


# Total Cost of Ownership (TCO) Calculator

Estimate the cost savings you can realize by migrating your workloads to Azure

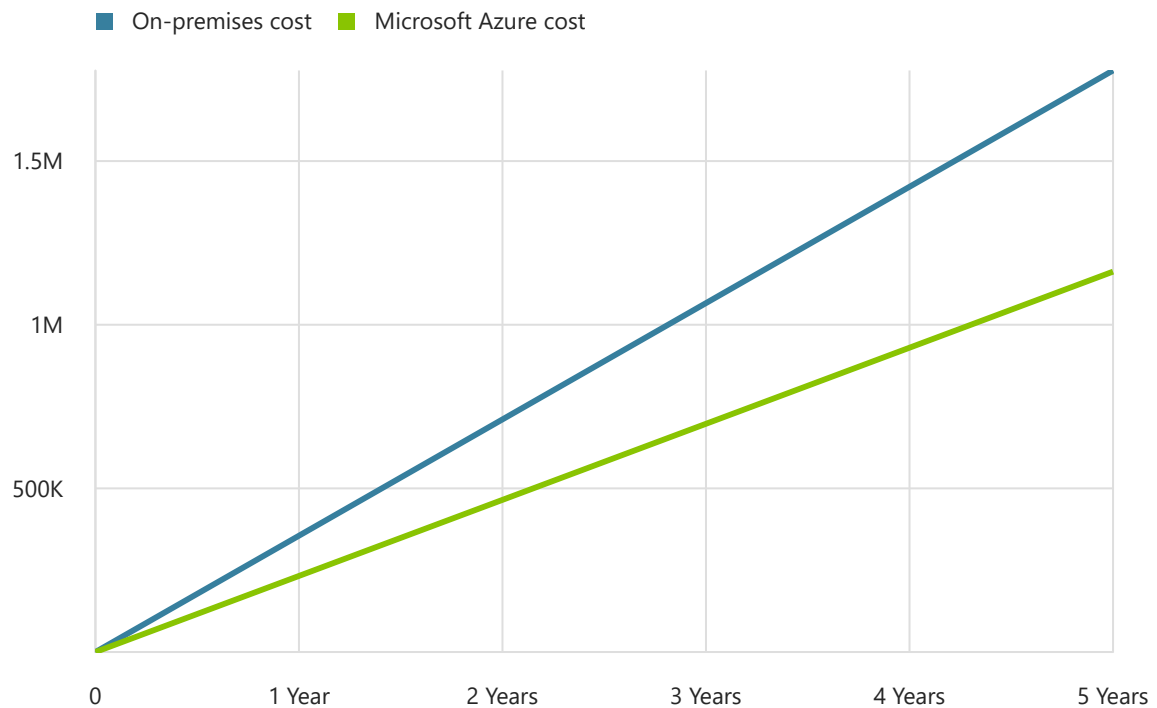
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Over 5 year(s) with Microsoft Azure, your estimated cost savings  
could be as much as **\$614,638**

## Total on-premises vs. Azure cost over time

Savings from running workloads in Azure accrue over time. The following shows how those savings add up over years.



### Total on-premises over 5 year(s)

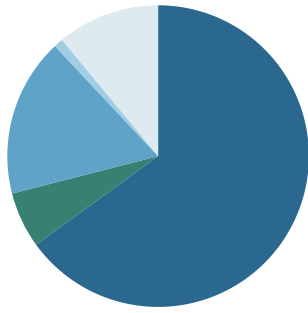
TCO of on-premises environments tends to be driven by compute and data center costs.

**\$1,776,881**  
Total cost

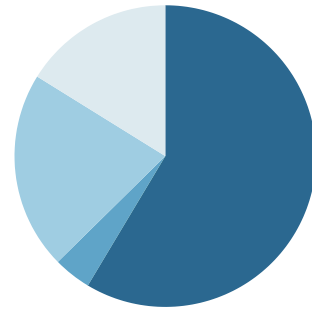
### Total Azure cost over 5 year(s)

In Azure, certain cost categories decrease or go away completely.

**\$1,162,243**  
Total cost



<b>65%</b>	<b>6%</b>	<b>17%</b>	<b>1%</b>	<b>11%</b>
Compute	Data center	Networking	Storage	IT Labor



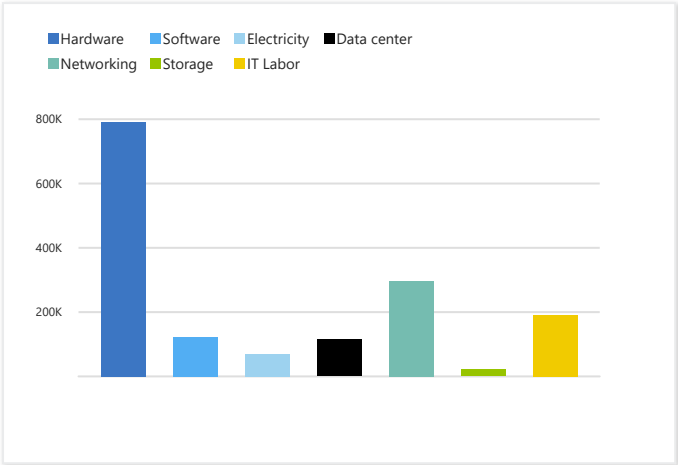
<b>58%</b>	<b>0%</b>	<b>4%</b>	<b>21%</b>	<b>16%</b>
Compute	Data center	Networking	Storage	IT Labor

## Total on-premises cost breakdown

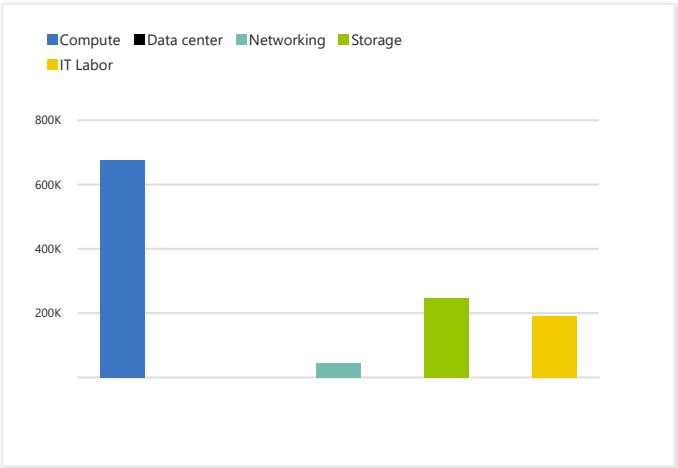
In Azure, several of the cost categories from the on-premises environment are consolidated and decrease with the efficiency that comes with the cloud.

## Total Azure cost breakdown

In Azure, several of the cost categories from the on-premises environment are consolidated and decrease with the efficiency that comes with the cloud.



\$1,776,881  
Cost over 5 year(s)



\$1,162,243  
Cost over 5 year(s)

On-premises cost breakdown  
summary

Azure cost breakdown summary

Category	Cost
Compute	\$1,152,920.80

Category	Cost
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Hardware	\$790,280.00
Software	\$123,100.00
Electricity	\$70,276.80
Virtualization	\$169,264.00
Data Center	\$114,862.60
Networking	\$295,798.05
Storage	\$21,632.00
IT Labor	\$191,667.05

Compute	\$676,416.00
Data Center	\$0.00
Networking	\$46,065.00
Storage	\$248,094.72
IT Labor	\$191,667.05

Total	\$1,776,881.00	Total	\$1,162,243.00
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Estimated on-premises cost (5 year(s))

Estimated Azure cost (5 year(s))

Compute cost

## Azure compute cost

### Hardware cost

Virtual machine density - Number of virtual cores that can be created per physical core	3	
Cost per 4 proc 32 core, 2000 GB RAM virtualization server for Windows		\$98,785.00
Number of servers needed for 50 virtual machine(s) - 8 core, 16 GB RAM	2	
Cost per 4 proc 32 core, 2000 GB RAM virtualization server for Linux		\$98,785.00
Number of servers needed for 50 virtual machine(s) - 8 core, 16 GB RAM	2	
Total cost for virtualization server(s)		\$395,140.00
Cost of maintaining virtualization server(s) - 20% of cost of virtualization server(s)		\$79,028.00
Total cost of maintaining server(s) over five year(s)		\$395,140.00
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<b>Total hardware cost over five year(s)</b>		<b>\$790,280.00</b>

### Software cost

Cost of Windows datacenter license per 4 proc, 32 core, 2000 GB RAM virtualization server		\$49,240.00
Number of servers needed for 50 virtual machine(s) - 8 core, 16 GB RAM	2	
Total software license cost		\$98,480.00
Total Software Assurance cost		\$24,620.00

### Virtual Machines cost

Number of hours per month	730	
F8sv2 Standard (8 core, 16 GB RAM) Windows (Azure Hybrid Benefit)	SKU# AAA- 57371	
Number of virtual machines	50	
Total virtual machine cost per month		\$5,636.800
F8sv2 Standard (8 core, 16 GB RAM) Linux	SKU# AAA- 57366	
Number of virtual machines	50	
Total virtual machine cost per month		\$5,636.800

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<b>Total Azure Virtual Machines cost</b>	<b>\$676,416.00</b>
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NOTE: For Azure compute costs, 3 year  
Reserved VM and two 1 year Reserved VM in  
use.

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Total software cost over five year(s)	\$123,100.00
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### Electricity cost

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Price of electricity per kWh	\$0.1334
Power rating of 32 core, 2000 GB RAM server	3,006.9 Watts
Total electricity cost for 2 server(s) - 32 core, 2000 GB RAM server per month	\$585.64
Power rating of 32 core, 2000 GB RAM server	3,006.9 Watts
Total electricity cost for 2 server(s) - 32 core, 2000 GB RAM server per month	\$585.64

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Total electricity cost over five year(s)	\$70,276.80
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### Virtualization cost

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Virtualization software license cost	\$10,144.00
Per virtual machine, per month, cost to load balance, backup and patch virtual machines	\$26.52
Number of virtual machines	100
Virtual machine management cost per month	\$2,652.00
Virtual machine management cost per year	\$31,824.00

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Total virtualization cost over five year(s)	\$169,264.00
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Total cost over five year(s)	\$1,152,920.80
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Total Azure compute cost over five year(s)	\$676,416.00
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### Data center cost

## Azure data center cost

### Compute cost

Number of rack units per rack	42
Rack units required per 32 core, 2000 GB RAM server	4
Number of 32 core, 2000 GB RAM server	2
Total number of rack units required	\$8.00
Rack units required per 32 core, 2000 GB RAM server	4
Number of 32 core, 2000 GB RAM server	2
Total number of rack units required	\$8.00
Total number of rack units required for all server(s)	\$16.00
Data center construction cost per rack unit amortized over 20 years	\$302.27
Data center compute cost	\$4,836.32

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<b>Total Data center compute cost over five year(s)</b>	<b>\$24,181.60</b>
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### Storage cost

Total number of rack units required for all storage	60
Number of rack units for DAS or SAN	60
Rack mounting/installation cost	\$18,136.20

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<b>Total Data center storage cost over five year(s)</b>	<b>\$90,681.00</b>
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Total Azure data center cost over five year(s)	\$0.00
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<b>Total Data center cost over five year(s)</b>	<b>\$114,862.60</b>
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Total Azure data center cost over five year(s)	\$0.00
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## Networking cost

## Azure networking cost

Total hardware + software cost over five year(s)	\$913,380.00
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Network hardware and software cost assumed to be 15% of hardware and software cost over five year(s)	\$137,007.00
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Network maintenance cost assumed to be 15% of network hardware and software cost over five year(s)	\$20,551.05
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Service provider cost/GB per month	\$0.15
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Amount of bandwidth needed (GB) per month	15,360
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Total service provider cost per month	\$2,304.00
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Total outgoing bandwidth needed per month	15 TB
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Total outgoing bandwidth cost per month	\$767.75
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Total networking cost over five year(s)	\$295,798.05
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Total Azure networking cost over five year(s)	\$46,065.00
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## Storage cost

## Azure storage cost

### Hardware

Local Disk/SAN-HDD	
Cost per GB	\$0.20
Storage (RAID 10 configuration) volume in GB	61,440

Total storage procurement cost	\$12,288.00
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### Page Blob storage

Usable storage volume in GB	30,720
Storage cost per GB/month	\$0.045

Annual storage cost per usable volume	\$16,588.80
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Backup

Total backup and archive volume in GB	122,880
	HP LTO-7 BB873A
Backup volume per tape in TB	6
Number of Tape drives required	20
Cost per Tape Drive	\$160.00

Backup and Archive cost over five year(s)	\$3,200.00
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Storage Maintenance

Storage maintenance cost (10% of storage procurement cost) over five year(s)	\$6,144.00
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Total storage maintenance cost over five year(s)	\$6,144.00
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Total storage cost over five year(s)	\$21,632.00
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IT labor cost

Number of IT admin hour(s) needed per year	1,666.67
Hourly rate for IT administrator	\$23.00

Total IT labor cost over five year(s)	\$191,667.05
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Total Page Blob LRS storage maintenance cost over five year(s)	\$82,944.00
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Backup

Total backup and archive volume in GB	122,880
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Storage cost per GB	\$0.0224
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SKU# AAL-31949

Backup and Archive maintenance cost over five year(s)	\$165,150.72
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Total Azure storage cost over five year(s)	\$248,094.72
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Azure IT labor cost

Number of IT admin hour(s) needed per year	1,666.67
Hourly rate for IT administrator	\$23.00

Total Azure IT labor cost over five year(s)	\$191,667.05
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Total on-premises cost over five year(s) \$1,776,881.00      Total Azure cost over five year(s) \$1,162,243.00

A total **savings** of **\$614,638.00** with **Microsoft Azure**