



Membangun Platform Data Modern dengan Azure

Proposal Teknis

Versi 2.0 - September 2024

Disiapkan untuk



Visi Kami

untuk membantu pelanggan kami menjadi perusahaan yang digerakkan oleh data

dengan memanfaatkan data mereka, data eksternal, platform (cloud/big) data, analitik, dan otomatisasi. Dapatkan wawasan yang sebelumnya tidak jelas dan analisis tingkat operasional dengan solusi dan produk kami.



XQ Bekerja dengan baik dengan



Bahasa Indonesia: Microsoft Azure

Emas Biru Mitra

XQ mencapai status mitra Emas
sebagai mitra Microsoft dalam Data
Platform Analisis dan Data

Data dan AI Fokus Laser

XQ adalah salah satu mitra pilihan di
Lanskap data dan AI sejak 2019

milik Microsoft Dikelola- Mitra

XQ telah menugaskan manajer mitra dari
Microsoft untuk mengembangkan Data dan
Implementasi AI



Penawaran Cloud Komprehensif

1. Penasihat

Membuka potensi penuh cloud untuk meningkatkan ketangkasan perusahaan dan mendorong pertumbuhan bisnis.

2. Migrasi

Mempercepat dan Mengotomatiskan beban kerja lokal atau cloud lainnya ke Azure.

3. Modernisasi

Memberdayakan bisnis dengan peningkatan ketangkasan, skalabilitas, dan efisiensi biaya, mendorong inovasi dan keunggulan kompetitif.

4. Data dan Analisis

Bertransformasi menjadi perusahaan berbasis data dengan platform data lengkap dan strategi yang kohesif.

8. Layanan Terkelola

Layanan Terkelola Cloud Generasi Berikutnya dengan DevSecOps dan otomatisasi GenAI.

5. Keamanan

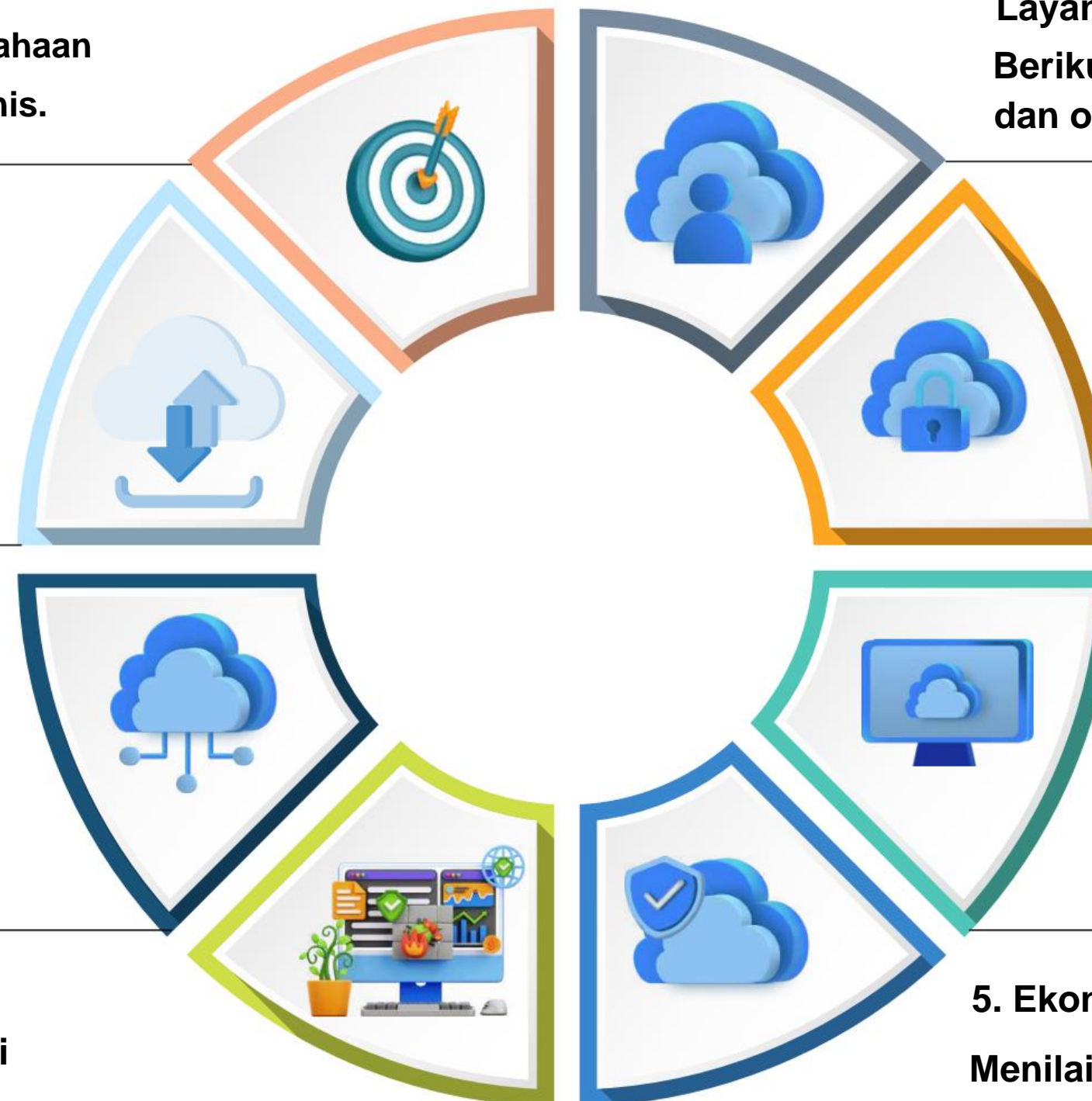
Perkuat keamanan cloud perusahaan dengan wawasan praktis dan rekomendasi yang disesuaikan.

6. Keandalan & Jaminan

Memastikan kinerja, skalabilitas, dan keandalan aplikasi di cloud.

5. Ekonomi

Menilai dan membentuk kembali pengaturan Anda menjadi arsitektur yang hemat biaya.



Isi

Apa yang akan kita bahas

- Peta Jalan dan Ruang Lingkup Pekerjaan
- **Arsitektur Solusi & Estimasi Ukuran**
- Manajemen Proyek
- Iklan

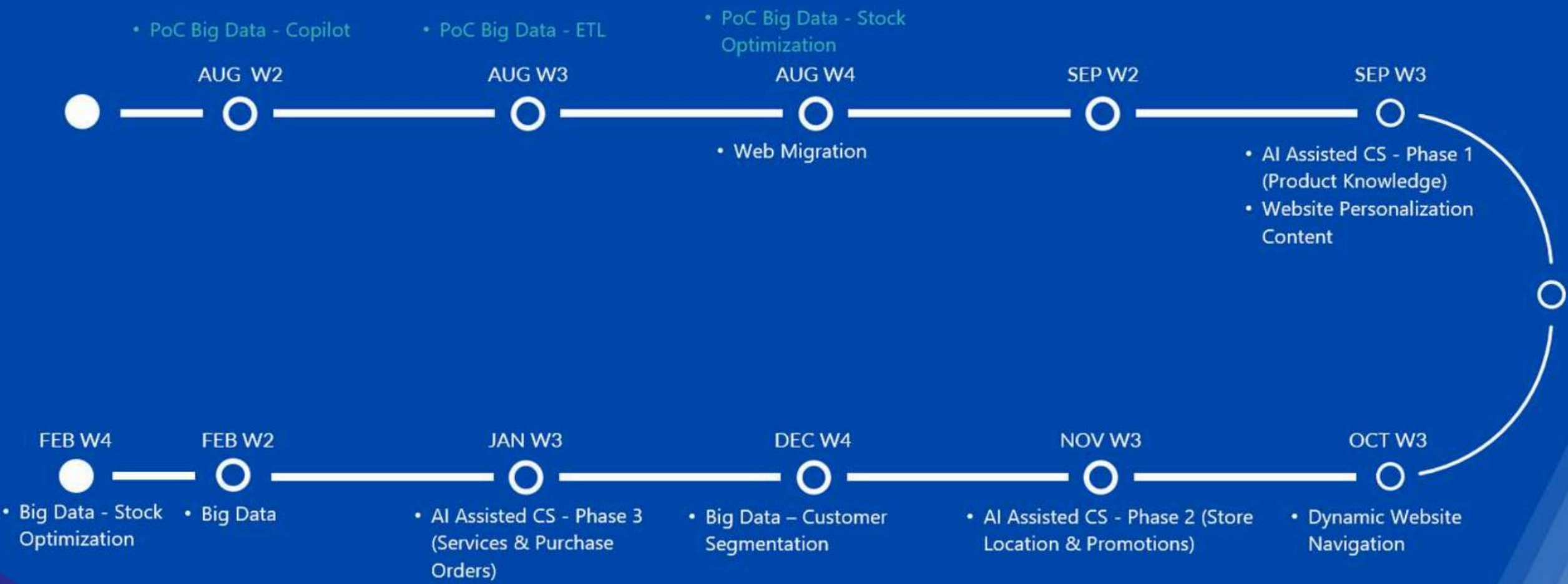


01

Peta Jalan dan Ruang Lingkup Pekerjaan



Peta Jalan Proyek



Catatan: Tanggal yang ditampilkan menandai penyelesaian, bukan dimulainya proyek



Identifikasi Solusi

Solusi-solusi ini diambil dari tantangan-tantangan dan permasalahan yang telah diidentifikasi selama diskusi kelompok fokus sebelumnya.

Engagement Objectives	Target Features	PoC Version	Project Version
Website hosted on Azure	Website hosted on Azure		Website Migration
Azure AI Chat bot capabilities Synapse Data Science on Fabric Capability	AI assisted website navigation and customer support which create personal/ unique experience for customers and propose recommendation of contents, products, services, store locations, promotions etc	AI Assisted Customer Support Dynamic Website Navigation Website Personalization Content	AI Assisted Customer Support Phase 1 - 3 Dynamic Website Navigation Website Personalization Content
Azure AI Chat bot capabilities	AI can also summarize the feedbacks, queries from customers, topics, themes, interests for respective person in melawai to follow up	AI Assisted Customer Support	AI Assisted Customer Support Phase 1-3
Azure AI Chat bot capabilities	How to connect azure open AI to Melawai commerce website/ apps and customer support and POC	AI Assisted Customer Support	AI Assisted Customer Support Phase 1-3
Azure AI Chat bot capabilities Synapse Data Science on Fabric Capability	Integrasi AI dengan content management system	Dynamic Website Navigation Website Personalization Content	Dynamic Website Navigation Website Personalization Content
Azure AI Chat bot capabilities Synapse Data Science on Fabric Capability	Implementasi AI untuk Bot	AI Assisted Customer Support	AI Assisted Customer Support Phase 1-3
Synapse Data Science on Fabric Capability	Implementasi AI untuk website navigation	Dynamic Website Navigation	Dynamic Website Navigation
Synapse Data Science on Fabric Capability	Implementasi AI untuk personalization	Website Personalization Content	Website Personalization Content
Power BI Copilot	Pembuatan Dashboard menggunakan bantuan Copilot	Big Data - Copilot	Big Data
Power BI Copilot	Copilot untuk menjawab pertanyaan out of the box dari dataset yang disediakan	Big Data - Copilot	Big Data
Microsoft Fabric Platform	Solusi ETL process yang ter-orkestrasi berawal dari data landing hingga data mart untuk divisualisasikan	Big Data - ETL	Big Data
Microsoft Fabric Platform Synapse Data Science on Fabric Capability	Solusi untuk management & governance big data di Azure	Big Data - ETL	Big Data
Synapse Data Science on Fabric Capability	Solusi product recommendation & item similarity yang dapat di feeding ke berbagai end point	Website Personalization Content	Website Personalization Content
Synapse Data Science on Fabric Capability	Solusi forecasting yang dapat digunakan untuk stock optimization yang dilakukan secara paralel per cabang	Big Data - Stock Optimization with Demand Forecasting	Big Data - Stock Optimization with Demand Forecasting



Identifikasi Solusi

Solusi-solusi ini diambil dari tantangan-tantangan dan permasalahan yang telah diidentifikasi selama diskusi kelompok fokus sebelumnya.

Dalam lanskap ritel yang berkembang pesat, untuk tetap unggul dalam persaingan diperlukan pendekatan strategis dalam memanfaatkan teknologi. Solusi peta jalan teknologi yang kami usulkan untuk bisnis ritel Anda dirancang untuk meningkatkan pengalaman pelanggan, menyederhanakan operasi, dan memberikan wawasan yang dapat ditindaklanjuti melalui analisis data tingkat lanjut. Peta jalan ini dibagi menjadi dua bagian penting: Situs web

- Kategori
 - solusi ini menangani migrasi situs web, personalisasi web, dan chatbot AI tingkat lanjut Big Data solusi ini mengelola integrasi
- data,
 - platform data Fabric, Power BI berbantuan AI dengan Co-Pilot, dan otomatisasi ETL



Identifikasi Solusi - Situs Web

Solusi-solusi ini diambil dari tantangan-tantangan dan permasalahan yang telah diidentifikasi selama diskusi kelompok fokus sebelumnya.

Project Name	PoC Version	Project Version
Website Migration		Features: <ul style="list-style-type: none">- Create tenant under Optik Melawai.- Migrate FE to Azure- Host and manage FE using Azure services (DevOps)- Setup CDN to optimize latency
Website Personalization Content	Features: Using Fabric to create recommendation engine with collaborative filtering on item-based Scope: 1 City Result: REST API Requirement: <ul style="list-style-type: none">- Tagged product data- Customer searching- Transaction data- Tagged asset contents	Features: Using Fabric to create recommendation engine with collaborative filtering on item-based Result: Deployed on website Requirement: <ul style="list-style-type: none">- Tagged product data- Customer searching- Transaction data- Tagged asset contents- Website readiness
Dynamic Website Navigation	Features: <ul style="list-style-type: none">- Using Fabric to create recommendation engine that can recommend web menu position according to user behaviour- Run on registered user Scope: 1 City Result: REST API Requirement: <ul style="list-style-type: none">- Transaction data	Features: <ul style="list-style-type: none">- Using Fabric to create recommendation engine that can recommend web menu position according to user behaviour- Run on registered user Result: Deployed on website Requirement: <ul style="list-style-type: none">- Transaction data- Website readiness



Identifikasi Solusi - Situs Web (Lanjutan)

Solusi-solusi ini diambil dari tantangan-tantangan dan permasalahan yang telah diidentifikasi selama diskusi kelompok fokus sebelumnya.

Project Name	PoC Version	Project Version
AI Assisted Customer Support	Features: Using Azure OpenAI to answer user questions about product knowledge Result: - Chat bot Requirement: - Product Data	AI Assisted Customer Support - Phase 1 (Product Knowledge) AI Assisted Customer Support - Phase 2 (Store Location & Promotions) AI Assisted Customer Support - Phase 3 (Services & Purchase Orders)
AI Assisted Customer Support - Phase 1 (Product Knowledge)		Features: Using Azure OpenAI to answer user questions about product knowledge Result: - Chat bot via website - Chat bot via WhatsApp Requirement: - Related data for product knowledge - Website readiness - WhatsApp for Business account
AI Assisted Customer Support - Phase 2 (Store Location & Promotions)		Features: Using Azure OpenAI to answer user questions about specific or nearest store location Using Azure OpenAI to answer user questions about events promotions on Optik Melawai Result: - Chat bot via website - Chat bot via WhatsApp Requirement: - Related data for store locations - Related data for events and promotions - Website readiness - WhatsApp for Business account
AI Assisted Customer Support - Phase 3 (Services & Purchase Orders)		Features: Using Azure OpenAI to answer user questions about services on Optik Melawai Using Azure OpenAI to answer user questions about their purchase orders Result: - Chat bot via website - Chat bot via WhatsApp Requirement: - Related data for services - Related data for purchase orders - Website readiness - WhatsApp for Business account



Identifikasi Solusi - Big Data

Solusi-solusi ini diambil dari tantangan-tantangan dan permasalahan yang telah diidentifikasi selama diskusi kelompok fokus sebelumnya.

Project Name	PoC Version	Project Version
Big Data (Azure Modern Data Platform with Fabric and Power BI Co-Pilot)		Features: <ul style="list-style-type: none">- Fabric recreate current (AWS) end-to-end stock data ETL process Result: <ul style="list-style-type: none">- ETL moved to Fabric: 48 ETL Jobs- Data moved to Fabric: ICAPOS (78 Tables), SAP (28), Foundation (91), da_dwh (47), da_dmt (7), Materialized View (26), View (30)- Dashboard moved to PowerBI: +- 35 Dashboard, each ranged in 1-6 pages Requirement: <ul style="list-style-type: none">- ETL Documentation
Big Data - Stock Optimization with Demand Forecasting	Features: <ul style="list-style-type: none">- Stock optimization using demand forecasting- Run parallely on 2-3 branches Scope: <ul style="list-style-type: none">- 1 City- Accuracy >= 0.7 Result: REST API Requirement: <ul style="list-style-type: none">- Stock data (3 months)- Prompt query examples	Features: <ul style="list-style-type: none">- Stock optimization using demand forecasting- Run parallely on several branches Result: <ul style="list-style-type: none">- Batch job to Data Mart Requirement: <ul style="list-style-type: none">- Stock data- Transaction data- ETL readiness
Big Data – Customer Segmentation		Features: <ul style="list-style-type: none">- Customer segmentation from customers' behavior when doing the transaction- Segmentation using K-Means Cluster Result: <ul style="list-style-type: none">- Batch job to Data Mart Requirement: <ul style="list-style-type: none">- Transaction data- Master Customer data- ETL readiness



Identifikasi Solusi - Big Data

(Lanjutan)

Solusi-solusi ini diambil dari tantangan-tantangan dan permasalahan yang telah diidentifikasi selama diskusi kelompok fokus sebelumnya.

Project Name	PoC Version	Project Version
Big Data - Copilot	Features: <ul style="list-style-type: none">- Copilot on PowerBI Scope: <ul style="list-style-type: none">- Stock data Result: <ul style="list-style-type: none">- 1 dashboard in PowerBI- Copilot can answer user's questions, e.g. "Show me trend of 10 dead stock in last 3 months" Requirement: <ul style="list-style-type: none">- Copilot on PowerBI- Stock data (3 months)- Prompt query examples	Big Data (Azure Modern Data Platform with Fabric and Power BI Co-Pilot)
Big Data - ETL	Features: <ul style="list-style-type: none">- Show Fabric capability to recreate current (AWS) end-to-end stock data ETL process Scope: <ul style="list-style-type: none">- Stock data Result: <ul style="list-style-type: none">- Scalability- Auto scale- Duration to do full ETL- Cost needed for services Requirement: <ul style="list-style-type: none">- ETL Documentation	Big Data (Azure Modern Data Platform with Fabric and Power BI Co-Pilot)



Garis Waktu Peta Jalan

Draf pertama dari garis waktu tingkat tinggi dari keseluruhan PoC dan Proyek

Activities	OCTOBER			NOVEMBER				DECEMBER				JANUARY				FEBRUARY				MARCH				APRIL				MAY			
	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	w1	w2	w3	w4	w5	w6	w7	w8	w9	w10	w11	w12	w13	w14	w15	w16	w17	w18	w19	w20	w21	w22	w23	w24	w25	w26	w27	w28	w29	w30	w31
Project Kickoff																															
Administration Process																															
Azure Services Provision Setup anf Config																															
Assessment Consulting																															
PoC Big Data - ETL																															
PoC Big Data - Copilot																															
PoC Big Data - Stock Optimization with Demand Forecasting																															
AI Assisted Customer Support - Phase 1 (Product Knowledge)																															
AI Assisted Customer Support - Phase 2 (Store Location & Promotions)																															
AI Assisted Customer Support - Phase 3 (Services & Purchase Orders)																															
Website Personalization Content																															
Dynamic Website Navigation																															
Big Data - Modern Data Platform with Fabric & Power BI Co-Pilot																															
Big Data - Customer Segmentation																															
Big Data - Stock Optimization with Demand Forecasting																															
Project Closing																															

Catatan: untuk Timeline terperinci, Struktur Rincian Pekerjaan, dan Alokasi Hari Kerja dilampirkan pada spreadsheet terpisah agar dapat dilihat lebih baik.



tanggal 02

Larutan Arsitektur & Estimasi Ukuran

<https://xquisite.ai>

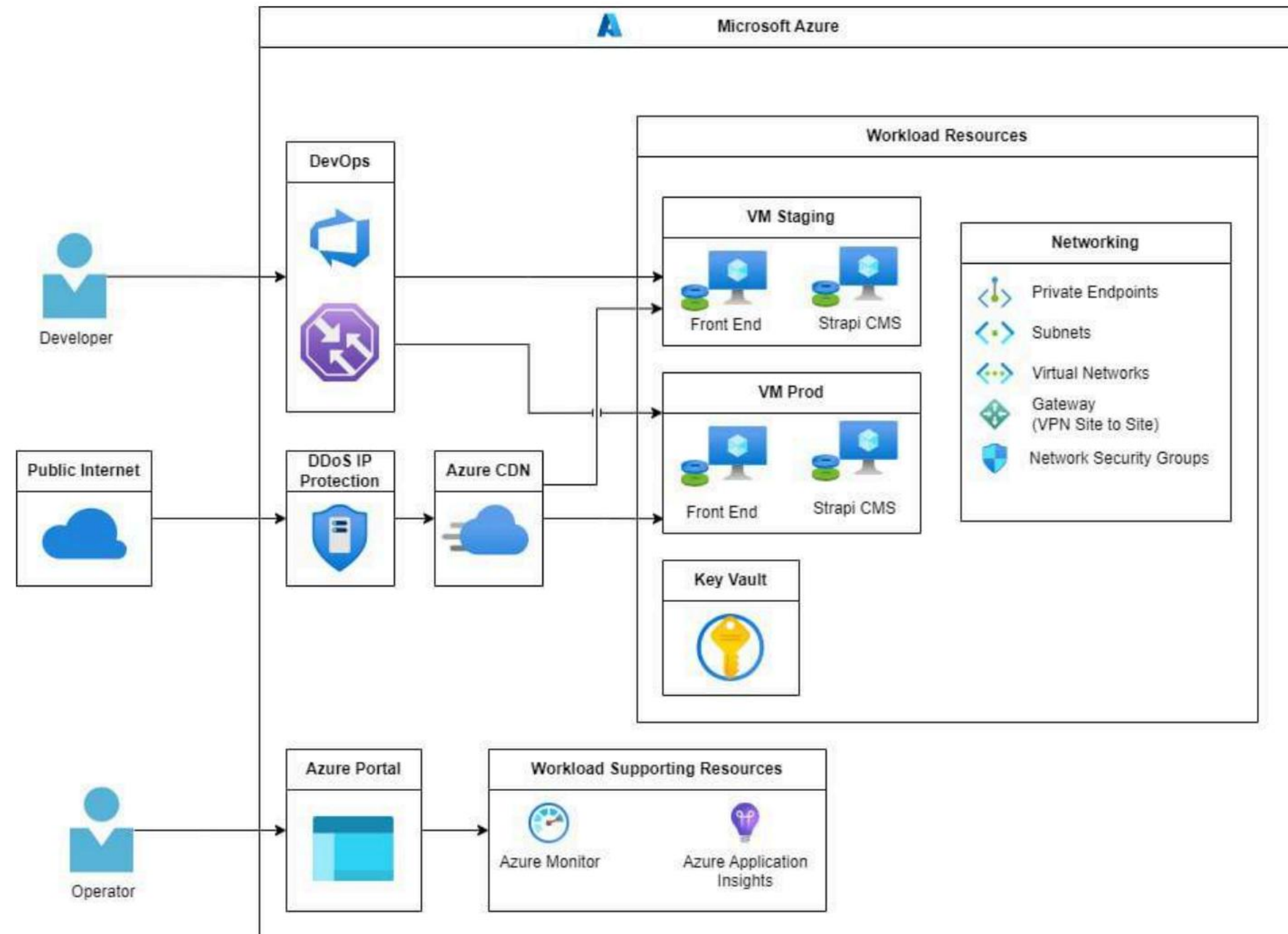


Arsitektur Situs Web di Azure

Memigrasikan situs web Anda saat ini ke Azure akan memberikan banyak manfaat, termasuk skalabilitas, keamanan, dan performa yang lebih baik. Tim kami akan memastikan proses migrasi yang lancar dengan waktu henti yang minimal, merencanakan dan melaksanakan setiap langkah dengan saksama untuk menghindari gangguan pada operasi bisnis Anda. Ini termasuk penilaian menyeluruh terhadap infrastruktur, migrasi data, dan penerapan aplikasi Anda yang ada di platform Azure.

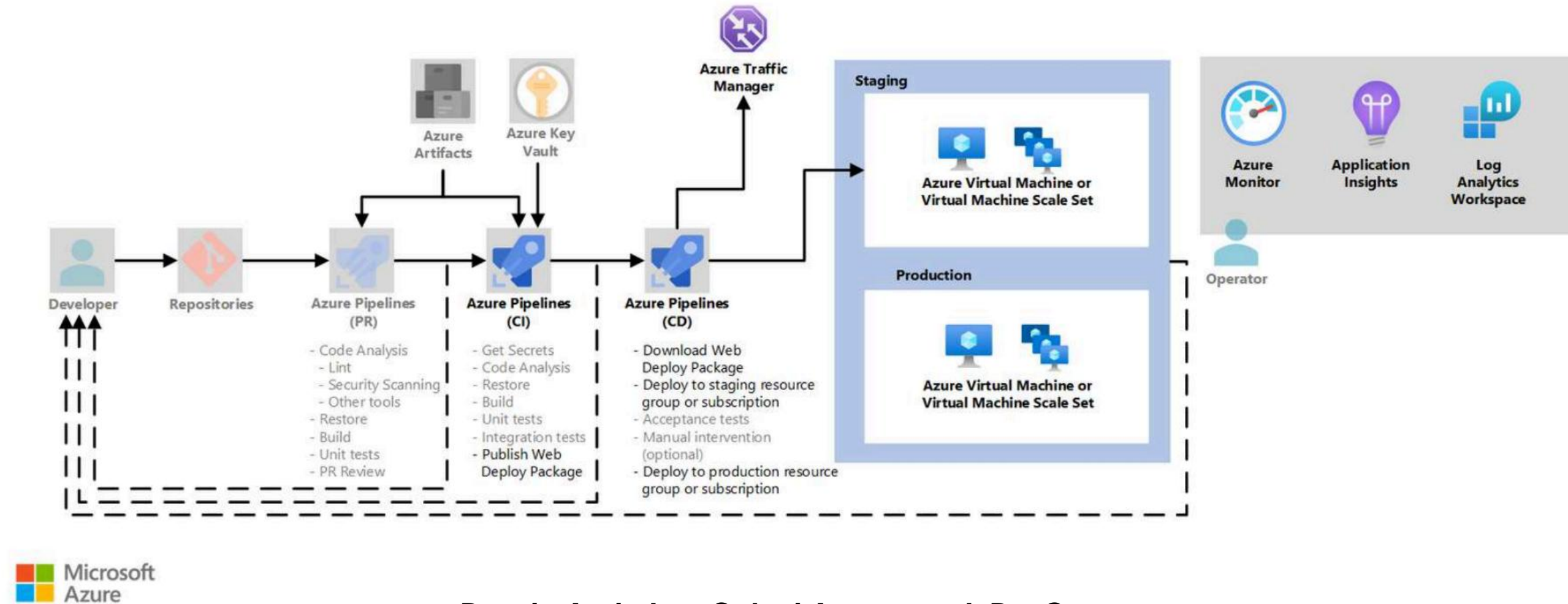
Mengalir:

1. FE di Azure dikelola di bawah Azure DevOps Security di Azure menggunakan perlindungan DDoS dan 2.
- Azure Key-vault ke titik akhir privat yang dikelola Untuk
3. mengoptimalkan latensi dari pengguna, kami akan menggunakan CDN untuk menyimpan aset statis (JS & CSS)
4. Staging dan Produksi berada di VM yang berbeda



Arsitektur Situs Web di Azure

Arsitektur DevOps



Desain Arsitektur Solusi Azure untuk DevOps

Mengintegrasikan praktik DevOps ke dalam solusi peta jalan teknologi kami sangat penting untuk mencapai integrasi berkelanjutan dan pengiriman berkelanjutan (CI/CD), meningkatkan kolaborasi antara tim pengembangan dan operasi, serta memastikan penerapan yang lebih cepat dan lebih andal. Azure menawarkan rangkaian lengkap alat dan layanan DevOps yang memfasilitasi implementasi DevOps yang efisien dan efektif.



Perkiraan Biaya Situs Web di Azure

Microsoft Azure Estimate				
Optik Melawai - Web Apps				
Region: Southeast Asia				
Service category	Service type	Custom name	Description	Estimated monthly cost
Compute	Virtual Machines	Frontend - Production	1 B4ms (4 Cores, 16 GB RAM) x 730 Hours (Pay as you go), Linux, (Pay as you go); 1 managed disk – P6; Internet egress, 5 GB outbound data transfer from Southeast Asia routed via Public Internet	\$164,24
Compute	Virtual Machines	Frontend - Staging	1 B2ms (2 Cores, 8 GB RAM) x 730 Hours (Pay as you go), Linux, (Pay as you go); 1 managed disk – P6; Inter-region transfer type, 5 GB outbound data transfer from Southeast Asia to East Asia	\$87,59
Compute	Virtual Machines	Strapi - Production	1 B4ms (4 Cores, 16 GB RAM) x 730 Hours (Pay as you go), Linux, (Pay as you go); 1 managed disk – P6; Internet egress, 5 GB outbound data transfer from Southeast Asia routed via Public Internet	\$164,24
Compute	Virtual Machines	Strapi - Staging	1 B2ms (2 Cores, 8 GB RAM) x 730 Hours (Pay as you go), Linux, (Pay as you go); 1 managed disk – P6; Inter-region transfer type, 5 GB outbound data transfer from Southeast Asia to East Asia	\$87,59
Developer Tools	Azure DevOps		5 Basic Plan licence users, 1 Basic + Test Plans licence users, Free tier - 1 Microsoft Hosted Pipeline(s), 1 Self Hosted Pipeline(s), 10 GB Artifacts	\$68,00
Networking	Traffic Manager		10 million DNS queries/mo, 50 Azure endpoint(s), 0 Fast Azure endpoint(s), 0 External endpoint(s), 0 Fast External endpoint(s), 10 million(s) of user measurements, 10 million(s) of data points processed.	\$43,40
Security	Key Vault		Vault: 1,000,000 operations, 1,000,000 advanced operations, 5 renewals, 0 protected keys, 0 advanced protected keys; Managed HSM Pools: 0 Standard B1 HSM Pool(s) x 730 Hours	\$33,00
DevOps	Azure Monitor		Log analytics: Log Data Ingestion: 1 GB Daily Analytics logs ingested, 0 GB Daily Basic logs ingested, 1 months of Interactive Data Retention, 0 months of data archived, 0 GB data restored for 0 days, 0 Basic Log Search Queries per day with 0 GB data scanned per query, 0 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, 0 Search job Queries per day with 0 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: 3 months Data retention, 2 Standard Web Tests, 5 Minutes Execution frequency, Executing for 730 hours; 0 resources monitored X 1 metric time-series monitored per resource, 0 Log Alerts at 5 Minutes Frequency, 0 Additional events (in thousands), 0 Additional emails (in 100 thousands), 0 Additional push notifications (in 100 thousands), 0 Additional web hooks (in millions)	\$160,89
Networking	Azure DDoS Protection		IP Protection, Protection for 2 resources x 730 Hours	\$398,00
Networking	Content Delivery Network		Zone 1: 10 GB, Zone 2: 10 GB, Zone 3: 0 GB, Zone 4: 10 GB, Zone 5: 10 GB, DSA: 10 GB	\$6,75
Networking	VPN Gateway		VPN Gateways, Basic VPN tier, 730 gateway hours, 10 S2S tunnels, 128 P2S connections, 100 GB, Inter-VNET outbound VPN gateway type	\$35,28
Networking	IP Addresses		Basic (Classic), 0 Dynamic IP Addresses X 730 Hours, 2 Static IP Addresses X 730 Hours	\$5,26
Total				\$1.168,08
Disclaimer				
All prices shown are in United States – Dollar (\$) USD. This is a summary estimate, not a quote. For up to date pricing information please visit https://azure.microsoft.com/pricing/calculator/				
This estimate was created at 7/25/2024 8:42:48 AM UTC.				



Perkiraan Biaya AI di Azure

Microsoft Azure Estimate				
AI Assistant				
Region: East US				
Service category	Service type	Custom name	Description	Estimated monthly cost
AI + Machine Learning	Azure OpenAI Service		Language Models, GPT-4o-Global-Deployment-128K, 1,000 x 1,000 input tokens, 1,000 x 1,000 output tokens	\$20,00
Web	Azure AI Search		Standard S1, 1 Unit(s), 730 Hours	\$245,28
Analytics	Azure AI Bot Service		S1 tier, 10000 messages in Premium Channels	\$5,00
Compute	App Service		Basic Tier; 1 B1 (1 Core(s), 1.75 GB RAM, 10 GB Storage) x 730 Hours; Windows OS; 0 SNI SSL Connections; 0 IP SSL Connections; 0 Customised Domains; 0 Standard SLL Certificates; 0 Wildcard SSL Certificates	\$54,75
Databases	Azure Cosmos DB		Azure Cosmos DB for PostgreSQL (NEW), Single Node Tier, 2 vCore 8 GiB RAM x 730 Hours, Pay as you go, 128 GiB General Purpose Storage, Without High Availability	\$175,66
Storage	Storage Accounts		Block Blob Storage, General Purpose V2, Flat Namespace, LRS Redundancy, Hot Access Tier, 1,000 GB Capacity - Pay as you go, 10 x 10,000 Write operations, 10 x 10,000 List and Create Container Operations, 10 x 10,000 Read operations, 1 x 10,000 Other operations. 1,000 GB Data Retrieval, 1,000 GB Data Write, SFTP disabled	\$21,84
Total				\$522,53
Disclaimer				
All prices shown are in United States – Dollar (\$) USD. This is a summary estimate, not a quote. For up to date pricing information please visit https://azure.microsoft.com/pricing/calculator/				
This estimate was created at 7/25/2024 9:42:05 AM UTC.				

Estimasi Biaya Bulanan Azure untuk Asisten Chatbot AI



Arsitektur Big Data di Azure

Pemetaan Apple-ke-Apple dari Arsitektur yang Ada

