

# Total Cost of Ownership (TCO) Calculator

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



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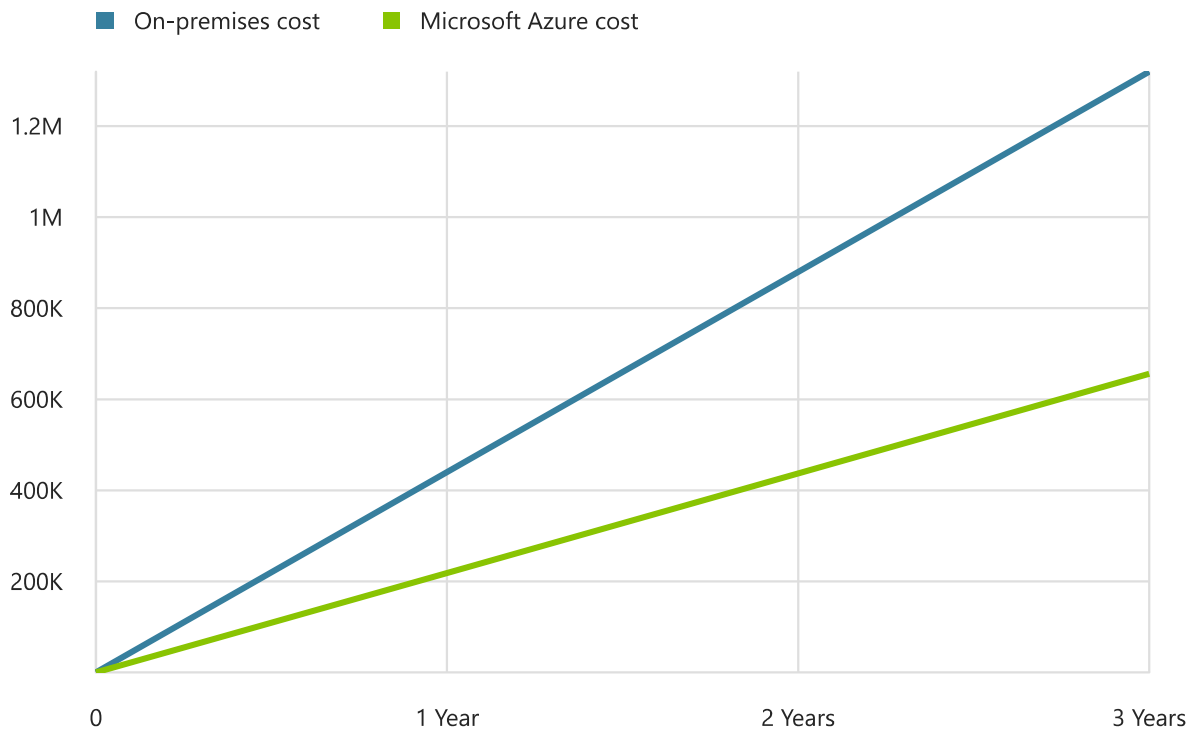
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Over 3 year(s) with Microsoft Azure, your estimated cost savings  
could be as much as **US\$663,656**

## 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.

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### Total on-premises over 3 year(s)

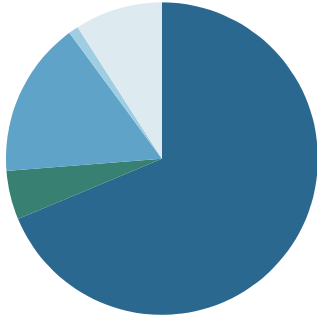
TCO of on-premises environments tends to be driven by compute and data centre costs.

### Total Azure cost over 3 year(s)

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

**US\$1,319,436**  
Total cost

**US\$655,780**  
Total cost



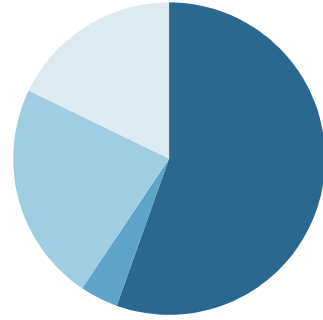
**68%**  
Compute

**5%**  
Data  
centre

**16%**  
Networking

**1%**  
Storage

**9%**  
IT labour



**56%**  
Compute

**0%**  
Data  
centre

**4%**  
Networking

**23%**  
Storage

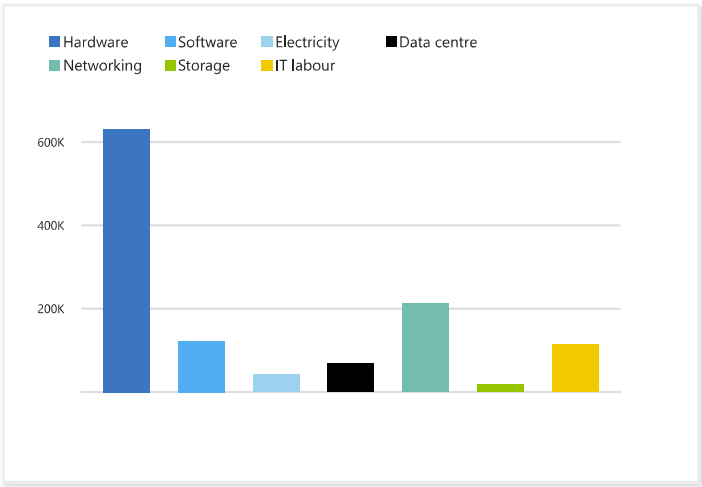
**18%**  
IT labour

## 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.

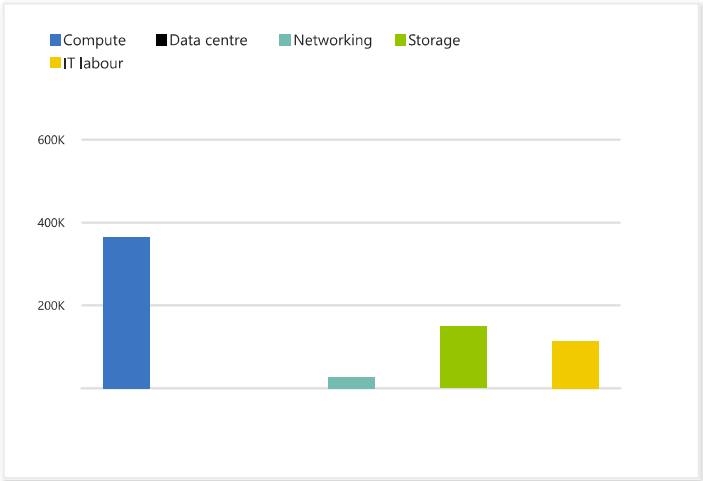
## Total Azure cost breakdown

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



US\$1,319,436

Cost over 3 year(s)



US\$655,780

Cost over 3 year(s)

On-premises cost breakdown  
summary

Azure cost breakdown summary

Category

Cost

Compute	US\$903,106.08
Hardware	US\$632,224.00
Software	US\$123,100.00
Electricity	US\$42,166.08
Virtualisation	US\$105,616.00
Data centre	US\$68,917.56
Networking	US\$213,237.39
Storage	US\$19,174.40
IT labour	US\$115,000.23

Total

US\$1,319,436.00

Category

Cost

Compute	US\$364,284.00
Data centre	US\$0.00
Networking	US\$27,639.00
Storage	US\$148,856.83
IT labour	US\$115,000.23

Total

US\$655,780.00

## Estimated on-premises cost (3 year(s))

## Estimated Azure cost (3 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	US\$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	US\$98,785.00	
Number of servers needed for 50 virtual machine(s) - 8 core, 16 GB RAM	2	
Total cost for virtualisation server(s)	US\$395,140.00	
Cost of maintaining virtualisation server(s) – 20% of cost of virtualisation server(s)	US\$79,028.00	
Total cost of maintaining server(s) over three year(s)	US\$237,084.00	
<b>Total hardware cost over three year(s)</b>	<b>US\$632,224.00</b>	

#### Virtual Machines cost

Number of hours per month	730	
F8sv2 Standard (8 core, 16 GB RAM) Windows (Azure Hybrid Benefit)	SKU# AAD- 10155	
Number of virtual machines	50	
Total virtual machine cost per month	US\$5,059.50	
F8sv2 Standard (8 core, 16 GB RAM) Linux	SKU# AAD- 10188	
Number of virtual machines	50	
Total virtual machine cost per month	US\$5,059.50	
<b>Total Azure Virtual Machines cost</b>	<b>US\$364,284.00</b>	

NOTE: For Azure compute costs, one 3 year  
Reserved VM in use.

## Software cost

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Cost of Windows datacenter  
licence per 4 proc, 32 core,  
2000 GB RAM virtualisation  
server US\$49,240.00

Number of servers needed  
for 50 virtual machine(s) - 8  
core, 16 GB RAM 2

Total software licence cost US\$98,480.00

Total Software Assurance cost US\$24,620.00

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**Total software cost over three  
year(s) US\$123,100.00**

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## Electricity cost

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Price of electricity per kWh US\$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 US\$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 US\$585.64

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**Total electricity cost over  
three year(s) US\$42,166.08**

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## Virtualisation cost

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Virtualisation software licence  
cost US\$10,144.00

Per virtual machine, per month,  
cost to load balance, backup  
and patch virtual machines US\$26.52

Number of virtual machines 100

Virtual machine management  
cost per month US\$2,652.00

Virtual machine management  
cost per year US\$31,824.00

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Total virtualisation cost over three year(s)	US\$105,616.00
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Total cost over three year(s)	US\$903,106.08
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Total Azure compute cost over three year(s)	US\$364,284.00
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## Data centre cost

## Azure data centre cost

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### Compute cost

Number of rack units per rack	42
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Rack units required per 32 core, 2000 GB RAM server	4
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Number of 32 core, 2000 GB RAM server	2
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Total number of rack units required	US\$8.00
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Rack units required per 32 core, 2000 GB RAM server	4
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Number of 32 core, 2000 GB RAM server	2
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Total number of rack units required	US\$8.00
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Total number of rack units required for all server(s)	US\$16.00
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Data centre construction cost per rack unit amortised over 20 years	US\$302.27
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Data centre compute cost	US\$4,836.32
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Total data centre compute cost over three year(s)	US\$14,508.96
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### Storage cost

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Total number of rack units required for all storage	60
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Total Azure data centre cost over three year(s)	US\$0.00
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Number of rack units for DAS or SAN	60
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Rack mounting/installation cost	US\$18,136.20
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Total data centre storage cost over three year(s)	US\$54,408.60
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Total data centre cost over three year(s)	US\$68,917.56
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Total Azure data centre cost over three year(s)	US\$0.00
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## Networking cost

## Azure networking cost

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Total hardware + software cost over three year(s)	US\$755,324.00
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Network hardware and software cost assumed to be 15% of hardware and software cost over three year(s)	US\$113,298.60
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Network maintenance cost assumed to be 15% of network hardware and software cost over three year(s)	US\$16,994.79
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Service provider cost/GB per month	US\$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	US\$2,304.00
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Total networking cost over three year(s)	US\$213,237.39
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Total outgoing bandwidth needed per month	15 TB
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Total outgoing bandwidth cost per month	US\$767.75
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Total Azure networking cost over three year(s)	US\$27,639.00
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## Storage cost

### Hardware

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

<b>Total storage procurement cost</b>	<b>US\$12,288.00</b>
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### Back up

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	US\$160.00

<b>Backup and Archive cost over three year(s)</b>	<b>US\$3,200.00</b>
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### Storage Maintenance

Storage maintenance cost (10% of storage procurement cost) over three year(s)	US\$3,686.40
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<b>Total storage maintenance cost over three year(s)</b>	<b>US\$3,686.40</b>
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<b>Total storage cost over three year(s)</b>	<b>US\$19,174.40</b>
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## Azure storage cost

### Page Blob storage

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

Annual storage cost per usable volume	US\$16,588.80
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<b>Total Page Blob LRS storage maintenance cost over three year(s)</b>	<b>US\$49,766.40</b>
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### Back up

Total backup and archive volume in GB	122,880
Storage cost per GB	US\$0.0224
	SKU# AAL-31836

<b>Backup and Archive maintenance cost over three year(s)</b>	<b>US\$99,090.43</b>
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<b>Total Azure storage cost over three year(s)</b>	<b>US\$148,856.83</b>
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## IT labour cost

## Azure IT labour cost

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

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

Total IT labour cost over three  
year(s) US\$115,000.23

Total Azure IT labour cost over  
three year(s) US\$115,000.23

Total on-premises cost over three  
year(s) US\$1,319,436.00

Total Azure cost over three  
year(s) US\$655,780.00

A total **savings** of **US\$663,656.00** with **Microsoft Azure**