

Platform architecture, end to end

EbixEnterprise is designed as a connected platform with unified workflow across relationship management, agency operations, quoting, policy administration, claims, data, and AI. This briefing covers the next-generation connected-platform architecture and the current-state EbixEnterprise Policy & Claims systems it modernizes.

Prepared July 2026 · New connected platform & current-state Policy & Claims

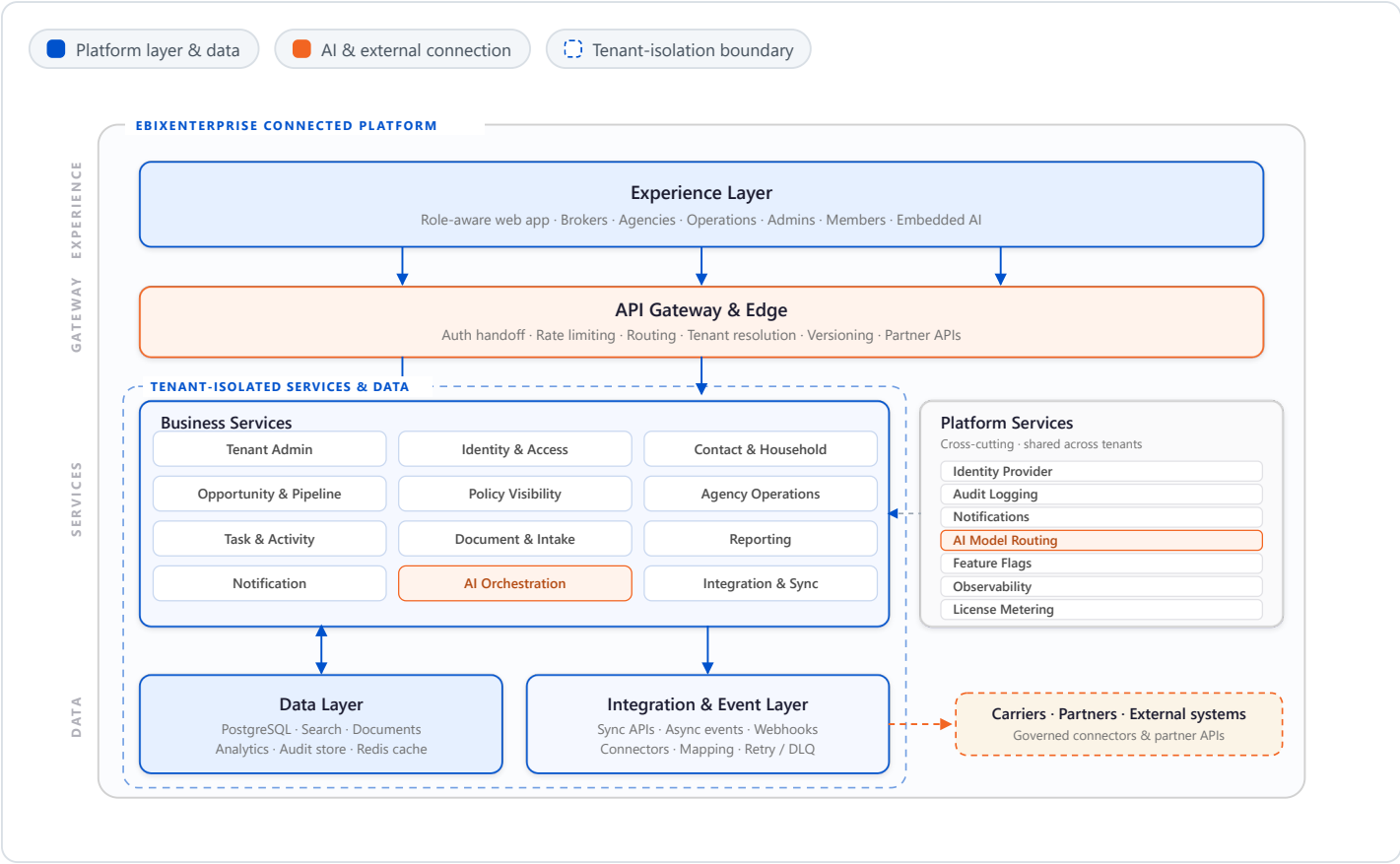
PART 1 · THE CONNECTED PLATFORM

The next-generation architecture

A layered, API-first, multi-tenant platform. Every request flows through the same path — experience to gateway to tenant-isolated business services, which are the only path to data and integration. Platform services run cross-cutting alongside, and the AI orchestration path is governed end to end.

System topology

How the layers connect.



Six foundational layers

The platform is organized into distinct layers that work together to deliver a complete enterprise experience.

01 Experience Layer

Web application for brokers, agencies, operations, admins, and managers. Role-aware homepage, client cockpit, opportunity views, desk console, dashboards, admin settings, and embedded AI interaction points.

Role-aware homepage

Client cockpit

Opportunity views

Desk console

Dashboards

Admin settings

Embedded AI

02 API Gateway & Edge Layer

Authentication handoff, rate limiting, request routing, tenant resolution, API security, logging, versioning, and external partner API exposure.

Auth handoff

Rate limiting

Request routing

Tenant resolution

API security

Logging & versioning

Partner APIs

03 Business Services Layer

Domain-based services powering every operational capability across the platform, from tenant administration to AI orchestration.

Tenant admin

Identity & access

Contact & household

Opportunity & pipeline

Policy visibility

Agency operations

Task & activity

Document & intake

Reporting

Notification

AI orchestration

Integration & sync

Audit & compliance

04 Data Layer

Primary relational database, search and indexing, document storage, analytics store, audit store, and caching layer for high-performance reads.

PostgreSQL Search & indexing Document storage Analytics store Audit store Redis caching

05 Integration & Event Layer

Synchronous APIs, asynchronous events, webhook framework, connector framework, mapping layer, and retry / dead-letter handling.

Sync APIs Async events Webhooks Connectors Mapping layer Retry & dead-letter

06 Platform Services Layer

Identity provider, audit logging, notification service, file processing, AI model routing, localization, feature flags, observability, and license metering.

Identity provider Audit logging Notifications File processing AI model routing Localization Feature flags Observability License metering

Multi-tenant by design

One codebase, tenant-level configuration, and strict data isolation.

- Tenant-isolated data with strict boundary enforcement
- Shared services for identity, audit, AI, and notification
- API-first integration for every tenant boundary
- Configurable country and tenant behavior without code changes
- Scalable deployment from single-tenant to thousands

API-first from day one

Every capability is accessible through well-defined APIs in four categories.

Internal Application APIs

Service-to-service communication powering the experience layer and internal workflows.

External Integration APIs

RESTful endpoints for carrier connectivity, third-party data exchange, and partner ecosystems.

Admin APIs

Tenant configuration, role management, feature toggling, and platform governance.

AI Action APIs

Orchestration for AI model routing, prompt execution, and governed action confirmation.

6

Architecture layers

13+

Business services

100%

API-first

Multi

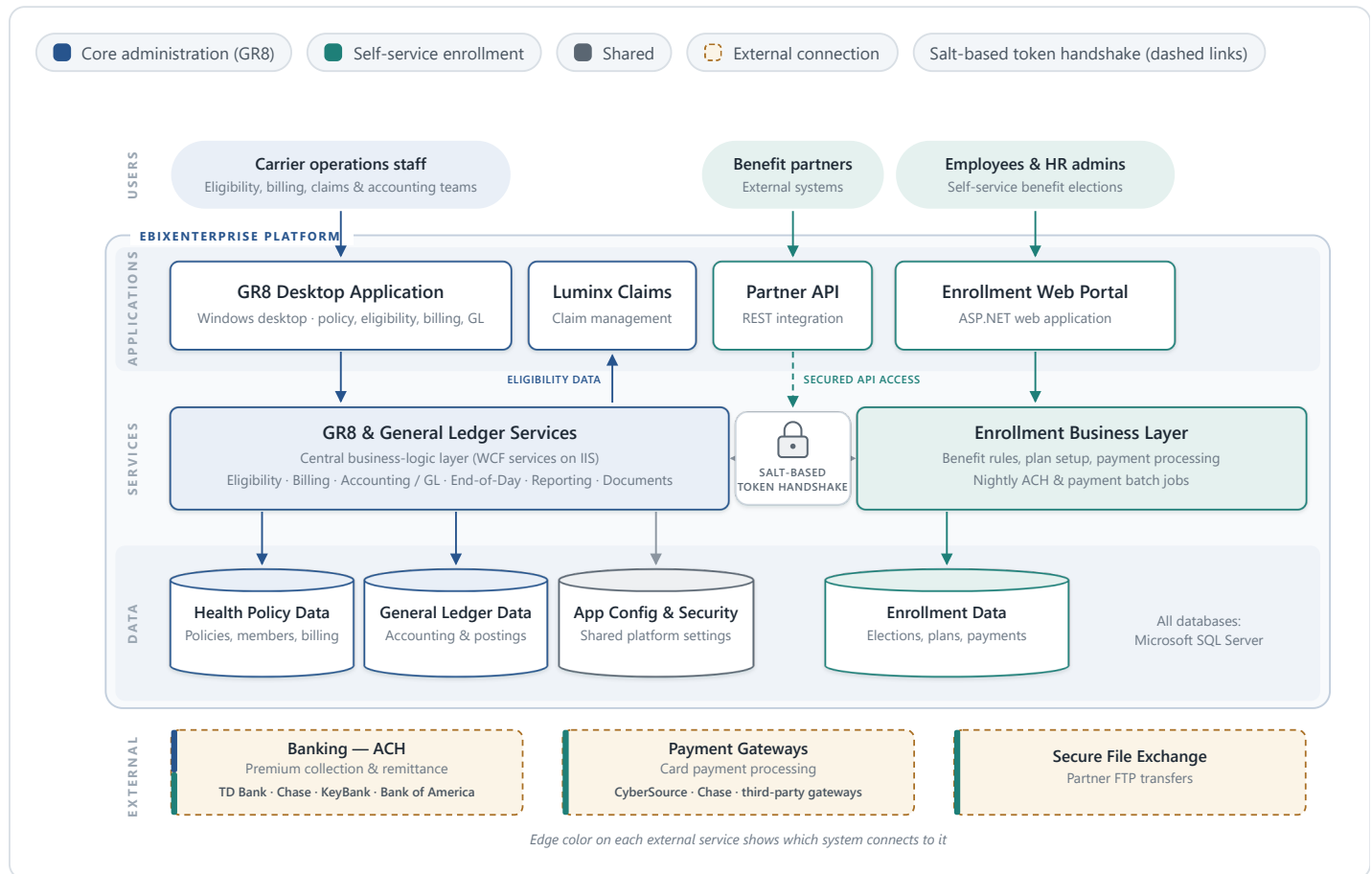
Tenant ready

Today's EbixEnterprise Policy & Claims

EbixEnterprise runs the full health-benefits lifecycle — from an employee's first enrollment election to the carrier's general ledger. Two systems share one data backbone: a desktop administration suite used by carrier operations staff, and a web enrollment experience for members and external partners. Derived from the current codebase, July 2026.

How the platform fits together

Every request flows top to bottom; external partners connect through the Partner API under a salt-based security-token handshake gate before reaching the GR8 & General Ledger services or the Enrollment business layer.



Two systems, one platform

Both systems are built by the same team on a common .NET foundation and reconcile into the same general ledger.

Core Administration — GR8

WINDOWS DESKTOP · WCF SERVICES · SQL SERVER

The system of record for carrier and TPA operations: group health policies, member eligibility, premium billing, ACH collection, general ledger, and nightly end-of-day reconciliation. Eligibility data feeds the in-house Luminx claim management system.

Used daily by internal operations teams. All business rules live in a central service layer, so the desktop application itself stays thin.

Self-Service Enrollment

WEB APPLICATION · REST PARTNER API · SQL SERVER

The customer-facing side: employees and HR administrators elect and manage benefits through the web portal, while external benefit partners integrate through a documented REST API that reaches both enrollment and core-administration services under a salt-based token handshake.

Handles card payments through CyberSource, Chase, and third-party gateways, and runs nightly ACH payment batches that feed back into core administration.

LuminX — Claim Management

DB/C ISAM · AIM INDEXING · INDEXED FILE SYSTEM

LuminX uses a high-performance application database file system built on DB/C ISAM with AIM indexing. Rather than relying on a traditional relational database, the platform stores data in optimized indexed files designed for fast transaction processing, scalability, high reliability, and efficient retrieval of policy, claims, and eligibility information.

The technology stack, in depth

A layer-by-layer view of the technologies behind both systems — policy administration on the Microsoft .NET stack, and LuminX claims on a DB/C engine with a C-ISAM balanced-tree database.

EbixEnterprise Admin	
FINANCIAL, POLICY & PREMIUM ADMINISTRATION	
● APPLICATION & DEVELOPMENT	
Application framework	.NET Framework, C#
Web application framework	ASP.NET, ASP.NET MVC
Service framework	Windows Communication Foundation (WCF) — stateless internal & external (SOAP "Smart") services
Data access / ORM	Entity Framework (EDMX models), LINQ to SQL, LINQ to Objects
Messaging / queuing	Microsoft Message Queuing (MSMQ)
Back-office UI	Windows Forms smart client (Infragistics); auto-install & auto-update; client-side caching
Web portal UI	HTML5, CSS, JSON, Bootstrap; IE9–IE11, Chrome, Firefox, Safari
Unified online portal	Microsoft SharePoint (EbixEnterprise Online Portal)
IDE / tooling	Visual Studio; SQL Server Management Studio (SSMS)
Source control / ALM	Team Foundation Server (TFS)
Document generation	Aspose.Words for .NET — mail-merge (DOC, OOXML, RTF, HTML, PDF, XPS, TIFF, TXT)
● DATA & REPORTING	
Transactional database	Microsoft SQL Server
Business intelligence database	Oracle
Operational reporting	RDLC via SQL Server Reporting Services (SSRS) — statements, trial balance, P&L, refund registers
BI / analytical reporting	IBM Cognos — high-volume batch-fed reports
ETL / data integration	Pervasive Data Integration — migrations, extracts, scheduled feeds (relational, EDI, flat file, XML)
Import / export formats	Excel, XML, ANSI X.12

EbixEnterprise Claims — LuminX	
CLAIM ADJUDICATION & MANAGEMENT	
● APPLICATION & DEVELOPMENT	
Core programming language	DB/C — base language of the claims engine
Operating system	Red Hat Linux (chosen for scalability & performance)
Back-office UI	.NET forms over core LX UI components — text-based or Windows-like interfaces
Member web portal	Java, HTML5, Bootstrap responsive design
Single sign-on	SAML 2.0 integration with the Policy Administration / Online Portal (SharePoint)
Source control	CVS — versioning, branching, configuration management
● DATA & REPORTING	
Transactional database	C-ISAM balanced-tree database (claims transactional information)
Eligibility data source	Direct connection to the Policy Administration MSSQL database (system of record)
Business intelligence database	Oracle Data Warehouse
ETL / data integration	Action DataConnect ETL — custom extractions, transformations, regular feeds

How value flows through the platform

The five stages of the benefits lifecycle, and where each one runs.

1 Enroll Employees elect benefits on the web portal; partners submit through the API.	2 Administer Carrier staff manage policies, members, and eligibility in GR8.	3 Bill Premiums are calculated, invoiced, and collected via ACH and card.	4 Account Every transaction posts automatically to the general ledger.	5 Reconcile Nightly end-of-day processing reconciles accounts and issues remittances.
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Platform facts

.NET 4.6.1 Runtime foundation (Microsoft .NET Framework)	62 Projects in the core GR8 solution	4 SQL Server databases behind the platform	9+ Business service endpoints hosted on IIS
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EbixEnterprise platform architecture briefing · New connected platform & current-state Policy & Claims · Prepared July 2026. Detail simplified for a leadership audience; engineering documentation covers the full service and database inventory.