# Microsoft Azure

Microsoft's public cloud computing platform offering a broad range of cloud services, including compute, analytics, storage, networking, and AI.

https://azure.microsoft.com/

## Overview

Microsoft Azure is a comprehensive, trusted cloud computing platform that provides Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) offerings. It is built on a global network of data centers, offering unmatched scalability, reliability, and hybrid capabilities through services like Azure Stack and Azure Arc. Azure is compatible with open-source technologies, giving users the flexibility to use their preferred tools and frameworks.

**Key Benefits for Biotech and Healthcare:** Azure has emerged as a key platform for life sciences, driven by its advanced AI/ML capabilities, robust data management, and strict compliance features. Specific services like the **Azure API for FHIR** (Fast Healthcare Interoperability Resources) provide a managed, HIPAA-compliant data store for electronic medical records and clinical data, simplifying data exchange and interoperability.

**Main Features and Capabilities:**

**AI and Machine Learning (Azure ML, Cognitive Services):** Accelerates drug discovery, personalized medicine, and medical image analysis (computer vision).
**Big Data and Analytics (Azure Synapse Analytics, Databricks):** Enables large-scale processing of complex datasets, such as genomic information and high-throughput screening results.
**Hybrid Cloud:** Extends Azure services to on-premises, multicloud, and edge environments, ensuring consistency across deployments.
**IoT for Healthcare:** Facilitates remote patient monitoring and management of in-vitro diagnostics (IVDs) via Azure IoT Hub.
**Security and Compliance:** Offers multi-layered security, built-in resiliency, and over 100 compliance standards, including a Business Associate Agreement (BAA) for HIPAA.

**Target Users and Use Cases:** Azure is used by companies of all sizes, from startups to 95% of Fortune 500 companies. In the biotech/healthcare sector, its primary users are R&D teams, clinical operations, data scientists, and IT/security administrators. Use cases include R&D acceleration, clinical trial optimization, building telemedicine platforms, and managing massive genomic data lakes.

## Key Features

- AI and Machine Learning Services (Azure ML)
- Global Infrastructure and Scalability
- Hybrid Cloud Solutions (Azure Arc, Azure Stack)
- Big Data and Analytics (Azure Synapse)
- Managed Databases (Azure SQL, Cosmos DB)
- Identity and Access Management (Microsoft Entra ID)
- Internet of Things (IoT) Solutions
- Serverless Computing (Azure Functions)

## Pricing

**Model:** usage_based

Primarily Pay-as-You-Go (PAYG) based on actual consumption, billed per second/hour/GB/transaction. Discounts are available for 1- or 3-year Reserved Instances (up to 72% savings). Tiered support plans are available for an additional fee.

**Target Company Size:** startup, small, medium, enterprise

## Integrations

Adaptive Biotechnologies, Eagle Genomics, Genoox, L7 Informatics, Parabricks, Qiagen, Scilife, Synthace, Microsoft 365, Dynamics 365

## Compliance & Certifications

HIPAA, GxP (FDA 21 CFR Part 11), HITRUST, ISO 27001, SOC 1, SOC 2, SOC 3, GDPR, FedRAMP