



ANNEX 1: SCHEDULE OF REQUIREMENTS

1. BACKGROUND

The United Nations Development Programme (UNDP) is the UN's global development network, advocating for change and connecting countries to knowledge, experience and resources to help people build a better life, as envisaged by 2030 Agenda for Sustainable Development. We are on the ground in more than 170 countries and territories, working with governments and people on their solutions to global and national development challenges to help empower lives and build resilient nations. UNDP is a founding co-sponsor of the Joint UN Programme on HIV/AIDS (UNAIDS), a partner of The Global Fund to fight AIDS, TB and Malaria (GF), and a co-sponsor of several other international health partnerships.

The Global Fund has provided grant funds since 2003 to the Government of Indonesia in the amount of US\$ 910 million to fight HIV/AIDS, Tuberculosis (TB) and Malaria, as well to strengthen country health systems. As of January 2020, there are six active grants in the current implementation period (2018-2020) with a total budget of US\$ 264 million. The Ministry of Health (MOH) through its Directorate General of Disease Prevention & Control is the Principal Recipient (PR) for the Global Fund's HIV/AIDS, TB, and malaria grants, with a total budget of US\$ 208 million (2018-2020). The MOH's Global Fund programme is institutionalised along three Programme Implementation Units (PMUs): HIV/AIDS, TB, and Malaria with each PMU having independent staff and implementing own budget and activities. Further, the three PMUs all based at the national level works with at least 119 district-based entities called Sub-recipients (SRs). The SRs supports the implementation of grants and achievement of programme results at the district and provincial levels.

Since 2007, UNDP has partnered with the Ministry of Health of Indonesia to provide Technical assistance to the Ministry aimed at supporting successful implementation of The Global Fund grants in the country. Among the critical components of the partnership between UNDP and the Ministry of Health is towards supporting and strengthening the accountability and reporting of all financial, HR and Logistics activities as well streamlined the standardized processes and reporting mechanism via integrated information management system.

Currently the UNDP has been approved by the Global Fund to facilitate the development of Financial Management Information System (FMIS), and qualified Contractor has been assigned to develop the integrated system within the Programme and across three PMUs. The target for system is expected to go-live by the end of December 2020, and UNDP processing the temporary cloud hosting of the Microsoft Azure Stack within the Indonesia jurisdiction according to The Ministry of Communication and IT mandates that all government data must be stored within the country, including FMIS data. UNDP Indonesia will explore more options to another cloud service provider (CSP) that can provide a sustained competitive advantages for infrastructure as a service (IaaS). Therefore against this backdrop, UNDP seeks the qualified Contractor to provide temporary cloud hosting for the FMIS as provisioned in the Term of Reference.

2. OBJECTIVES OF THE SERVICES

The objectives of this services is to identify for engaging the Contractor of cloud service provider in Indonesia that would allow also Ministry of Health - Project Management Unit for managing services provisioned using Public Cloud Hosting Infrastructure/Hardware management to support for FMIS facility over a defined temporary duration by providing flexible and scalable hosting services, cost efficiency, high availability, and technical excellence. The expected output of the services is to ensure FMIS secured in reliable infrastructure on the cloud platform.

3. CONTRACTOR'S SCOPE OF WORK

Under the direct supervision of the UNDP Project Team Leader of FMIS Implementation, the Contractor will be responsible for the provision of cloud hosting that will offer Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) services. Specifically, the Contractor is expected to carry out the following:

- 3.1. Provide the cloud hosting services and shall also manage the cloud infrastructure on behalf of PMU, including delivering or managing cloud-based workloads, applications and services for FMIS.
- 3.2. The Contractor shall provide access interface with both “web-based” and “console-based”. The deployment shall be compatible with shell scripting language.
- 3.3. The Contractor not only help the Ministry of Health Project Management Unit with architecture optimization but also manages the data migration into the Contractor’s hosting and assist data post migration to the new hosting services, including any trouble shooting during the pre and post migration as well as data hosting period. Data generated by the system stored in public cloud is owned by the Government of Indonesia. Any other agency associated with them under this agreement cannot use the data for any purpose during or beyond the contract period.
- 3.4. The Contractor is required to provide effective and efficient cloud hosting services, which include the hosted production environment running the following 4 main server roles;
 - a) Database server (SQL Server)
 - b) Application server (D365BC application server)
 - c) Web server (portal and D365BC web server)
 - d) Authentication server - Active Directory Domain Services (Domain controller).
- 3.5. The Contractor shall also deliver high level service to ensure that PMU makes the most efficient and effective use of hosting technology service and resources. This include architecture, design and configuration activities for all aspects of the IaaS and PaaS services in scope, including:
 - a) Cloud Provider Services is a selected/ appointed company by one of principal (VMware/Microsoft/ Citrix) which shows the respective company possess high competency on Cloud Service
 - b) Possess and use their own technology (not to use 3rd party Application) on the infrastructure setup, storage as well as monitoring system
 - c) Provide High Performance Server tier with operating system of Windows Server 2019 Datacenter and estimated traffic network of 10 GB
 - d) The technology support to do Hybrid Cloud using the same platform
 - e) Use Load Balancing with throughput 200 Mbps and possess Anti DDoS Feature.
 - f) Scaling up in a short time (less than 1 hour)
 - g) Provide dedicated bandwidth: 10 Mbps on IX and 1 GB on IIX (Up to)
 - h) Provide /29 Public IP
 - i) Use Tiering Storage Technology with 2 types of HDD, SSD and SAS
 - j) Possess and use at least 3 (three) data centers – redundant among each other
 - k) Provide Web Application Firewall on cloud which operates on layer 7
 - l) Virtual Cloud Machine has to be accessible through panel even when remote desktop is not available
 - m) Provide and support Windows Server 2019
 - n) Provide Unlimited quota on data traffic
 - o) Provide Service Level Agreement (SLA) 99.9%
 - p) Do Migration process to transfer all content from previous hosting servers to new cloud servers within 7 x 24 hours
 - q) Provide Full Support and monitoring service 24/7 during contract period
 - r) Provide/possess at least 2 (two) certified professional technical support from the principal
 - s) Provide technical support team/developer in maintaining on the infrastructure part.
 - t) Provide Monitoring Alert System via Email when usage of resources reaching 80% (Memory, Processor and Storage) in every server

- u) Provide Weekly Offline Backup over the platform. 1 Offline Backup in every week and send the copy to Ministry of Health Project management Unit every month.
- v) Provide Real time backup mirroring feature
- w) Provide MYSQL and SQL
- x) Provide regular VDC Backup with Warm Archive Storage (IOSTOR – 100) type of total backup approximately 2 TB depending on VMs sizes, including 3 (three) copies retain before overwriting and 4 VMs licenses to be backed-up.
- y) Provide Disaster Recovery for Database Server and Application server, including one IP per server and failover resources as per primary VMs specification (database and application) as listed on point 3.6.

3.6. The Contractor should ensure servers specification/requirements for FMIS Production environment provided as below:

No	Server Roles/Service	Count (physical/ VMs)	Processor Cores	Memory (GB)	Storage (GB)	OS	Backup / DR
1	Authentication server	1	2 cores 2.4 GHz	4	127	Windows Server 2019 Datacenter	Monthly
2	Database Server	1	8 cores 2.4 GHz	32	1024	Windows Server 2019 Datacenter	Daily
3	Application/Web server	1	8 cores 2.4 GHz	32	512	Windows Server 2019 Datacenter	Weekly
4	Test server	1	6 cores 2.4 GHz	24	1024	Windows Server 2019 Datacenter	Monthly
Total		4	24	92	2687		

3.7. The infrastructure should provide and manage reasonable usage limits of FMIS usage that expectedly will meet:

- a) A maximum of 350 system user with estimated 200 concurrent users in the system,
- b) Estimated of 1,050 transactions each month per disease component,
- c) SMS Gateway at the maximum of 3,000 SMS/month
- d) Pre-production environment for GFATM PMU for testing on all modules before its release and trainings purposes.

3.8. To ensure reliable service, the following conditions must be fulfilled by the prospective Contractor, which include:

- a) Company with non-small category (SIUP non – kecil)
- b) Be a registered company in Indonesia by providing evidence of legal documents such as valid business license (Surat Izin Usaha Perdagangan – SIUP), Tax Payer Identification Number (Nomor Pokok Wajib Pajak – NPWP); and other supporting documents.
- c) Cloud Provider is a selected/appointed company by one of principal (VMware/ Microsoft/Citrix) which shows the respective company possess high competency on Cloud

Service. Contractor shall provide evidence by submitting the letter of appointment by one of the principals.

- d) Provide details of projects of similar nature that they have undertaken. Contactable reference (client references) is to be provided for each project of at least three (3) referees from existing clients
- e) Having the skills to build the cloud computing infrastructure that supports an ecosystem of mobile and website apps stored within a cloud server.
- f) The Contractor should appointed minimum 1 (one) qualified technical focal point to manage all technical issues and coordination.
- g) The Contractor must provide the timeline of service delivery
- h) The Contractor must provide detailed specification on the fully redundant hosting infrastructure.

3.9. The Contractor should adhere to and practice industry specific standards (including ITIL) with team of competent engineers at various levels. The team should be able to be contacted for any trouble shooting with good communication (English) and technical skills, coupled with industry certification and substantive experiences in providing support in production and maintenance of the delivered hardware

3.10. The Contractor must agree to sign the Non-Disclosure Agreement (NDA) of all data storage and hosted in the Contractor's infrastructure and ensure the data regulation of Government of Indonesia was taken care of on this cloud environment, whereby the CONTRACTOR should ensure all data hosting and processing including logs and audit trails are hosted on premise with a disconnected deployment approach (without Internet access) and Connected approach (with internet) which fits organization because of the users at the districts.

Technical Specifications for Services:

Item No	Minimum technical requirements	Unit	Quantity
1	Authentication server :1 physical count (VMs), 2 processor cores with 2.4 GHz, 4 GB RAM Memory, 127 GB storage, Operating system Windows Server 2019 Datacenter, Monthly backup/data recovery	server	1
2	Database Server: 1 physical count (VMs), 8 processor cores with 2.4 GHz, 32 GB RAM Memory, 1024 GB storage, Operating system Windows Server 2019 Datacenter, Daily backup/data recovery	server	1
3	Application/Web server: 1 physical count (VMs), 8 processor cores with 2.4 GHz, 32 GB RAM Memory, 512 GB storage, Operating system Windows Server 2019 Datacenter, Weekly backup/data recovery	server	1
4	Test server: 1 physical count (VMs), 6 processor cores with 2.4 GHz, 24 GB RAM Memory, 1024 GB storage, Operating system Windows Server 2019 Datacenter, Monthly backup/data recovery	server	1

Delivery Requirements

Delivery Requirements	
Delivery date and time	Bidder shall deliver the services within 1 day after Contract signature.
Delivery Terms (INCOTERMS 2020)	N/A
Customs clearance (must be linked to INCOTERM)	<input checked="" type="checkbox"/> Not applicable
Exact Address(es) of Delivery Location(s)	N/A
Distribution of shipping documents (if using freight forwarder)	N/A
Packing Requirements	N/A
Training on Operations and Maintenance	N/A
Warranty Period	N/A
After-sales service and local service support requirements	24 hours Data recovery and maintenance
Preferred Mode of Transport	N/A