RENEWAL OF CLOUD SUBSCRIPTION AND ANNUAL MAINTENANCE SUPPORT (AMS) FOR GOOGLE CLOUD PLATFORM (GCP) FOR THREE (3) YEARS FOR AIR SELANGOR

SCOPE OF WORKS

Renewal of Cloud Subscription and Annual Maintenance Support (AMS) For Google Cloud Platform (GCP) is based on the following categories: -

Table 1: AMS and Cloud Subscription

No	Product Description	Quantity Year 1	Quantity Year 2	Quantity Year 3
1.	Google Cloud Services Subscription – **Refer to Table 3**	LOT	LOT	LOT
2.	Annual Maintenance Support (AMS)	LOT	LOT	LOT

The scope of this proposal includes both production and development environments as detailed below: -

A. Google Cloud Service Subscription (Production & Development)

Table 2: Production & Development

CP Component	Custom Name	Region	Qty	Unit	Remarks
as-telemetry-prd (Production)					
Compute Engine	prd-vm-001-sg-n	asia-southeast1	1	n2d-standard-8: 8vCPU, 32GB RAM, 1, 536GB SSD Persistent Disk	14 days snapshot retention. Upgrade to 1.5TB SSD, no SUD
				Windows Server 2022	
				Snapshot Storage (6452 GiB)	
Cloud Storage	as-billing-bucket as-gis-bucket as-tele-temp	global	6	TB, Standard Storage	
as-vpcsharing-prd (Production)					
Compute Engine	vmware-sdwan-1-vm	asia-southeast1	2	n2d-standard-4: 4vCPU, 16GB RAM,10GB SSD Persistent Disk, 1 static public IP	VeloCloud
CP Component	Custom Name	Region	Qty	Unit	Remarks
Compute Engine	vmware-sdwan-1-vm	asia-southeast1	1	n2d-standard-4: 4vCPU, 8GB RAM,10GB SSD Persistent Disk, 1 static public IP	Splunk (New)
Shared Services (Production)					
Networking	NAT Gateway	asia-southeast1	1	2 VM, 400GB Data Processed	Based on current usage
Networking	Engress		60	GB Egress to Asia-Pacific	Network traffic is an assumption only
Customer Care	Google Cloud Support	global	1	Enhanced Support	

SCOPE OF WORKS

as-telemetry-dev (Development)					
Compute Engine	prd-vm-001-sg-n	asia-southeast1	1	n2d-standard-4: 4vCPU, 16GB RAM, 500GB Balanced Persistent Disk	7 days snapshot retention
				Windows Server 2022	
				Snapshot Storage (1,050 GiB)	
Cloud Storage	as-billing-bucket as-gis-bucket as-tele-temp	global	1	TB, Standard Storage	
Customer Care	Google Cloud Support	global	1	Enhanced Support	
Good Sync Software			1		Software for data transfer

B. Annual Maintenance Support (AMS)

1. GCP Infrastructure Maintenance

1.1 Organisation Policies

- Enforce uniform bucket-level access.
- Restrict public IP access on Cloud SQL instances.
- Prevent removal of shared VPC project liens.
- Enforce secure TLS configurations.
- Disable default network creation for custom setups.
- Define and enforce allowed external IPs for VM instances.
- Disable automatic IAM grants for default service accounts.
- Disable service account key creation and upload.
- Enforce domain-restricted sharing.
- Prevent public access to Cloud Storage buckets.

1.2 Organization Hierarchy & IAM Roles

- Maintain existing folder/project/billing hierarchy.
- Assign and manage least privilege roles for users and service accounts.
- Securely manage service account keys.
- Enforce domain-restricted sharing.

1.3 Networking

- Maintain High Availability (HA) VeloCloud for centralized network configuration.
- Maintain Shared VPC for centralized network management.
- Maintain dedicated subnets for Telemetry and VeloCloud components.
- Maintain firewall rules for secure access and communication.

1.4 Compute Engine

- Maintain VMs with specified CPU, RAM, OS, and storage configurations.
- Secure ingress and egress port configurations.

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SCOPE OF WORKS

- Ensure Windows Server 2022 or later is used for hosting real-time and scheduled data synchronization platforms.

1.5 Cloud Storage

- Maintain buckets for telemetry data, billing information, and temporary files.
- Enforce secure bucket-level access control and uniform access.
- Prevent public access and maintain folder structure.

1.6 Cloud Monitoring

- Monitor CPU, disk, and memory utilization.
- Configure alerts for critical thresholds and events.
- Establish alert notification channels.

1.7 Cloud Billing

- Monitor multiple billing accounts.
- Configure alerts and budgets for all billing accounts.

2. Data Synchronization (Good Sync Software):

2.1 File Sync Platform

- Add/Edit/Delete jobs for real-time and scheduled data synchronization.
- Securely connect to source systems via FTP, SFTP, WebDAV, Public Cloud Storage, OneDrive, BackBlaze, Google Drive, Windows Mobile/ActiveSync, Dropbox (via Core API), and GSTP.
- Backup/synchronize data to/from designated Cloud Storage buckets and other file-based sources.

2.2 Laravel Framework

- Maintain API parser developed using PHP 8+ and Apache 2.4+.
- Securely store API credentials.
- Implement data retrieval and processing logic for 2–3 brands of Air Selangor's NRW IoT devices.
- Automate scheduling for data retrieval.

2.3 Real-Time and Scheduled Data Synchronization

- Maintain integrations with the following Netbase Telemetry Solutions (On-Prem):
- Ashridge, Cello, Xilog, Regulo, Pegasus, i2O, Innova, Sofrel.

3. Integration Solutions

- Maintain integration with the following platforms:
  - Netbase SaaS on AWS – Object Storage
  - Oracle Customer Cloud Service (Billing)
  - Salesforce (Job Management)
  - GIS (Geospatial Mapping)

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SCOPE OF WORKS

- o CITECT / SWANIoT (Pump House & Floating Pond Monitoring)
- o PRODIS (Water Production Analytics)
- o Microsoft Azure Blob – Object Storage
- o Digital Twin (Hydraulic Modelling) – via SFTP

4. API Parsers

- Monitor parser logs for errors and exceptions.
- Update parser logic as needed to accommodate API changes.

5. Cloud Monitoring & Billing

- Regularly review monitoring and billing dashboards.
- Adjust thresholds and alert configurations as necessary.

6. Service Level Agreements (SLAs)

Table 3 : SLA

Level	Description	Response Time	Resolution Time
Critical (Severity 1)	▪ Production outages where problems are affecting end-users. ▪ Performance degrading which affects business operation such as Customer Service Counter.	Immediate	8 hours
High (Severity 2)	▪ Application problems that are serious or that are blocking progress of the end users, but do not have direct negative production impact.	30 Minutes	1 day
Medium (Severity 3)	▪ Issues which have a direct impact on the use of the application requiring workarounds or preventing specific activities from being completed.	1 Hour	2 days
Low (Severity 4)	▪ Issues are those which are noted, but which do not have a direct impact or where a workaround is a trivial inconvenience.	3 Hours	5 days

7. Support Hours:

- 24 X 7 Coverage including Saturday, Sunday and Public Holiday.

8. Support Medium

- WhatsApp Messenger

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SCOPE OF WORKS

- Microsoft Teams Messenger
- Microsoft Teams / Zoom Call
- WhatsApp Call / Phone Call
- Email
- Remote Access

9. Support Locations

- Air Selangor Headquarters – for coordination meetings.

- Online – for technical support and troubleshooting.

10. Support Team Requirements

Tenderer must propose a **support organizational structure**. (Please specify):-

- Total number of support resources.

- Online/Offshore support model.

- Provide **CVs and relevant certificates** of proposed personnel.

11. Preventive Maintenance (PM)

- To be conducted **once a year**.

12. Training

Provide **annual refresher training** on: -

- GCP Infrastructure

- Netbase Telemetry Solutions

- API Parsers

- Monitoring Tools

13. Reporting Requirements
Each report for Monthly Reports, Quarterly Report and Yearly Report must include: -
- Summary of activities
- Incident logs
- System performance metrics
- Recommendations and improvements

14. Internal Stakeholders

- AIS – Information Technology Department (ITD)

- AIS – Non-Revenue Water (NRW)

- AIS – Data Analytics (DAC)

- AIS – Planning Capital & Works (PCW) – GIS

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15. External Vendors

- Netbase Solution – Crowder Consulting

- Telemetry Solutions – Cello, Xilog, Sofrel, Regulo, Ashridge, Pegasus, i2O, Innova

- Integration Solutions – Salesforce, PRODIS, CITECT

16. Payment Terms

- 60-day payment term from invoice date.

- Annual upfront payment for license subscriptions.

- Quarterly payments for maintenance support services