



Scaling Enterprise AI Doesn't Have to be Taxing

Founded in 1965 and headquartered in Augusta, Georgia, TaxSlayer has emerged as one of the best-known, easy-to-use IRS-approved online tax filing platforms for consumers and businesses. By 2022, TaxSlayer was annually processing more than 10 million federal and state e-filed tax returns with refunds of nearly \$15 billion.

However, as early as 2019, the company identified a few key challenges to their future growth:

TOP 3 TAKEAWAYS

How did a popular online tax filing platform address its key challenges when adopting and scaling AI for business?

By partnering with AHEAD, Cisco, and Pure Storage to implement their own GenAI Pod solution optimized to:

1 Reduce Complexity

The new solution eliminates much of the design and integration complexity associated with building a production-ready AI infrastructure from scratch. It also provides better availability and performance than slower tokenized public cloud resources.

2 Lower Costs

By accelerating time-to-value and minimizing the need for seasonal staff augmentation even for traditionally specialized technical skills sets, the new solution helps control operational costs. Faster AI models provide essential real-time actionable data for product, security, and marketing teams.

3 Increase Efficiency

The high-performance integrated architecture prevents idle GPU time by eliminating storage bottlenecks, a common problem in AI workloads. The advanced AI pod powered by NVIDIA H100 GPUs provides enhanced anti-fraud transaction analysis and yields faster validated multi-source knowledge-sharing results for customers, support agents, product marketing, and data science teams. AI and LLM models that required hours or days in previous environments now take just a few minutes.

What They Found Taxing

SEASONAL SCALABILITY

TaxSlayer consumer and pro websites, network resources, and data centers might receive traffic from one thousand user sessions on a cold day in November but often host over one million user sessions during a typical week in late March or early April, peaking on Tax Day (April 15).

SEASONAL STAFFING

TaxSlayer staffing levels more than double in size during the busy January to April tax season. Individual onboarding and team training must occur within a compressed timeline.

CUSTOMER SATISFACTION

TaxSlayer data teams track metrics based on customer satisfaction best represented by the speed and accuracy of processing not only returns, but also countless reliable knowledge base and chat bot answers to customer questions ranging from the ordinary to the most complex scenarios for CPAs and tax professionals.

FRAUD ANALYSIS

To address the persistent risks of identity theft and tax fraud, TaxSlayer systems must provide built-in protection against fraud and misuse by applying the latest cybersecurity and fraud-detection capabilities.

AHEAD Expertise Powers Advanced New AI Capabilities

After several years of operational lessons learned from staffing variability and occasional network performance setbacks, IT and executive leadership at TaxSlayer knew they wanted to go big: they wanted to procure the absolute best network architecture, including next-gen AI and storage solutions. Based on prior executive briefings, they were already familiar with AHEAD as a source of skilled IT solution architects and engineers with deep expertise in AI platforms, networks, hardware, and storage.

On consulting calls, both sets of teams agreed that the solution was about more than buying AI expertise. Addressing the full array of TaxSlayer requirements would require a mix of internal AHEAD resources and professional external partner resources. Every step of the way, AHEAD was able to advise TaxSlayer teams about the entire AI infrastructure and coach them through various options to meet their requirements including AI servers, GPUs, dynamic storage, networks, security, firewalls, additional workload servers, and all supporting data center components, documentation, and follow-up tasks.

TaxSlayer Turned To the Experts at AHEAD

With AHEAD as its strategic partner, TaxSlayer received advisory services expertly tailored to guide its transformation. To accelerate results and make immediate meaningful impacts, AHEAD provided outcome-oriented services built on industry-leading platforms. As a Cisco Gold Certified Partner, AHEAD leveraged its cross-functional expertise in cloud and data center to transform network operations at TaxSlayer with a robust Cisco platform. Initially, some of the aging network infrastructure was an obstacle to deploying AI workloads. To help TaxSlayer successfully pivot, AHEAD constructed custom AI infrastructure across cloud, core, and edge that reduced the stress on TaxSlayer network infrastructure while meeting its business goals for AI. As a member of the Cisco Data Center Technical Advisory Board, Partner Lifecycle Advisory Board, and Cisco AI Advisory Board, AHEAD has over 200 certified engineers, 50 CCIE certifications, and was awarded over 375 Cisco certifications. As a Pure Storage Elite Partner, AHEAD worked with TaxSlayer to create staged migration plans and data center consolidation roadmaps. AHEAD demonstrated excellence in modernizing infrastructure for scalability, governance, and cost optimization. The resulting Pure Storage GenAI Pod for TaxSlayer was a full-stack, turnkey solution designed to accelerate their enterprise-wide deployment of artificial intelligence and

machine learning projects. The solution was built on the Pure Storage data platform in partnership with AHEAD, NVIDIA, Cisco, and other technology companies to provide the necessary hardware, software, and services for TaxSlayer AI workloads. TaxSlayer teams seamlessly adopted these transformative new technologies while maintaining simplicity in management and operations. In addition to application and underlying platform improvements, other key benefits include:

- **SUSTAINABLE DESIGN:** The GenAI pod uses less energy and space while delivering quality data performance over longer durations.
- **SCALABILITY AND INTEROPERABILITY:** In addition to sustainable scalability, Pure storage solutions offer interoperability across all environments.
- **SPEED, FLEXIBILITY, AND CAPACITY FOR GROWTH:** AHEAD next-gen observability capabilities added visibility to all levels of client data, simplified data management, and made it more recoverable and secure. TaxSlayer is now equipped to handle the capacity required for future AI goals and can adapt even more of their future machine learning and infrastructure ambitions to take



Top-Ranked Operations, Availability, and Performance

The AHEAD Foundry™ team offers custom hardware integrations and pre-configured racks for plug-and-play deployments. Pre-integrating the Cisco and Pure Storage partner ecosystem in the AI Pod and then shipping the completed components straight to TaxSlayer as a seamless working solution dramatically reduced the implementation timeline and got the TaxSlayer AI Pod operational before the crunch time of tax season.

With help from AHEAD, Cisco, and Pure Storage, TaxSlayer maintains robust networking resources for tens of millions of customers with high availability, outstanding performance, and system security. AI models are being developed to pull from IRS tax code and other reliable data sources, generate answers, and then rank, organize, reuse, and improve the content. Lifetime value modeling on TaxSlayer's customer base is driving machine learning and automation improvements reflected in TaxSlayer quality, satisfaction, and retention metrics.

As a leader in deploying powerful, scalable, and flexible data center and hybrid cloud environments for multi-functional AI workloads, AHEAD was able to achieve rapid results, resource optimization, and reliable network operations for TaxSlayer. As one executive at TaxSlayer observed, "The AI pods are already solving real production needs today while also giving us scalable entry points for long-term AI expansion."

AHEAD

Combining cloud-native capabilities in software and data engineering with an unparalleled track record of modernizing infrastructure, we're uniquely positioned to help accelerate the promise of digital transformation.

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