Microsoft Azure

Getting Started with Azure AI Foundry Agent Service

Guy Gregory
Partner Solution Architect – Microsoft

Introduction – Guy Gregory

Partner Solution Architect,
EMEA Partner Team (GPS)

Based in the UK

Aligned to Azure AI Foundry

20+ years of Microsoft
partner experience

Guy Gregory

Azure AI Partner Solution Architect

Agenda - Intro to Azure AI Foundry Agent Service

01
Introducing Azure AI Foundry Agent Service

02
Demo – Agent Service in the SDK and Foundry UI experience

03
Azure AI Foundry Service vs. Chat Completions API / Responses API

04
Six key differentiators

05
Semantic Kernel and AutoGen

06
Recap of key Agent Service announcements from Build

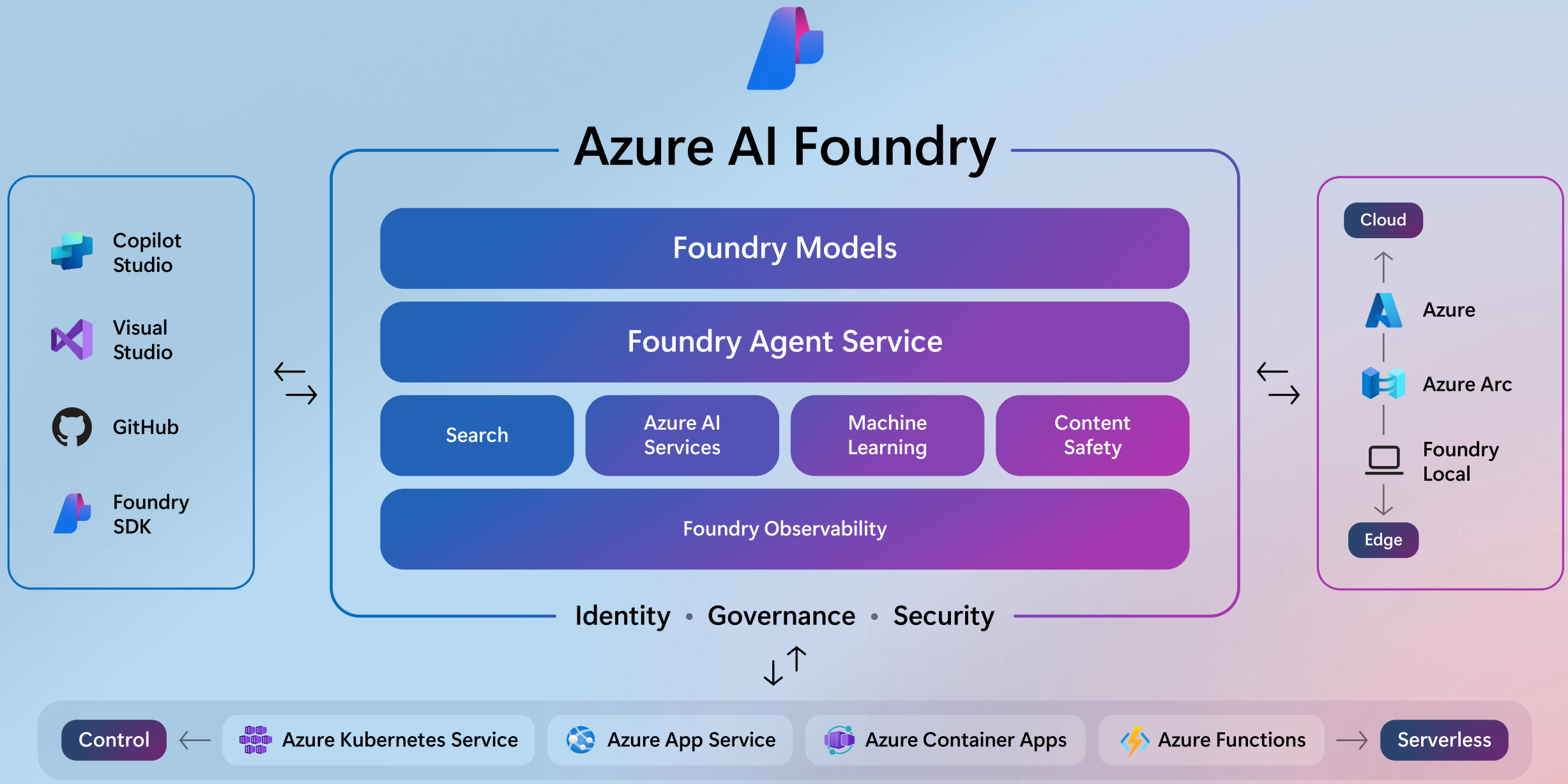
07
Emerging features: Voice Live API, MCP, and A2A

08
Getting Started Links

09
Azure AI Foundry Global Community

10
Q&A

11
Close


Azure AI Foundry
Copilot Studio
Visual Studio
GitHub
Foundry SDK
Foundry Models
Foundry Agent Service
Search
Azure AI Services
Machine Learning
Content Safety
Foundry Observability
Identity • Governance • Security
Cloud
Azure
Azure Arc
Foundry Local
Edge
Control
Azure Kubernetes Service
Azure App Service
Azure Container Apps
Azure Functions
Serverless

Generally Available

Azure AI Foundry Agent Service

Securely customize, orchestrate, and deploy AI agents with ease

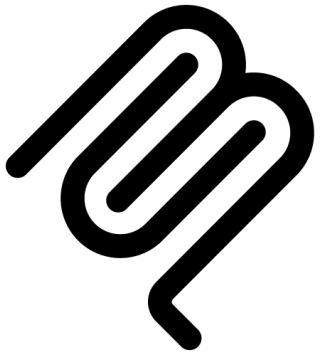
Multi-Agent Orchestration

Open and Interoperable Tools

Trust & Enterprise Readiness

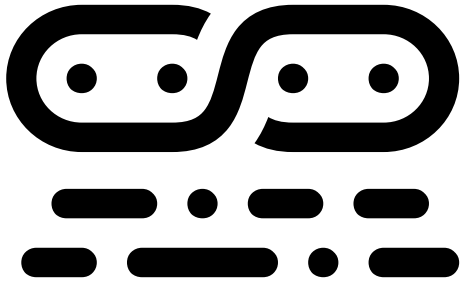
ai.azure.com

MCP & A2A



MCP (for Tools)

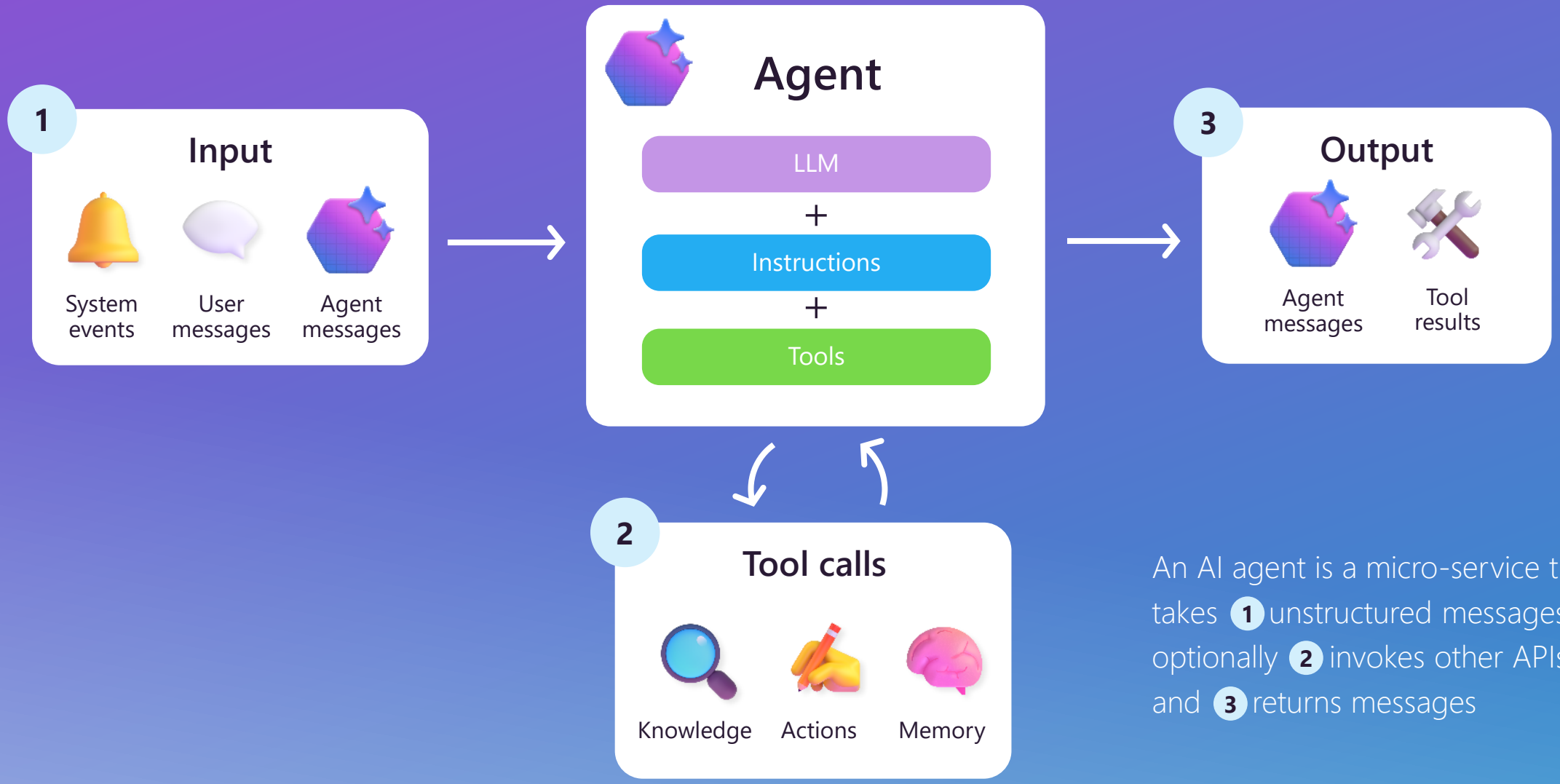
- Released ~7mo ago by Anthropic
- “USB-C” for AI Applications
- Powers Foundry Local Agents
- Rapid success in the industry
- **Now available via SDK!**



A2A (for Agents)

- Released ~3mo ago by Google
- Focused on Agent-to-Agent communication
- Recently donated to Linux Foundation

What is an AI agent?



An AI agent is a micro-service that takes 1 unstructured messages, optionally 2 invokes other APIs and 3 returns messages

Code Europe 2025 agent demo

Step 1:
Upload a file and create a vector database

Step 2:
Create an Agent

Step 3:
Create a Thread

Step 4:
Add a message

Step 5:
Run the Agent

Step 6:
Check the Run status

Step 7:
Display the Agent's Response

Agent
DEMO – Code Europe

Instructions
You are a helpful AI assistant. You have access to session information for Code Europe

Model

Your data **(optional)**

Files (local or Azure Blob)

Azure AI Search (optional)

Tools
File Search (Vector store)

Grounding with Bing
Weather API
SharePoint
Fabric

Thread

User's message
Tell me about Guy Gregory's session

Agent's message
Here is information about Guy's session…

Run 1

1 Use File Search to find sessions where Guy Gregory is the speaker

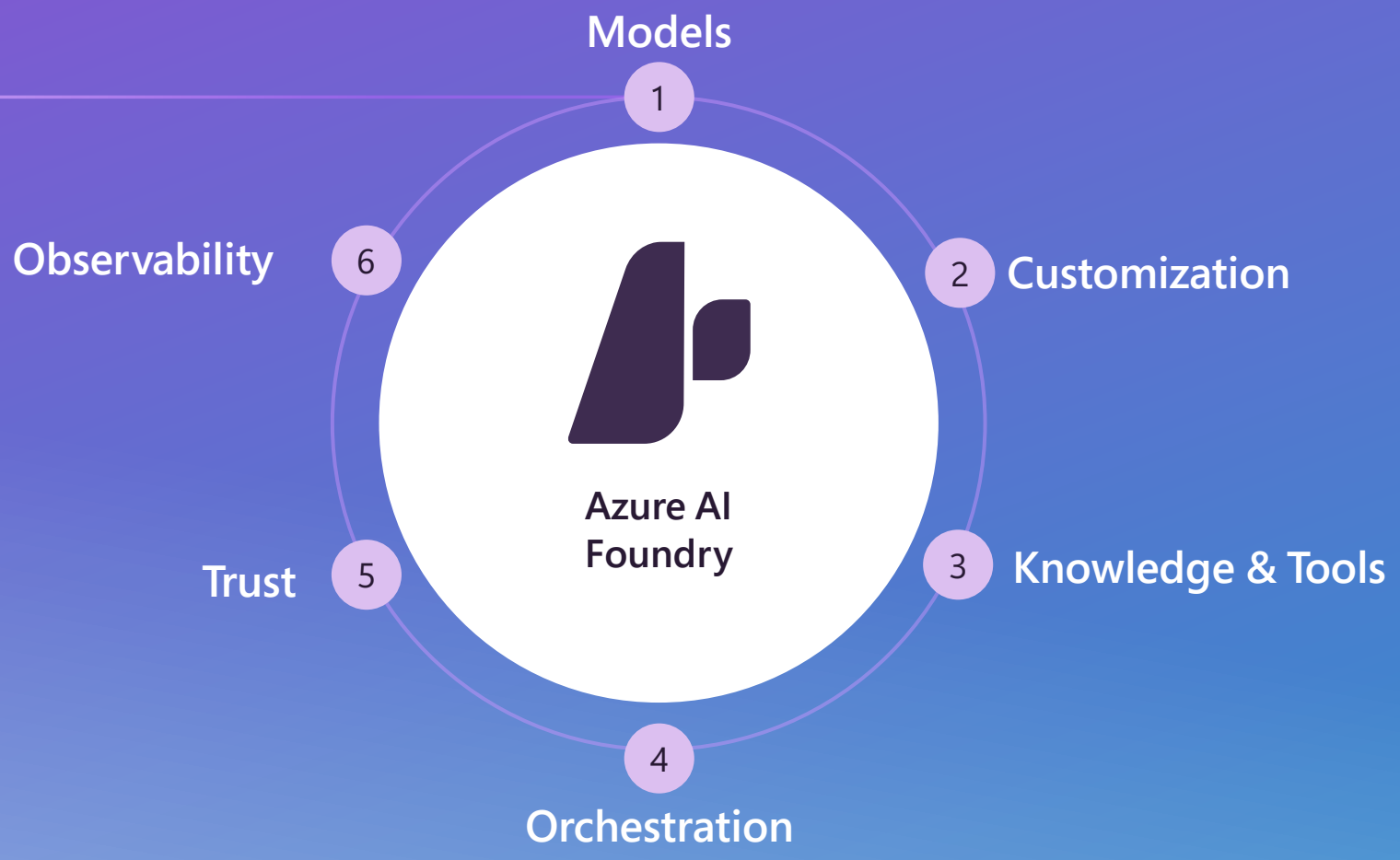
2 Create message

Demo – Azure AI Foundry SDK and Foundry portal UI experience

Foundry Agent Service feature comparison (1 July ‘25)

Capabilities	Chat Completions API (Azure OpenAI)	Assistants API (Azure OpenAI)	Azure AI Foundry Agent Service	Responses API (Azure OpenAI)
Text generation	✅	✅	✅	✅
Audio	✅	❌	✅	Not yet available
Vision	✅	✅	✅	✅
Structured Outputs	✅	✅	✅	✅
Function calling	✅	✅	✅	✅
Web search	❌	❌	✅	Not yet available
File search	❌	✅	✅	✅
Computer use	❌	❌	Not yet available	✅
Code interpreter	❌	✅	✅	Not yet available
Reasoning models	✅	✅	✅	✅
Entra ID support	✅	✅	✅	✅
Semantic Kernel support	✅	✅	✅	✅

The Agent Factory



1 Models

Model choice

Don’t lock yourself into a single model provider

Azure OpenAI Service

o3-mini, o3, o4-mini, GPT-4.1, 4o, etc

Models-as-a-Service

Llama 3.1-405B-Instruct

Mistral Large

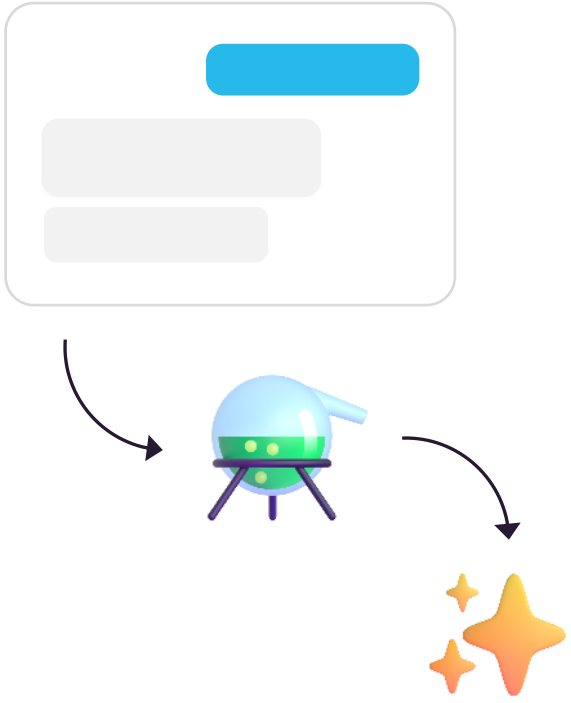
Cohere-Command-R-Plus

1 Models

2 Customization

Customization

Use the data in your threads to fine-tune and distill models



1 Models

2 Customization

3 Knowledge and tools

AI tools

Give your agents the skills to retrieve data and act

Knowledge

Actions

Logic Apps

Azure functions

OpenAPI

MCP*

Connected agents

Agent service

A2A*

Copilot Studio

1

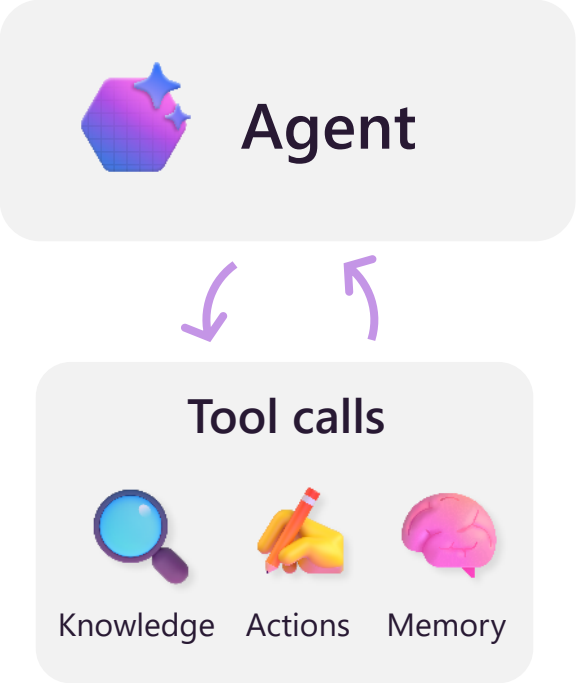
2 Customization

3 Knowledge and tools

4 Orchestration

Orchestration

We'll automatically invoke tools and store results in your thread



Trust

Reduce risk by controlling your data and by leveraging RAI

- BYO-thread storage
- BYO-file storage
- BYO-search index
- BYO-virtual network
- OBO authentication
- Content filtering

1

2

3 Knowledge and tools

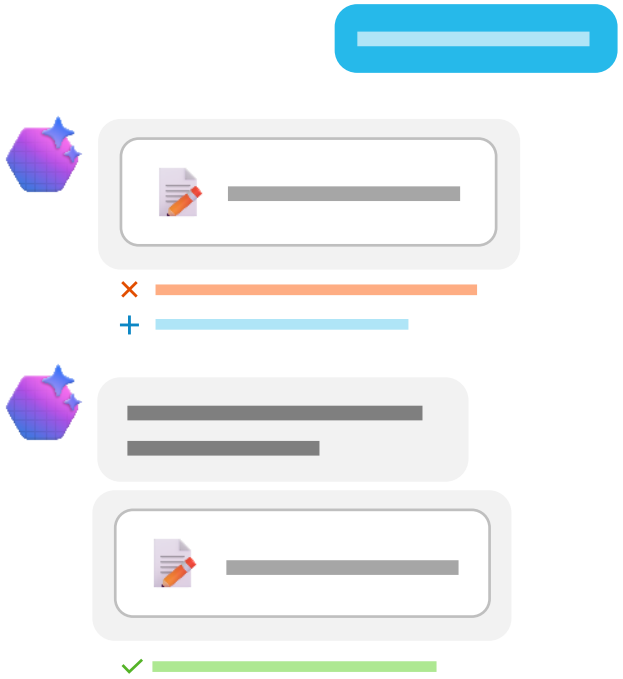
4 Orchestration

5 Trust

6 Observability

Observability

Watch everything your agent does within a thread



Semantic Kernel

AI and Agent Orchestration

AI Services

- Azure OpenAI
- Foundry Catalog
- OpenAI
- Hugging Face
- NVIDIA
- DeepSeek
- Google Gemini
- AWS Bedrock

Local models

- Ollama
- ONNX
- LM Studio
- Phi SLM Model Family

Memory Services

- Azure AI Search
- Azure CosmosDB
- Elasticsearch
- MongoDB
- Pinecone
- Qdrant
- Redis

.NET

Python

Java

Agent Services

- Azure AI Agent Service
- Bedrock Agents
- AutoGen
- Crew AI

Plugins

- OpenAPI
- MCP
- A2A
- Logic Apps

Prompts

- YAML
- Semantic Kernel

Filters and telemetry

- OpenTelemetry
- Azure Monitor
- Aspire Dashboard
- Azure AI Content Safety

Converging the two popular OSS frameworks

Microsoft Agent Framework (coming soon)

Semantic Kernel

Full SDK designed to build AI agents with ease, excellent for single agents and can be extended for multi-agents with integrations to AutoGen

AutoGen

Powerful multi-agent research framework with prebuild conversation orchestration patterns for handling complex agent systems

Recent Agent Service announcements – Build 2025

- **Azure AI Foundry Agent Service is now <u>generally available</u>**
- Move to **Foundry Projects** ASAP to take advantage of new features, e.g. **integrated tracing**
- New **SharePoint, Microsoft Fabric, and Bing Custom Search Tools**
- Public preview of **multi-agent capabilities** including connected agents and **multi-agent workflows**
- Enterprise-grade **identity for agents with Entra ID**
- **Cosmos DB** is now the default store for agent message threads (BYO options also available)
- **VS Code extension** for Azure AI Foundry now supports Azure AI Foundry Agents
- **1.0.0 release of the Python SDK** with enhancements*, inc. decoupling of projects and agents libs
- Integrated one-click templates in the new **Agent Catalog**
- **A2A & MCP support**

and finally…

- **Voice Live API**

New | Preview

Introducing Voice Live API

Redefining agent communication with advanced, real-time voice

Use the foundation model of your choice

Unparalleled speech recognition and synthesis capabilities

Fully customizable voices and avatars

aka.ms/voice-live

Azure AI Foundry

Voice Live API

Microsoft Azure

Get started with Azure AI Agents

Resources:

Downloads these slides:
https://aka.ms/IntroToAgentService

File Search demo repo:
https://aka.ms/IntroToAgentService/Sample

MCP demo repo:
https://aka.ms/IntroToAgentService/MCP

Learn about Foundry Projects:
https://aka.ms/foundryprojects

Agent Service on Microsoft Learn Docs
https://aka.ms/MicrosoftLearn_Agents

Microsoft Build BRK149 session
https://build.microsoft.com/sessions/BRK149

Microsoft Build DEM534 session
https://build.microsoft.com/sessions/DEM534

29,000+ Members!

Join

Azure AI Foundry Developer Community

Let's Build the Future of AI Together

- Discord
- GitHub Discussions
- Community Events
- Open-Source Courses
- Code Samples

Microsoft

Dziękuję!

Join the Discord:
https://aka.ms/AzureAI/Discord

Download the slides and demos:
http://aka.ms/IntroToAgentService