

RVTools Insights

Prepared for **Contoso** by:
<Enter Name>



Contents

Explore immediate and future opportunities

- Migration Pathways
- Executive Summary
- Cost Case
- Key Insights
- Next Steps



Contoso's VMware Overview



ESX HOSTS
75

vCenters Scanned

- ffx_datacenter
- sap_datacenter



SERVICES
1119

	Window	877
	SQL	0
	RHEL	162
	Linux & Other	80
	Physical Nodes Detected	0



UTILIZATION

7,013
Allocated Cores
50% Utilization

30,642
Allocated RAM (GB)
50% Utilization

777
Allocated Storage (TB)



SUPPORT STATUS

Out of Support

Linux	7
Centos	1
Windows	158



MIGRATION CALLOUTS

Readiness

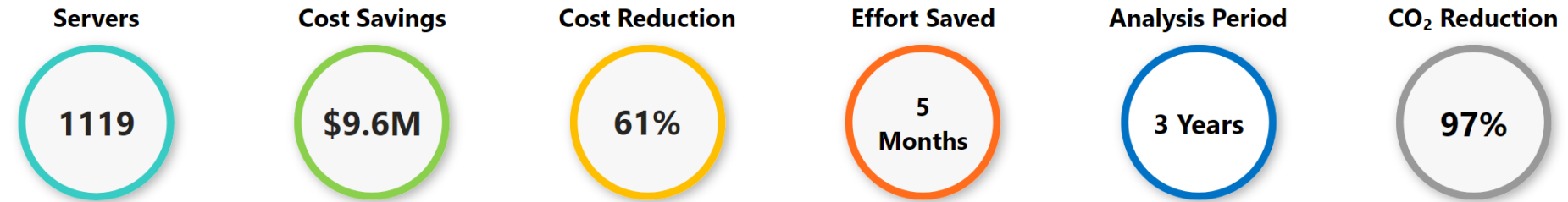
- READY 1066
- CONDITIONS 53
- BLOCKED 0

Power Status

On 1119

Off 0

Executive Summary - TCO Savings



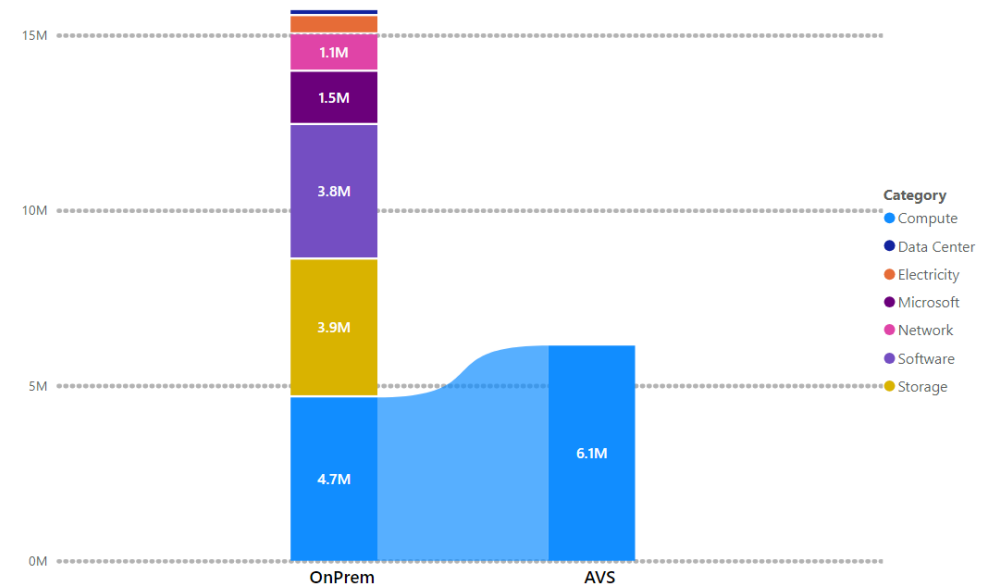
Total Cost of Ownership

Category	On-Premises	AVS
Compute	\$4,658,862.6	\$6,138,462.2
Data Center	\$172,904.2	\$0.0
Electricity	\$521,540.8	\$0.0
Microsoft	\$1,520,321.9	\$0.0
Network	\$1,065,909.3	\$0.0
Software	\$3,838,873.6	\$0.0
Storage	\$3,932,488.8	\$0.0
Total	\$15,710,901.1	\$6,138,462.2

Costing Assumptions

No powered off servers included
 All servers are assumed to be Production
 Disaster Recovery is out of scope for this view
 Backup is out of scope for this view

Cost Transformation



Migration Acceleration Simulation

Azure VMWare Services (AVS) allows customers to quickly and efficiently move out of On-Premises VMWare.

Action to Save

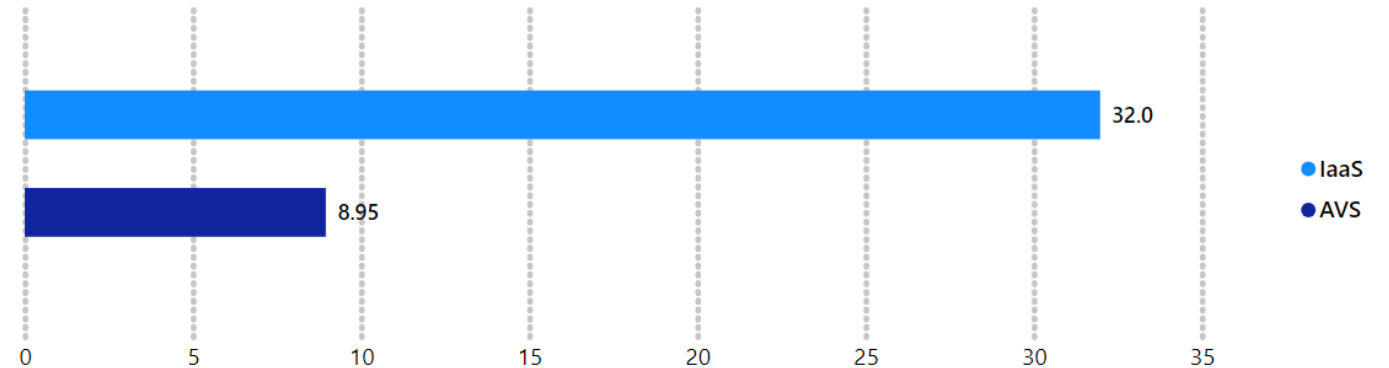
Migrate to Azure VMWare Services (AVS) rather than Azure IaaS, as this will greatly reduce the number of months needed to migrate from On-Premises VMWare and avoid Broadcom price-hikes.

\$402.9K

**Estimated
Migration
Cost
Savings**

Compared to IaaS Migration

Migration Duration (Weeks) IaaS vs AVS



Migration Simulation	On-Premises	AVS	Azure IaaS
Time to Complete Rehosting	Never	2.24 months	7.99 months
Estimated Completion Date (03/04/2024 Start Date)	Never	04 Jun 2024	12 Nov 2024

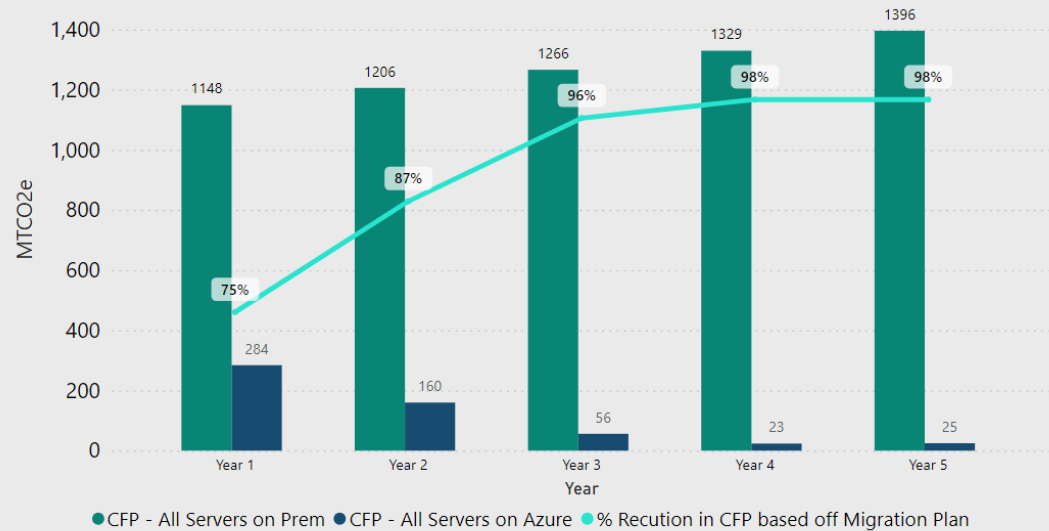
Benefit of AVS over IaaS Analysis

Completing the migration using AVS as opposed to Azure IaaS can save you up to:	5.76 FTE
	\$402.88K
	5.76 Months

Sustainability Results

Based on Scenario 1

Carbon Footprint: On Premise versus Azure (MTCO2e)



5,797
MT co2e

The 5-year reduction in carbon footprint by
VA-COUNTY OF FAIRFAX migrating from On-premise t...

Equivalent to:



1,246

Petrol powered passenger vehicles driven for 1 year.



1,131

Homes electricity usage for 1 year.



1716

Additional acreage of forest that would be needed
to absorb the difference in emissions emitted by
VA-COUNTY OF FAIRFAX from remaining on-premise o...

Microsoft Sustainability Initiatives

- Microsoft has committed to become carbon negative by 2030, Zero Waste by 2030 and Water Positive by 2030.
- Microsoft is on track to Operate with 100% renewable energy by 2025.
- Microsoft datacenters are sustainable by design.



Scenario 1

All IaaS

1119 Servers

776.7 TB

On Premise Cost
\$5.3M

Cloud Hosting Cost
\$1.8M

Annual Savings
\$3.5M

Key Operational Benefits

- Cost Savings
- Flexibility
- Security
- Redundancy
- Operational Savings
- Availability

Financial Overview - All IaaS

On-Prem Server Workload	Azure Recommendation	Device Count	Compute Cost, Monthly	Storage Cost, Monthly	Total Cost, Monthly	Comments
Production Servers	Azure VM: AHB + 3Yr RI	1119 Servers	\$84,408.3	\$50,763.7	\$135,171.9	
Non-Prod Servers	Azure VM: Azure Dev/Test Pricing	0 Servers				Azure Start/Stop 40 Hrs/Week
Total			\$84,408.3	\$50,763.7	\$135,171.9	
Additional Recommended Workload	Azure Recommendation	Device Count	Base Cost, Monthly	Storage Cost, Monthly	Total Cost, Monthly	Comments
Server Security	Microsoft Defender for Cloud Servers P2	1119 Servers	\$16,337.4	\$0.0	\$16,337.4	Utilize Defender for Cloud to protect 1119 servers at a cost of \$15/Month per Server
Data Backup	Azure Backup Services	0 Servers				Azure Backup Service for 0 Servers
Disaster Recovery	Azure Site Recovery	0 Servers				ASR for 0 Servers



Scenario 2

Azure VMWare

1119 Servers 776.7 TB

On Premise Cost \$5.3M

Cloud Hosting Cost \$2.2M

Annual Savings \$3.1M

Key Benefits

- Ease of Migration
- Speed
- Cost Savings
- Simplification

Financial Overview - Azure VMWare Solution

On-Prem Server Workload	Azure Recommendation	Device Count	Compute Cost, Monthly	Storage Cost, Monthly	Total Cost, Monthly	Comments
VMware-hosted Virtual Machines	Azure VMware Solution - 3Yr RI	1119 Servers	\$170,512.8	\$0.0	\$170,512.8	51x AV36P AVS Nodes (36 cores, 768 GB RAM, 19.2 TB All Flash Storage, each)
Total			\$0.0	\$0.0	\$0.0	

Additional Recommended Workload	Azure Recommendation	Device Count	Base Cost, Monthly	Storage Cost, Monthly	Total Cost, Monthly	Comments
Server Security	Microsoft Defender for Cloud Servers P2	1119 Servers	\$16,337.4	\$0.0	\$16,337.4	Utilize Defender for Cloud to protect 1119 servers at a cost of \$15/Month per Server

Key Technical Insights



Server Migration Readiness

Each server is assessed for its technical readiness to run in Azure. Servers that are 'Ready' will confidently run in Azure without issues.

Any conditions or blockers per VM are detailed in the online report.

Action

'Ready' to migrate servers represent possible low-hanging fruit that can be moved to Azure without issue.

Explore 'Rapid Migration First Wave Candidates' to find out more.



READY

1066



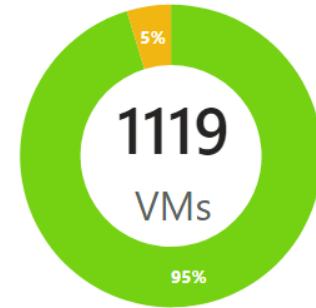
CONDITIONS

53



BLOCKED

0



READY

CONDITIONS

Blocker & Conditions Summary

Windows client versions conditionally supported



Guest OS Not Provided



Guest OS unknown



Unendorsed Linux OS



Conditionally endorsed Linux OS



Right Sizing

Each server's current CPU and memory utilization has been assessed and right-sized to run on optimal Azure virtual machines. The reduction in CPU and memory is reflected in annual cost saving estimates.

Action to Save

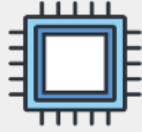
Right-size to recommended optimized Azure VM when migrating to realize cost savings.

Additionally review Powered Down and Zombie Servers as potential decommission candidates.

\$227.3K

Annual Savings

Compared to as-is VMs PAYG



CPU

Core Reduction

↓ 466

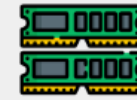
Utilisation

50% to 52%

Before / After



Average Core reduction per server: **0.4**



MEMORY (GB)

RAM Reduction

↓ 1,439

Utilisation

50% to 52%

Before / After



Average Memory (GB) reduction per server: **1.3**



POWERED
DOWN
0 VMs

Powered Down virtual machines do not contribute to right-sizing calculations. Power on the machine to collect right sizing recommendations.



ZOMBIE
SERVERS
0 VMs

Zombie Servers are virtual machines with very little to no network connections, implying they may be candidates to decommission.



Out of Support Server Operating Systems

Out of support Operating Systems present security risks & operational issues. Azure provides no-cost extended security updates for many operating systems, providing immediate cost reduction and security enhancement while you work through re-host/re-platform strategies.

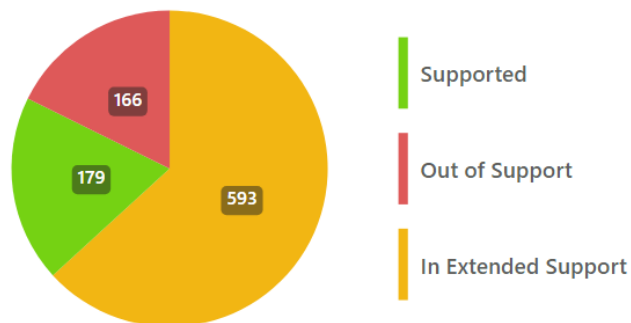
\$241.4K

Annual Savings

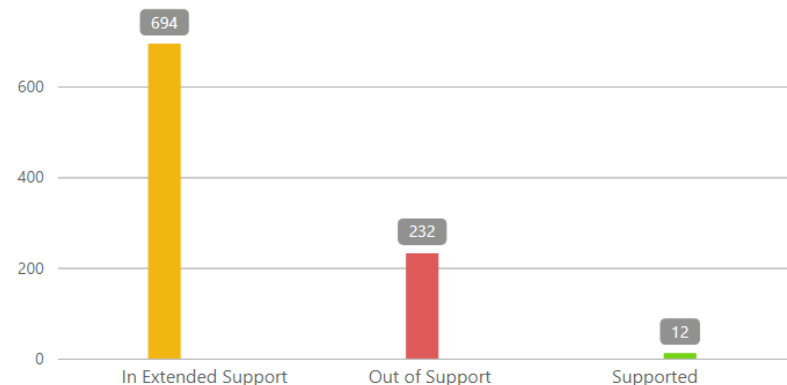
Action to Save

Migrate servers to Azure before they go out of support to avoid Extended Security Update costs.

Current Out of Support Summary



OS Going Out of Support by End of 2025



Out of Support OS Version Count + Extended Security Upgrades Costs

Support Status	OS Version	Extended Update Cost	Azure Cost	Total Count
	Microsoft Windows Server 2019 (64-bit)	\$134,125	\$0.0	295
	Microsoft Windows Server 2016 or later (64-bit)	\$71,263	\$0.0	151
	Microsoft Windows Server 2016 (64-bit)	\$36,007	\$0.0	86
	CentOS 4/5 (64-bit)	\$0	\$0.0	1
	CentOS 7 (64-bit)	\$0	\$0.0	40
	Other 3.x Linux (64-bit)	\$0	\$0.0	7



Extended Security Updates

Top Benefits



Continuous Security

Latest Updates



Reduced Cost

Tool Consolidation



Cost Efficient

Pay as you Go



Operational Gains

No infrastructure required

Extended Security Updates Pricing Options

Option 1 - Migrate to Azure - Free

Exclusive to Azure, receive free ESUs when workloads are migrated to Azure.



Eligible Windows Operating Systems

532



Eligible SQL Instances

0

Option 2 - Enable Azure Arc - Priced by cores

	Count	Annual Cost
Eligible Windows Servers	532	\$241,395
Eligible SQL Instances	0	\$0

*Extended Security Updates enabled by Azure Arc also gives more flexibility with a pay-as-you-go subscription model.

Recommendations & Next Steps



Next Steps

- Internal huddle on agreeing on value to proceed to next step
- Work with your account team to request an Advanced Assessment funded by Microsoft (see next slide for sample)
- Deploy Azure Migrate to capture detailed data points allowing for next level planning: App dependency mapping, modernization and consolidation approaches, wave planning.
-
-

Next Steps

An RVTools import identifies immediate opportunities and pathways to Azure. The next step is to sure up migration plans and the cost case by conducting an Advanced Assessment. It provides customers with clear direction at an application level, 6R migration strategies, wave planning, application sizing, and refined total cost of ownership (TCO) calculations.

Express Assessment

RVTools Import



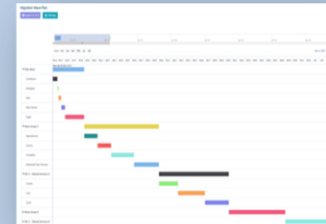
Complete

Advanced Assessment

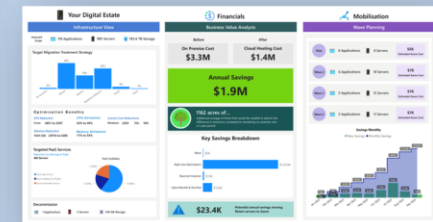
Application 6R Treatments



Wave Plan



Refined TCO





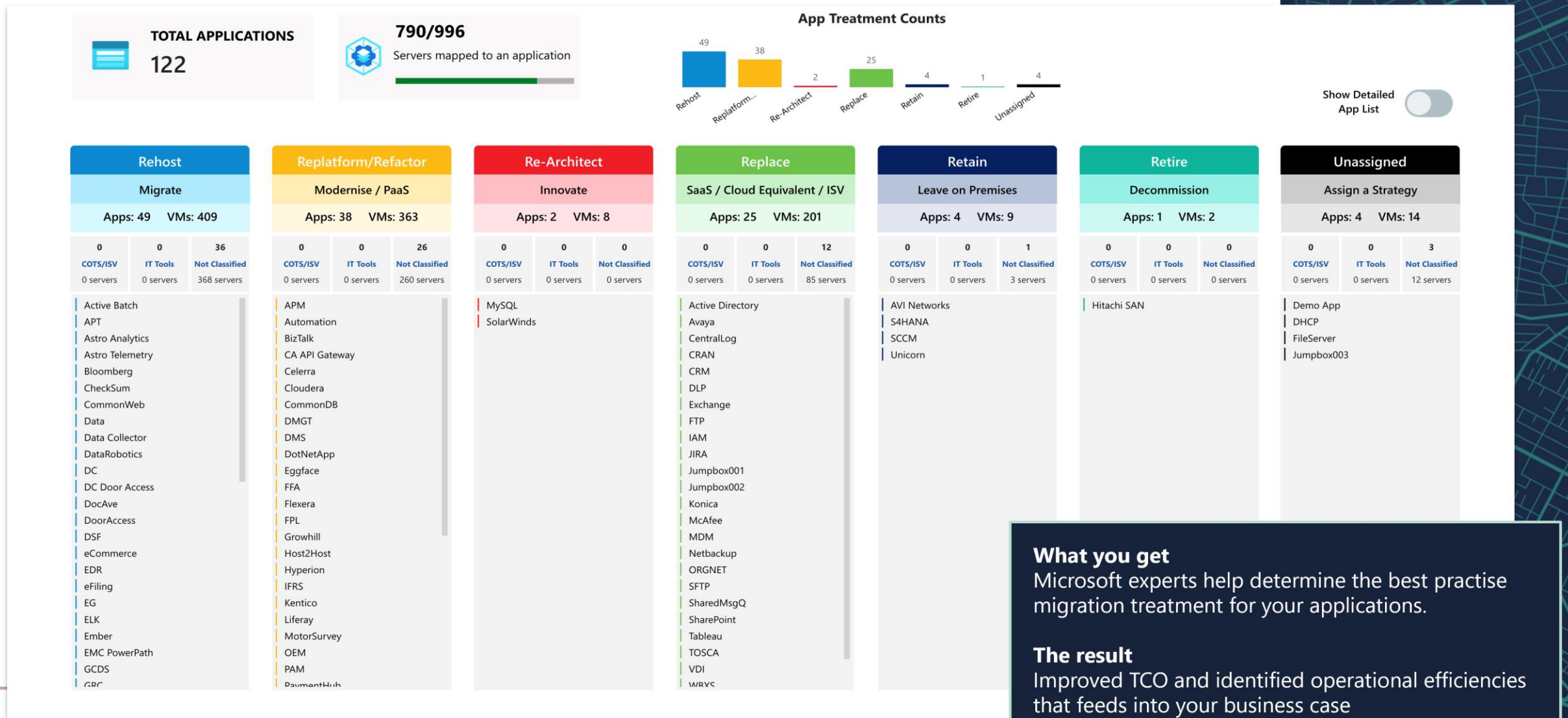
Sample Advanced Assessment Insights

Plan with Confidence



Application Rationalization Overview

SAMPLE



Applications by Complexity Size

SAMPLE



19 Apps

Low

App	Servers	Score
APT	4	160
eFiling	2	160
TITUS	4	150
RHA	3	145
Unicorn	3	135
DHCP	2	100
SharedOTP	2	100
VDI	1	95
GCDS	1	85
TOSCA	1	85
CentralLog	1	75
Checksum	1	75
CommonWeb	1	75
CRAN	1	75
Data	1	75
DataRobotics	1	75
EDR	1	75
EG	1	75
SOAR	1	75



49 Apps

Medium

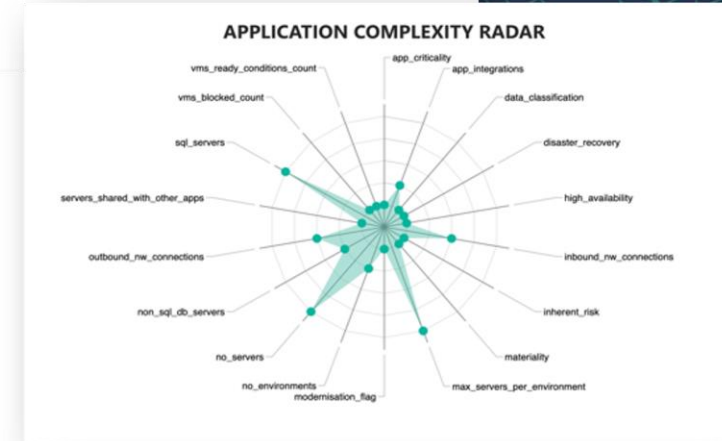
App	Servers	Score
Liferay	7	335
J2EE	6	310
Astro Analytics	5	285
Astro Telemetry	5	285
SAP	5	265
Maximus	4	240
PaymentHub	4	240
DSF	5	235
Hyperion	3	235
Tableau	3	235
WLF	5	235
DocAve	3	210
JIRA	4	210
SCCM	3	210
Exchange	4	200
GRC	3	195
Jumpbox003	2	190
Kentico	2	190
MotorSurvey	4	190
Netbackup	2	180



28 Apps

High

App	Servers	Score
FileServer	10	430
SolarWinds	7	425
PeopleSoft	13	415
Talend	10	380
FTP	9	365
Remedy	11	355
FPL	11	335
APM	12	330
DLP	8	330
OLTC	9	315
IAM	12	300
HSM	7	295
Step	6	290
eCommerce	7	285
TMDS	4	260
REPO	6	240
Reporting	4	240
SOC	7	240
Zabbix	6	240
TDS	6	235



Very High

App	Servers	Score
DMS	29	645
PAM	12	610
SSO	23	585
WCMS	14	510
Active Batch	15	475
RPA	16	475
MDM	18	460
FFA	12	420
CommonDB	8	410
Automation	4	375
DMGT	9	370
CA AP		
Gatewa		
UWW		
BizTall		

Extra High

App	Servers	Score
CRM	59	1215
DC	19	1045
IFRS	39	825
Cloudera	45	820
SharePoint	27	715
Growhill	20	610
WBXS	16	605
ELK	31	585
Prophet	15	565
ORGNET	13	530
InnoDB	5	255

What you get

Advanced algorithms size each application based on

The result

Accurate sizing of each application that can be used by your selected partner or internal team to size and cost migration work.

Application Wave Planning

SAMPLE

Based on application dependencies and known business priorities, a first set of applications have been added to wave groups. The calculated Application Complexity rating has also been used to extrapolate estimated wave duration.

Pilot Wave			
Apps: 6 Servers: 8			
App	Servers	Complexity	Treatment
CRAN	1	Low Complexity	Replace
DataRobotics	1	Low Complexity	Rehost
SOAR	1	Low Complexity	Rehost
TOSCA	1	Low Complexity	Replace
VDI	1	Low Complexity	Replace
RHA	3	Low Complexity	Rehost

Wave Group 2			
Apps: 6 Servers: 10			
App	Servers	Complexity	Treatment
CommonWeb	1	Low Complexity	Rehost
EDR	1	Low Complexity	Rehost
EG	1	Low Complexity	Rehost
GCDS	1	Low Complexity	Rehost
SharedOTP	2	Low Complexity	Rehost
APT	4	Low Complexity	Rehost

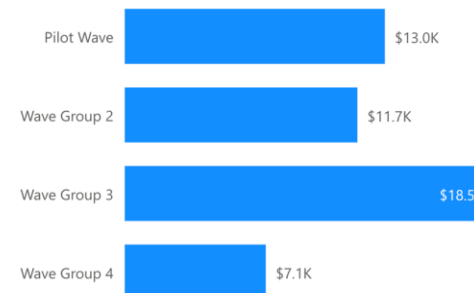
Wave Group 3			
Apps: 5 Servers: 13			
App	Servers	Complexity	Treatment
OEM	1	Medium Complexity	Replatform/Refactor
Serena	1	Medium Complexity	Replatform/Refactor
WIS	1	Medium Complexity	Replatform/Refactor
MotorSurvey	4	Medium Complexity	Replatform/Refactor
REPO	6	High Complexity	Replatform/Refactor

Wave Group 4			
Apps: 5 Servers: 11			
App	Servers	Complexity	Treatment
HRMobile	1	Medium Complexity	Rehost
IPAddMgt	1	Medium Complexity	Rehost
Wizards	1	Medium Complexity	Rehost
GRC	3	Medium Complexity	Rehost
CA API Gateway	5	Very High Complexity	Replatform/Refactor

Estimated Duration (Weeks)



Estimated Savings (Annual)



Estimated Azure Hosting Cost (Annual)

What you get

Applications will be organized into logical wave groups.

The result

You have an actionable starting wave plan, that can be tailored based on your business priorities

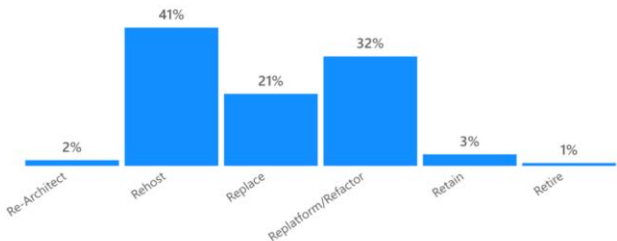


Your Digital Estate

Infrastructure View

Assessed Scope 118 Applications 982 Servers 783.6 TB Storage

Target Migration Treatment Strategy



Optimization Benefits

CPU Reduction

Cores: 6851 to 2297

CPU Utilization

22% to 49%

License Core Reductions

Windows: 2553 SQL: 595

Memory Reduction

RAM (GB): 23918 to 6405

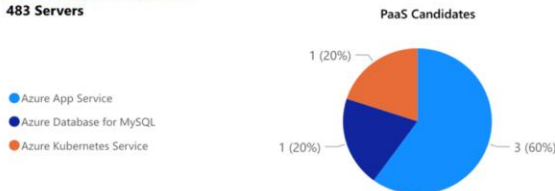
Memory Utilization

17% to 54%

Targeted PaaS Services

Reduction by Moving to PaaS

483 Servers



Decommission

1 Applications 2 Servers 340 GB Storage



Financials

Business Value Analysis

Before

On Premise Cost

\$3.3M

After

Cloud Hosting Cost

\$1.4M

Annual Savings

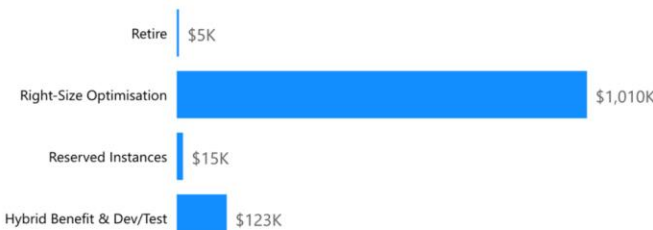
\$1.9M



1162 acres of...

Additional acreage of forest that would be needed to absorb the difference in emissions compared to remaining on-premise over a 5 year period

Key Savings Breakdown



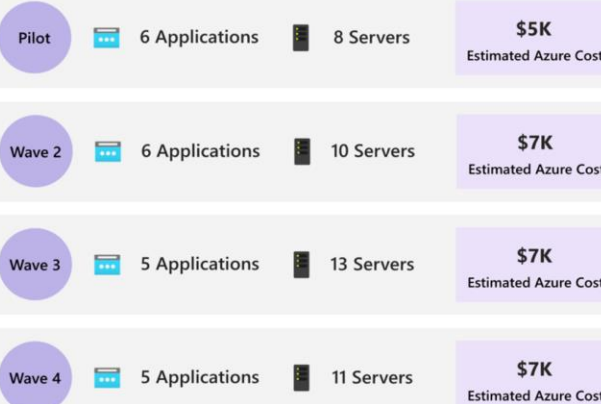
\$23.4K

Potential annual savings moving
Retain servers to Azure



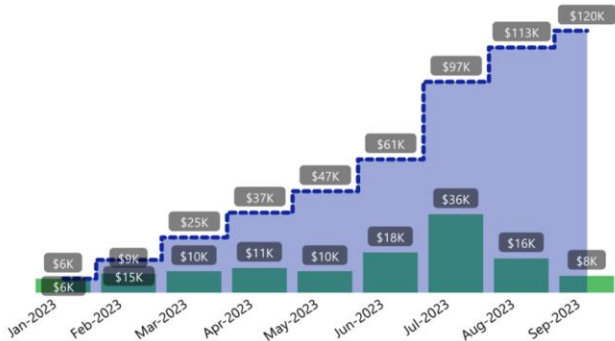
Mobilisation

Wave Planning



Savings Monthly

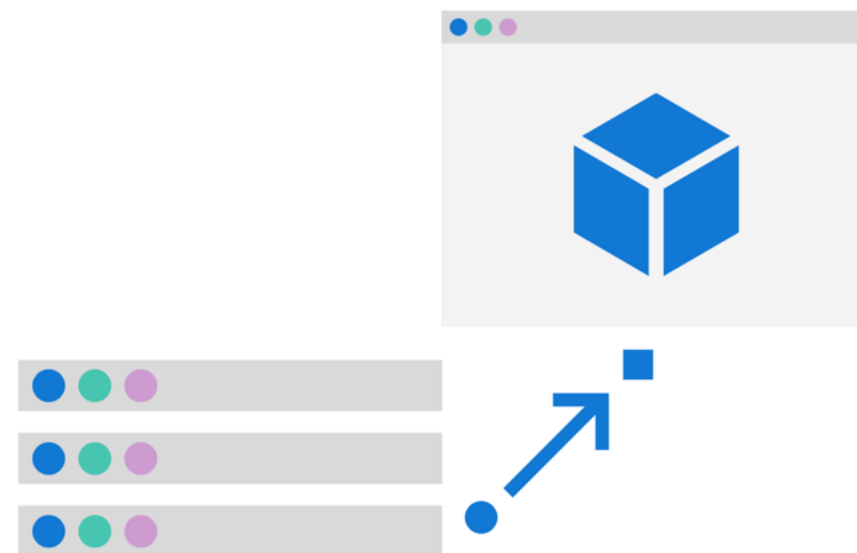
● New Savings ● Monthly Savings



Migration factory

Rapid migration from on-premises Windows & SQL to IaaS/AVS & PaaS

- Microsoft has an offering for our customers to provide zero-cost Migration of Windows & SQL Server to Azure (PaaS or IaaS).
- Migrations can be typically be completed within 2-4 weeks.
- SQL Server databases that are ready to migrate and do not require any refactoring/rewrite are good candidates for this offer.
- If you have additional questions or want to learn more, please engage your Customer Success Account Manager, Microsoft Account Team, and/or send an email to: CSU_migrationfactory@microsoft.com



Accelerate your cloud journey with confidence through the Microsoft Migration Factory Program

Account Team Nomination

Work with your CSAM/Account Team to connect with the CSU Migration Factory.

SMF Triage

Connect with the CSU Migration Factory engineers to determine how they can help.

Migration and Modernization

Execute deployment with the **Migration Factory** Program through **Microsoft** at zero-cost.

Thank You!