

 CASE STUDY

REDEFINING IT INTELLIGENCE VIA GENAI

Resolving Critical Visibility Gaps with Centralized
Data Architecture and AI-Powered Support

INDUSTRY

Enterprise IT Services

DOMAIN

GenAI & Data Engineering

🎯 Executive Summary

Trellissoft engineered a highly scalable, AI-powered IT Support Chatbot to resolve critical visibility gaps within enterprise IT service management. Historically, organizations struggle with decentralized support channels that obscure operational metrics, extend employee wait times, and ultimately degrade the overall user experience.

By consolidating disjointed communication pathways into a single, securely authenticated interface, this solution successfully reclaimed thousands of hours previously lost to routine, repetitive technical inquiries. The deployment established a much-needed single source of truth, fundamentally optimizing resource allocation and productivity across the enterprise.

🔧 System Optimization

This structural shift eliminated manual heroics, empowering employees with instant, accurate resolutions while optimizing the operational capacity of Level 3 support teams. By leveraging a centralized GenAI knowledge base, the architecture ensures every automated response is grounded in verified, predefined enterprise data.

Consequently, the implementation not only reduced immediate response times but also provided leadership with unprecedented, unified oversight into systemic IT performance.

TARGET TECHNOLOGY STACK

- ✔ Enterprise Data Warehouse
- ✔ GenAI Knowledge Base
- ✔ Power BI & Tableau

CORE INTEGRATIONS

- ✔ Enterprise CRM Platform
- ✔ Custom ETL Pipelines
- ✔ Secure Auth Interfaces
- ✔ Log & Document Systems

30%

Of all support chats handled entirely autonomously

Instant

Response times for L1/L2 issues, down from 60 mins

1000s

Of hours reclaimed from routine, repetitive inquiries

The Challenge: Manual Heroics

Prior to this optimization, the client's IT support infrastructure suffered from severe data fragmentation. Support teams frequently engaged in manual heroics to manage overflowing ticket queues, lacking a unified system to triage effectively. This fragmented approach obscured the root causes of recurring issues, degraded service quality, and extended resolution timelines drastically. The IT department operated in a continuous state of reactive firefighting rather than strategic management.

Repetitive Inquiry Overhead

IT professionals expended significant manual effort managing routine, repetitive requests. This drastically reduced the team's overall systemic efficiency.

Extended Resolution Latency

Employees faced prolonged wait times for issue resolution. This latency often extended up to 60 minutes, even for foundational Level 1 and Level 2 technical issues.

Operational Blind Spots

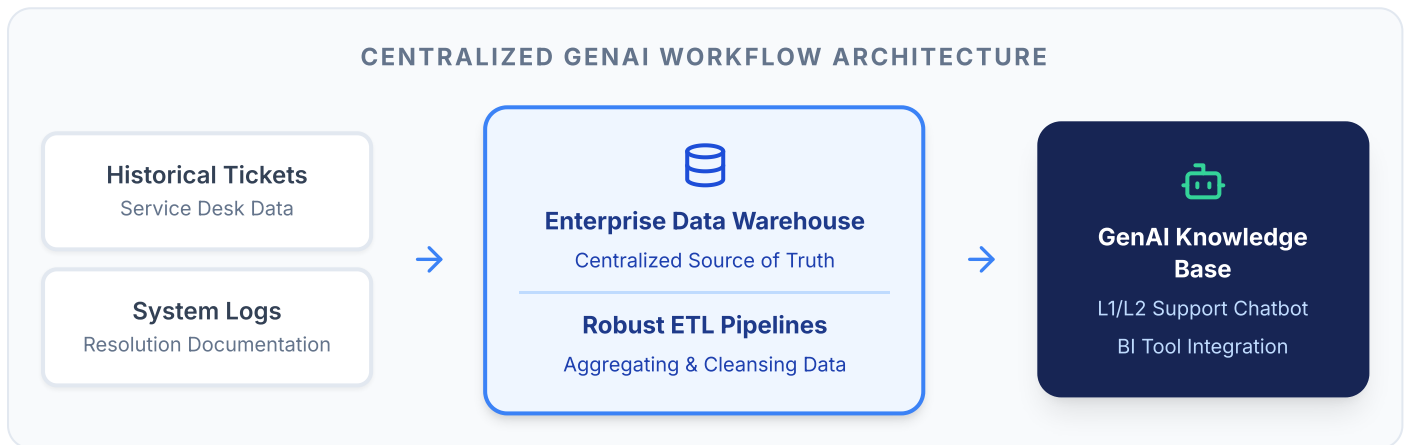
Without a consolidated view, the IT team was constantly overloaded by multiple support tickets, resulting in a reactive support model and a severe ticket backlog.

Reactive Firefighting

Lacking a unified system to triage tickets effectively, the team was forced into constant firefighting rather than engaging in proactive, strategic IT management.

Architecting a Single Source of Truth

To overcome these systemic bottlenecks, Trellissoft engineered a dynamic, AI-driven framework designed to automate IT support processes and deliver faster, accurate responses.



Implementation Highlights

- 1 Robust ETL Pipelines**
Aggregated historical ticket data, system logs, and resolution documentation into a centralized Enterprise Data Warehouse (EDW).
- 2 GenAI Knowledge Base**
The EDW feeds directly into the AI, ensuring the chatbot retrieves precise, verified solutions for every user query.
- 3 Rapid CRM Integration**
The system was seamlessly integrated with the client's existing CRM within a rapid four-week deployment sprint, ensuring minimal workflow disruption.
- 4 Proactive Automated Service Desk**
By securing user authentication and centralizing data flow, the chatbot handles Level 1 and Level 2 issues autonomously.

AI-Powered Delivery Model

This centralized data ecosystem powers a highly proactive, automated service desk capable of delivering rapid, verified resolutions across the entire enterprise.

Centralized Intelligence (EDW)

Aggregates system logs and resolution documentation into a cleansed Enterprise Data Warehouse, establishing a definitive single source of truth.

GenAI Engine

Retrieves precise, verified solutions from the EDW to autonomously resolve Level 1 and Level 2 technical inquiries instantaneously.

Seamless CRM Sync

Deployed within a rapid 4-week sprint, integrating smoothly with the client's existing CRM to ensure minimal workflow disruption.

Secure Authentication

Consolidates disjointed communication pathways into a single, securely authenticated interface for safe and verified data delivery.

BI & Analytics

Connects to Power BI and Tableau, allowing employees to track tickets directly while leadership monitors real-time resolution metrics.

Level 3 Optimization

By offloading routine tasks to the chatbot, highly-skilled human agents can focus entirely on complex, high-value problem-solving.

Transformation Results

METRIC	BEFORE IT SUPPORT CHATBOT	AFTER IT SUPPORT CHATBOT
Ticket Volume	100% of tickets handled manually by IT support	30% of chats handled autonomously by the chatbot
Task Allocation	Support resources strained across all types of issues	Chatbot manages L1 and L2 level issues; IT optimized for L3 issues
Response Latency	Approximately 60 minutes to respond to even L1 and L2 level issues	Instantaneous response and quick issue resolution for L1 and L2 level issues

Executive Outcome

"PulseAI360 fundamentally changed how we measure and manage quality. We've moved from reactive sampling to proactive compliance oversight. Our agents now receive feedback instantly, and our QA coverage has expanded without increasing headcount."

Within the initial weeks of implementation, the enterprise recognized immediate improvements across IT support operations, characterized by faster issue resolution and a noticeable reduction in repetitive ticket handling.

Trellissoft's deep domain expertise in the IT support domain facilitated this distinct edge, allowing human agents to focus on complex, high-value problem-solving while leadership benefits from unprecedented, unified oversight into systemic IT performance.



ABOUT TRELLISSOFT

Trellissoft is a premier enterprise technology partner specializing in AI-driven automation and modernization. We engineer centralized, scalable architectures that eliminate technical debt and data fragmentation, transforming legacy ecosystems into agile, future-ready platforms.