NOTEPAD-AI

Cloud Computing Project
2023-2024

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Introduction

Introduction

Why Notepad-AI?

A cloud platform where users can easily write, save and store their works.

Natively supported by commonly used tools and services.

Support classic notebook style and markdown contents.

Introduction

Why Cloud?

High efficiency.

High Availability.
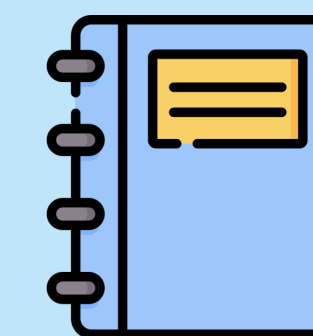
Scalable infrastructure.

Cost reduction.

Introduction
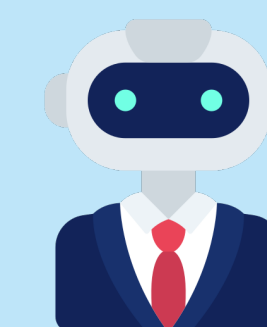
Notepad-AI features

Account creation and management.

Creation, opening and deletion of classic/markdown notebooks.
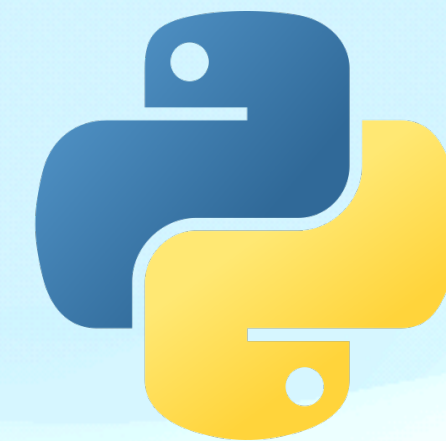
Notebook extraction in a universal document format.

Abstractive text-summarisation, text-translation, text-generation and speech-to-text conversion (experimental).

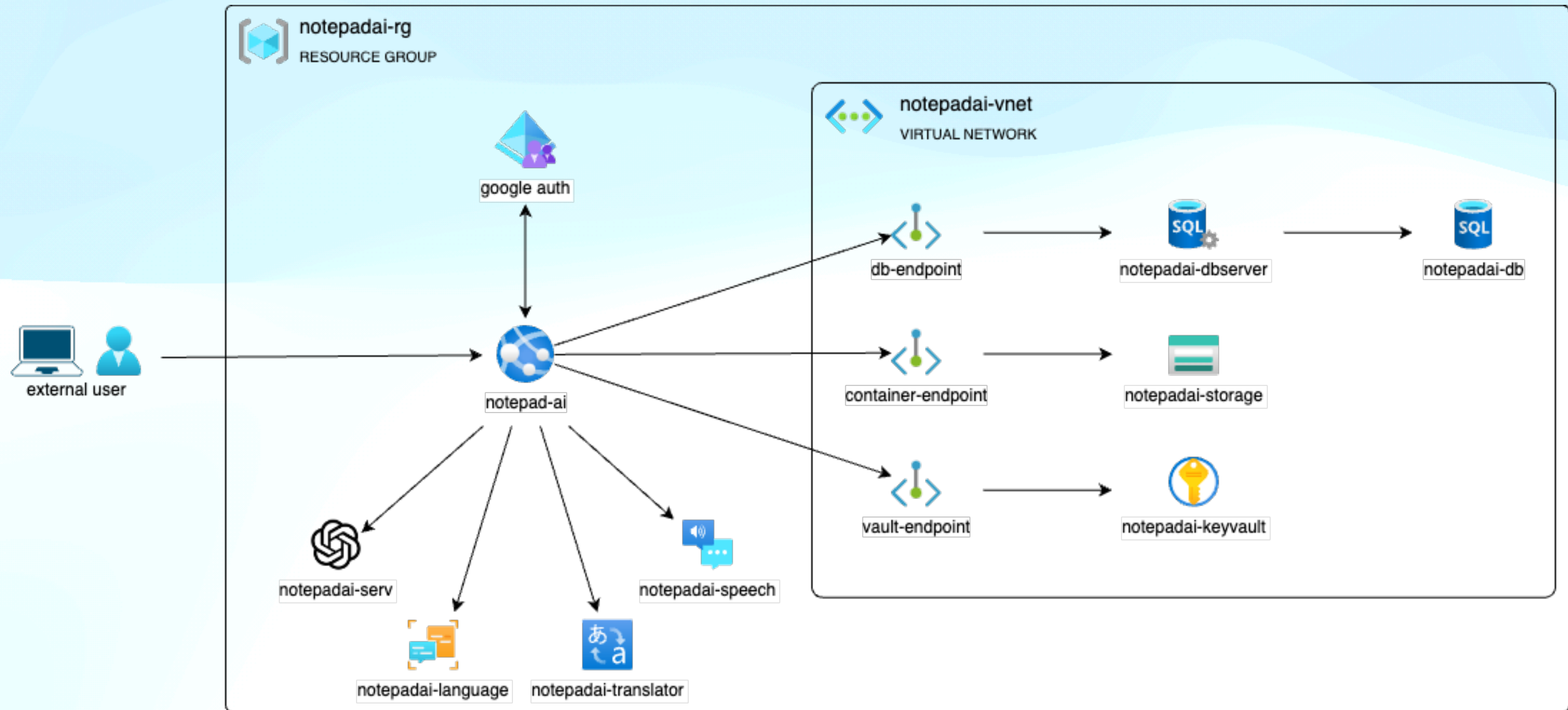# Technologies

Technologies

Front-End & Back-End

System Architecture

System Architecture

System Architecture Diagram

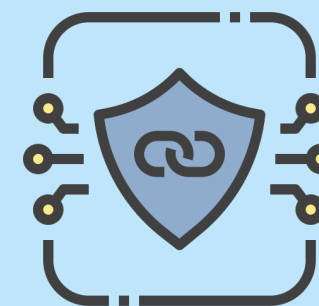# Services

Services

Azure App Service

Hosts Notepad-AI web-application.

Accessible from any public source.

Connected via private link to some private services.

Pricing plan: B1 but can be changed at anytime with a more/less powerful plan depending on workloads.
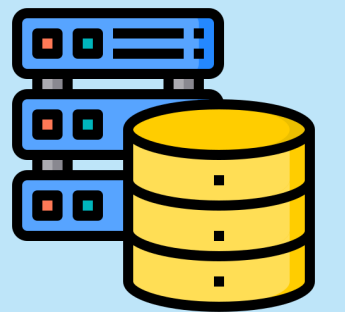
Services

Azure SQL Database / Azure Storage Account

Holds a container with all the text documents related to the notebooks.

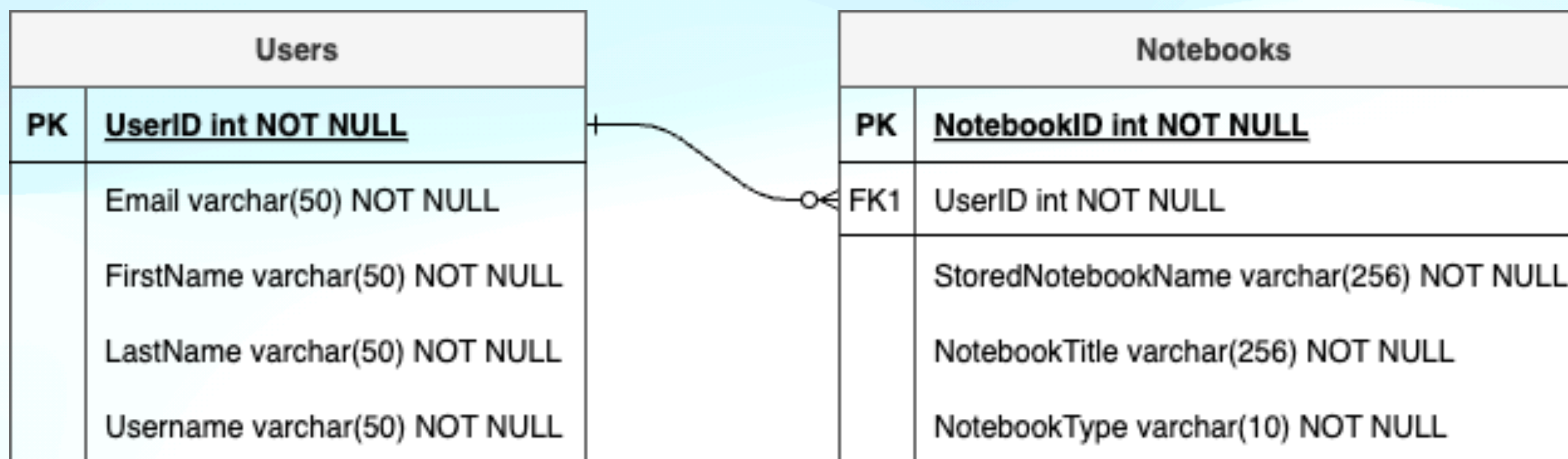Stores informations about users and their related notebooks in a table format.

Both services are not accessible from public sources.

For this two resources the cost changes depending on used data and transactions.

Services

Database Schema

Services

Azure Key Vault

A cloud service for securely storing and accessing secrets.

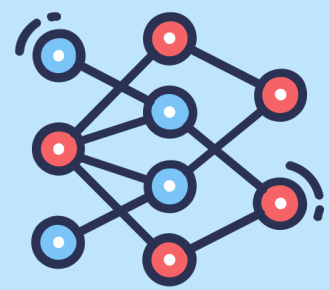Used to store private credentials, api-keys and some access endpoints.

Secured in a private virtual network.

Costs: standard pricing tier based on transactions.

Services

Azure Virtual Network

Provides the fundamental building block for private networks in Azure.

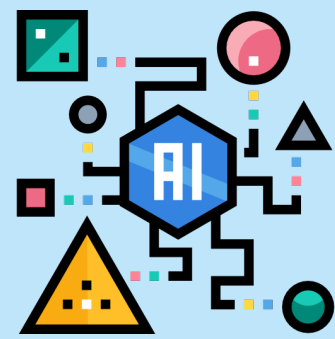Only trusted identities can access resources in this virtual network.

Secures critical services like database, storage and vault from unauthorised accesses.

Costs: the service itself is free but costs vary on the number of private endpoints and processed in/out data.

Services

Azure OpenAI / Azure AI Language / Azure AI Translator / Azure AI Speech

Services belonging to the suite of services provided by Azure AI.

Ready to use abstractive summarisation and text generation.

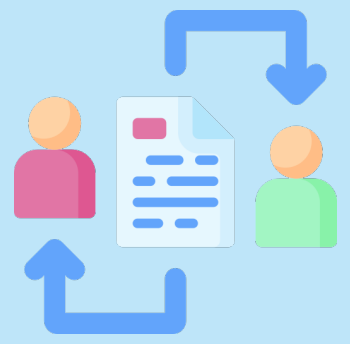In-app text translator and experimental speech-to-text feature.

Costs: F0 plan upgradable to standards or pay-as-you go plans. (speech and text)
Standard plans depending on model used and in/out tokens. (OpenAI)
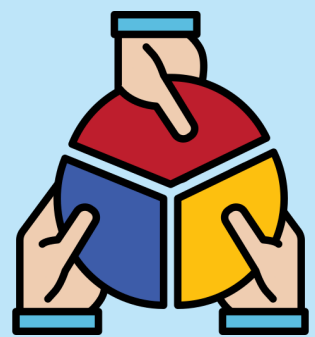
Future Works

Future works

Some ideas

Notebook sharing with other users.

Upload and extraction of text from documents.

Collaborative notebook editing.

NOTEPAD-A.I

Thank you for your attention!