



FHIR Server

An open-source, .NET Core implementation of the HL7 FHIR standard, optimized for deployment on Microsoft Azure.

<https://github.com/microsoft/fhir-server>

Overview

The FHIR Server for Azure is an open-source project by Microsoft Healthcare that provides a foundational implementation of the Fast Healthcare Interoperability Resources (FHIR) specification. Built on .NET Core, it is designed for cross-platform deployment, though it is highly optimized for the Azure ecosystem, serving as the core engine for Microsoft's managed FHIR offerings (Azure API for FHIR and the FHIR service in Azure Health Data Services).

This server enables developers to rapidly deploy a FHIR-compliant service to ingest, manage, and exchange clinical health data in the cloud. It features a modular architecture with a pluggable persistence layer, supporting both Azure Cosmos DB and Azure SQL Database.

Key Capabilities

Full FHIR Standard Implementation: Supports the core FHIR RESTful API capabilities (read, create, update, search, history, batch/transaction).

Security and Access Control: Integrates with Microsoft Entra ID (formerly Azure AD) to enable Role-Based Access Control (RBAC) and secure data access.

SMART on FHIR: Includes support for the SMART on FHIR specification, allowing for secure integration with third-party mobile and web applications.

Bulk Data Operations: Supports bulk data ingestion and the FHIR \$export operation for large-scale data analytics and machine learning workloads.

Target users include healthcare developers, health IT organizations, and researchers looking to build custom, interoperable, and scalable health data solutions.

Key Features

- HL7 FHIR R4 Standard Implementation
- RESTful FHIR API
- Pluggable Persistence Layer (Cosmos DB/SQL)
- Role-Based Access Control (RBAC)
- SMART on FHIR Support
- Bulk Data Operations (\$export, \$import)
- .NET Core Cross-Platform Support

Pricing

Model: free

The FHIR Server is free and open-source (MIT License). Deployment is self-hosted, incurring only the cost of the underlying cloud infrastructure (e.g., Azure App Service, Azure Cosmos DB, Azure SQL Database) or on-premise resources.

Target Company Size: startup, small, medium, enterprise

Integrations

Azure Cosmos DB, Azure SQL Database, Microsoft Entra ID (Azure AD), Azure IoT Connector for FHIR, Apache Spark (via \$export)

Compliance & Certifications

HIPAA, HITRUST, GDPR, ISO 27001

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