Teams Bot using Azure Language service

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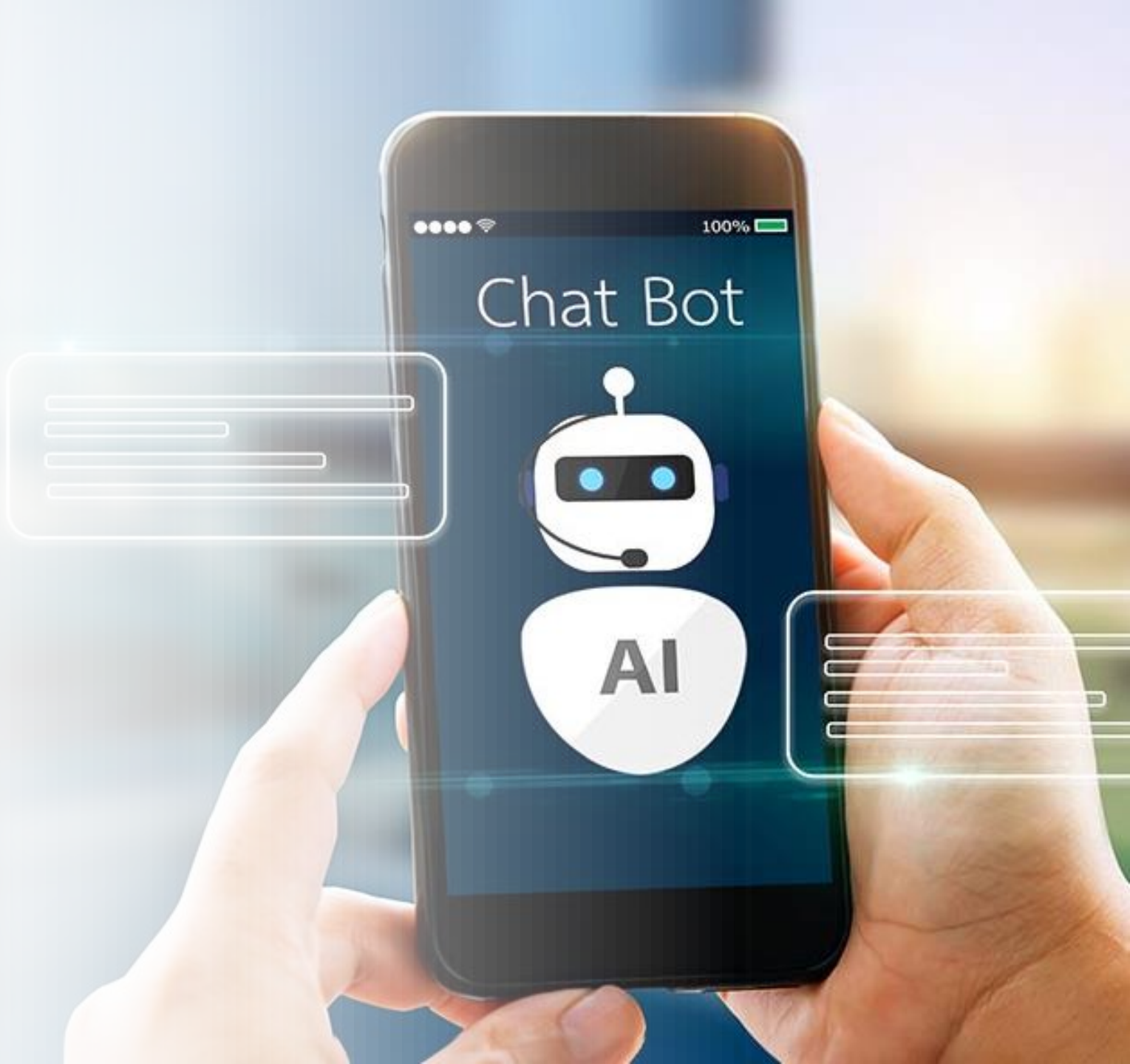


All Azure Services Used

- Azure Language Service (QnA Maker-style)
- Azure AI Search
- Azure Blob Storage
- Azure Bot Framework (Web App Bot)
- Azure Private Endpoints
- Azure Virtual Network (VNet)
- Azure Application Gateway (with WAF)
- Microsoft Teams (Channel integration)

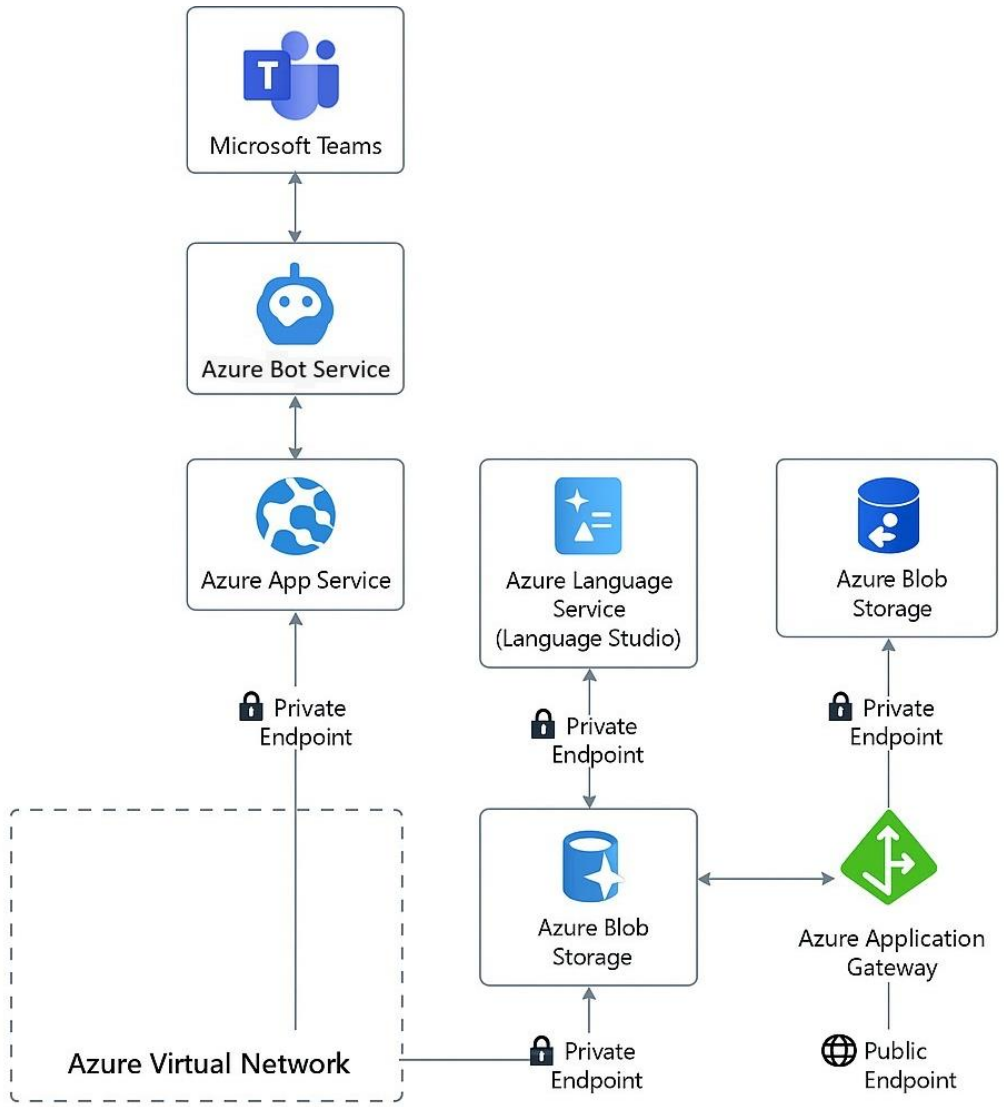
Azure Services & Their Roles

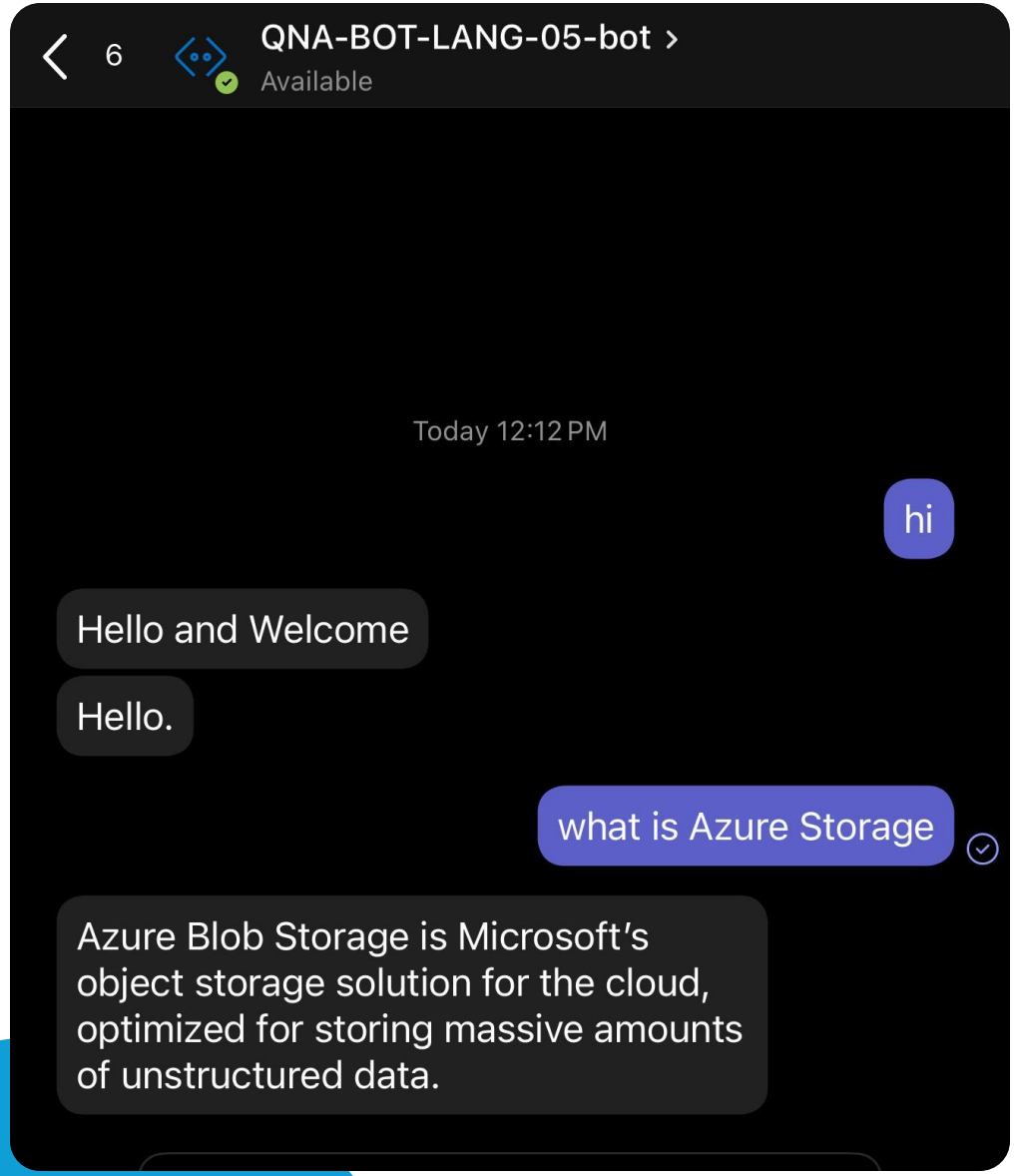
S.No	Azure Service	Purpose / Use
1	Azure AI Language (Language Studio)	Create and manage QnA project for natural language understanding
2	Azure AI Search	Indexes content from Blob Storage to enable intelligent search queries
3	Azure Blob Storage	Stores documents like PDFs, DOCX, TXT for knowledge base
4	Azure App Service / Function App	Hosts the backend logic of the bot (serverless)
5	Azure Private Endpoints	Secures services by restricting access to the VNet
6	Azure Virtual Network (VNet)	Isolates all Azure resources in a secure private network
7	Azure Application Gateway	Exposes the bot with HTTPS, routing, and WAF protections
8	Microsoft Teams	Acts as the client platform for interacting with the QnA bot

Architecture Diagram

Description:

- Microsoft Teams interacts with the Azure Bot service.
- Bot is connected through the Azure Application Gateway for secure HTTPS access.
- The gateway routes traffic to an Azure App Service or Function App via a Private Endpoint.
- The App connects to:
- Azure AI Language Studio to handle QnA logic
- Azure AI Search to perform document semantic searches
- Azure Blob Storage as the source for documents
- All components are deployed inside a Virtual Network (VNet) for isolation and security.





Output

- Users can ask questions in Microsoft Teams.
- The bot replies intelligently using Azure AI Language Studio and Search.
- It fetches answers from the Blob-stored documents.
- The bot respects enterprise compliance and privacy via Private Endpoints.
- All interactions are secured using TLS via Application Gateway.

THANK YOU