AveHealth – Azure DMP Infra Services Deployment (SEA)

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Document History

Version	Owner	Review Date
1.0	Rakesh SD, Solution Specialist	20th Feb 2024
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Contents

Preface

This statement of work dated 20/02/2024 (hereinafter: "Statement of Work") governs duties and scope of the service engagement between AveHealth Pte. Ltd ("Customer") and SoftwareONE Pte Ltd ("SoftwareONE"). This Statement of Work is governed by the terms of the services agreement between the Customer and SoftwareONE. If no Services Agreement is in place between the Customer and SoftwareONE, this Statement of Work is entered into under SoftwareONE's standard terms and conditions (the "T&Cs"), a copy of which are available at www.softwareone.com. The terms of the Services Agreement or the T&Cs, as applicable, shall govern this Statement of Work, along with any non-disclosure agreement in place between SoftwareONE and the Customer. In case of any inconsistencies between the relevant documents, the terms of the Services Agreement or the T&Cs will control, unless all of the following apply: (i) the Statement of Work clearly identifies the applicable section of the Services Agreement or T&Cs that is to be modified; and (ii) the Statement of Work clearly states that such provision supersedes the conflicting or inconsistent provision in the Services Agreement or T&C's.

1 Executive Summary

SoftwareONE welcomes the opportunity from AveHealth Pte. Ltd to provide Infrastructure support as part of current environment expansion in Azure.

AveHealth Pte. Ltd. (AHPL) is a subsidiary of Mitsui & Co., Ltd (Mitsui), based in Singapore. AHPL was established in 2016 as the dedicated operating partner platform for the Wellness Business of Mitsui. As the largest shareholder of IHH Healthcare Berhad, AHPL's mission is to create long-term value and to grow the portfolio within the healthcare ecosystem of Mitsui (the Group).

AHPL is seeking for deployment of Data management Platform services on existing AveHealth Cloud environment on following environments Dev, QA, Pre-Prod and Prod environments.

As part of this engagement, SoftwareONE will provide the following services.

- Building the Azure Infrastructure based on alignment discussions with the AveHealth.

SoftwareONE's Delivery methodology is organized into two key stages:

- Cloud Advisory, where discovery and alignment sessions are conducted on the proposed Azure infra services to be deployed. The output of the advisory stage produces a finalized validated design for the Cloud Build.

- Cloud Build is where agreed Azure Infrastructure is provisioned and validated by AveHealth.

2 Current Architecture

AveHealth Pte. Ltd has Azure landing setup with Hub-and-Spoke topology and shared services. All connectivity Azure services Virtual WAN HUB, Azure Firewall and Azure Bastion are hosted in the Connectivity/Network subscriptions. Virtual WAN Hub with Site-to-Site VPN Gateway and Point to Site VPN Gateway is provisioned. Azure Firewall regulates the private traffic between AVE Health Azure Platform and IHH & Health Catalyst. All the Partner / External Entities will access the IaaS/VMs using Azure Bastion Services.

VNet Peering is enabled between the Hub (Connectivity) VNet, Identity VNet and other Landing Zone VNets. Azure Monitor is deployed to perform monitoring.
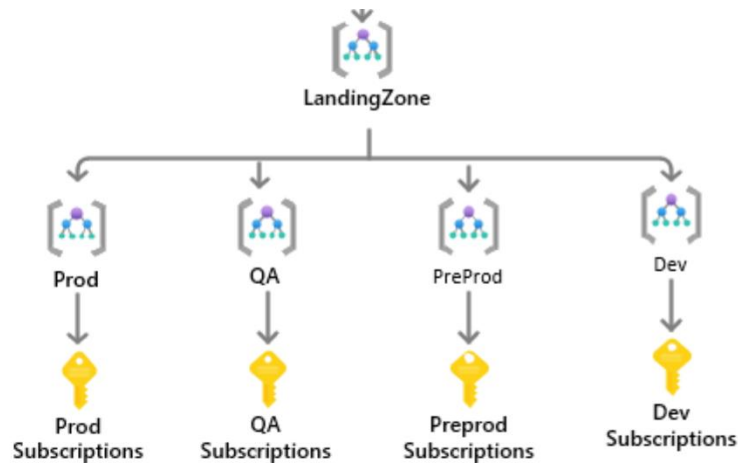
AveHealth Landing Zone Structure
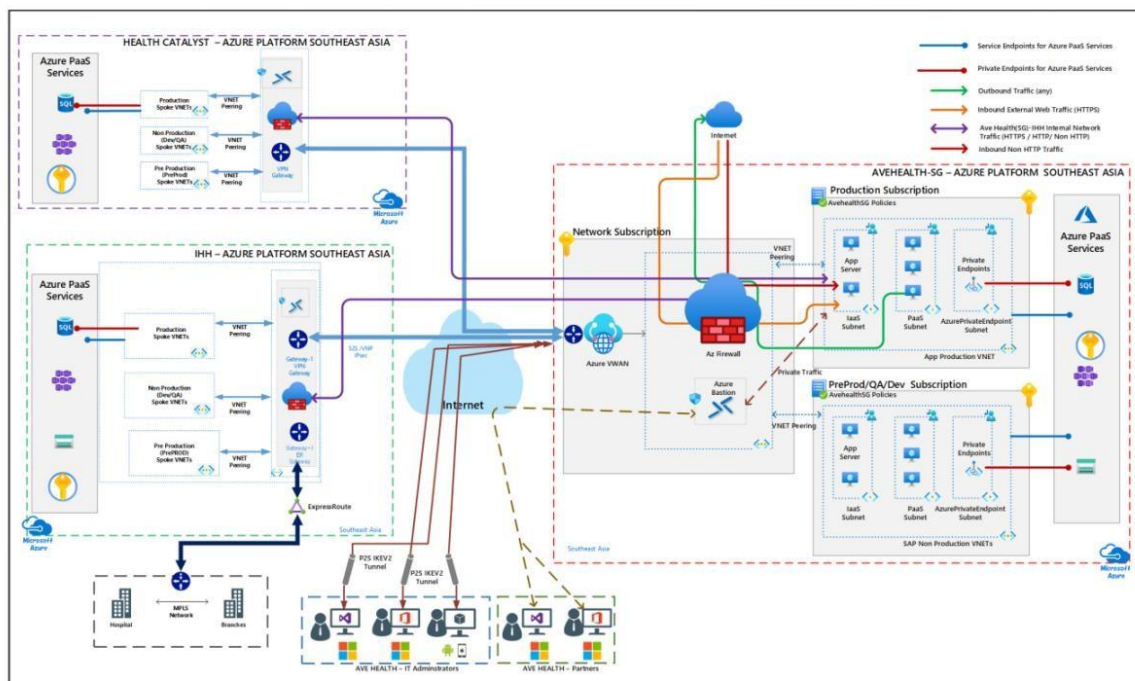
AveHealth Landing Zone High Level Architecture

2.1 Core components

2.1.1 Hub Subscription

This is the central hub for the deployment. It has the Firewall that controls the data transfer between all the spokes and Client Azure Tenants o. It also links to other Client Azure Tenants– through one site to site tunnel. AveHealth support team will use a point to site VPN to access the Client Azure Platform.

The DMP Azure Platform connects all components through private endpoints.

Component	Assumptions/Sizing	Remarks
Azure Firewall	Premium tier, 1 Logical firewall units x 730 Hours, 10 TB Data processed.	
VWan	730 Deployment hours, 2 Routing infrastructure units, 1 GB of data processed.	
DNS VM	1 DC2s v3 (2 Cores, 16 GB RAM) x 730 Hours (Pay as you go), Windows (License included), OS Only; 1 managed disk – E10, 100 transaction units.	(configuration required to update the DNS entries) Consider Azure PaaS Services as recommendation for US
IP Sec tunnel		IPSec tunnel configuration between Client tenants. To provide recommended configurations during design sessions.
CIDR conflict configuration with other Tenant		Configuration on IP address conflict with other Tenant CIDR

2.1.2 Automation (Spoke)

Automation spoke consists of the essential elements to enable the different software deployments under private endpoints. It essentially has an Azure VM and the required network components to operate the VM and deploy it under private endpoints.

Component	Assumptions/Sizing	Remarks

Azure VM	1 DC2s v3 (2 Cores, 16 GB RAM) x 730 Hours (Pay as you go), Windows (License included), OS Only; 1 managed disk – E10, 100 transaction units.	(Access the ACR instances to push images through Devops pipeline) SWO to only provision VM and establish connectivity
Azure DevOps subscription	Needed for code source control and deployment.	.The SEA ADO must be able to connect to any other tenants via the tenant's automation Azure VM.

2.1.3 Management (Spoke)

The management spoke is responsible for collecting and analysing logs, metrics, and alerts from the hub and the spokes, using tools such as Azure Monitor, Log Analytics, and Application Insights. The management spoke can also automate tasks and enforce policies across the cloud resources, using tools such as Azure Automation, Azure Policy, and Azure Blueprints.

Component	Assumptions/Sizing
Azure Monitoring	Log analytics: Log Data Ingestion: 2 GB Daily Analytics logs ingested, 5 GB Daily Basic logs ingested, 6 months of Interactive Data Retention, 12 months of data archived, 1000 Basic Log Search Queries per day with 10 GB data scanned per query, 1 GB of Log Data Exported per day, Platform Log Data Processed per day: 0 GB with Destination to Storage or Event Hub and 0 GB with Destination to Marketplace Partners, 1000 Search job Queries per day with 5 GB data scanned per query; 0 SCOM MI Endpoints; Managed Prometheus: 0 AKS nodes in cluster, 10000 Prometheus metrics per node, 30 seconds of Metric collection interval, 0 Average daily Dashboards users, 7 Dashboards, 50000 Data samples queried per dashboard, 25 promql alerting rules, 25 promql recording rules; Application Insights: 12 months Data retention, 0 Multi-step Web Tests; 75 resources monitored X 5 metrics time-series monitored per resource, 75 Log

	Alerts at 5 Minutes Frequency, 0 Additional events (in thousands), 1 Additional email (in 100 thousands), 1 Additional push notification (in 100 thousands), 1 Additional web hook (in millions)
Alerts are managed by SW1 and/ or client	Alerts are configured as a part of Managed Services.

2.1.4   Security (Spoke)

The security spoke is responsible for protecting the hub and the spokes from threats and vulnerabilities, using tools such Azure Firewall. The security spoke can also implement encryption, identity, and access management, using tools such as Azure Key Vault, Azure Active Directory, and Azure Role-Based Access Control

To capture Firewall rules design workshop

S. No	Source	Port	Protocol	Destination	Remarks

2.1.5   Identity (Spoke)

The identity spoke is responsible for managing the identities and credentials of the users and applications that access the hub and the spokes, using tools such as Azure Active Directory, Azure AD Domain Services, and Azure AD Connect.

The identity spoke can also enable single sign-on, multifactor authentication, conditional access, and identity protection, using tools such as Azure AD B2C, Azure AD B2B, and Azure AD Identity Protection.

The identity spoke can also integrate with other identity providers and federations, such as Microsoft 365, Azure DevOps, or third-party solutions.

The identity spoke can also leverage Azure AD Privileged Identity Management to monitor and control the access of privileged accounts and roles.

Component	Assumptions/Sizing	Remarks
Azure VM DNS VMs (2)	DC2s v3 (2 Cores, 16 GB RAM) x 730 Hours (Pay as you go), Windows (License included), OS Only; 1 managed disk – E10, 100 transaction units;	
	Zone 1, DNS, Private; 20 hosted DNS zones, 10 DNS queries.	Azure DNS (there is no Azure DNS deployed)
Microsoft Entra ID with domain services	Need to check with SW1 and client	(same domain can't use across the tenants, each tenant should be configured with custom domain) AveHealth will provide the policy details for B2B connectivity
Azure Key Vault	See bicep code for specs	

2.1.6   Resources (Spoke QA, Pre-Prod and Prod)

Following resources are deployed under resource Spoke as part of Phase1.

S. No	Resource	Subscription	Qty	Remarks
1	AKS Privat Cluster	QA, Pre-Prod, Prod	6	
2	SQL Server	QA, Pre-Prod, Prod	6	
3	SQL DB	QA, Pre-Prod, Prod	9	
4	Synapse Analytics Workspace	QA, Pre-Prod, Prod	6	
5	VM	QA, Pre-Prod, Prod	3	
6	Storage Account	QA, Pre-Prod, Prod	9	To be decommissioned.
7	Azure Data Bricks workspace	QA, Pre-Prod, Prod	3	

8	Data share	QA, Pre-Prod, Prod	3	To be decommissioned.
9	Private DNS	Hub	1	
10	Azure Bastion VM	QA, Pre-Prod, Prod	3	
11	RSV	QA, Pre-Prod, Prod	3	

There is SQL server in the Architecture for Container App environment, need to use existing SQL server or provision new? It is confirmed during the discussion that there is no need to provision SQL Server.

3 Scope of Work

The following scope is defined for the project:

Customer variables	In scope	Out of scope
Organization (s)	AveHealth Pte. Ltd	Any Other Organization

3.1 Software Disclaimer

Product licenses and/or tools are not included in the professional services and must be purchased separately.

3.2 Out of Scope

SoftwareONE will not provide any out-of-scope services unless otherwise agreed by the parties in writing. Anything not identified as in scope in the sections below is considered out of scope and would be subject to a change request.

3.3 Work Plan

The approach provides a detailed view of all activities to be performed during the Azure Landing Zone build and Azure infrastructure services deployment Service engagement:
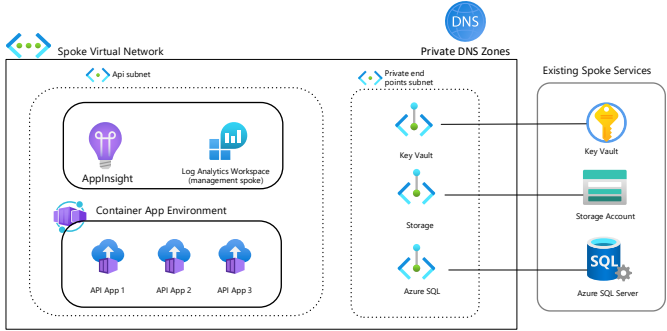
3.3.1 Work plan for Cloud Advisory

Inclusions	a) Project Kick-off, Timelines
	b) Define Success Criteria
	c) Identification of Key Stakeholders
	d) Alignment decisions
	e) Understanding of existing environment and alignment of the scope of services to be delivered.
	f) Produce High level configurations design document
Scope of Services	1. Following services (specification, sizing and configurations) that needs to be deployed are discussed during the discovery phase.
	a) Azure Container App/Container environment.
	b) Container Registry
	c) Configure data services VM via Bastion access.
	d) Azure Databricks Workspace (Workspace to be deployed using Bicep pipeline, For Cluster AveHealth to provide to provide PowerShell script)
	e) MS Fabric workspaces (identify the subnet for deployment) (need to check with MS for Bicep template, else deployment is performed manually)
	f) Storage Accounts (For data ingestion to Data bricks workspace)
	g) Azure Purview Services (identify the subnet for deployment)

	2. Identify the Bicep template changes accordingly for the above services deployment.
	
	3. Following Services that needs to be removed are discussed to assess Impact and plan of deployment (identify the Bicep template changes accordingly)
	
	   a) Azure Synapse Workspace
	
	      • Azure Synapse Workspace
	
	      • Azure Synapse SQL Pools
	
	      • VNet/Private endpoints integration
	
	   b) Azure SQL Databases (SQL Servers to be removed)
	
	Identify the Bicep template changes accordingly for the above services removal.
	
	4. Configure IPSec tunnel between SEA DMP and SEA Customer Demo tenant.
	
	5. Solution approach and configuration on IP address conflict with other Tenant CIDR
	
	6. Validation of proposed solution approach and design.

Network Connectivity	*AveHealth to provide infra connectivity details across the above services to deployed <table><tr><th>S. No</th><th>Source</th><th>Port</th><th>Protocol</th><th>Destination</th><th>Remarks</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>
Testing Requirements	SWO Scope: • Infrastructure Connectivity tests of the deployed Azure Resources AveHealth Scope: • Application access and application specific connectivity configurations testing
Exclusions	a) No Infrastructure will be built in the cloud during the cloud advisory stage. b) Any item not specifically mentioned as a Cloud Advisory stage inclusion will be deemed excluded and out of scope
Customer Dependencies	a) Availability of client resources for workshops b) Pre-requisites information and requirements that are provided by the SoftwareONE team would need to be provided by customers such as user information, service accounts, server and network information for performing the review tasks.
Key Obligations, Information, & Assumption(s)	a) Customer to share the infrastructure details with SoftwareONE. b) Customer to provide a downtime window with SoftwareONE to complete the implementation. c) Customer to facilitate attendance and participation of key stakeholders in the Meeting(s).

	d) Workshops are conducted remotely thru Microsoft Teams
Deliverable(s)	a) Prerequisites list
	b) Requirement gathering
	c) Regular check points to ensure all requirements are covered.
	d) High-level project plan
	e) HLD on DMP Infrastructure changes
	f) Design doc sign-off by AveHealth.

3.3.2   Work Plan for Cloud Build

	The scope services are limited to following environments. • Dev • QA • Pre-Production • Production
New Resource Deployment in Development environment	1.Configure Bicep Code to deploy following services to the existing environment deployed in phase 1. [Azure App Container environment] This service needs to be set up in the Spoke Vet in a particular subnet according to App Container Services as illustrated in the following diagram. The Container Environment should connect resources with VNet and existing Log Analytics workplace. No need of SQL server , use the existing key vault, use standard storage account for container app.

Environment	Specifications
Development	Consumption Plan Type, 1 million requests per month, Pay as you go, 20 concurrent requests per container app, 100 milliseconds execution time per request, 1 vCPU, 1 GiB memory, Pay as you go

	QA	Dedicated Plan Type, Pay as you go, 1 X D4, 4 vCPU, 64 RAM
	Pre-Production	Dedicated Plan Type, Pay as you go, 1 X D8, 8 vCPU, 64 RAM
	Production	Dedicated Plan Type, Pay as you go, 1 X D16, 16 vCPU, 64 RAM

Container Registry

Environment	Cluster
All environments	Premium Tier, 1 registry x 30 days, Geo Replication - 1 regions, 0 GB Extra Storage, Container Build - 1 CPUs x 1 Seconds - Inter Region transfer type, 5 GB outbound data transfer from East US to East Asia

Azure Bastion VM

Environment	Virtual Machine
One per Spoke Subscription	1 DC2s v3 (2 Cores, 16 GB RAM) x 730 Hours (Pay as you go), Windows (License included), OS Only; 1 managed disk – E10, 100 transaction units.

Azure Databricks Workspace and Clusters

Every Databricks workspace deployment requires Databricks clusters. The table below shows the different clusters used for each environment.

Environment	Cluster	Usage
Development (AveHealth to provide PowerShell script to deploy the Clusters on Workspace) (SWO will only deploy the Workspace)	DS 13 V2, 4 VMs (X2) D8a V4, 3 VMs (X1)	Nonclinical (Silver to Gold On demand) Near real time Bronze to Silver (On demand)
QA	DS 13 V2, 4 VMs (X2) D8a V4, 3 VMs (X1)	Nonclinical (Silver to Gold On demand) Near real time Bronze to Silver (On demand)
Pre-Prod	DS 13 V2, 4 VMs (X2) D8a V4, 3 VMs (X1)	Nonclinical (Silver to Gold On demand) Near real time Bronze to Silver (On demand)
Production	DS 13 V2, 4 VMs (X2) D8a V4, 3 VMs (X1)	Nonclinical (Silver to Gold On demand) Near real time Bronze to Silver (On demand)

MS Fabric workspaces

The following environments require the creation of Azure Fabric Workspaces (Fabric Workspaces & capacity is deployed manually)

Environment	Capacity
Development	F8 - Pay as you go
QA	F8 - Pay as you go
Pre-Prod	F64 - Pay as you go
Production	F64 – **Reserved instance**

	[Storage accounts](#) Each environment requires three storage accounts, as shown in the tables below.

Environment	Capacity
Development	2 X Premium Block Blob Storage, Hierarchical Namespace, ZRS Redundancy, Hot Access Tier, 5 TB Capacity - Pay as you go, 100 x 10,000 Write operations, 100 x 10,000 Read operations, 10 x 10,000 Iterative Read operations, 10 x 100 Iterative Write operations, 1,000 GB Data Retrieval, 1,000 GB Data Write, 1,000 GB Index, 100 x 10,000 Other operations. Unity Catalog-1 X Standard blob storage Data Lake Storage Gen2, Standard, LRS Redundancy, Hot Access Tier, Hierarchical Namespace File Structure, 1 TB Capacity - Pay as you go, Write operations: 4 MB x 10 operations, Read operations: 4 MB x 10 operations, 10 Iterative read operations, 100,000 Archive High Priority Read, 10 Iterative write operations, 10 Other operations. 1,000 GB Data Retrieval, 1,000 GB Archive High Priority Retrieval, 1,000 GB Data Write, 1,000 GB Meta-data storage
QA	2 X Premium Block Blob Storage, Hierarchical Namespace, ZRS Redundancy, Hot Access Tier, 5 TB Capacity - Pay as you go, 100 x 10,000 Write operations, 100 x 10,000 Read operations, 10 x 10,000 Iterative Read operations, 10 x 100 Iterative Write operations, 1,000 GB Data Retrieval, 1,000 GB Data Write, 1,000 GB Index, 100 x 10,000 Other operations. Unity Catalog-1 X Standard blob storage Data Lake Storage Gen2, Standard, LRS Redundancy, Hot Access Tier, Hierarchical Namespace File Structure, 1 TB Capacity - Pay as you go, Write operations: 4 MB x 10 operations, Read operations: 4 MB x 10 operations, 10 Iterative read operations, 100,000 Archive High Priority Read, 10 Iterative write operations, 10 Other operations. 1,000 GB Data Retrieval, 1,000 GB Archive High Priority Retrieval, 1,000 GB Data Write, 1,000 GB Meta-data storage

	Pre-Production	2 X Premium Block Blob Storage, Hierarchical Namespace, ZRS Redundancy, Hot Access Tier, 5 TB Capacity - Pay as you go, 100 x 10,000 Write operations, 100 x 10,000 Read operations, 10 x 10,000 Iterative Read operations, 10 x 100 Iterative Write operations, 1,000 GB Data Retrieval, 1,000 GB Data Write, 1,000 GB Index, 100 x 10,000 Other operations. Unity Catalog-1 X Standard blob storage Data Lake Storage Gen2, Standard, LRS Redundancy, Hot Access Tier, Hierarchical Namespace File Structure, 1 TB Capacity - Pay as you go, Write operations: 4 MB x 10 operations, Read operations: 4 MB x 10 operations, 10 Iterative read operations, 100,000 Archive High Priority Read, 10 Iterative write operations, 10 Other operations. 1,000 GB Data Retrieval, 1,000 GB Archive High Priority Retrieval, 1,000 GB Data Write, 1,000 GB Meta-data storage
	Production	2 X Premium Block Blob Storage, Hierarchical Namespace, LRS Redundancy, Hot Access Tier, 5 TB Capacity - Pay as you go, 100 x 10,000 Write operations, 100 x 10,000 Read operations, 10 x 10,000 Iterative Read operations, 10 x 100 Iterative Write operations, 1,000 GB Data Retrieval, 1,000 GB Data Write, 1,000 GB Index, 100 x 10,000 Other operations. Unity Catalog-1 X Standard blob storage Data Lake Storage Gen2, Standard, ZRS Redundancy, Hot Access Tier, Hierarchical Namespace File Structure, 1 TB Capacity - Pay as you go, Write operations: 4 MB x 10 operations, Read operations: 4 MB x 10 operations, 10 Iterative read operations, 100,000 Archive High Priority Read, 10 Iterative write operations, 10 Other operations. 1,000 GB Data Retrieval, 1,000 GB Archive High Priority Retrieval, 1,000 GB Data Write, 1,000 GB Meta-data storage

[Purview Service](#)

This service requires the following configuration. We avoid scheduling data scans in lower environments by default to reduce costs. Ensure connectivity for services from Purview.

Environment	Capacity
All environments, one per environment	Elastic Data Map: 1 Capacity Unit hour, 150 hours, Automated Scanning and Classification: 0

21

	Total scan duration in minutes x 32 Total vCores across scans (For other data sources), Other features: 150 Resources Set hours, Microsoft Purview Data Catalog: C0 Service, Microsoft Purview Data Policy: 10 Policies x 730 Hours
	Bicep Templates are configured first for development environment for resource provisioning

Remove Resources under Development environment	2. Remove following resources under Development.
	
	    a. Azure Synapse Workspace
	
	        o Azure Synapse Workspace
	
	        o Azure Synapse SQL Pools
	
	        o VNet/Private endpoints integration
	
	    b. Azure SQL Databases
	
	3. Update Bicep templates to remove the above services

Finalise the Bicep template for Development environment	4. Configure and Finalise Biceps template module with the VNet/Subnets for resource deployment. (AveHealth to provide the CIDR for Dev environment) need confirm on /20 for CIDR from AveHealth
Clean up all resources in development and redeploy using Bicep template	5. Currently DEV environment is used for other POC, DEV will not be similar to other environments 6. Run the updated Bicep template to deploy all resource under development environment 7. Validate the environment in Development Subscription and get AveHealth Sign-off.
Resource deployment under QA, Pre-Prod and Prod environments	QA 8.Configure Biceps template module inline alignment with development environment with the VNet/Subnets for resource deployment under QA environment (AveHealth to provide the CIDR detail and connectivity details) 9.Delete all resources under QA environment and redeploy resources using updated Bicep template 10.Validate the QA Subscription and get AveHealth Sign-off. Pre-Prod 11.Configure Biceps template module inline alignment with development environment with the VNet/Subnets for resource deployment under Pre-Prod environment (AveHealth to provide the CIDR detail and connectivity details)

	12.Delete all resources under QA environment and redeploy resources using updated Bicep template
	13.Validate the Pre-Prod Subscription and get AveHealth Sign-off.
	[Prod](#)
	14. Configure Biceps template module inline alignment with development environment with the VNet/Subnets for resource deployment under Prod environment (AveHealth to provide the CIDR detail and connectivity details)
	15. Delete all resources under Prod environment and redeploy resources using updated Bicep template
	16. Validate the prod Subscription and get AveHealth Sign-off.
Total Resource to be deployed (Dev, QA, Pre-Prod and Prod)	**Dev, QA, Pre-Prod and Prod** • Vnet's/Subnet's Configuration • 8x AKS private cluster (Immuta/Samurai) • 4 x App Container Environment • 4 x Container Registry • 12 x Azure Databricks Cluster • 4 x Data share • 4 x Azure Fabric workspaces • 8 x Storage account • 4 x Purview Service • 4 x Azure Bastion VM • 4 x Key vault • 4 x RSV (Azure Recovery service vault) • Private endpoint/Private links /Association (AveHealth to provide detail on connectivity across the services being deployed) • 4X VM's for Data Team • Configure RBAC for the service in scope (Refer to RBAC section) • Configure DNS entries for the relevant services. • Assign tags to all resources being deployed as per AveHealth Standards. • Ensure existing security & backup policies are in place. • Extend existing Azure monitor alert rules to the Instances deployed. • Configure required service principles for the new instance deployed in coordination with AVeHealth Infrastructure team.
RBAC	X⬛ AveHealth_DMP_RBA C.xlsx
Testing Requirements	SWO Scope: • Infrastructure Connectivity tests of the deployed Azure Resources

	AveHealth Scope: • Application access and application specific connectivity configurations testing
Exclusions	• Creation of any new Azure policies, monitoring rules is out of scope. • Creation of new DNS forwarding /routing configuration • Application support is not in scope. • Any item not specifically mentioned as inclusion will be deemed excluded and out of scope. • Any remediation on the existing customer environment such as firewall ports, proxies, client access, etc. would be performed by the customer team. • Upgrade/ update of existing Services/policies. • Any item not specifically mentioned as inclusion will be deemed excluded and out of scope.
Dependencies	• SoftwareONE assumes that appropriate Azure subscriptions and access would be provided to allow SoftwareONE to perform work items in the scope. • SoftwareONE requires respective stakeholder support for trouble shooting. • Customer will act as the liaison between end users, Applications teams and SoftwareONE for coordination. • Work would be performed remotely for customer
Key information/ assumptions	• SoftwareOne (SWO) will deploy applicable infrastructure services through Bicep templates. • If in any case, there is no Bicep template for a service (e.g MS fabric) then SWO will try to verify with Microsoft and provide best support using Bicep templates else these services are deployed manually up on confirmation of AveHealth. • SWO will try to automate the infra connectivity where possible. • Data platform services and application connectivity is configured by AveHealth team. • For few configurations e,g RBAC, Policies etc are deployed manually ,for which configuration through bicep templates is not feasible or complex. • Any integrations that are not mentioned is considered as out of scope. • Application installation and configuration is the responsibility of the Customer or the Customer's application vendor. • Application testing and troubleshooting is the responsibility of the Customer or the Customer's application vendor. • Customer would provide the support for the dependencies required under customer dependencies to execute the work plan. • Should there be a need for additional days of support due the services beyond the scope of work, a change request can be discussed. • The customer is responsible for the onboarding of the user. SoftwareOne will be supporting during the rollout. • Work would be performed remotely for customer.

Deliverables	• Implementation of configurations as per scope
	• Documentation on configurations deployed.
	• Knowledge Transfer and Handover
	• Project Closure Documentation
	• Project closure Sign-off by AveHealth

3.4   RACI Matrix

(R: Responsible, A: Accountable, C: Consulted, I: Informed)

Core Activities	SoftwareONE	Client
Project Kick Off, Stakeholder Mapping	RA	CI
Customer ITSM Approvals, Change Management & Implementation	CI	RA
Azure infrastructure configuration deployment Design Workshop	RA	CI
Creation of Design Document & Deployment Plan	RA	C
Design Document Sign-Off	CI	RA
Azure Infrastructures deployment for services in scope	RA	CI
Azure Infrastructure Configuration and Testing	RA	CI
Application Installation, Configuration, and Testing	CI	RA
User Acceptance Test	CI	RA
Project Sign Off	CI	RA

3.5   Project Timelines

The proposed high-level project timeline is represented by the Gantt Chart below. This only is the estimated timeline for each activity that is part of the implementation scope. This estimated timeline will be updated based on the outputs of the Design Workshop.

Phase & Task	W1	W2	W3	W4	W5	W6	W7	W8
Project Governance								
Project Kick Off & Workshops	█							
Project planning & Tracking	█	█	█	█	█	█	█	█
Discovery Assessment								
Discovery & Assessment Design Workshop	█							
Presentation and Document Sign-off								
Development environment configuration								
Deploy Resources under Development Subscription		█	█	█				
Validation of resources deployed in Development Subscription				█				
UAT Deployment Sign-Off				█				
QA environment Configuration								
Deploy Resources under QA Subscription					█			
Validation of resources deployed in QA Subscription					█			
QA Deployment Sign-Off					█			
Pre-Prod environment Configuration								
Deploy Resources under Pre-Prod Subscription						█		
Validation of resources deployed in Pre-Prod Subscription						█		
Pre-Prod Deployment Sign-Off						█		
Prod environment Configuration								
Deploy Resources under Prod Subscription							█	
Validation of resources deployed in prod Subscription							█	
UAT Deployment Sign-Off							█	
Project Closure								
Post Go -Live Support								█
Knowledge Transfer and Documentation								█
Project Handover and Sign-Off								█

4 Other Requirements

4.1 SoftwareONE responsibilities

a. SoftwareONE will assign a dedicated consultant to the project that will serve as the focal point for all communications relative to this engagement.

b. SoftwareONE will make all reasonable efforts to communicate with the Customer to ensure the completion of project deliverables.

c. SoftwareONE will make a reasonably good faith effort to ensure the accuracy of the data it reports to the Customer based on industry standards.

d. SoftwareONE will provide the information needed by the Customer to complete the engagement. This information will be provided in accordance with the engagement timeline agreed upon by both parties.

e. SoftwareONE shall ensure that the Customer is notified of any issues likely to impact this Statement of Work.

f. SoftwareONE has provided an escalation path as outlined below, starting with the primary contact (1st level), and moving up. This is the path that should be followed when escalating any issues with the engagement.

SoftwareOne Pte Ltd escalation path			
Level	Name	Position	Phone number / Email
1	Alex Tay	Business Development Director	Phone: +65 9233 2430 alex.tay@softwareone.com
2	You Month Leong	Head of Services	Phone: +65 8218 7112 Email: youmonth.leong@softwareone.com
3	Suryavanshi, Shailendra	Delivery Leader, Cloud Services ANZ & SEA	E-mail: shailendra.suryavanshi@softwareone.com

4.2 Customer responsibilities

a. The Customer shall designate a representative to be the Customer's primary contact. This individual shall be the focal point for all communications relative to this engagement and shall have the authority to act on the Customer's behalf in matters regarding this engagement. The Customer shall ensure that this person has all necessary signing authority to approve deliverables. The Customer shall notify SoftwareONE of any change in this assignment.

b. The Customer shall provide the information needed by SoftwareONE to complete the engagement. This information will be provided in accordance with the project timeline agreed upon by both parties.

c. SoftwareONE shall make reasonable efforts to schedule all training, consultant access, and other deliverables that involve Customer participation. However, it is ultimately the Customer's responsibility to propose times and agree to a schedule. Non-use of those services does not entitle the Customer to a reduction in project costs.

d. The Customer shall ensure that SoftwareONE is notified of any issues likely to impact this Statement of Work.

e. The Customer has provided an escalation path as outlined below, starting with the primary contact (1st level), and moving up. The Customer shall follow this path when escalating any issues with this Statement of Work or the engagement described herein.

AveHealth Pte. Ltd escalation path			
Level	Name and position	Email address	Phone number
1	Rodney Lim, Project Manager	lu.lim@mitsui.com	+65 9008 7476
2	Kandan Jayaraj, CEO	k.jayaraj@avehealth.co	+65 9189 2707

4.3   Limitations, exclusions, and assumptions

a. SoftwareONE does not guarantee any cost savings or decrease in software spend as a direct result of this engagement.

b. SoftwareONE does not guarantee compliance with Sarbanes-Oxley, HIPAA, or any other regulatory or industry documentation requirements.

c. Any activities not documented in this Statement of Work are considered outside of scope for this Statement of Work and SoftwareONE will not have any obligation to provide any Services or create any deliverables except as provided herein.

d. SoftwareONE will not be liable for failure or delay in delivering services or deliverables if such failure or delay arises from the Customer's failure to perform its responsibilities, Customer providing inaccurate information or the Customer's inaction or delayed action. Delays caused by the Customer will not entitle the Customer to any change in the cost for this project.

e. All work performed under this Statement of Work is limited in scope by the abilities of any 3rd party tool(s) utilized for this engagement by the Customer. Additionally, SoftwareONE does not guarantee the accuracy of data collected by a third-party tool.

f. EXCEPT FOR THE EXPRESS REPRESENTATIONS AND WARRANTIES CONTAINED IN THE SERVICES AGREEMENT, T&CS AND THIS STATEMENT OF WORK, SOFTWAREONE HEREBY DISCLAIM ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.

4.4   Travel & expenses

The Customer will be charged for all travel and related expenses for any resources (outside of Singapore) that are part of the SoftwareONE project team delivering this project that is not explicitly listed as included in the scope of the engagement. All travel will require pre-approval by both the Customer and SoftwareONE Pte Ltd. The charges will be calculated for each resource in accordance with SoftwareONE's travel policy, which is available upon request. The Customer will be billed no later than quarterly at the end of the current calendar quarter following the completion of the event and travel.

4.5   Billing & invoicing

a. The engagement will be billed in accordance with the engagement expense overview in Section 6 unless a specific payment schedule is defined. If any third-party funding will be used in lieu of direct payment, the Customer agrees to work with SoftwareONE to fulfil any program requirements for payment, otherwise the Customer will be billed in accordance with the following:

    i. The Customer will issue SoftwareONE a purchase order at execution of this Statement of Work that will be charged against in accordance with the payment schedule. No services shall be delivered prior to the acceptance of a proper payment promissory by SoftwareONE. In the case that the Customer's normal payment process does not require a purchase order, the Customer will provide SoftwareONE a written confirmation that a purchase order is not required, and this Statement of Work shall serve as authorization.

    ii. For any components of the proposed engagement that is based on Time and Materials basis, the Customer will be billed every two (2) weeks for actual accrued project services costs.

    iii. Costs incurred by delays caused by the Customer, or a request by the Customer's onsite staff to delay or change the scope of this engagement, will be billed on a time & material basis at a 'per day' applicable rate.

    iv. SoftwareONE's price does not include any federal, state, or local sales, use, or excise taxes. Appropriate taxes will be added to the price, as necessary, unless the Customer provides lawful evidence of exemption.

4.6   Provision for change of scope

The costs outlined in this Statement of Work are based on SoftwareONE executing the required activities as listed. Any deviation from this scope or schedule may result in corresponding changes to the price, completion dates, responsibilities, or other provisions of the engagement. Changes must be agreed to by both parties and do not come into effect until a Change Request Form or a separate Statement of Work has been executed by the Customer and SoftwareONE.

4.7   Customer Reference

In consideration of the special pricing granted to you under this Statement of Work, SoftwareONE may refer to you as a customer in sales presentations, marketing vehicles and activities. In addition, you agree to become part of SoftwareONE's reference program by working with a representative from SoftwareONE Marketing to develop a customer profile for use on SoftwareONE website, and for other promotional activities at SoftwareONE's discretion. The profile may include a quote from an executive of your company and your company's logo.

4.8   Term and termination

4.8.1   Term

This Statement of Work will remain in effect in accordance with the term and any renewal terms as set out in the Services Agreement unless terminated earlier in accordance with the provisions set forth below.

4.8.2 Termination

This Statement of Work may be terminated immediately upon written notice:

i. By either party if the other party commits a material breach or default of any obligation hereunder and fails to remedy such breach within thirty (30) days of receipt of a written notice by the other party which specifies the material breach;

ii. By either party, if a receiver, liquidator or trustee of the other party is appointed by court order or receivership, insolvency or bankruptcy proceedings are commenced or a petition is filed by or against the other party under any applicable liquidation, conservatorship, bankruptcy, moratorium, insolvency, reorganization or similar laws or the other party makes an assignment for the benefit of its creditors, admits in writing its inability to pay its debts generally as they become due or otherwise takes any action or causes any action to be taken which the other party reasonably believes will cause the acting party to be unable to perform its financial obligations under the Statement of Work.

iii. By SoftwareONE, if the Customer fails to pay any amount due hereunder and does not cure such default within fifteen (15) days of the date payment is due. SoftwareONE may suspend performance of services without prejudice to its right to terminate hereunder.

iv. Upon termination of this Statement of Work in accordance with this section, the Customer will pay SoftwareONE for all services performed and any charges and expenses incurred by SoftwareONE up to the date of termination. Any rights or obligations of either party that have accrued prior to the termination shall not be affected by the termination of this Statement of Work. For the avoidance of doubt, termination of this Statement of Work may cause a termination of any licenses granted in association with this Statement of Work.

5   Commercial Framework

5.1   Project Pricing

The Customer agrees that the below totals represent SoftwareONE's commercially reasonable efforts to accurately determine the labour required to perform the defined engagement.

Engagement expense breakdown			
Description	Unit cost	QTY	Total Cost (SGD)
One-Time Professional Services • Project Kick-Off and Project Management • Azure Infra services deployment in scope • 1-week Post Implementation Warranty	$ 33,600.00	1	$ 33,600.00
Total			**$ 33,600.00**

Pricing notes:

Any Services out scope will be performed through a change request.

• *Prices are exclusive of taxes.*

5.2   Payment Milestones

The below indicates the payment schedule based on project milestones for the implementation services stage. All prices shown below are exclusive of taxes

Engagement Expense Payment Milestone Breakdown (Implementation)			
S. No	Description	% of Total	Cost (SGD)
Azure Infrastructure deployment (SEA)			
1	Upon Receive of Purchase Order and Signing of this Statement of Work	50%	**$16,800.00**
1	Upon completion of UAT	50%	**$16,800.00**

6 Specific contract details and authorization

Between: SoftwareONE Pte Ltd

                                                150 Beach Road, Gateway West, Level 31,

                                                Singapore 189720

                                                "SoftwareONE"

And: AveHealth Pte. Ltd

                                                6 Shenton Way, #44-01
                                                OUE Downtown 1
                                                Singapore 068809

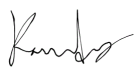Engagement Description   AveHealth Azure Data Management
                                                Deployment (SEA)

Estimated Project Start Date: _____

Estimated Project End Date: _____

Price: SG $ 33,600.00 (Excluding taxes and software
                                                license)

PO Number Issued, if applicable:

EACH PARTY HERETO ACKNOWLEDGES THAT IT HAS READ THIS AGREEMENT AND
AGREES THAT ITS TERMS AND CONDITIONS INCLUDING ALL SCHEDULES ARE BOTH
REASONABLE AND ESSENTIAL REQUIREMENTS OF THE RELATIONSHIP HEREIN
ESTABLISHED.

| AveHealth Pte. Ltd	SoftwareONE Pte Ltd
By (Authorized Signature):	By (Authorized Signature):
Print Name: Kandan Jayaraj	Print Name:
Title: CEO	Title:
Date:27-03-2024	Date:

8 SoftwareOne Profile

SoftwareOne is a leading global software and cloud solutions provider that is redefining how organizations build, buy, and manage everything in the cloud. We develop and deliver the technology solutions that modernize our clients' applications and software in the cloud, while enabling these purchases and optimizing their investments over time.

We offer our clients an end-to-end value proposition to help them navigate complex options and implement the best IT solutions for their needs. Taking a vendor-agnostic approach, we support clients with defining their technology strategy, followed by either cloud-native application development (build) or software sourcing (buy). We also help clients efficiently migrate applications and critical workloads to their chosen cloud destination. Finally, we manage and optimize their IT estate to ensure complete transparency, manage risk and control costs.

In this way, we empower our clients to defend their business models, transform and position themselves as leaders through enhanced customer and employee experiences, improved agility, and increased resilience.
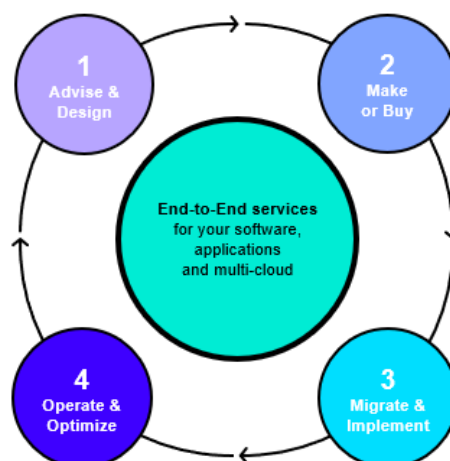
8.1 Why SoftwareOne

Expert Azure advice and services from one of Microsoft's largest global partners:

- **30**+ year of partnership with Microsoft

- **2,900**+ Microsoft cloud technical certifications worldwide

- **600+** Azure Technical Consultants

- **3000+** Azure professional & managed services customers

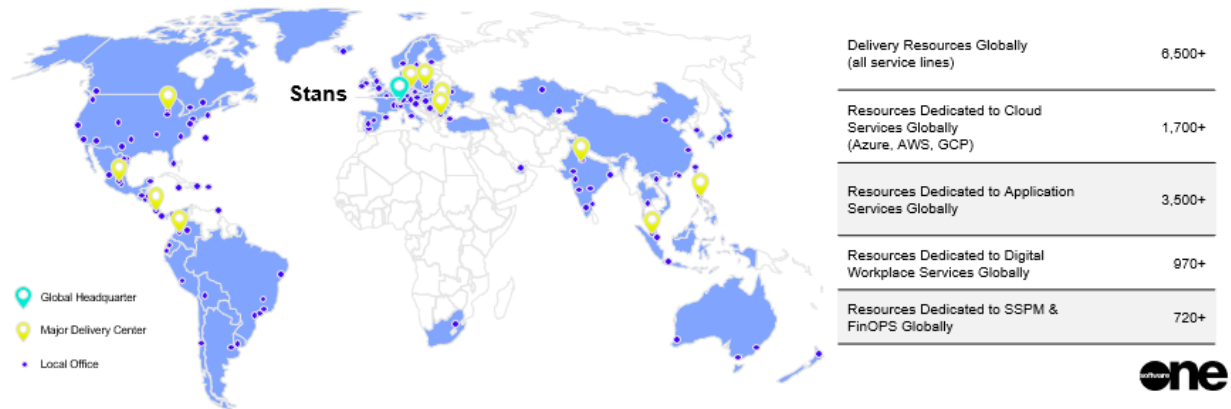- **17** Microsoft Gold Partner Competencies including:

- o Cloud Productivity
- o Collaboration and Content
- o Communications
- o Enterprise Mobility Management
- o Messaging
- o Security
- o Windows and Devices
- Global Strategic Collaboration Agreement with Microsoft
- Highly regarded Enterprise Azure Center of Excellence with deep capability across:
  - o Advanced Data Analytics to start your Big Data journey on Azure
  - o Application Modernization to capitalize on modern Azure architectures & DevOps approaches
  - o Cloud Identity and Access Governance specialism
  - o Azure-focused Cyber Security to secure your cloud assets
- Sitting on the Governing board of the FinOps Foundation to drive innovation and standards
- One of the largest certified teams in the world, over 200 FinOps Certified Practitioners
- SoftwareONE is the only provider having a FinOps Certified Platform & Certified Service
- Provider status as well as leader on the SAM Gartner Magic Quadrant
- ISO 27001 certification is an internationally recognized standard of best practices ISO
- Certifications - We Deliver Certified Quality | SoftwareONE.

8.2   Delivery Capabilities

SoftwareOne's business is powered by a lean global and local **'glocal'** business operating model built to deliver profitable growth at scale. It has a lean group structure with empowered local subsidiaries supported by global/ regional/ local service delivery centers (xDCs) in four continents (see below image).

Accelerated digital transformation drives opportunity for the prepared

SoftwareOne professionals in 90 countries, backed by 30+ years of unmatched software and cloud solutions experience make us the ideal partner to help our clients.

Delivery Resources Globally (all service lines)	6,500+
Resources Dedicated to Cloud Services Globally (Azure, AWS, GCP)	1,700+
Resources Dedicated to Application Services Globally	3,500+
Resources Dedicated to Digital Workplace Services Globally	970+
Resources Dedicated to SSPM & FinOPS Globally	720+

As a global consulting organization, SoftwareOne has a workforce consisting of skilled staff located across the globe. Predominantly, in the APAC region, we have sufficient Cloud Consultants to provide onshore/ offshore services to Pan Pacific Hotels Group.