



COST ESTIMATOR FUNDAMENTALS

Margin Optimization

Before building an Azure practice, many MSPs have limited knowledge,
causing common pricing mistakes

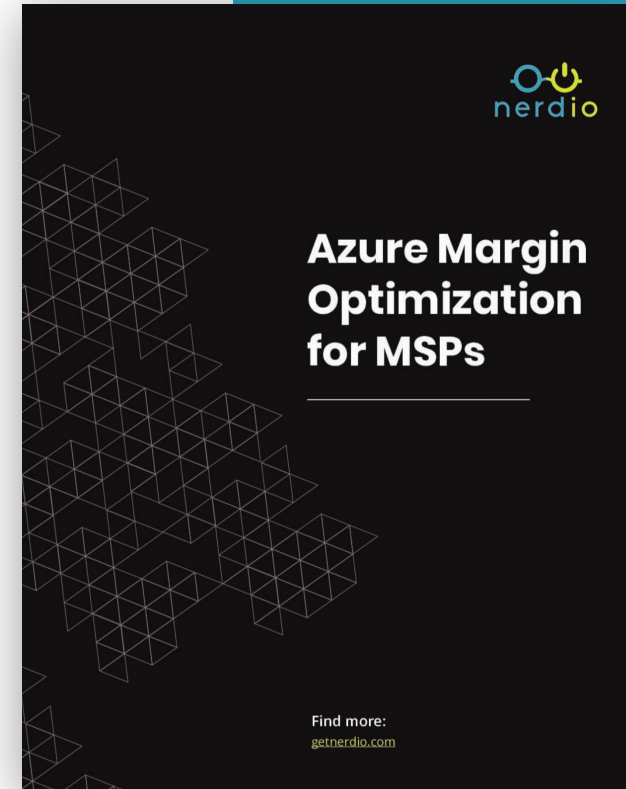
MARGIN OPTIMIZATION

Optimize costs

- A. **BECOME A CSP RESELLER** – Discounts, rebates, incentives
- B. **COMPUTE RESERVATIONS** – Azure Reserved Instances
- C. **LEVERAGE AZURE HYBRID USAGE** – CSP Software Subscriptions
- D. **AUTO-SCALE WORKLOADS** – resize or turn off when not in use



Download whitepaper



getnerdio.com/white-papers/

Pricing

How to properly architect and price an AVD opportunity

Customer Scenario


Lets Build This Scenario in the CE

- 18 user property management firm
- Two on-prem VMs – DC & App server (Property Management software)
 - Minimal resources needed for app, 2 cores 4GB RAM and 50GB storage
- Microsoft 365 Business Standard
 - Files in OneDrive & SharePoint
- Located in Florida


COST
ESTIMATOR

Let's Price Azure!

1 Let's start with desktop information

 About how many users overall will use Nerdio desktops?


18

 Will any of those users need dedicated personal desktops?

0

 How many users have GPU pooled desktop needs?


0

 We will assume rest of the users are pooled desktop users.

18

DESKTOP

SIZING CONFIGURATION

 Pooled desktops

For 18 users with pooled desktop needs:

a) Maintain a minimum of 1 host(s) and no more than 3 of size

E4s_v3 (4C/32GB/Standard)

b) Host pool will be maxed out 40 hours per week and at minimum size 128

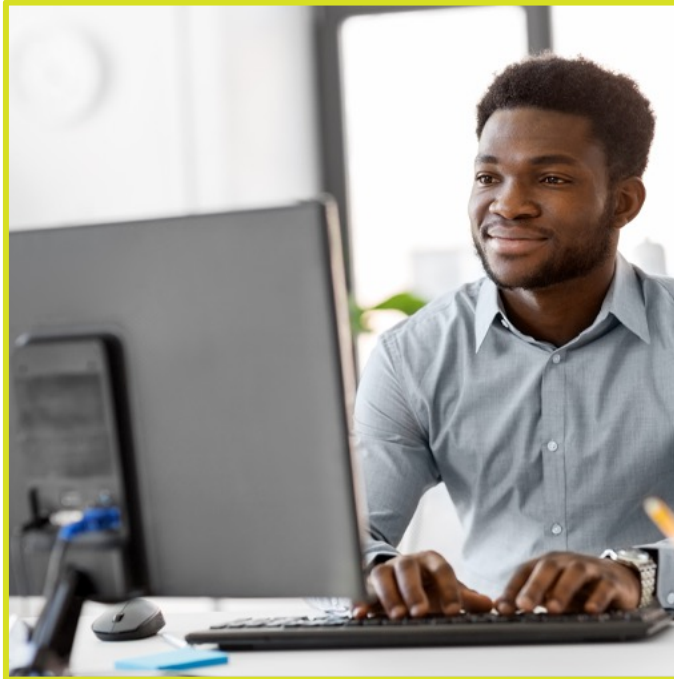
hours per week

c) Use a ratio of Custom 2 users per CPU core

Add
another

Dedicated vs. Pooled

Assume Pooled Unless...



Local Admin Access

User needs/wants to install their own applications



Resource Hog

Never enough compute



Application Restriction

Rarely certain applications will not work for Win10 multi-session (rare)

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SERVERS

SERVER	INSTANCE SIZE	OS DISK	DATA DISK	APPLY AHB	APPLY RI	
DC/File/App	D2s_v4 (2C/8GB/Standard) ▼	128 GB (E10/Standard SSD) ▼	128 GB (P10/Premium SSD) ▼	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Delete

Add server

How do I know what instance to use?

AZURE RESOURCES – SERIES

MATCHING SERIES TYPES TO WORKLOADS

- Size it right to protect margin and performance

Azure Virtual Machine Series

- Bs Series – [Economical Burstable VM](#)
- D Series – [General Purpose](#)
- E Series – [Memory Optimized](#)
- NV Series – [GPU Enabled](#)

WHAT IS CRUCIAL TO CONSIDER?

- Cost
- How the series is sized (vCPU:vRAM)
- Disk performance (I/O)

Series Naming Conventions

Family] + [Sub-family]* + [# of vCPUs] + [Constrained vCPUs]* + [Additive Features] + [Accelerator Type]* + [Version]	
Value	Explanation
Family	Indicates the VM Family Series
*Sub-family	Used for specialized VM differentiations only
# of vCPUs	Denotes the number of vCPUs of the VM
*Constrained vCPUs	Used for certain VM sizes only. Denotes the number of vCPUs for the constrained vCPU capable size
Additive Features	One or more lower case letters denote additive features, such as: a = AMD-based processor d = diskfull (local temp disk is present); this is for newer Azure VMs, see Ddv4 and Ddsv4-series i = isolated size l = low memory; a lower amount of memory than the memory intensive size m = memory intensive; the most amount of memory in a particular size t = tiny memory; the smallest amount of memory in a particular size s = Premium Storage capable, including possible use of Ultra SSD (Note: some newer sizes without the attribute of s can still support Premium Storage e.g. M128, M64, etc.)
*Accelerator Type	Denotes the type of hardware accelerator in the specialized/GPU SKUs. Only the new specialized/GPU SKUs launched from Q3 2020 will have the hardware accelerator in the name.
Version	Denotes the version of the VM Family Series

Explanation	
N	
V	
16	
a = AMD-based processor s = Premium Storage capable	
v4	

NV16as_v4

VM Selection

VM Size Averages***

- **Domain Controller (VM)**
 - 1-40 users = B2ms
 - 40-75 users = D2sv4
 - 75-200 users = D4sv4
- **File Server**
 - 1-15 users = D2sv4
 - 15-30 users = D4sv4
 - 30-60 users = D8sv4
 - 60-100+ users = D16sv4
- **AVD Pools**
 - 0-8 Users = E4sv3 or E4asv4
 - 8-15 users = E8sv3 or E8asv4
 - 15-25 users = E16sv3 or E16asv4
 - 25-40 users = 2x E16sv4 or 2x E16asv4
 - 40-60 users = 3x E16sv4 or 3x E16asv4

B series

Light workloads without constant use. Best for Domain Controllers, when not using AAD or Azure AD DS

D Series

Standard Azure VM with a 4 GB RAM to 1 vCPU ratio. Typically for File servers & app servers

E Series

Standard Azure VM with a 8 GB RAM to 1 vCPU ratio. Best for high memory usage workloads & AVD session hosts

N Series

GPU enabled VMs in Azure. Best for high graphics rendering workloads like Revit and AutoCAD

****Averages are a general guide, but each environment and use case is different. It's your responsibility to appropriately size each VM. For assistance email sales@getnerdio.com*

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2 SERVERS

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3 Licensing options

Select the right Microsoft 365 and/or Office 365 Windows 10 licenses for running a virtual desktop environment in Azure. ?

	BUY OR OWN?		HOW MANY?		LICENSE	
<input checked="" type="checkbox"/> Microsoft 365	Purchasing licenses ▼	50	user	Microsoft 365 Business Premium ▼	<input checked="" type="radio"/> Monthly <input type="radio"/> Annual	Add another
<input type="checkbox"/> Office 365	Purchasing licenses ▼	50	user	Office 365 E3 ▼	<input type="radio"/> Monthly <input checked="" type="radio"/> Annual	Add another
<input type="checkbox"/> Windows 10	Purchasing licenses ▼	50	user	Windows 10 E3 ▼		Add

Monthly licenses are 20% more expensive than annual licenses

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4 OTHER FEATURES

Will you be taking advantage of these other features?

FEATURE	DESCRIPTION		
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Azure Hybrid Benefit (AHB)	Take advantage of Azure Hybrid Benefit (AHB)	CSP subscription (1 year) ▼	?
Reserved instances	Reduce compute costs with reserved instances from Azure	<input checked="" type="radio"/> 3 years <input type="radio"/> 1 year <input type="radio"/> No	?
In-region backup	Back up all servers, desktops and FSLogix Azure File storage on a regular basis. more... Retain daily backups for <input type="text" value="30"/> Day(s) Retain weekly backups for <input type="text" value="0"/> Week(s) Retain monthly backups for <input type="text" value="0"/> Month(s) Retain yearly backups for <input type="text" value="0"/> Year(s)	<input checked="" type="radio"/> Yes <input type="radio"/> No	?
Site-to-site VPN	Establish VPN between Azure and your location. VPN Gateway type: <input type="text" value="Basic"/>	<input type="radio"/> Yes <input checked="" type="radio"/> No	?
Include hosting costs	Include PaaS costs of running this management portal in your Azure subscription.	<input type="radio"/> Yes <input checked="" type="radio"/> No	?
Azure AD DS	Run Azure Active Directory Domain Services for scalable, high-performance, managed domain services	None ▼	?
Additional storage	Additional Azure Files storage customer may need for something other than FSLogix profile storage	<input type="text" value="0"/> GB	?



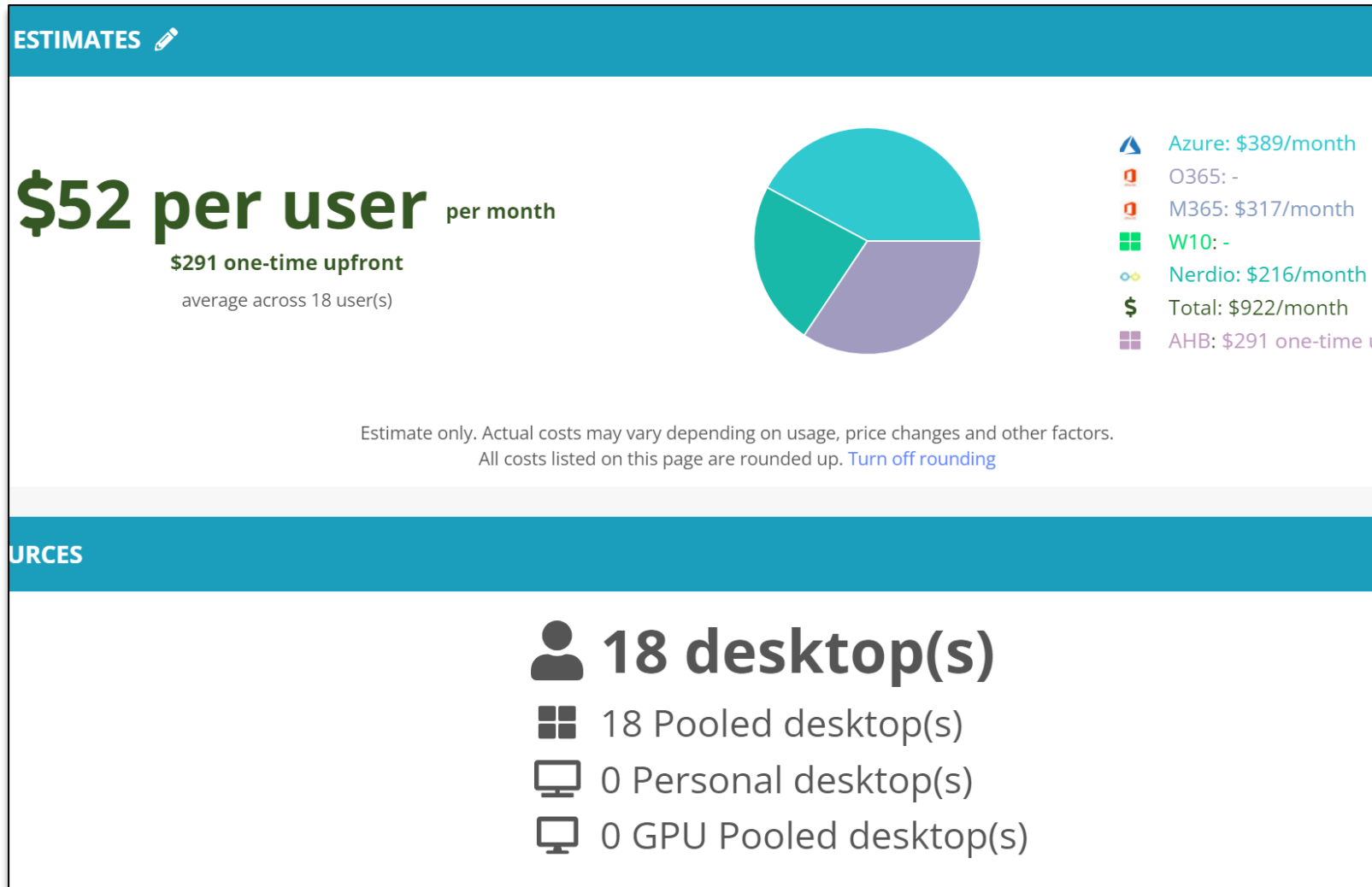
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5 COST ASSUMPTIONS

There are a handful of cost assumptions we make in our calculations. Pricing is based on South Central US region prices. Feel free to change any of the following assumptions

ITEM	DESCRIPTION	
FSLogix Profile Size	Average size of users' FSLogix Profile Container file on Azure Files Premium storage.	<div>Large (20GB) ▾</div> <div>20</div> GB per user
Bandwidth	Estimated bandwidth usage for RDP connection, per-user-per-month. Typically it's \$1.00 for regular users and it's \$3.00 for graphically intensive users.	\$ <div>1.5</div> per user per month
Storage operations	Estimated standard storage usage per GB. For Standard storage only (S and E), does not apply to Premium (P).	\$ <div>0.03</div> per GB
Log Analytics Workspace	Store app insights and AVD diagnostics information. 5 GB of monthly data ingestion is free, up to 30 days of retention.	<div>5</div> GB data ingestion <div>30</div> days retention
Azure CSP discount	Discount available to you as a Microsoft partner for Azure resources.	<div>9</div> %
CSP software discount	Discount available to you as a Microsoft partner for Microsoft 365/Office 365, Windows 10 and SQL Server licenses	<div>12</div> %
Windows 365 software discount	Discount available to you as a Microsoft partner for Windows 365 licenses	<div>0</div> %
Azure CSP discount for RI	Discount available to you as a Microsoft partner for Reserved Instances.	<div>0</div> %
Azure region	Azure pricing can vary by region.	<div>East US ▾</div>
Currency	Show costs in selected currency.	<div>USD ▾</div>

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Q&A

LAB

Cost Estimator Lab

Build This Scenario in the CE

- 25 user CPA firm with 2 high demand users (owners)
- 2 On-Prem Domain Controller connected to Azure AD (one in each office)
- One on-prem VM hosting all LOB apps
- Apps Used
 - Multiple versions of QB, LaCerte & Thompson Reuters CS
 - OEM Office Suite 2016 with OneDrive, Teams, Zoom & POP3 email
 - Lots of scan to folder and printing between offices
- 2 TB available on their current server & 600GB in use
- Located in Florida & NYC

**QuickBooks
Server Requirements
4 Cores / 24 GB RAM**

**LaCerte
Requirements
4 GB RAM per user**

**Thompson Reuters
Server Requirements
2 Cores / 8 GB RAM
SQL Express 8 GB DB**