



## SAP SERVICE TICKET INTELLIGENCE, POWERED BY NVIDIA GPUs PROCESS CUSTOMER ISSUES FASTER AND DELIVER A GREAT CUSTOMER EXPERIENCE.

Businesses are under increasing pressure to do more with less to meet growing customer expectations for service excellence in today's digital world. You need to respond quickly to communications that involve issue and incident resolution, no matter which channel customers use to engage services. In fact, best-in-class customer experience management has become a competitive differentiator, delivering up to a 527% improvement in customer profit margin.

### INTEGRATED SOLUTION

The SAP Service Ticket Intelligence solution helps enterprises automatically route inquiries to the right people or locations. Powered by NVIDIA® DGX™ Systems and the NVIDIA Tesla® platform, it offers a fast and efficient way to deliver best-in-class customer services.

The solution uses deep learning neural networks to understand the semantics of unstructured ticket messages. It can then classify tickets into their most likely categories and recommend solutions or knowledge-base articles.

During the training process, SAP uses historical customer ticket messages and the assigned categories and solutions to train the deep learning model. This model is based on state-of-the-art, character-level, convolutional neural networks. An attention mechanism guides the model on which words it should focus on to achieve correct predictions. The resulting model can then be used to classify new ticket messages and recommend relevant solutions. As more processed service ticket information and user feedback are gained, the model improves over time.

The NVIDIA DGX portfolio of AI supercomputing systems is purpose-built and optimized for deep learning, with fully integrated hardware and software that can be quickly deployed and easily managed. SAP experienced 20-30x improvement in training time on DGX vs on CPUs.

Together, NVIDIA and SAP help enterprises improve service response times with automated processing and allow customer service to easily manage tremendous volumes of digital interactions. This lowers the overall cost of providing customer service, while increasing customer satisfaction.

### INDUSTRY CHALLENGES

- > **Too Many Channels of Information:**  
Customers can engage the service center from multiple channels.
- > **Slow Response Rate:**  
72% of customers expect a response to their complaints on social media within one hour.
- > **Lack of Human Touch:**  
73% of consumers prefer human interactions to resolve service issues, yet human agents are bogged down by the processing tasks instead of engaging with customers.

## TOGETHER, NVIDIA AND SAP DELIVER



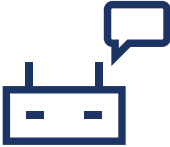
The SAP Service Ticket Intelligence solution takes advantage of the NVIDIA deep learning platform to create value for your business by accelerating customer service in an omnichannel front office.

### UNPARALLELED SPEED

- Accelerate service response time with AI-supported ticket processing, enabling service agents to tackle thousands of interactions every day.
- Evidence:
  - SAP experienced 20-30 times faster training with NVIDIA DGX-1 compared to CPUs.
  - 88% categorization accuracy has been achieved with a live customer.
  - There's a 100% automation rate for categorization, increasing productivity by 50% for initial ticket handling.

## SAP SERVICE TICKET INTELLIGENCE USE CASES

The SAP solution has a variety of uses:

CUSTOMER SERVICE INTELLIGENCE		QUESTION ANSWERING		CHATBOT SUPPORT	
<p>Customer service teams process thousands of service requests every year, and this historical data becomes a rich source of data for machines to learn. SAP Service Ticket Intelligence supports these teams in speeding up ticket processing by recommending case information, such as inquiry type and priority, at the point of ticket creation.</p>		<p>Self-service support is critical for customers of all ages!. These customers expect services that allow them to create business transactions rather than open a ticket in the queue. SAP Service Ticket Intelligence provides answer recommendations based on semantic similarity of questions and answer templates.</p>		<p>Chatbots are a scalable way for support teams to reach millions of users. SAP Service Ticket Intelligence functionality is exposed as an API that can be easily integrated with conversational applications to create powerful customer support tools.</p>	

## RECOMMENDED INFRASTRUCTURE

NVIDIA data center GPUs are available in servers, supercomputers, and cloud platforms around the world. You can now get end-to-end accelerated analytics solutions powered by NVIDIA GPUs with integrated software technologies and support from NVIDIA experts.

TESLA SERVERS IN EVERY SHAPE AND SIZE		DGX SYSTEMS AI TOOLS FOR INSTANT PRODUCTIVITY		CLOUD EVERYWHERE	
 					

## FIND OUT MORE

NVIDIA Deep Learning

- Website: <https://www.nvidia.com/sap>
- Twitter: @NVIDIAAI
- Blog: [blogs.nvidia.com/](https://blogs.nvidia.com/)

SAP Machine Learning Applications

- Website: <https://www.sap.com/solution/machine-learning.html>
- Twitter: @sap
- Blog: [blogs.sap.com](https://blogs.sap.com)