

AI CUSTOMER SUPPORT AUTOMATION

3,000 Tickets a Month and Every One Waited for a Human — Even Password Resets

A PE-backed managed services operation had every ticket — from password resets to complex configurations — landing in the same queue for a human. KeyDelta deployed an AI virtual agent that autonomously resolves 55% of tickets while escalating frustrated or complex cases with full context.

55% AUTO-RESOLVED	-47% AVG WAIT TIME	91% CSAT ON AI TICKETS	-34% SUPPORT COSTS	3.8x ROI IN 9 MONTHS
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THE SITUATION

A PE-backed managed services operation was fielding 3,000+ IT support tickets and emails per month for a flagship product. Every ticket — from password resets to complex configuration issues — landed in the same queue and waited for a human. Staffing costs were climbing, wait times were growing, and customer satisfaction was slipping as the business scaled. The team needed to handle more volume without proportionally more headcount.

- 3,000+ monthly tickets for a single product line — all requiring human triage and response
- Simple issues (password resets, status checks, how-to questions) consuming 40%+ of agent time
- Average first-response time of 4+ hours during peak periods — customers escalating out of frustration
- No sentiment awareness — frustrated customers got the same queue position as routine inquiries
- Support team scaling linearly with ticket volume — every 500 new tickets required another FTE

THE APPROACH

KeyDelta built an AI virtual agent that sat at the front of the support queue — resolving what it could, enriching what it couldn't, and intelligently routing everything else:

- 1 Contact Suite Integration**
Deployed on Evolve Contact Suite with a .NET backend. The virtual agent intercepted inbound tickets and emails natively within the existing support workflow — no new tools for customers or agents to learn.
- 2 Knowledge & Resolution Engine**
Trained on the product's knowledge base, past ticket resolutions, and support documentation. The agent could diagnose common issues, walk customers through solutions, and execute routine actions like password resets and configuration checks autonomously.
- 3 Sentiment Analysis & Smart Escalation**
Rolling-window sentiment analysis tracked customer tone across the full conversation trajectory — not just per-message classification. Escalation triggers fired on negative sentiment trends, multi-step complexity, and out-of-scope detection. Human agents received full context, sentiment trajectory, and a recommended resolution.
- 4 Voice Channel Extension**
LiveKit and Broadworks integration extended the virtual agent to voice channels. Customers calling in got the same AI-first experience — with seamless handoff to human agents when needed, preserving full conversation context across channels.

THE RESULTS — 9 MONTHS

AUTO-RESOLUTION 0% → 55% Over half resolved by AI	FIRST RESPONSE 4.2 hrs → 2.2 hrs 47% faster for humans too	CSAT (AI TICKETS) N/A → 91% Matching human baseline (89%)	SUPPORT COST \$18/ticket → \$11.80 34% reduction per ticket	ESCALATION QUALITY Blind → Enriched Full context + sentiment	AGENT SATISFACTION 3.1 → 4.4 / 5 Meaningful work, not password resets
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WHY IT WORKED — THE KEYDELTA VOOC S LENS

V VISION Customers get answers in minutes, not hours. Humans handle hard problems, not password resets. Support scales with software, not headcount.	O OUTCOMES Resolution rate, CSAT, and cost-per-ticket tracked per channel from day one. The AI earned its place by outperforming the baseline on customer satisfaction.	O OWNERSHIP Product support owned resolution accuracy. AI ops owned model performance. Escalation quality was a shared metric — both teams accountable.	C CADENCE Daily resolution audits + weekly CSAT reviews + monthly cost analysis. Bad resolutions caught within hours and fed back into training.	S SCALE Added a second product line in month 7 without additional infrastructure. The system handles 2x ticket volume on the same architecture.
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“We were hiring a new support agent every time we added 500 customers. Now the AI handles the straightforward stuff better than we did — 91% CSAT on AI-resolved tickets, matching our best humans. Support costs dropped 34%. But here's what surprised us: agent satisfaction jumped from 3.1 to 4.4 because they stopped doing password resets and started solving real problems. Customers happier, team happier, costs down. That's the math every CEO wants to see.”

— KEYDELTA ADVISORY