

Azure OpenAI Service Quick Start



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Overview



Understand generative AI and the Azure AI stack

Plan, deploy, and configure Azure OpenAI Service

Secure Azure OpenAI Service

Session Materials

timw.info/river23



Understand Generative AI and the Microsoft Azure AI Stack

Relevant Vocabulary

Artificial Intelligence

Machine Learning

Deep Learning

Generative AI

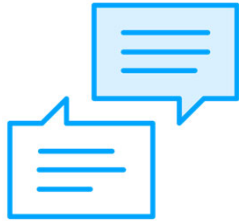
Generative AI

Create new text, visual, image, or auditory content based on prompts or existing data

OpenAI's Generative AI Models



GPT
Text



ChatGPT
Conversational
text

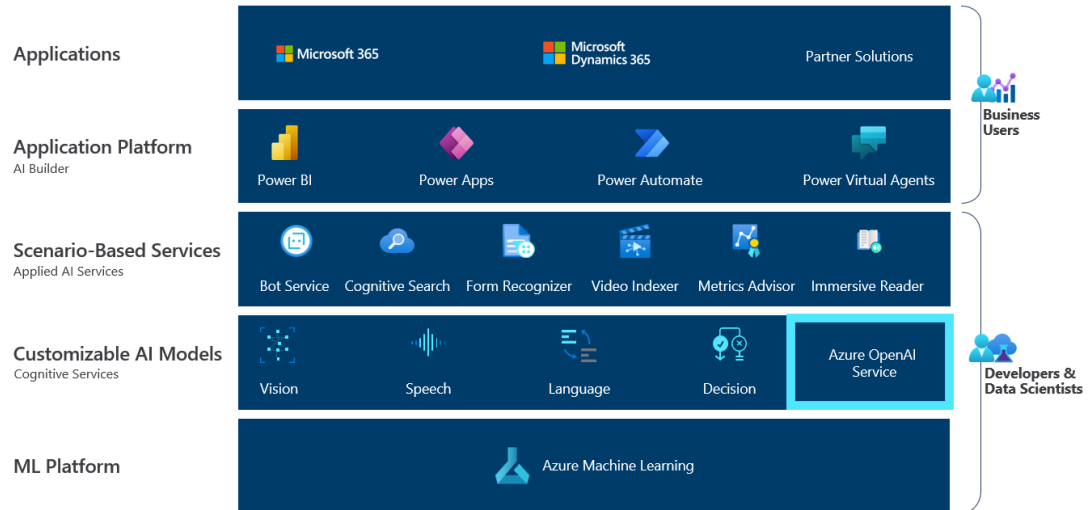


Codex
Source code
gpt-3.5-turbo

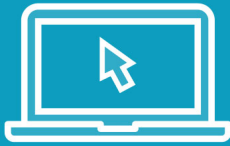


DALL-E
Images

Microsoft Azure AI Stack



Demo



1

ChatGPT

OpenAI APIs

GitHub Copilot

Deploying and Configuring Azure OpenAI Service

Azure OpenAI
Service

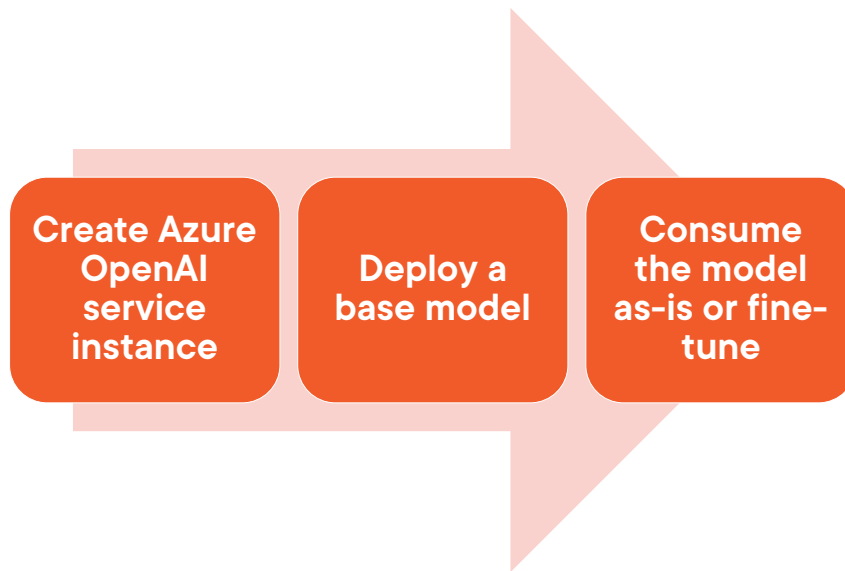


Azure-hosted solution that provides secure REST API access to OpenAI's large language models (LLMs)

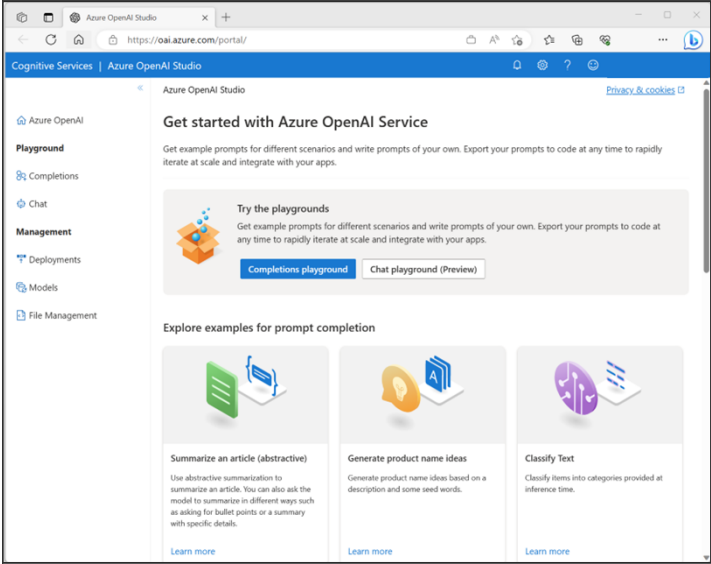
- GPT-4
- GPT 3.5 Turbo
- Embeddings
- DALL-E

Full integration with Microsoft Entra ID (formerly Azure AD) and Azure Resource Manager (ARM)

Deployment Workflow



Azure OpenAI Studio



Fine-Tuning

Azure AI Studio | Azure AI Studio

Testing and training datasets

Upload training and validation datasets for customizing our models to your use case. Fine-tuning jobs will also output a fine-tune-results file which will appear here.

[Learn more about preparing a dataset for fine-tuning.](#)

JSON

```
{
  "prompt": "<prompt text>",
  "completion": "<ideal generated text>"
}
```

Console

```
pip install --upgrade openai
openai tools fine_tunes.prepare_data -f <LOCAL_FILE>
```

No files found. Please upload a file to get started.

Demo



2

Deploy service and models

Portal

Bicep

PowerShell

Experiment with the Playground

Securing Azure OpenAI Service

Role-Based Access Control (RBAC)

Dashboard > Azure AI services > Azure OpenAI > twopenai0001

twopenai0001 | Access control (IAM)

Search

+ Add Download role assignments Edit columns Refresh Remove Feedback

Check access Role assignments **Roles** Deny assignments Classic administrators

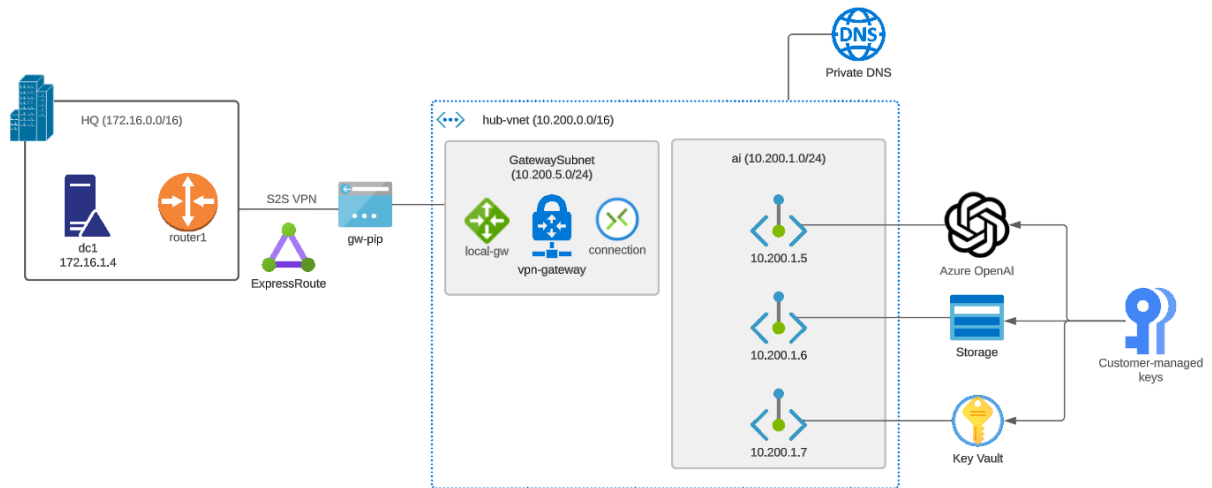
A role definition is a collection of permissions. You can use the built-in roles or you can create your own custom roles. [Learn more](#)

OpenAI Type: All Category: All

Showing 2 of 39 roles

<input type="checkbox"/> Name ↑↓	Description ↑↓	Type ↑↓
<input type="checkbox"/> Cognitive Services OpenAI Contributor	Full access including the ability to fine-tune, deploy and generate text	BuiltInRole
<input type="checkbox"/> Cognitive Services OpenAI User	Ability to view files, models, deployments. Readers can't make any chan...	BuiltInRole

Private Endpoint



Customer-Managed Keys (CMK)

twgpccloud01 | Encryption ☆ ...

Storage account

Search

Overview
Activity log
Tags
Diagnose and solve problems
Access Control (IAM)
Data migration
Events
Storage browser
Storage Mover

Data storage

Containers
File shares
Queues
Tables

Security + networking

Networking
Azure CDN
Access keys

Encryption Encryption scopes

Storage service encryption protects your data at rest. Azure Storage encrypts your data as it's written in our datacenters, and automatically decrypts it for you as you access it.

Please note that after enabling Storage Service Encryption, only new data will be encrypted, and any existing files in this storage account will retroactively get encrypted by a background encryption process. [Learn more about Azure Storage encryption](#)

Encryption selection

Enable support for customer-managed keys: Blobs and files only

Infrastructure encryption: Disabled

Encryption type

☐ Microsoft-managed keys
☒ Customer-managed keys

When customer-managed keys are enabled, the storage account named 'twgpccloud01' is granted access to the selected key vault. Both soft delete and purge protection are also enabled on the key vault and cannot be disabled. [Learn more](#)

Key selection

Encryption key

☒ Select from key vault
☐ Enter key URI

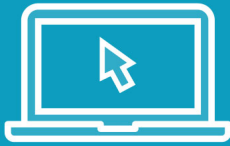
Key vault and key

Select a key vault and key

Identity type

☒ System-assigned
☐ User-assigned

Demo



3

Customer-managed keys

Azure Storage

Azure Key Vault

Questions? Comments? Curiosities?



Summary



Microsoft has a "lock" on consuming OpenAI models in a safe, enterprise context

Thanks!

Session materials: timw.info/river23

LinkedIn: timw.info/li

Blog: azureopenai.blog