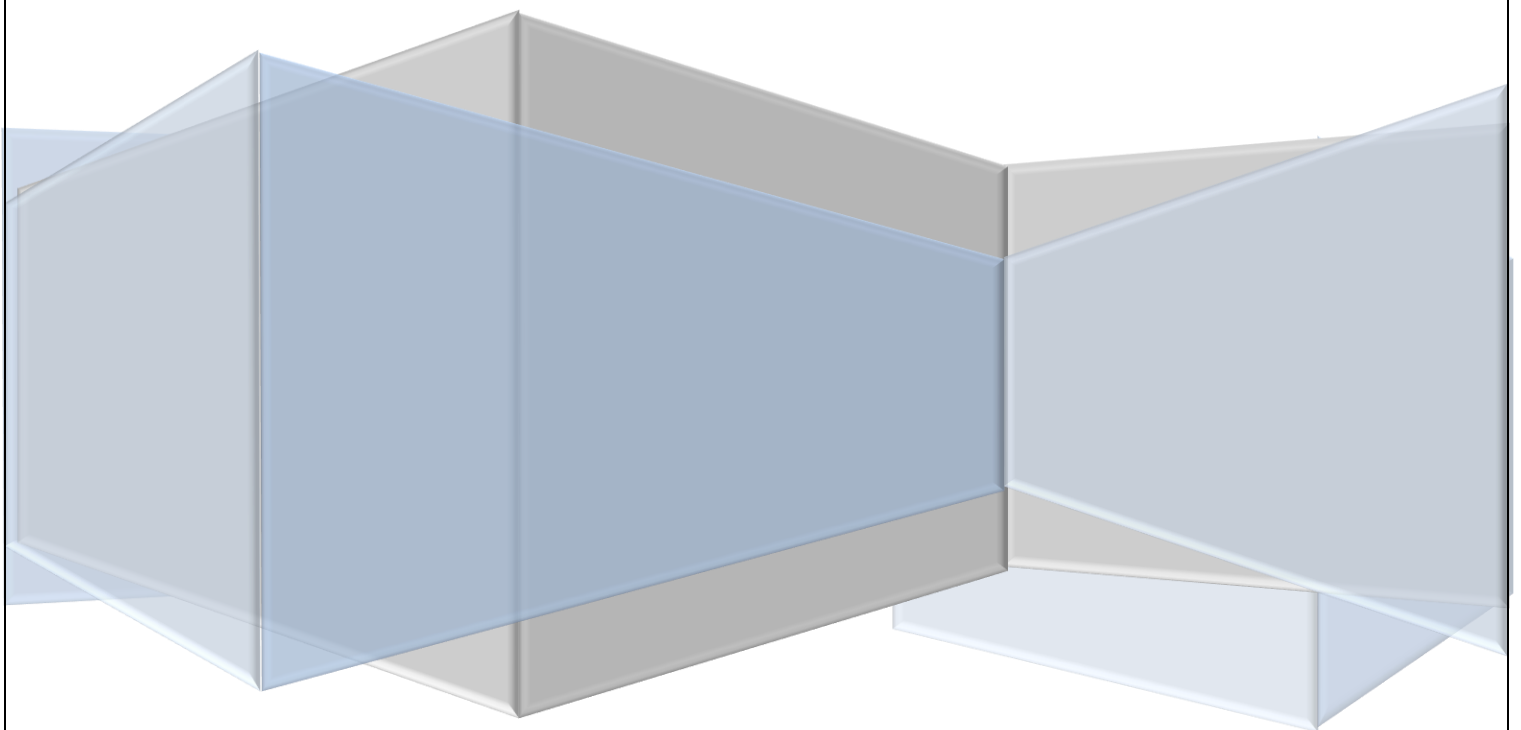


Infrastructure Discovery and Assessment Report and Recommendations for 'Experiment GmbH'



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Client:	Experiment GmbH
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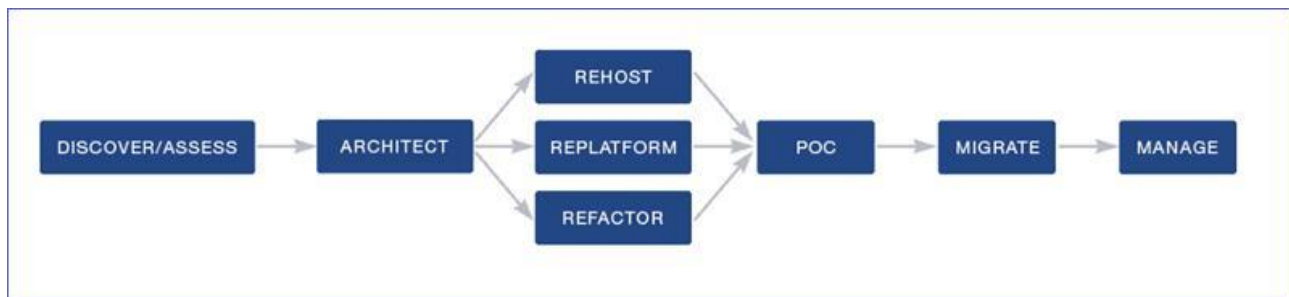
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1. Executive Summary – Cloud Discovery and Assessment

This document provides a cloud discovery for Experiment GmbH On-Premise environment. The report assessed the existing environment and its migration to the Azure Cloud.

This document covers:

1. Existing environment (source) analysis.
2. Cloud Analysis Report
3. Azure migration timeline.
4. Migration action items and any risks.



Overall, the existing environment can be moved/migrated to the Azure CSP. The following document will provide the critical strategy planning to minimize any application and/or infrastructure downtime. That said, change windows may be required to ensure that any maintenance is managed.

2. Cloud Analysis Report

The assessed environment consists for 7 servers that are discovered from that will need to be migrated to Azure.

2.1 Infrastructure Summary

MAP toolkit analysed your infrastructure considering your compute, storage, and networking resources and mapped your infrastructure with Microsoft Azure. MAP toolkit matched your requirements to available Cloud resources and made suggestions on different strategies for migrating your infrastructure to Microsoft Azure based on utilization data collected while scanning the servers. MAP toolkit also presents multiple recommendations and advisories to improve the performance and utilization of your workload components.

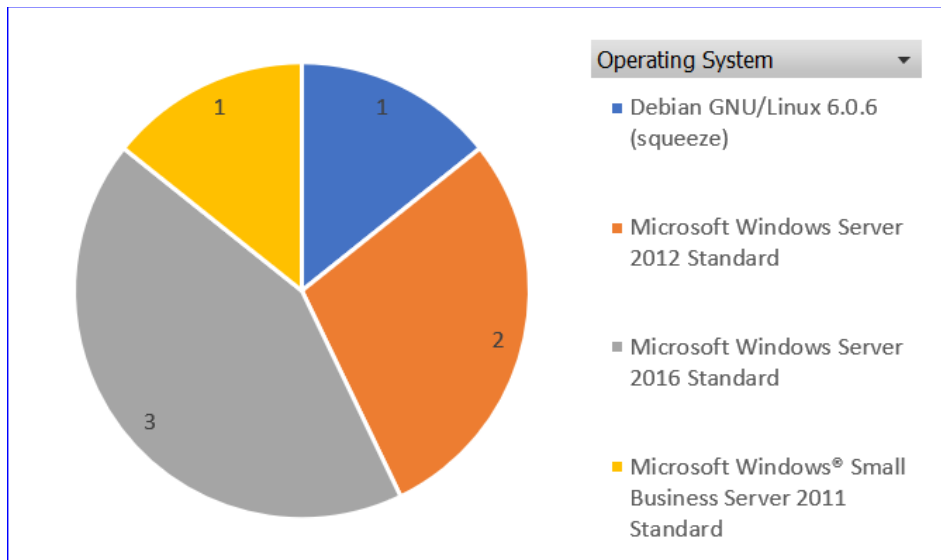
- **Server Summary**

Information about the server in the infrastructure assessment.

Server Scan Summary	
No. Of Servers	7
Windows Servers	6
Linux Servers	1
Physical Servers	0
Virtual Servers	7
Unidentified Servers	0
Total Storage	6428.45 GB
No. Of Disks	14

- **OS Distribution**

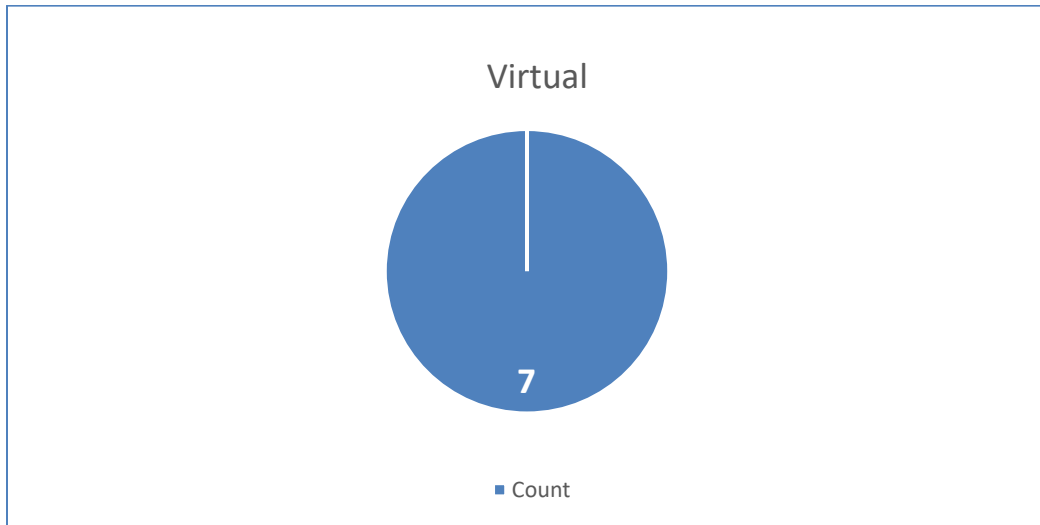
Classification of servers based on OS.



- **Server Type**

Distribution of servers based on hypervisor.

Operating System	Machine Type
Debian GNU/Linux 6.0.6 (squeeze)	Virtual
Microsoft Windows Server 2012 Standard	Virtual
Microsoft Windows Server 2012 Standard	Virtual
Microsoft Windows Server 2016 Standard	Virtual
Microsoft Windows® Small Business Server 2011 Standard	Virtual
Microsoft Windows Server 2016 Standard	Virtual
Microsoft Windows Server 2016 Standard	Virtual

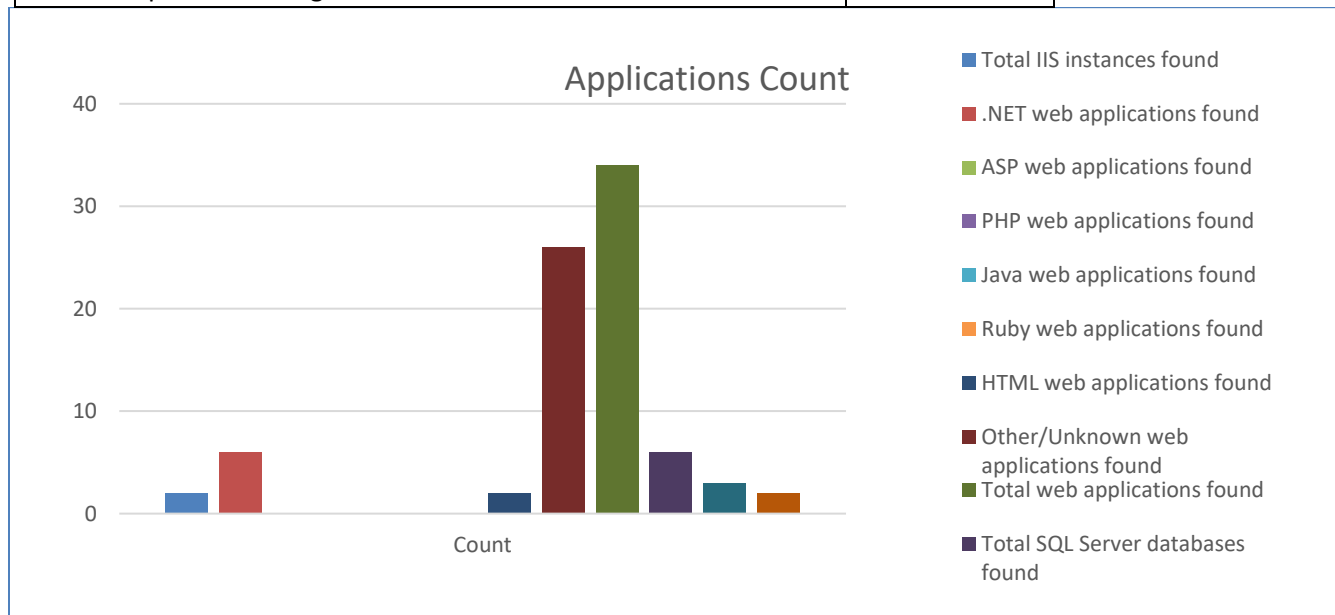


- **Assessed Applications summary**

MAP toolkit assessed following applications running on the servers.

Summary Item	Count
Total IIS instances found	2
.NET web applications found	6
ASP web applications found	0
PHP web applications found	0
Java web applications found	0
Ruby web applications found	0
HTML web applications found	2

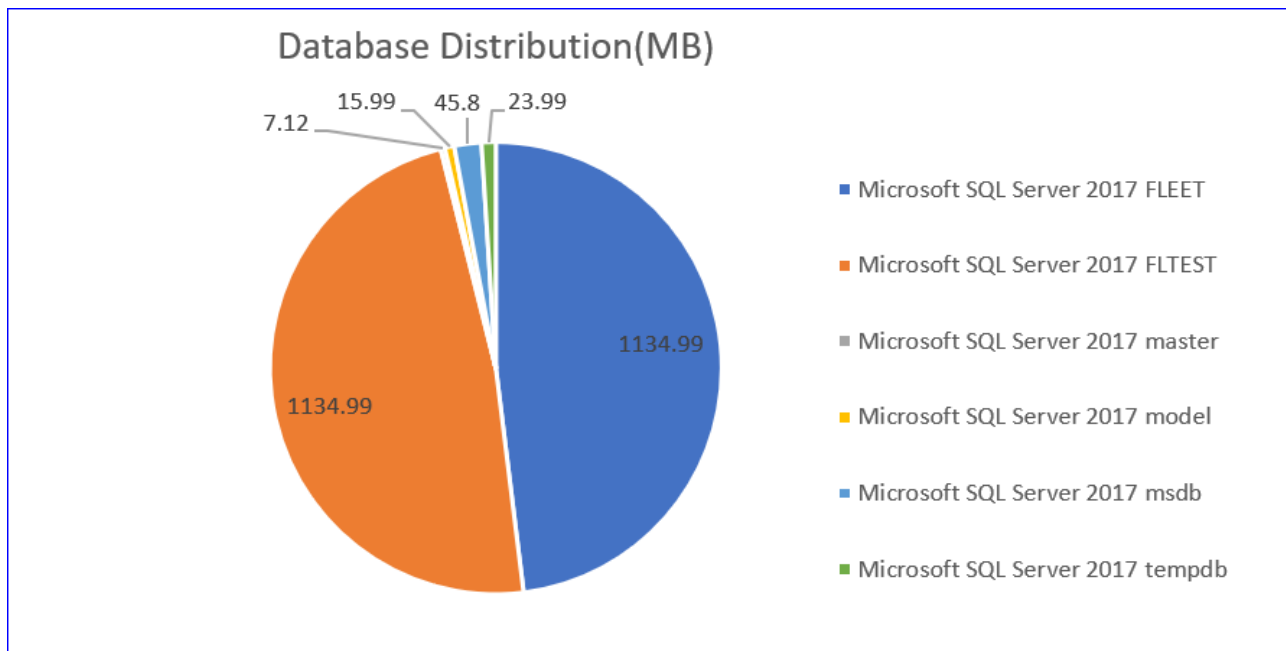
Other/Unknown web applications found	26
Total web applications found	34
Total SQL Server databases found	6
Total SQL Server instances found	3
Total computers running SQL Server	2



• **SQL Server Database Summary**

Distribution of Databases servers.

Server Name	SQL Server Database Engine Instance Name	SQL Server Product Name	Database Name	Database Size (MB)
S100010.svs.local	SBSMONITORING	Microsoft SQL Server 2008 R2		
S100010.svs.local	SHAREPOINT	Microsoft SQL Server 2008 R2		
s100012.svs.local	MSSQLSERVER	Microsoft SQL Server 2017	FLEET	1134.99 MB
s100012.svs.local	MSSQLSERVER	Microsoft SQL Server 2017	FLTEST	1134.99 MB
s100012.svs.local	MSSQLSERVER	Microsoft SQL Server 2017	master	7.12 MB
s100012.svs.local	MSSQLSERVER	Microsoft SQL Server 2017	model	15.99 MB
s100012.svs.local	MSSQLSERVER	Microsoft SQL Server 2017	msdb	45.80 MB
s100012.svs.local	MSSQLSERVER	Microsoft SQL Server 2017	tempdb	23.99 MB



2.2 Cloud Migration Strategy

Classification of servers based on different Cloud migration strategies such as Lift and Shift, PasS, SaaS, based on the analysis.

- Cloud Readiness Analysis

Cloud Strategy Analysis	Microsoft Azure
Windows machines considered for Microsoft Azure VM readiness	6
Windows machines Ready	6
Windows machines Ready after changes	0
Linux machines considered for Microsoft Azure VM Readiness	1
Linux machines Ready	0
Linux machines Not Ready	1

- Migration Strategy (Cloud Ready)

Lift and Shift Migration Strategy	Microsoft Azure
Lift and Shift Migration	6/7 Server(s)

Lift and Shift Migration with additional service efforts	0/7 Server(s)
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2.3 VM Instance Recommendation

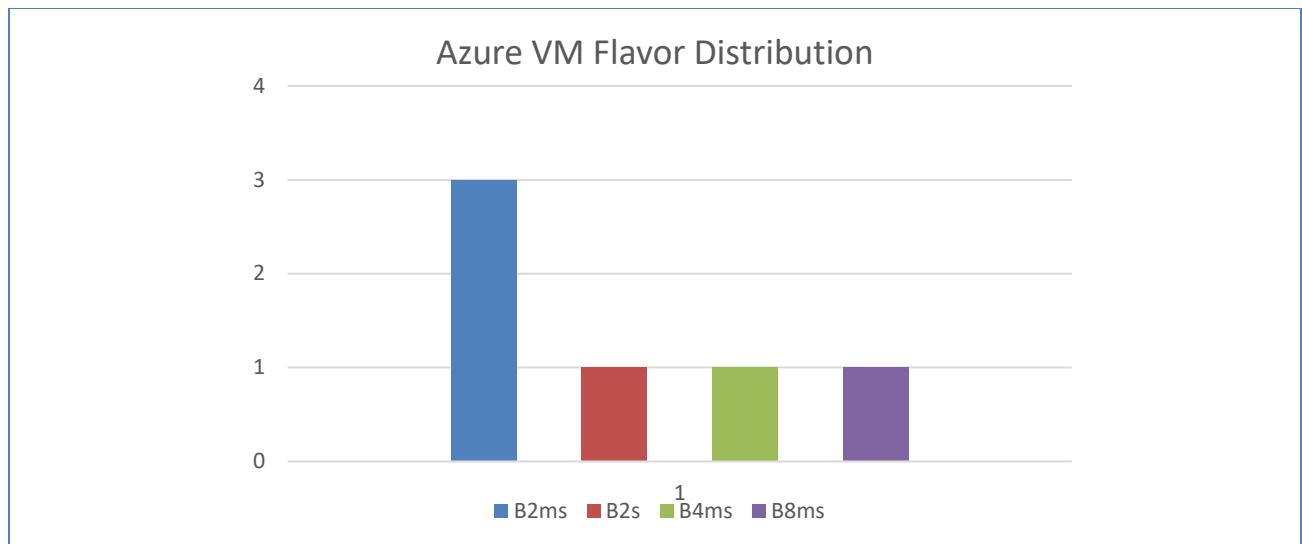
MAP toolkit recommends suitable VMs in Cloud, based on source server configurations considering OS, RAM, CPU core, storage, etc.

- Suggested VM Flavour Profile

List of equivalence and best match flavours suggested by Ingram Micro Cloud for the scanned source servers with its resource specifications and cost. Ingram Micro Cloud recommends flavours which is equal to or higher/lower than your existing server configuration.

Cloud Name	OS Name	Logical Processors	System Memory (MB)	No of Servers	Flavour Name	Flavour Cost /Month(USD)
Microsoft Azure	Debian GNU/Linux 6.0.6 (squeeze)	1	1100	1	B1s	12.34
	Microsoft Windows Server 2012 Standard	2	8192	1	B2ms	97.09
	Microsoft Windows Server 2012 Standard	8	32768	1	B4ms	303.68
	Microsoft Windows Server 2016 Standard	4	32768	1	B4ms	151.84
	Microsoft Windows® Small Business Server 2011 Standard	4	32768	1	B8ms	418.29
	Microsoft Windows Server 2016 Standard	2	16384	1	B2ms	104.39
	Microsoft Windows Server 2016 Standard	4	16384	1	B2s	55.19
	Total					1255.98

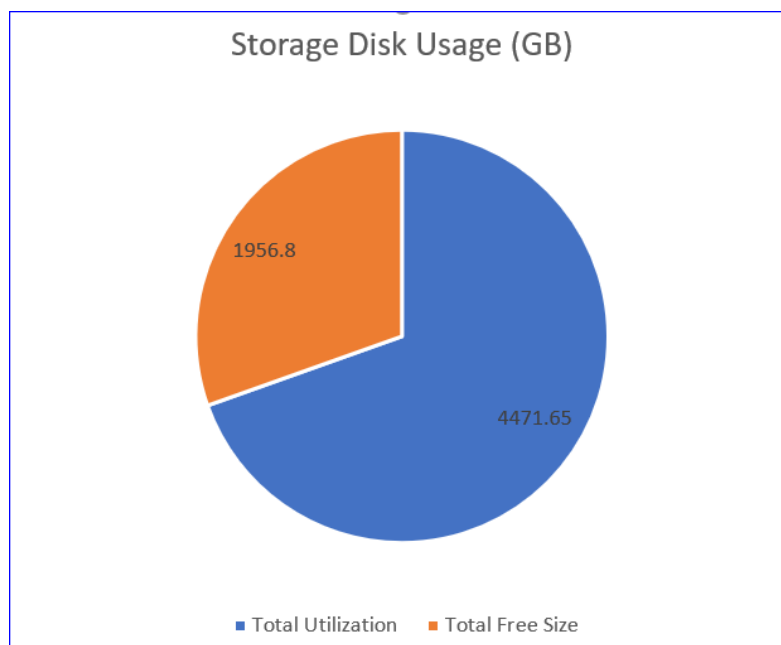
- Microsoft Azure VM Flavour Distribution



2.4 Storage Recommendation

MAP toolkit identified the storage requirements of your infrastructure and suggests suitable storage types available in Cloud by considering the disk utilization and IOPS/throughput requirements for workload components.

- Storage Disk Utilization



- Recommendation for Disks

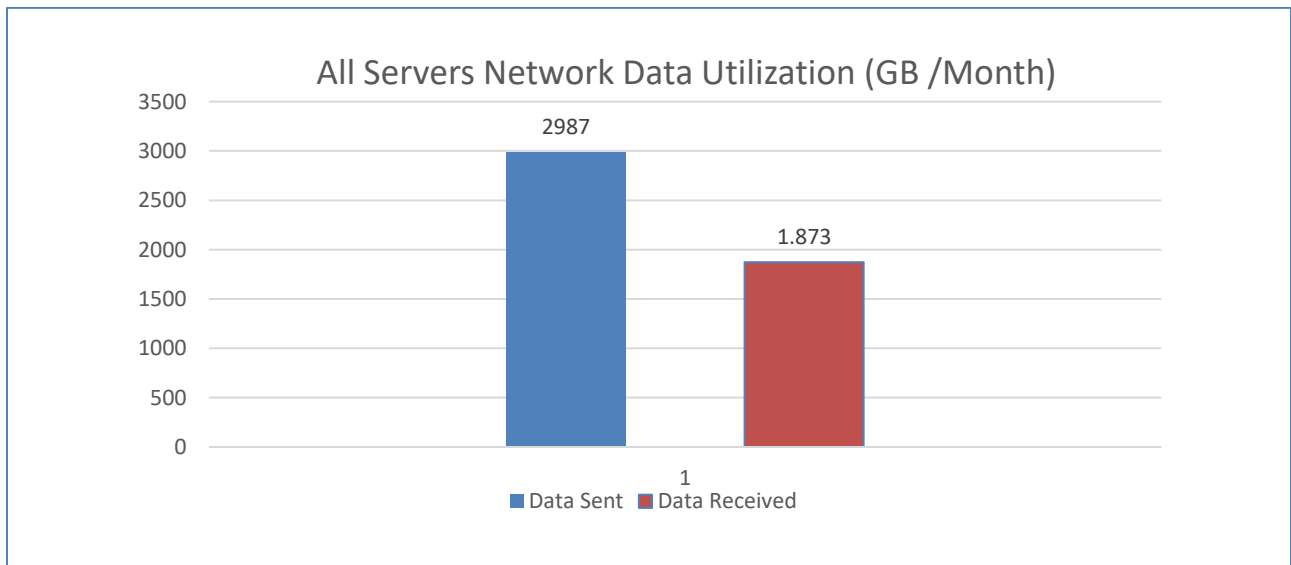
Storage recommendations for VMs are calculated based on the number of disks (this includes OS disks) and any additional storages such as NAS, SAN attached to the VM.

Cloud Name	Type of Storage	Premium SSD sizes	Provisioned IOPS per disk	Provisioned Throughput per disk	Total Disk	Total Used Storage(GB)	Total Proposed Storage(GiB)	Total Cost /Month (USD)
Microsoft Azure	Premium Managed SSD	P3	120	25 MiB/sec	1	6.47	16	2.08
	Premium Managed SSD	P40	7500	250 MiB/sec	1	1706.49	2048	407.46
	Premium Managed SSD	P30	5000	200 MiB/sec	1	898.26	1024	212.61
	Premium Managed SSD	P6	240	50 MiB/sec	1	49.03	64	16.05
	Premium Managed SSD	P40	7500	250 MiB/sec	1	1317.95	2048	407.46
	Premium Managed SSD	P6	240	50 MiB/sec	1	38.77	64	16.05
	Premium Managed SSD	P20	2300	150 MiB/sec	1	454.68	512	115.17
							Total Cost	1176.88

2.5 Network Utilization

Summary of network bandwidth requirements for all servers based on utilization data collected while scanning the servers.

Machine Name	Average Network Utilization (MB/s)	Maximum Network Utilization (MB/s)	Avg Network Bytes Sent (MB/s)	Avg Network Bytes Received (MB/s)
s100005	0	0	0	0
s100007.svs.local	0.13	7.3	0.09	0.05
s100008.svs.local	0.01	0.48	0.01	0.01
s100009.svs.local	0.04	1.46	0.02	0.02
S100010.svs.local	1.68	107.96	1.04	0.64
s100012.svs.local	0	0.14	0	0
s100013.svs.local	0.03	0.93	0.02	0.02



2.6 Infrastructure Details – Usage based – Right Sized Environment

Name	IP Address	OS Detail	Description	Azure VM Size
s100005	192.168.100.35	Debian GNU/Linux 6.0.6 (squeeze)	CPU: Intel(R) Xeon(R) CPU E5-2630 v2 @ 2.60GHz, 64 bit Cores: 1 Memory (MB): 993.7/1010 IOPS: 0.15 Disk Space Utilization (GB): 6.47	B1s
s100007.svs.local	192.168.100.37	Microsoft Windows Server 2012 Standard	CPU: Intel(R) Xeon(R) CPU E5-2630 v2 @ 2.60GHz, 64 bit Cores: 2 Memory (MB) : 4184.02/ 8192 IOPS: 16.03 Disk Space Utilization (GB): 1706.49	B2ms
s100008.svs.local	192.168.100.38	Microsoft Windows Server 2012 Standard	CPU: Intel(R) Xeon(R) CPU E5-2630 v2 @ 2.60GHz, 64 bit Cores: 8 Memory (MB) : 6944.37/ 32768 IOPS: 65.22 Disk Space Utilization (GB): 898.26	B4ms
s100009.svs.local	192.168.100.49	Microsoft Windows Server 2016 Standard	CPU: Intel(R) Xeon(R) CPU E5-2630 v2 @ 2.60GHz, 64 bit Cores: 4 Memory (MB) : 6760.12/ 32768 IOPS: 7.24 Disk Space Utilization (GB): 49.03	B2ms
S100010.svs.local	192.168.100.11	Microsoft Windows® Small Business Server 2011 Standard	CPU: Intel(R) Xeon(R) CPU E5-2630 v2 @ 2.60GHz, 64 bit Cores: 4 Memory (MB) : 31865.7/ 32768 IOPS: 428.3 Disk Space Utilization (GB): 1317.95	B8ms
s100012.svs.local	192.168.100.32	Microsoft Windows Server 2016 Standard	CPU: Intel(R) Xeon(R) CPU E5-2630 v2 @ 2.60GHz, 64 bit Cores: 2 Memory (MB) : 4535.7/ 16384 IOPS: 6.67 Disk Space Utilization (GB): 38.77	B2ms
s100013.svs.local	192.168.100.33	Microsoft Windows Server 2016 Standard	CPU: Intel(R) Xeon(R) CPU E5-2630 v2 @ 2.60GHz, 64 bit Cores: 4 Memory (MB) : 4069.44/ 16384 IOPS: 9.83 Disk Space Utilization (GB): 454.68	B2s

3. Total Cost of Ownership

Based on cost modelling performed by Azure TCO Calculator for your infrastructure, total cost for the resources and services are calculated for different infrastructure cost options. It helps to assesses direct and indirect costs and benefits related to migrating your infrastructure to each Cloud. The objective is to estimate a final figure for each Cloud that will reflect the true cost, all things considered.

3.1 TCO for Match Over 3 Years

Azure TCO Calculator projected 3-year cumulative cost for Microsoft Azure 7 Server(s) considering the compute, storage, and network resources. This projected cost does not include resources such as PaaS, IPs.

- TCO calculated considering the managed Disk is HDD

Cloud Name	Pricing Plan	Compute	Networking	Storage	Operational	Total Cost Over 3 Years
Microsoft Azure	PAYG	\$15,063.48	\$16,020.00	\$5,848.20	\$7000	\$43,932.00

- TCO calculated considering the managed Disk is SSD

Cloud Name	Pricing Plan	Compute	Networking	Storage	Operational	Total Cost Over 3 Years
Microsoft Azure	PAYG	\$15,063.48	\$16,020.00	\$21,770.64	\$7000	\$59,854.00

4. Windows Server End of Support Advisory

Ingram Micro Cloud has identified the end of support Windows servers and recommends to migrate to the Cloud using Smart Shift method for greater security and performance

Servers Identified:

Microsoft windows server 2012 standard Servers: 2

Microsoft Windows® Small Business Server 2011 Standard: 1

Machine Name	Server IP	OS	End of support
s100007.svs.local	192.168.100.37	Microsoft Windows Server 2012 Standard	Oct. 10, 2023
s100008.svs.local	192.168.100.38	Microsoft Windows Server 2012 Standard	Oct. 10, 2023
S100010.svs.local	192.168.100.11	Microsoft Windows® Small Business Server 2011 Standard	January 14, 2020

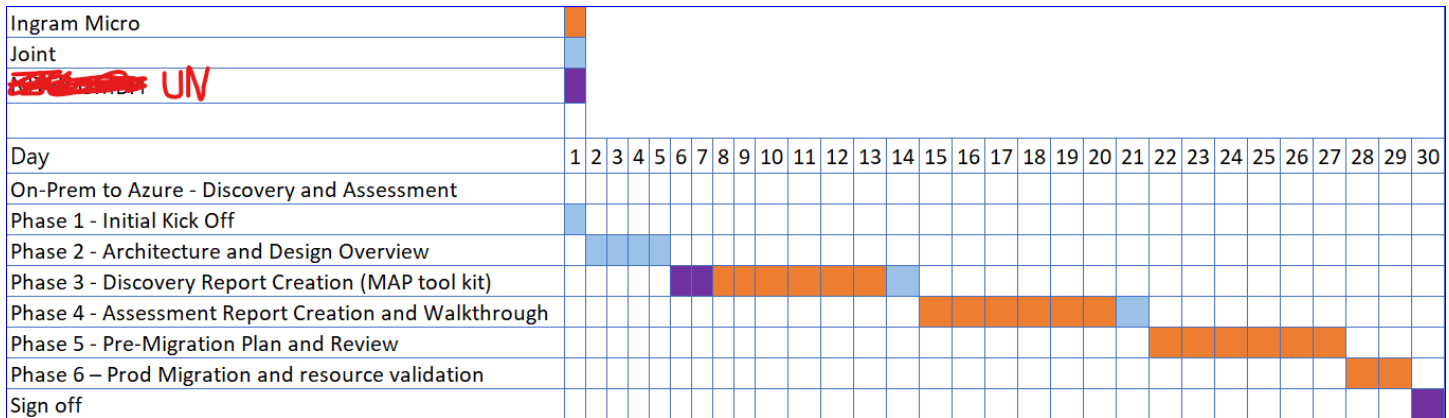
5. Migration Planning and Execution Phases

The overall migration could occur in 4-6 weeks. The plan will be executed in a phased approach based on client environments.

5.1 Migration Phases:

- Before proceeding with migration we need to confer with the Experiment GmbH team to work on the phasing of which client environments should be in what sequence.
- Need to determine maximum changeover window for each client, whereby which certain workloads may be unavailable/offline
- At any step of the migration a rollback is possible.

6. CSP Migration Timelines



7. Action items, Key Observations and Next Steps

7.1 Action items and Next steps

- Review Discovery and Assessment jointly.
- Confirm plan and receive 'go-ahead' from Experiment GmbH.

7.2 Areas of Risk/Concern

- Overall, minimal areas of concern for the migration.
- Client Azure Environment will need to be enabled with its Internal/External IP addressing and further efforts may be required to create security and firewall policies to support them based on their current needs.
- Linux operating systems need to be reviewed further to ensure their operating system versions can be adopted in Azure.
- Ingram Micro to review and suggest mitigation plan if any.
- Will need to establish change windows for all migrations