 
CORES QUOTA:	A-series : 350 B-series : 350 D-series : 349		


2. Provide account information

COMPANY:	WVD Customer Inc.	+ ADVANCED OPTIONS
PLAN:	Enterprise (WVD)  Requires 14 B-series cores	

[Cancel](#) [Save](#)

- HOME
- ACCOUNTS
- NAP USERS
- NAP COMPANIES ▼
- REG REQUESTS
- REPORTS ▼
- BILLING ▼
- SETTINGS
- MESSAGES ▼
- EXTERNAL API ▼
- LOGS ▼
- NAP OPS

Manage

WVD test

Home > Users > Add user

ADD USER

FIRST NAME
John

LAST NAME
Smith

PRIMARY EMAIL ADDRESS
jsmith @ 5104.nerdio.net

MOBILE NUMBER
123-555-1212
We will send a text message to this number for 2FA during login and password reset.

ADDITIONAL EMAIL ADDRESSES
john@5104.nerdio.net [Delete](#) [Set as primary](#)
[Add email](#)

OFFICE 365 LICENSE
 Enterprise E3
 None

DESKTOP
 Pooled
 Personal

SELECT DESKTOP SIZE
D2sv3 (2C/8GB/SSD)

SELECT DISK SIZE
128 GB - Standard SSD (E10)
We recommend 128 GB - Premium SSD disks

USERNAME
 Make username same as primary email address
jsmith @ 5104.nerdio.net

USER PERMISSIONS
 Allow user to login to NAP as Account IT Admin
 Grant desktop local admin rights

COPY FROM: Angie Accounting

ACTIVE DIRECTORY GROUPS
Finance Department Group x Accounting Department Group x

[+ Show extended attributes](#)
[+ Send welcome email](#)

Optimize

nerdio WVD test

Home > Servers > Pool-B > Autoscale

MANAGE AUTO-SCALE - POOL-B

Desktop Pools scale out or scale in based on user workload. Additional hosts are provisioned when collective CPU usage across all existing hosts in the pool exceeds a preset threshold. Similarly, hosts are deleted when the collective CPU usage drops below a certain threshold. You can set an upper limit on the number of hosts added to the pool to avoid costs from spiralling out of control. You can also set a lower limit to ensure base capacity. When a host is deleted the system will intelligently remove the host with least number of users, and only after it drains connections and warns existing users they are going to loose their session.

WVD session hosts will be provisioned based on the template for pool:

VM SIZE (TEMPLATE): B2ms (2C/8GB/SSD)

VM DISKS (TEMPLATE): OS Disk: E10 (128 GB Standard SSD)

1 SETTING BOUNDARIES

There should always be at least host(s) in the pool

And no more than host(s) in the pool

Min standby hosts (powered off)

2 SCALING LOGIC

Add a host if average CPU usage across all hosts exceeds % for minutes

Remove a host if average CPU usage across all hosts drops below % for minutes

Start removing hosts only after

3 MESSAGING

Send a warning message to users on the host before removing host

The message should say

SYNNEX + Nerdio = Success

How to get started?

1. SYNNEX account.
2. MPN ID established and active.
3. Net Terms approved.

Microsoft CSP through SYNnex



Why distribution makes sense

SYNNEX provides simple complimentary support, included as part of your Indirect CSP package.

CSP cloud solutions offered:

- O365/M365
- Azure
- D365

Industry solutions offered:

- Services (Office365, Azure, and Dynamics)
- Pre-sales/implementation/post-sales support (Office365, Azure, Dynamics)
- ISV bundles (Office365 and Azure)
- IoT solutions
- Mobility (wireline and wireless)

Support, training, and reporting:

- 24 x 7 support for SYNnex partners and their end users
- Dedicated manager to assist with the ordering process and Microsoft tickets
- Formal training program that includes sales and technical in person or virtual boot camps covering Office365, Azure, & Dynamics.
- Customizable reporting for your CSP needs.



Microsoft Azure certified engineers with decades of experience



Can help you price out Azure engagements free of cost.



Can help with implementation of those solutions, start to finish.



Can help right-size or cost optimize existing workloads

Get in touch!

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Microsoft Azure

