# Total Cost of Ownership (TCO) Calculator

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

# According to your inputs, it looks like there are no cost savings in this instance.
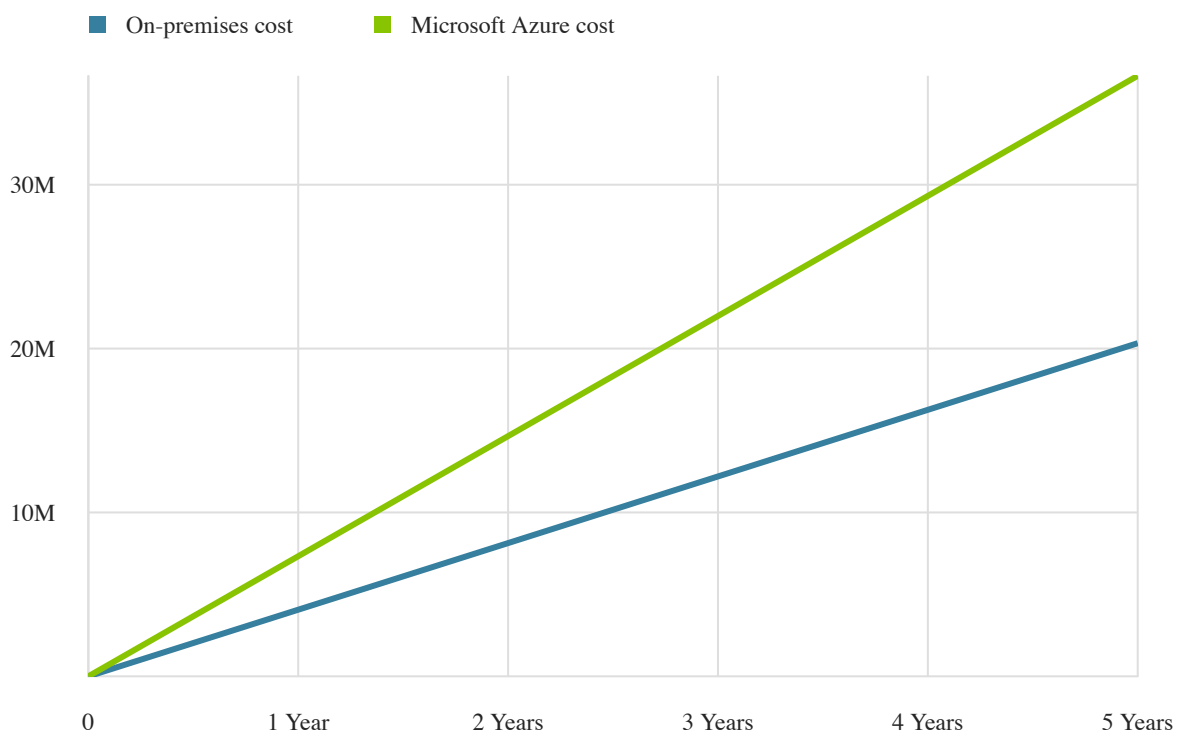
**Here are other ways Azure could help lower your costs:**

✔ Rightsize your infrastructure as you migrate to the cloud for substantial savings. Explore Azure Migrate (/en-us/services/azure-migrate/) to analyze your environment and get intelligent recommendations for your cloud infrastructure.

✔ Consider replatforming your applications to save costs. Save more by moving to managed services like Azure App Service or Azure SQL Database, which costs less and have smaller management costs.

✔ Using lower cost Azure regions with the same services can lead to lower TCO. From the View Report section, explore some nearby Azure regions to model your cost savings.

✔ Take advantage of additional discount programs when you enroll in an Enterprise Agreement with Microsoft. Please contact your Microsoft sales representative for more information.

# Over 5 year(s) with Microsoft Azure, your estimated cost savings could be as much as $0

## 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.
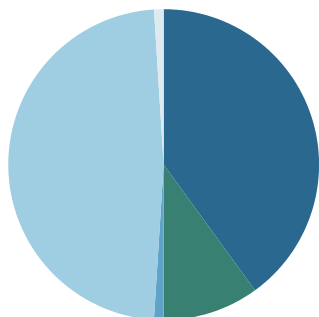


## Total on-premises over 5 year(s)

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

## Total Azure cost over 5 year(s)

In Azure, certain cost categories decrease or go away completely.
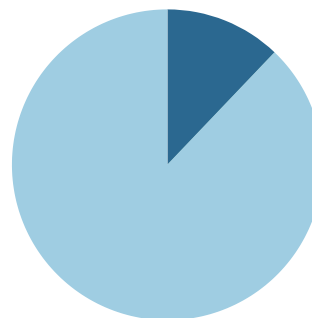
**$20,327,869**
Total cost

| 40% | 10% Data center | 1% | 48% | 1% |
|---|---|---|---|---|
| Compute | | Networking | Storage | IT Labor |

**$36,645,280**
Total cost

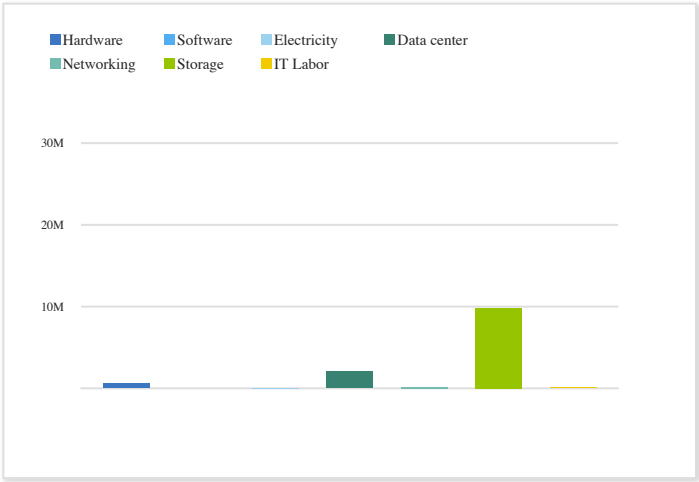| 12% | 0% Data center | 0% | 87% | 0% |
|---|---|---|---|---|
| Compute | | Networking | Storage | IT Labor |

## 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
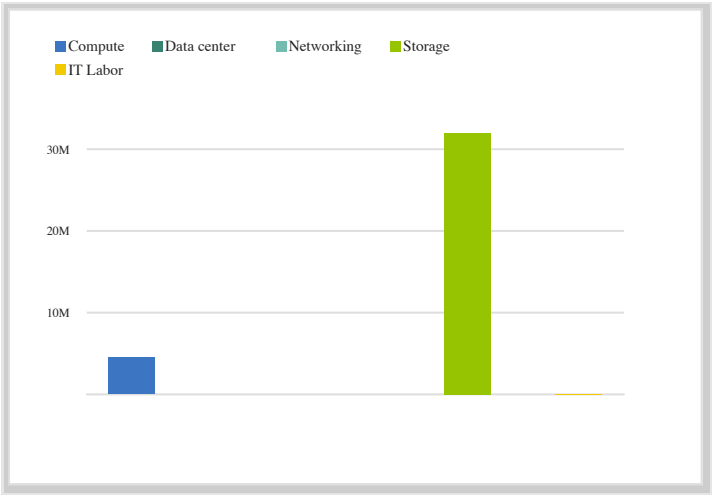
## Total Azure cost breakdown

cloud.

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



## $20,327,869
Cost over 5 year(s)



## $36,645,280
Cost over 5 year(s)

# On-premises cost breakdown summary

## Azure cost breakdown summary

| Category | Cost |
|---|---|
| Compute | $8,138,160.00 |
|     Hardware | $592,710.00 |
|     Software | $0.00 |
|     Electricity | $39,510.00 |
|     Virtualization | $385,140.00 |
|     Database | $7,120,800.00 |
| Data Center | $2,057,794.20 |
| Networking | $177,825.00 |
| Storage | $9,847,500.00 |
| IT Labor | $106,590.00 |
| **Total** | **$20,327,869.00** |

| Category | Cost |
|---|---|
| Compute | $4,520,742.00 |
| Data Center | $0.00 |
| Networking | $0.00 |
| Storage | $32,027,638.20 |
| IT Labor | $96,900.00 |
| **Total** | **$36,645,280.00** |

# Estimated on-premises cost (5 year(s))

# Estimated Azure cost (5 year(s))

## Compute cost

### Azure compute cost

### Hardware cost

### Virtual Machines cost

| | |
|---|---|
| Virtual machine density - Number of virtual cores that can be created per physical core | 2 |
| Cost per 4 proc 32 core, 2000 GB RAM virtualization server for Linux | $98,785.00 |
|     Number of servers needed for 100 virtual machine(s) - 4 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 10 virtual machine(s) - 160 core, 64 GB RAM | 1 |
| Total cost for virtualization server(s) | $296,355.00 |
| Cost of maintaining virtualization server(s) - 20% of cost of virtualization server(s) | $59,271.00 |
| Total cost of maintaining server(s) over five year(s) | $296,355.00 |

| | |
|---|---|
| Number of hours per month | 730 |
| B4MS Standard (4 core, 16 GB RAM) Linux | SKU# AAA-88127 |
|     Number of virtual machines | 100 |
|     Total virtual machine cost per month | $6,661.800 |

| | |
|---|---|
| **Total Azure Virtual Machines cost** | **$399,708.00** |

NOTE: For Azure compute costs, 3 year Reserved VM and two 1 year Reserved VM in use.

### SQL Database cost

| | |
|---|---|
| Single Premium P11 | $9.40875 /hr SKU# N7H-03905 |
|     Instance Count | 10 |
|     Cost Per Month | $6,868.39 |

| | |
|---|---|
| **Total SQL Database cost over five year(s)** | **$4,121,034.00** |

| | |
|---|---|
| **Total hardware cost over five year(s)** | **$592,710.00** |

### Software cost

| | |
|---|---|
| Total software license cost | $0.00 |

| | |
|---|---|
| **Total software cost over five year(s)** | **$0.00** |

## Electricity cost

| | |
|---|---|
| Price of electricity per kWh | $0.10 |
| 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 | $439.00 |
| Power rating of 32 core, 2000 GB RAM server | 3,006.9 Watts |
| Total electricity cost for 1 server(s) - 32 core, 2000 GB RAM server per month | $219.50 |

| | |
|---|---|
| **Total electricity cost over five year(s)** | **$39,510.00** |

## Virtualization cost

| | |
|---|---|
| Virtualization software license cost | $41,940.00 |
| Per virtual machine, per month, cost to load balance, backup and patch virtual machines | $52.00 |
| Number of virtual machines | 110 |
| Virtual machine management cost per month | $5,720.00 |
| Virtual machine management cost per year | $68,640.00 |

| | |
|---|---|
| **Total virtualization cost over five year(s)** | **$385,140.00** |

## SQL Database cost

| | |
|---|---|
| Total CPU cores | 160 |
| SQL Server Enterprise License cost per 2 cores | $14,256.00 |
| Enterprise cores | 160 |
| Total license cost | $5,702,400.00 |
| Enterprise Software Assurance cost per 2 cores | $3,546.00 |

|  | |
|---|---|
| Enterprise cores | 160 |
| Total Software Assurance cost | $1,418,400.00 |

| | |
|---|---|
| **Total SQL Database cost over five year(s)** | $7,120,800.00 |

NOTE: A minimum of four core licenses are required for each physical processor on the server or VM

| | |
|---|---|
| **Total cost over five year(s)** | $8,138,160.00 |

| | |
|---|---|
| **Total Azure compute cost over five year(s)** | $4,520,742.00 |

## Data center cost

## Azure data center cost

### Compute cost

| | |
|---|---|
| **Total Azure data center cost over five year(s)** | $0.00 |

| | |
|---|---|
| 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 |
| Rack units required per 32 core, 2000 GB RAM server | 4 |
| Number of 32 core, 2000 GB RAM server | 1 |
| Total number of rack units required | 4 |
| Total number of rack units required for all server(s) | 12 |
| Data center construction cost per rack unit amortized over 20 years | $339.57 |
| Data center compute cost | $4,074.84 |

| | |
|---|---|
| **Total Data center compute cost over five year(s)** | $20,374.20 |

## Storage cost

| | |
|---|---|
| Total number of rack units required for all storage | 1,200 |
| Number of rack units for DAS or SAN | 100 |
| Number of rack units for NAS | 100 |
| Number of rack units for Blob | 1,000 |
| Rack mounting/installation cost | $407,484.00 |

| | |
|---|---|
| **Total Data center storage cost over five year(s)** | $2,037,420.00 |

| | |
|---|---|
| **Total Data center cost over five year(s)** | $2,057,794.20 |

| | |
|---|---|
| **Total Azure data center cost over five year(s)** | $0.00 |

## Networking cost

## Azure networking cost

| | |
|---|---|
| Total hardware + software cost over five year(s) | $592,710.00 |
| Network hardware and software cost assumed to be 25% of hardware and software cost over five year(s) | $148,177.50 |
| Network maintenance cost assumed to be 20% of network hardware and software cost over five year(s) | $29,635.50 |
| Service provider cost/GB per month | $0.20 |
| Amount of bandwidth needed (GB) per month | 1 |
| Total service provider cost per month | $0.20 |

| | |
|---|---|
| Total outgoing bandwidth needed per month | 1 GB |
| Total outgoing bandwidth cost per month | $0.00 |

| | |
|---|---|
| **Total networking cost over five** | **$177,825.00** |

year(s)      $177,825.00

| | |
|---|---|
| **Total Azure networking cost over five year(s)** | **$0.00** |

## Storage cost

### Azure storage cost

### Hardware

### Premium storage

Local Disk/SAN-SSD

| | |
|---|---|
| Cost per GB | $3.00 |
| Storage (RAID 10 configuration) volume in GB | 102,400 |

NAS/File Share

| | |
|---|---|
| Cost per GB | $2.00 |
| Storage (RAID 10 configuration) volume in GB | 102,400 |

Blob

| | |
|---|---|
| Cost per GB | $2.00 |
| Storage (RAID 10 configuration) volume in GB | 1,024,000 |

| | |
|---|---|
| **Total storage procurement cost** | **$2,560,000.00** |

### Backup

| | |
|---|---|
| Total backup and archive volume in GB | 8,192,000 |
| | HP LTO-7 BB873A |
| Backup volume per tape in TB | 6 |
| Number of Tape drives required | 1,335 |
| Cost per Tape Drive | $4,500.00 |

| | |
|---|---|
| **Backup and Archive cost over five year(s)** | **$6,007,500.00** |

### Storage Maintenance

| | |
|---|---|
| Usable storage volume in GB | 51,200 |
| Premium Azure disk match | P4 |
| Total IOPS | 192,120 |
| Number of premium disks | 1,601 |
| Disk price per month | $8,452.48 |

| | |
|---|---|
| **Total LRS premium disk maintenance cost over five year(s)** | **$507,148.80** |

### File storage

| | |
|---|---|
| Usable storage volume in GB | 51,200 |
| Storage cost per GB | $0.060 |
| Annual storage cost per usable volume | $36,864.00 |

| | |
|---|---|
| **Total File storage LRS maintenance cost over five year(s)** | **$184,320.00** |

### Block Blob storage Hot tier

| | |
|---|---|
| Usable storage volume in GB | 409,600 |
| Average storage cost per GB/month | $0.02 |
| % of data being accessed frequently | 80 |
| | SKU# N9H-01064 |
| Annual storage cost per usable volume | $98,657.88 |

| | |
|---|---|
| Storage maintenance cost (10% of storage procurement cost) over five year(s) | $1,280,000.00 |

| | |
|---|---|
| **Total storage maintenance cost over five year(s)** | **$1,280,000.00** |

| | |
|---|---|
| **Total Blob storage - Hot Tier - LRS maintenance cost over five year(s)** | **$493,289.40** |

## Block Blob storage Cool tier

| | |
|---|---|
| Usable storage volume in GB | 102,400 |
| Average storage cost per GB/month | $0.02 |
| % of data being accessed infrequently | 20 |
| | SKU# N9H-01044 |
| Annual storage cost per usable volume | $18,677.76 |

| | |
|---|---|
| **Total Blob storage - Cool Tier - LRS maintenance cost over five year(s)** | **$93,388.80** |

## Backup

| | |
|---|---|
| Total backup and archive volume in GB | 8,192,000 |
| Storage cost per GB | $0.27 |
| | SKU# AAA-70203 |

| | |
|---|---|
| **Backup and Archive maintenance cost over five year(s)** | **$30,749,491.20** |

| | |
|---|---|
| **Total storage cost over five year(s)** | **$9,847,500.00** |

| | |
|---|---|
| **Total Azure storage cost over five year(s)** | **$32,027,638.20** |

## IT labor cost

## Azure IT labor cost

| Number of IT admin hour(s) needed per year | 426.36 |
|---|---|
| Hourly rate for IT administrator | $50.00 |

| Number of IT admin hour(s) needed per year | 387.6 |
|---|---|
| Hourly rate for IT administrator | $50.00 |

| **Total IT labor cost over five year(s)** | **$106,590.00** |
|---|---|

| **Total Azure IT labor cost over five year(s)** | **$96,900.00** |
|---|---|

| **Total on-premises cost over five year(s)** | **$20,327,869.00** |
|---|---|

| **Total Azure cost over five year(s)** | **$36,645,280.00** |
|---|---|

A total **savings** of  **$0.00**   with **Microsoft Azure**