



UNDERSTANDING AZURE BILLING & FUNDAMENTALS

PRESENTED BY:

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Microsoft's 3 Clouds

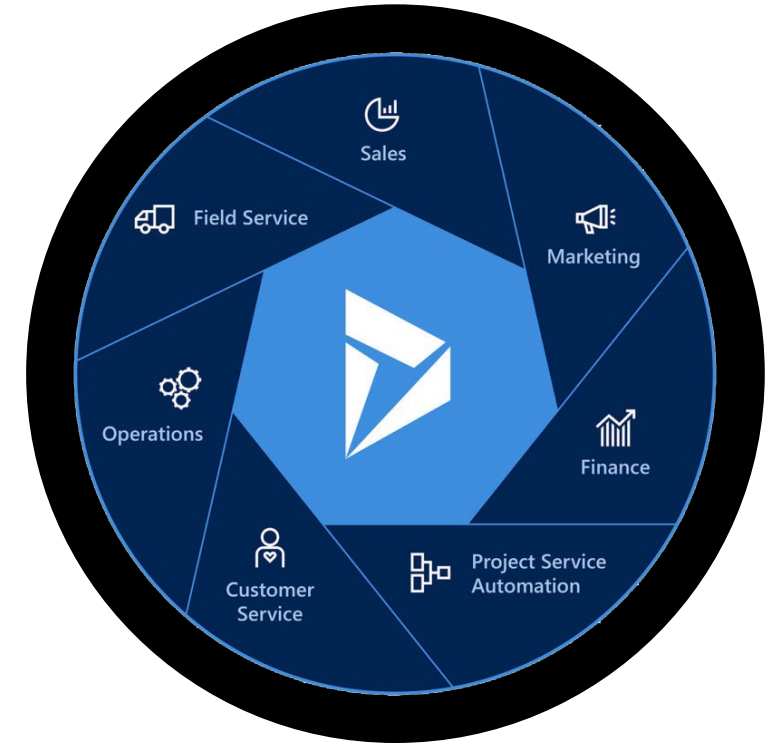
**AZURE
(CONSUMPTION-BASED)**



**MODERN WORK
(SKU-BASED)**



**DYNAMICS
(SKU-BASED)**



PURCHASING A

MODERN WORK

PRODUCT

01

SKU-based fixed pricing

Licensed by the user, fixed cost SKUs

02

Month-to-month or NCE commit

Month-to-month terms and/or annual commitment terms avail.

03

Resell for MSRP

Distribution gives you discount points off MSRP pricing

PURCHASING AN
AZURE
PRODUCT

01

Consumption-based cloud

Metered consumption by unit cost
(i.e., hours, used or transferred GBs)

02

Pay for what you use

On a monthly basis, your costs will
not be exactly the same

03

Miscellaneous costs

Some components are educated
estimates (i.e., I/O and bandwidth)

04

No “MSRP” of Azure

Entire solutions should be packaged
with MSP value-adds

What is an Azure Subscription?

A subscription is an agreement with Microsoft to use one or more Microsoft cloud platforms or services, for which charges accrue based on cloud-based resource consumption.



How do **Azure** Subscriptions work?

BANK ANALOGY

1. Bank (MSFT)
2. Credit card issuer (Distributor)
- 3. Credit card owner (MSP)**
- 4. Go shopping at the Azure mall**
- 5. Get credit card bill at end of month**



Where can you buy Azure?

Different Buying Methods

1. Direct from Microsoft PAYG/Credit Card
2. Through CSP Distributor
3. Direct from Microsoft Tier 1 CSP
4. Azure Sponsorship Subscriptions
5. EA/MCA with Microsoft Azure Consumption
Commitment (MACC)

There are CSP Subscription Rules

CSP Subscription Rules

1. New subscription obtained through distribution's Cloud Marketplace
2. Can transfer if subscription is CSP
3. Cannot convert Direct to CSP
4. Billed in arrears ~ 45 days out
5. RI and AHB transaction go through disti
6. Open Azure tickets through distribution

Other types of Azure Subscriptions to know about

Azure Direct PAYG/Sponsorship Subscription Rules

1. Obtained directly from Microsoft
2. Cannot use Reservations or AHB (sponsored)
3. Cannot be billed via distribution
4. Customer must call Azure support
5. Direct relationship between customer and Microsoft ONLY
6. Open tickets through Microsoft support

Recommendation Summary

As a MSP Nerdio Recommends

1. Purchase an Azure Subscription via your CSP
2. Non-Profits *might* benefit from a Sponsored Subscription (be aware of limitations)
3. Do not go to portal.azure.com and put in your CC
4. Tier 1 direct CSP may make sense for *some* MSPs

Purchasing Through Your **CSP Distributor**



Azure Plan

Look up “Azure Plan” in your CSP’s marketplace and purchase for client.
\$0.00 SKU



CSP Software Subscription

Take advantage of AHB by purchasing CSP Software Subscriptions through CSP



Reservations

Don’t forget to purchase Reservations for VMs that will be on 24/7



Let's talk Margin Optimization

Pricing calculator

Calculate your estimated hourly or monthly costs for using Azure.



Products

Example scenarios

Saved estimates

FAQs

Select a product to include it in your estimate.

Search products

Popular

Compute

Networking

Storage

Web

Mobile

Containers

Databases

Analytics

AI + machine learning

Virtual Machines

Provision Windows and Linux VMs in seconds

Storage Accounts

Durable, highly available, and massively scalable cloud storage

Azure SQL Database

Managed, intelligent SQL in the cloud

App Service

Quickly create powerful cloud apps for web and mobile

Azure Cosmos DB

Build or modernize scalable, high-performance apps

Azure Kubernetes Service (AKS)

Deploy and scale containers on managed Kubernetes

Azure Functions

Execute event-driven serverless code functions with an end-to-end development experience

Azure Cognitive Services

Add cognitive capabilities to apps with APIs and AI services

Microsoft Cost Management

Monitor, allocate, and optimize cloud costs with transparency, accuracy, and efficiency using Microsoft Cost Management

WHAT ARE THE TYPICAL AZURE VIRTUAL DESKTOP COSTS?

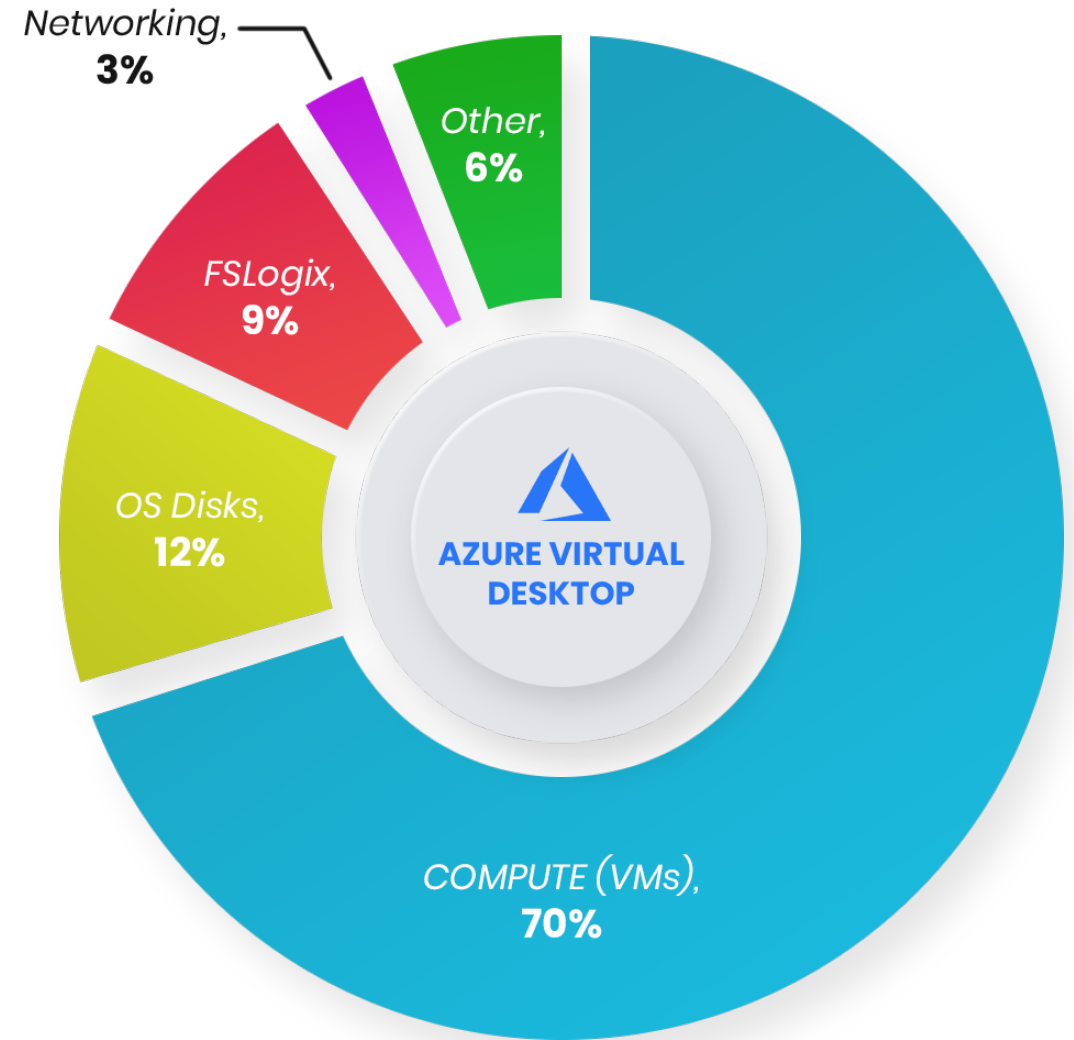
COMPUTE – 70%

OS DISKS STORAGE – 12%

FSLOGIX STORAGE – 9%

NETWORKING – 3%

OTHER – 6%



Margin Optimization

Azure Reservations (aka Reserved Instances)

Margin impact: increase of 20%–57% of Azure **compute** consumption

- Stops the base compute meter
- 12- and 36-month terms
- **Monthly** payments with no up-front payment
- Cancel/return, exchange, reassign
 - Cancellation fee: 12% (Not enforced)
- Region and VM family specific

Here's the Math on Cancellations

Filter by title

Azure Reservations documentation

Overview

What are Azure Reservations?

Concepts

How-to guides

Determine what to purchase

Buy reservations

Permissions, View and Manage

Utilization and cost reports

Exchange and refund

Exchange and refund reservations

Renew reservations

Troubleshoot

Reference

Resources

Cancel, exchange, and refund policies

Azure has the following policies for cancellations, exchanges, and refunds.

Exchange policies

- You can return multiple existing reservations to purchase one new reservation of the same type. You can't exchange reservations of one type for another. For example, you can't return a VM reservation to purchase a SQL reservation. You can change a reservation property such as family, series, version, SKU, region, quantity, and term with an exchange.
- Only reservation owners can process an exchange. [Learn how to Add or change users who can manage a reservation.](#)
- An exchange is processed as a refund and a repurchase – different transactions are created for the cancellation and the new reservation purchase. The prorated reservation amount is refunded for the reservations that's traded-in. You're charged fully for the new purchase. The prorated reservation amount is the daily prorated residual value of the reservation being returned.
- You can exchange or refund reservations even if the enterprise agreement used to purchase the reservation is expired and was renewed as a new agreement.
- The new reservation's lifetime commitment should equal or be greater than the returned reservation's remaining commitment. Example: for a three-year reservation that's \$100 per month and exchanged after the 18th payment, the new reservation's lifetime commitment should be \$1,800 or more (paid monthly or upfront).
- The new reservation purchased as part of exchange has a new term starting from the time of exchange.
- There's no penalty or annual limits for exchanges.

Refund policies

- We're currently not charging an early termination fee, but in the future there might be a 12% early termination fee for cancellations.
- The total canceled commitment can't exceed 50,000 USD in a 12-month rolling window for a billing profile or

Here's the Math on Cancellations

If Microsoft were to enforce the 12% Penalty fee of remainder

D2as_v4 – 2 Core, 8GB RAM Virtual Machine

	1 months	2 months	3 months	4 months	5 months	...36 months
PAYG	\$ 70.08	\$ 140.16	\$ 210.24	\$ 280.32	\$ 350.40	\$ 2,522.88
3 Year RI	\$ 26.89	\$ 53.78	\$ 80.67	\$ 107.56	\$ 134.45	\$ 968.04
Money Saved	\$ 43.19	\$ 86.38	\$ 129.57	\$ 172.76	\$ 215.95	\$ 1,554.84
Value of 3 Year RI	\$ 968.04	\$ 941.15	\$ 914.26	\$ 887.37	\$ 860.48	\$ 26.89
12% Penalty	\$ 116.16	\$ 112.94	\$ 109.71	\$ 106.48	\$ 103.26	\$ 3.23

- ✓ The total amount of money saved by month 3 by Reserving that machine is **\$129.57**
- ✓ At month 3 – Penalty is **\$109.71**, I've already saved enough to pay off my penalty!

Here's the Math on Cancellations

If Microsoft were to enforce the 12% Penalty fee of the remainder

E8as_v4 – 8 Core, 64GB RAM Virtual Machine

	1 months	2 months	3 months	4 months	5 months	...36 months
PAYG	\$ 367.92	\$ 735.84	\$ 1,103.76	\$ 1,471.68	\$ 1,839.60	\$ 13,245.12
3 Year RI	\$ 145.22	\$ 290.44	\$ 435.66	\$ 580.88	\$ 726.10	\$ 5,227.92
Money Saved	\$ 222.70	\$ 445.40	\$ 668.10	\$ 890.80	\$ 1,113.50	\$ 8,017.20
Value of 3 Year RI	\$ 5,227.92	\$ 5,082.70	\$ 4,937.48	\$ 4,792.26	\$ 4,647.04	\$ 145.22
12% Penalty	\$ 627.35	\$ 609.92	\$ 592.50	\$ 575.07	\$ 557.64	\$ 17.43

- ✓ The total amount of money saved by month 3 by Reserving that machine is **\$668.10**
- ✓ At month 3 – Penalty is **\$529.50**, I've already saved enough to pay off my penalty!

Margin Optimization (cont.)

Azure Hybrid Benefit

Margin impact: increase of 10%–49% of Azure **compute** consumption

- ✓ Stops the OS meter
- ✓ Windows Server Sold in 8-core packs, SQL in 2-core packs
- ✓ **Upfront** payments for SQL & Upfront for Windows Server
- ✓ Monthly CSP Software Subscriptions coming soon
- ✓ CSP Perpetual licenses DO NOT qualify for AHB
- ✓ Unlike Reservations – There are no refunds for licenses purchased

Moral of the Story

01

Azure Hybrid Benefit

Purchase CSP Software Subscriptions to take advantage of AHB

02

Purchase Reservations

The penalty if enforced is nothing to be afraid of. Numbers don't lie.

03

Take Action NOW

Action MUST be taken to order RIs and Licenses for AHB; do not assume this is done!

Let's take a look

Typical On Premises IT

The same things you have on premise, are the same components you are renting from Microsoft Azure, just in virtual form.

Just like a utility bill, you will receive a full breakdown of what you consume



Servers

VM's running Server OS,
LOB Application, Storage,
Backup



Networking

Firewalls, Switches, VPN's
Bandwidth, ISP



Endpoint Devices

Desktop, Laptops, iPhones,
Androids

EXPECT THESE 3 TYPES OF

Azure Invoices From Your Distributor For Each Customer

Pay As You Go Cost

Customers do not like surprises when it comes to cost.

Reservations

There will be a dialing in period to fine tune the compute.

One Time Software Subscription

You can still make margin when passing through Azure costs.

Example of a Consumption Azure Invoice

	A	E	F	G	H	I	J	K	L	M	N
1	Usage Date	Resource Name	Product Name	Resource Group - Meter Category - Meter SubCategory - Meter Type	Vendor SKU	Region	Quantity	UOM	Unit Cost	Current Charges	
2	2022-01-01 - 2022-01-01	NerdioBackup	Azure VM Pro Backup -- null		6551548b-7e	centralus	6.0968	1/Month	\$11.76	\$71.73	
4	2022-01-01 - 2022-01-01	main-e38f	Data Transfer Bandwidth		9995d93a-7d	centralus	1.2896	1 GB	\$0.10	\$0.13	
32	2022-01-01 - 2022-01-01	CB-CTS-Boat	Data Transfer Bandwidth -- Data Transfer Out		9995d93a-7d	centralus	0.0076	1 GB	\$0.10	\$0.00	
36	2022-01-01 - 2022-01-01	main-b0eb	Data Transfer Bandwidth -- Inter-Region		beb1457b-1a	centralus	0.0134	1 GB	\$0.06	\$0.00	
86	2022-01-01 - 2022-01-01	Backup	Azure VM Pro CBCL-RG -- Backup -- Backup -- 1 Protected Instance/Month		DZH318Z0BP	CENTRALUS	1.68413977	1/Month	\$10.00	\$16.84	
89	2022-01-01 - 2022-01-01	Bandwidth	Data Transfer cbcl-rg -- Bandwidth -- Bandwidth -- Data Transfer Out (GB)		DZH318Z0BN	CENTRALUS	8.75233747	1 GB	\$0.09	\$0.76	
95	2022-01-01 - 2022-01-01	Files	LRS Data Storage CBCL-RG -- Storage -- Files -- Data Stored (GB/Month)		DZH318Z0BP	CENTRALUS	1.20288	1 GB/Month	\$0.06	\$0.07	
99	2022-01-01 - 2022-01-01	Premium File	LRS Provision CBCL-RG -- Storage -- Premium Files -- Provisioned (GB/Month)		DZH318Z0BP	CENTRALUS	168.41394	1 GB/Month	\$0.18	\$30.48	
100	2022-01-01 - 2022-01-01	Premium File	LRS Snapshot CBCL-RG -- Storage -- Premium Files -- Snapshots (GB/Month)		DZH318Z0BP	CENTRALUS	14.708597	1 GB/Month	\$0.15	\$2.27	
101	2022-01-01 - 2022-01-01	Premium SSD P1 Disks	CBCL-RG -- Storage -- Premium SSD Managed Disks -- 1 Disk/Month		DZH318Z0BP	CENTRALUS	0.48384	1/Month	\$0.74	\$0.36	
102	2022-01-01 - 2022-01-01	Premium SSD P15 Disks	CBCL-RG -- Storage -- Premium SSD Managed Disks -- 1 Disk/Month		DZH318Z0BP	CENTRALUS	0.48384	1/Month	\$38.01	\$18.39	
107	2022-01-01 - 2022-01-01	Standard HDD S30 Disks	CBCL-RG -- Storage -- Standard HDD Managed Disks -- 1 Disk/Month		DZH318Z0BP	CENTRALUS	0.240576	1/Month	\$40.96	\$9.85	
108	2022-01-01 - 2022-01-01	Standard HDD S10 Disks	CBCL-RG -- Storage -- Standard HDD Managed Disks -- 1 Disk/Month		DZH318Z0BP	CENTRALUS	0.240576	1/Month	\$5.89	\$1.42	
109	2022-01-01 - 2022-01-01	Standard HDD Disk Operations	CBCL-RG -- Storage -- Standard HDD Managed Disks -- 10K Disk Operations		DZH318Z0BP	CENTRALUS	858.6362	10K	\$0.00	\$0.43	
110	2022-01-01 - 2022-01-01	Standard HDD LRS Snapshot	CBCL-RG -- Storage -- Standard HDD Managed Disks -- Snapshots (GB/Month)		DZH318Z0BP	CENTRALUS	167.492947	1 GB/Month	\$0.05	\$8.37	
123	2022-01-01 - 2022-01-01	Windows Server 4 vCPU VM Licenses	CBCL-RG -- Virtual Machines Licenses -- Windows Server Burst -- 1 License Hour		DZH318Z0BJ	CENTRALUS	177	1 Hour	\$0.02	\$2.83	
124	2022-01-01 - 2022-01-01	IP Addresses	Standard Static IP CBCL-RG -- Virtual Network -- IP Addresses -- 1 Static Public IP Hour		DZH318Z0BN	CENTRALUS	179.533333	1 Hour	\$0.01	\$0.90	
125	2022-01-01 - 2022-01-01	VPN Gateway	Basic Gateway CBCL-RG -- VPN Gateway -- VPN Gateway -- 1 Gateway Hour		DZH318Z0BN	CENTRALUS	179	1 Hour	\$0.04	\$6.44	
126	2022-01-01 - 2022-01-01	NAT Gateway	Gateway CreightonBrothersRG -- NAT Gateway -- NAT Gateway -- 1 Gateway Hour		DZH318Z0BX	CENTRALUS	179	1 Hour	\$0.05	\$8.06	
127	2022-01-01 - 2022-01-01	NAT Gateway	Data Processed CreightonBrothersRG -- NAT Gateway -- NAT Gateway -- Data Processed (GB)		DZH318Z0BX	CENTRALUS	186.733896	1 GB	\$0.05	\$8.40	
302	2022-01-01 - 2022-01-01	DNS-VA2	B1s Virtual Machines -- BS Series		296c8c28-5b	centralus	6	1 Hour	\$0.01	\$0.09	
303	2022-01-01 - 2022-01-01	DC01	B4ms Virtual Machines -- BS Series Windows		61c56ff5-c91	centralus	3	1 Hour	\$0.25	\$0.76	
304	2022-01-01 - 2022-01-01	CBMainImage	D4s v4 Virtual Machines -- Dsv4 Series		5c185fb7-77f	centralus	25.5336	1 Hour	\$0.26	\$6.52	
305	2022-01-01 - 2022-01-01	CBMainImage	D4s v4 Virtual Machines -- Dsv4 Series		5c185fb7-77f	centralus	0.7167	1 Hour	\$0.26	\$0.18	
306	2022-01-01 - 2022-01-01	FS01	D3 v2/DS3 v2 Virtual Machines -- Dv2/DSv2 Series		9660d899-da	centralus	3	1 Hour	\$0.34	\$1.03	
307	2022-01-01 - 2022-01-01	Returnofthej	D4 v3/D4s v3 Virtual Machines -- Dv3/DSv3 Series		41d09603-d8	centralus	0.1	1 Hour	\$0.26	\$0.03	
308	2022-01-01 - 2022-01-01	Main-0483	E8a v4/E8as Virtual Machines -- Eav4/Easv4 Series		5fb28472-0ca	centralus	3.1334	1 Hour	\$0.67	\$2.10	
309	2022-01-01 - 2022-01-01	Main-38f	E8a v4/E8as Virtual Machines -- Eav4/Easv4 Series		5fb28472-0ca	centralus	19.7167	1 Hour	\$0.67	\$13.22	
310	2022-01-01 - 2022-01-01	Main-b0eb	E8a v4/E8as Virtual Machines -- Eav4/Easv4 Series		5fb28472-0ca	centralus	20.4167	1 Hour	\$0.67	\$13.69	
311	2022-01-01 - 2022-01-01	Main-25f9	E8a v4/E8as Virtual Machines -- Eav4/Easv4 Series		5fb28472-0ca	centralus	18.7167	1 Hour	\$0.67	\$12.55	
327											
328										\$3,039.55	

Q&A



Manager
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Appendix – Advanced Info

CSP Software Subscriptions SKUs

Vendor SKU	SkuTitle	Disti Price	MSRP
DG7GMGF0DWBM:0003	SQL Server Standard - 2 Core License Pack - 1 year	\$1,419.00	\$1,559.00
DG7GMGF0DWBM:0005	SQL Server Standard - 2 Core License Pack - 3 year	\$3,872.00	\$4,254.00
DG7GMGF0DVT7:000B	Windows Server CAL - 1 User CAL - 3 year	\$36.40	\$40.00
DG7GMGF0DVT7:000D	Windows Server CAL - 1 User CAL - 1 year	\$11.83	\$13.00
DG7GMGF0DVSV:000G	Windows RDS CAL - 1 User CAL - 1 year	\$60.06	\$66.00
DG7GMGF0DVSV:000P	Windows Server RDS CAL - 1 User CAL - 3 year	\$152.88	\$168.00
DG7GMGF0DVT9:000B	Windows Server 2022 Standard - 8 Core - 1 year	\$291.20	\$320.00
DG7GMGF0DVT9:000C	Windows Server 2022 Standard - 8 Core - 3 year	\$582.40	\$640.00

What do you get billed for in Azure?

On Premise	Azure
Firewall	NSG (Free), 3 rd Party Appliance (Sonicwall, Sophos, Watchguard, etc)
Physical Servers, VM's	Virtual Machines – PAYG by the hour or Reservations
Windows OS Licensing (OPEN or OEM)	CSP Software Subscription, OPEN License with Software Assurance
Switches	Virtual Networks - Free
Desktops/Laptops	Azure Virtual Desktop – PAYG by the hour or Reservations Windows 365 Cloud PC – SKU Based Fixed Price
VPN and NAT	Virtual Network Gateways, NAT Gateways – Fix Price + Consumption
Internet Service Provider	Bandwidth - Consumption
Locally Attached Storage and SANS	Managed Disks (Fixed Cost) and Azure Files – Consumption
Backups	Azure Backup – Priced by Backup Storage Used
I/O Read/Write	Standard HDD and SSD's – Consumption, Premium SSD - Fixed
ISP - Static IP's	Cost per IP, sold 1 IP at a time – Fixed Price
Redundant Infra, Physical Security, Staff	Included at no charge - Free

VPN and NAT Gateways

- Unlike on-premises Firewall appliances, VPN Gateways and NAT Gateways are separate products than Network Security Groups (Free Firewall)
- Virtual Network Gateways have a consumption-based cost by the hour
- Different Virtual Network Gateway SKUs based on throughput speed and number of site-to-site or point-to-site tunnels
- NAT Gateways have a consumption-based cost by hour and data processed

NAT Gateway	Rate
Resource Hours	\$0.045 per hour – 730 Hours in a month = \$2 / month
Data Processed	\$0.045 per GB – 100 GB's transferred is about ~ \$37 / Month

Firewall

- Network Security Groups (NSG) – free
- 3rd Party Firewall Appliance – Deploy through the Azure Marketplace, PAYG or BYOL to license the firewall – only about 5% of our customers need one in AZ.
- Each Firewall appliance requires a VM, a managed disk to run the Linux OS
- SonicWall NSV 270 Total Secure - Essential Edition 3 Year - \$4800 or \$133/Month
 - Virtual Machine – D2_v2 – 3 year RI – \$29.50 / Month
 - Managed Disk – 128GB Standard SSD – \$9.60 / Month
 - Misc. I/O for read/write to Standard SSD - \$0.01 per 2.6GB data read/written
 - Total to run a Sonicwall per month is **\$175.10**

VPN and NAT Gateways

VPN Gateway Type	Price	Bandwidth	S2S Tunnels	P2S Tunnels
Basic	\$26.28/month	100 Mbps	Max 10 1-10: Included	Max 128 1-128: Included
VpnGw1	\$138.70/month	650 Mbps	Max 30 1-10: Included 11-30: \$0.015 /hour per tunnel	Max 250 1-128: Included 129-250: \$0.01 /hour per connection
VpnGw2	\$357.70/month	1 Gbps	Max 30 1-10: Included 11-30: \$0.015 /hour per tunnel	Max 500 1-128: Included 129-500: \$0.01 /hour per connection

Internet Access

- On-premise you pay for ISP Business Internet based on Speed and number of static IP's sold in packs of 1, 5, 13, etc. Typically, bandwidth is un-metered
- In Azure, Internet access is included but you get billed by egress traffic (traffic leaving Azure) – web browsing, uploading, AVD traffic, web servers, etc
- Public IP address are purchased for **\$3.65** / month each or **\$0.005** an hour
- First 100GB Bandwidth is free, after that it's **\$0.08** per GB

Storage – Managed Disks – Premium

No I/O Costs for Managed Premium SSD's

Not available	Disk Size	Price per month	1-Year Reserved Price Per Month	Max IOPS (Max IOPS w/ bursting)	Max throughput (Max throughput w/ bursting)	Price per mount per month (Shared Disk)
P1	4 GiB	\$0.60	N/A	120 (3,500)	25 MB/second (170 MB/second)	\$0.03
P2	8 GiB	\$1.20	N/A	120 (3,500)	25 MB/second (170 MB/second)	\$0.06
P3	16 GiB	\$2.40	N/A	120 (3,500)	25 MB/second (170 MB/second)	\$0.12
P4	32 GiB	\$5.28	N/A	120 (3,500)	25 MB/second (170 MB/second)	\$0.26
P6	64 GiB	\$10.21	N/A	240 (3,500)	50 MB/second (170 MB/second)	\$0.47
P10	128 GiB	\$19.71	N/A	500 (3,500)	100 MB/second (170 MB/second)	\$0.91
P15	256 GiB	\$38.02	N/A	1,100 (3,500)	125 MB/second (170 MB/second)	\$1.83
P20	512 GiB	\$73.22	N/A	2,300 (3,500)	150 MB/second (170 MB/second)	\$3.29
P30	1 TiB	\$135.17	\$128.42	5,000 (30,000)	200 MB/second (1,000 MB/second)	\$6.57
P40	2 TiB	\$259.05	\$246.09	7,500 (30,000)	250 MB/second (1,000 MB/second)	\$13.14
P50	4 TiB	\$495.57	\$470.84	7,500 (30,000)	250 MB/second (1,000 MB/second)	\$25.55
P60	8 TiB	\$946.08	\$898.75	16,000 (30,000)	500 MB/second (1,000 MB/second)	\$51.10
P70	16 TiB	\$1,802.06	\$1,712	18,000 (30,000)	750 MB/second (1,000 MB/second)	\$109.50
P80	32 TiB (32767 GiB)	\$3,604.11	\$3,423.92	20,000 (30,000)	900 MB/second (1,000 MB/second)	\$219

Storage – Managed Disks Standard SSD

You will incur I/O Costs for Managed Standard SSD's

Not available	Disk Size	Price per month	Max IOPS (Max IOPS w/ bursting)	Max throughput (Max throughput w/ bursting)
E1	4 GiB	\$0.30	500 (600)	60 MB/second (150 MB/second)
E2	8 GiB	\$0.60	500 (600)	60 MB/second (150 MB/second)
E3	16 GiB	\$1.20	500 (600)	60 MB/second (150 MB/second)
E4	32 GiB	\$2.40	500 (600)	60 MB/second (150 MB/second)
E6	64 GiB	\$4.80	500 (600)	60 MB/second (150 MB/second)
E10	128 GiB	\$9.60	500 (600)	60 MB/second (150 MB/second)
E15	256 GiB	\$19.20	500 (600)	60 MB/second (150 MB/second)
E20	512 GiB	\$38.40	500 (600)	60 MB/second (150 MB/second)
E30	1 TiB	\$76.80	500 (1,000)	60 MB/second (250 MB/second)
E40	2 TiB	\$153.60	500	60 MB/second
E50	4 TiB	\$307.20	500	60 MB/second
E60	8 TiB	\$614.40	2,000	400 MB/second
E70	16 TiB	\$1,228.80	4,000	600 MB/second
E80	32 TiB (32767 GiB)	\$2,457.60	6,000	750 MB/second

We charge \$0.002 per 10,000 transaction units for Standard SSDs. Any type of operation against the storage is counted as a transaction, including reads, writes and deletes. We use IO unit size of 256 KiB for counting the billable transaction units. Please refer to [Standard SSD documentation](#) for more information.

Storage – Managed Disks Standard SSD

- You will incur I/O Costs for Managed Standard SSD's

Not available	Disk Size	Price per month	Max IOPS (Max IOPS w/ bursting)	Max throughput (Max throughput w/ bursting)
E1	4 GiB	\$0.30	500 (600)	60 MB/second (150 MB/second)
E2	8 GiB	\$0.60	500 (600)	60 MB/second (150 MB/second)
E3	16 GiB	\$1.20	500 (600)	60 MB/second (150 MB/second)
E4	32 GiB	\$2.40	500 (600)	60 MB/second (150 MB/second)
E6	64 GiB	\$4.80	500 (600)	60 MB/second (150 MB/second)
E10	128 GiB	\$9.60	500 (600)	60 MB/second (150 MB/second)
E15	256 GiB	\$19.20	500 (600)	60 MB/second (150 MB/second)
E20	512 GiB	\$38.40	500 (600)	60 MB/second (150 MB/second)
E30	1 TiB	\$76.80	500 (1,000)	60 MB/second (250 MB/second)
E40	2 TiB	\$153.60	500	60 MB/second
E50	4 TiB	\$307.20	500	60 MB/second
E60	8 TiB	\$614.40	2,000	400 MB/second
E70	16 TiB	\$1,228.80	4,000	600 MB/second
E80	32 TiB (32767 GiB)	\$2,457.60	6,000	750 MB/second

We charge \$0.002 per 10,000 transaction units for Standard SSDs. Any type of operation against the storage is counted as a transaction, including reads, writes and deletes. We use IO unit size of 256 KiB for counting the billable transaction units. Please refer to [Standard SSD documentation](#) for more information.

Storage – Managed Disks Standard HDD

You will incur I/O Costs for Managed Standard HDD's

Not available	Disk Size	Price per month	IOPS per disk	Throughput per disk
S4	32 GiB	\$1.54	Up to 500	Up to 60 MB/second
S6	64 GiB	\$3.01	Up to 500	Up to 60 MB/second
S10	128 GiB	\$5.89	Up to 500	Up to 60 MB/second
S15	256 GiB	\$11.33	Up to 500	Up to 60 MB/second
S20	512 GiB	\$21.76	Up to 500	Up to 60 MB/second
S30	1 TiB	\$40.96	Up to 500	Up to 60 MB/second
S40	2 TiB	\$77.83	Up to 500	Up to 60 MB/second
S50	4 TiB	\$143.36	Up to 500	Up to 60 MB/second
S60	8 TiB	\$262.14	Up to 1,300	Up to 300 MB/second
S70	16 TiB	\$491.52	Up to 2,000	Up to 500 MB/second
S80	32 TiB (32767 GiB)	\$953.55	Up to 2,000	Up to 500 MB/second

We charge \$0.0005 per 10,000 transactions for Standard HDDs. Any type of operation against the storage is counted as a transaction, including reads, writes and deletes.

Storage – Azure Files

You will incur I/O Costs for non-Premium Azure Files tiers

	Premium	Transaction optimized	Hot	Cool
Data at-rest (GiB/month) Per GiB storage costs for a file's data stream.	\$0.16 per provisioned GiB*	\$0.06 per used GiB	\$0.0287 per used GiB	\$0.0228 per used GiB
	Premium	Transaction optimized	Hot	Cool
Write transactions (per 10,000) Write transactions are any operations which modify a file's data stream. This category also includes file handle operations.	Included	\$0.015	\$0.065	\$0.13
List transactions (per 10,000) List transactions are any operations which enumerate parts of the file share, such as listing files and directories within a share.	Included	\$0.015	\$0.065	\$0.065
Read transactions (per 10,000) Read transactions are any operations which read from a file's data stream.	Included	\$0.0015	\$0.0052	\$0.013
All other operations (per 10,000) Any other operations associated with Azure Files (share, snapshot, directory, etc.), except for delete operations which are free.	Included	\$0.0015	\$0.0052	\$0.0052

Azure Backup

- Azure backup costs consist of two charges:
 - 1. Price per VM backed up – based on total used storage size
 - 2. Actual storage used

Size of each instance		Azure Backup price per month
Instance < or = 50 GB		\$5 + storage consumed
Instance is > 50 GB but < or = 500 GB		\$10 + storage consumed
Instance is > 500 GB		\$10 for each 500 GB increment + storage consumed
Storage Type	Standard Tier	Archive Tier
LRS	\$0.0224 per GB	\$0.0013 per GB
GRS	\$0.0448 per GB	\$0.004 per GB

Example: If you have 1.2 TB of data in one instance, then the cost would be \$30 plus storage consumed. You would be charged \$10 for each of the two 500 GB increments and \$10 for the remaining 200 GB data. 1.2TB Standard Tier LRS Back up is \$26.88 + \$30 = **\$56.88**