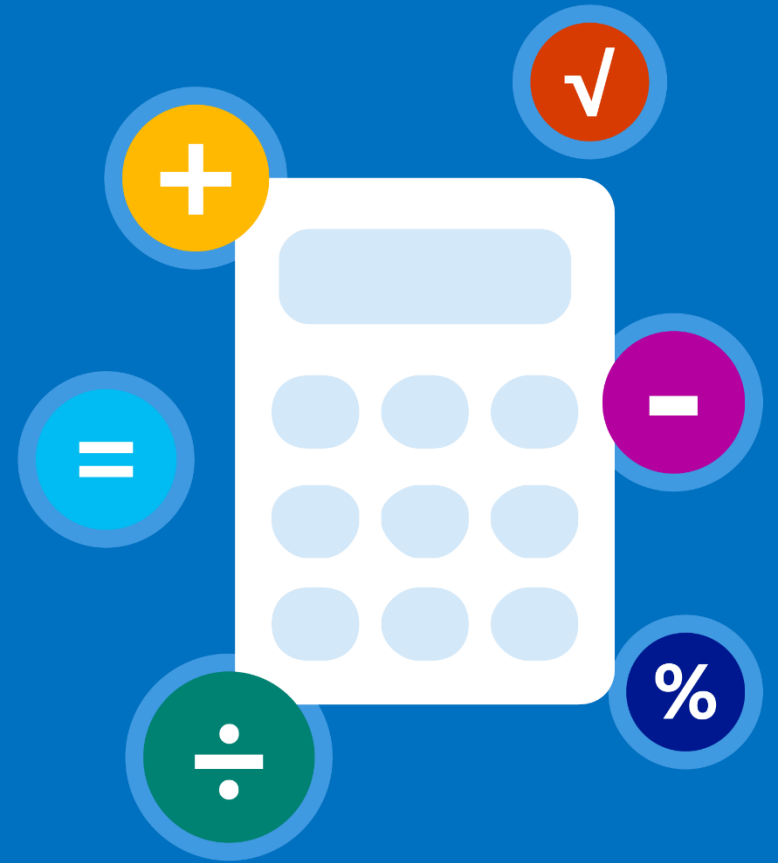


Azure Total Cost of Ownership (TCO) summary

Prepared for
Lexi Brown
April 2018



Assumptions and inputs

Compute

Physical servers

# Servers	OS	Proc(s) per server	Total cores	RAM (GB)	Optimize by	GPU
100	Linux	2	8	112	CPU	None

Virtual machines

# VMs	OS	Virtualization	Core(s)	RAM (GB)	Optimize by

Networking

Outbound bandwidth (GB)/Month

5 GB

Azure region

US East 2

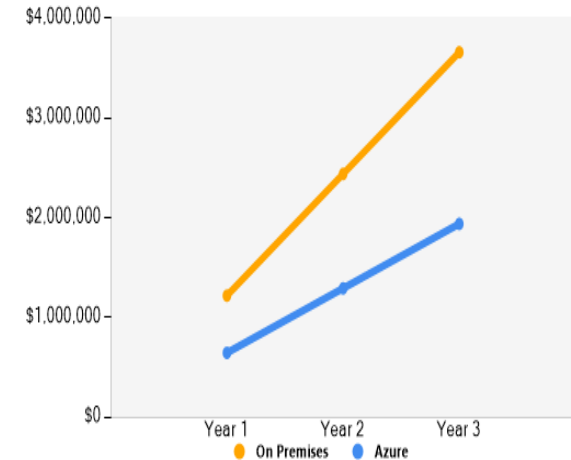
Storage

Storage type	Disk type	Capacity	Backup	Archive	Accessibility %
Local Disk/SAN	HDD	1 TB	0 TB	0 TB	100

DISCLAIMER: The TCO Calculator output is only an estimate of on-premises costs and equivalent Microsoft Azure services prices. Final Microsoft Azure costs will be based on your actual usage of Azure services, and may be different from the TCO estimates. This document is for informational purposes only. Microsoft makes no warranties, express or implied, in this summary.

Your estimated savings are **\$ 1,720,865 (47%)**
over **3** year(s) with Microsoft Azure.

On-Premises vs. D14 Azure Costs



On-premises cost breakdown summary

Category	Costs
Compute	\$2,431,424
Hardware	\$2,260,000
Software	\$0
Electricity	\$171,424
Data Center	\$470,646
Networking	\$678,036
Storage	\$2,662
IT labor	\$78,398
Total	\$3,661,166

Azure cost breakdown summary

Category	Web direct cost	1 Year Reserved VM	3 Years Reserved VM
Compute	\$3,145,716	\$2,930,100	\$1,880,800
Data center	\$0	\$0	\$0
Networking	\$0	\$0	\$0
Storage	\$921	\$921	\$921
IT labor	\$58,581	\$58,581	\$58,581
Total	\$3,205,218	\$2,989,602	\$1,940,302

Estimated on-premises cost (three years) vs. estimated Azure cost (three years)

Compute cost

Hardware cost

Physical Servers Costs	
Cost per 2 proc 10 core, 128GB RAM physical server	\$14,125
Number of server(s) required	100
Total cost for physical server(s)	\$1,412,500
Cost of maintaining physical server(s) - 20% of cost of physical server(s)	\$282,500
Total cost of maintaining server(s) over 3 year(s)	\$847,500
Total hardware costs over 3 year(s)	\$2,260,000

Software cost

Physical Servers Costs	
Total Windows licensing costs over 3 year(s)	\$0

Electricity cost

Price of electricity per kWh	\$0.1
Physical Servers Costs	
Power rating of 2 proc 10 core, 128 GB RAM server	652 Watts
Total electricity cost consumed by 100server(s) - 2 proc, 10 core, 128 GB RAM server per month	\$4,759.60
Total electricity costs over 3 year(s)	\$171,424

Web direct cost

Number of hours per month	730
Average utilization	100%
Physical Servers Costs	
D14v2 Standard (16 vCPU, 112 GB RAM)Linux	\$1.197/ hr SKU# 997-02769
Number of virtual machine(s) needed	100
Total virtual machine costs per month	\$87,381
Total web direct virtual machine costs over 3 year(s)	\$3,145,716

1 Year Reserved VM

Number of hours per month	730
Average utilization	100%
Physical Servers Costs	
DS14 Standard (16 vCPU, 112 GB RAM)Linux	\$1.115/ hr
Number of virtual machine(s) needed	100
Total 1-Year Reserved Cost over3 year(s)	\$2,930,100

3 Years Reserved VM

Number of hours per month	730
Average utilization	100%
Physical Servers Costs	

DS14 Standard (16 vCPU, 112 GB RAM)Linux	\$0.716/ hr
Number of virtual machine(s) needed	100
Total 3-Year Reserved Cost over 3 years	\$1,880,800

Total compute cost over 3 year(s)	\$2,431,424
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Total Azure compute cost over 3 year(s)	\$1,880,800
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Datcenter cost

Data center Compute cost

Number of rack units per rack	42
Physical Servers Costs	
Total number of rack units required	400
Total number of rack units required for all server(s)	400
Number of racks required	10
Data Center construction cost per rack amortized over 20 years	\$14,262
Total Data center compute costs over 3 year(s)	\$427,860

Data center storage cost

Rack mounting/installation cost	\$14,262
Total Data center storage costs over 3 year(s)	\$42,786

Total Azure Data center costs over 3 year(s)	\$0
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Total Data Center cost over 3 year(s)	\$470,646
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Total Azure Data center costs over 3 year(s)	\$0
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Networking cost

Networking cost

Total hardware + software costs over 3 year(s)	\$2,260,000
Network hardware and software costs assumed to be 25% of hardware and software costs over 3 year(s)	\$565,000
Network maintenance cost assumed to be 20% of network hardware and software costs over 3 year(s)	\$113,000
Service provider cost/GB per month	\$0.20
Amount of bandwidth needed (GB) per month	5
Total service provider cost per month	\$1
Total network hardware and software cost over 3 year(s)	\$678,036

Total estimated on-premises networking cost over 3 year(s)	\$678,036
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Azure Networking cost

Total outgoing bandwidth needed/month	5
Total outgoing bandwidth cost/month	\$0
Total networking cost for 5 GB / Month over 3 year(s)	\$0

Total estimated Azure networking cost	\$0
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Storage cost

Storage cost

Hardware infrastructure

Local Disk/SAN-HDD

Cost per GB	\$2
Amount of HDD (RAID 10) storage needed (TB)	1,024.00

Total storage procurement cost over 3 year(s)	2,048
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Storage maintenance

Storage maintenance cost (% of storage procurement cost) over 3 year(s)	\$614
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Total storage maintenance over 3 year(s)	\$614
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Total estimated on-premises storage cost	\$2,662
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Azure storage cost

Storage maintenance

Page Blob storage - LRS

Usable storage volume (RAID 10 configuration) in GB	512.00
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Storage cost per GB	\$0.05
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Annual storage cost per usable volume	\$307
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Number of storage transactions required per usable volume	5,000
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Azure page blob transaction pricing per 10000 transactions	\$0.00036
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SKU# N9H-00439

Total annual transactions cost	\$0
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Total LRS storage maintenance cost over 3 year(s)	\$921
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Total estimated Azure storage cost	\$921
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IT labor cost

On-premises IT labor cost

Number of IT admin hour(s) needed per year	522.66
Hourly rate for IT administrator	\$50

Azure IT labor cost

Number of IT admin hour(s) needed per year	390.53
Hourly rate for IT administrator	\$50.00

Total estimated on-premises IT labor cost	\$78,398
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Total estimated Azure IT labor cost	\$58,581
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Total on-premises cost over 3 year(s)	\$3,661,166
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Total Azure cost over 3 year(s)	\$1,940,302
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Learn how Microsoft Azure cloud services enable developers and IT professionals to build, deploy, and manage applications in the cloud, wherever they want, and with the freedom to use their preferred tools, applications, and frameworks. Find out more at:

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