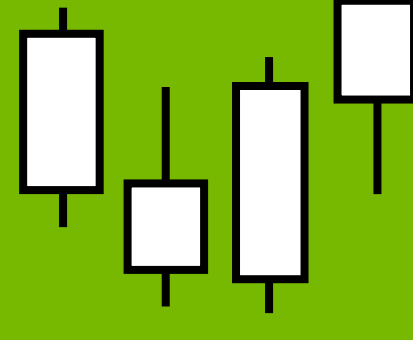


# A NEW STANDARD IN BACKTESTING

20 MILLION SIMULATIONS IN 60 MINUTES

Hedge-fund trading is a skilled game of numbers where one decision can make—or lose—a fortune. As these trades become more automated—one-third in the U.S. are algorithmic—data and the insights it can reveal through backtesting are keys to success. With STAC-A3™, the latest backtesting benchmark report, NVIDIA has changed the game.



## WHAT IS BACKTESTING?

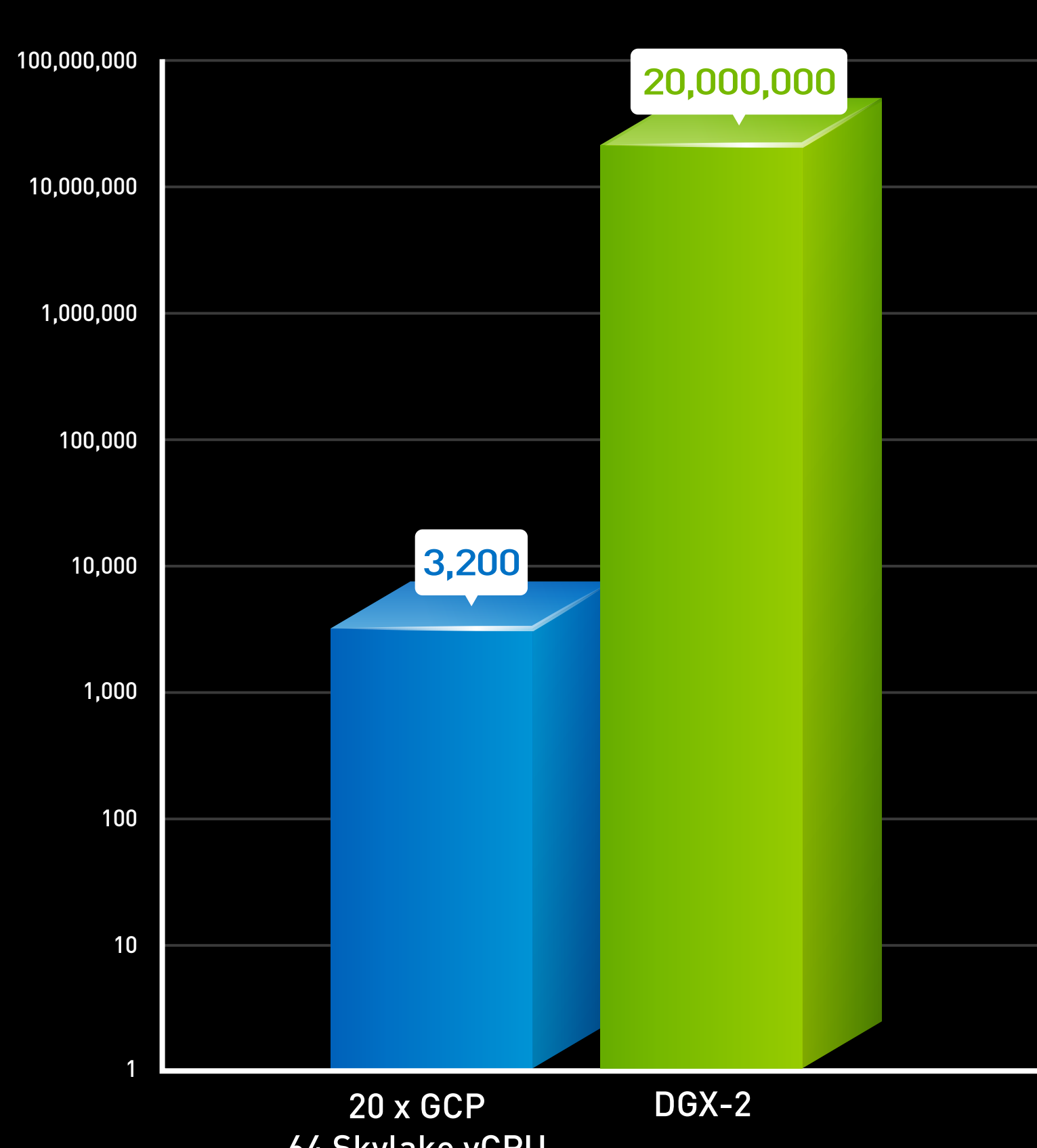
Backtesting is a way to assess the viability of a trading strategy. It's a method of testing a trading model with historical data to see how it would perform under real-world circumstances. The more simulations traders can run, the more accurate the algorithm is, and the more confident they can be deploying it.

## 6,000X MORE POSSIBILITY

In automated trading, decisions are based on algorithms that analyze data and make predictions about the market. Simulations run during backtesting train these algorithms to make the correct decisions.

With NVIDIA DGX-2™ running accelerated Python libraries and RAPIDS software, hedge funds can backtest **20 million trading simulations in an hour**. That's 6,000X faster than the previously set benchmark of 3,200 an hour.

Simulations per 60 Minutes



Results from STAC-A3.61.SWEEP.MAX60 test  
GCP system is 20 instances (64 vCPU, 2.0 GHz Skylake, 270 GB DRAM) – SUT ID: HPAT171029  
DGX-2 system is 1 node (16 V100 GPUs) – SUT ID: NVDA190425

This shifts the boundaries of what's possible. Now, backtesting that may have taken days can be completed in an hour. And the number of parameters that can be tested are virtually limitless.

Report Page: [www.STACresearch.com/NVDA190425](http://www.STACresearch.com/NVDA190425)

The STAC Benchmark Council explores the technical challenges and solutions in financial services and develops benchmark standards that are useful to financial organizations. In creating its benchmarks, it defines firm parameters for testing and then validates the results through careful audit.



## WHAT IS STAC®?

## NVIDIA DGX-2 WITH ACCELERATED PYTHON DELIVERS



FASTER PROCESSING



MORE SIMULATIONS

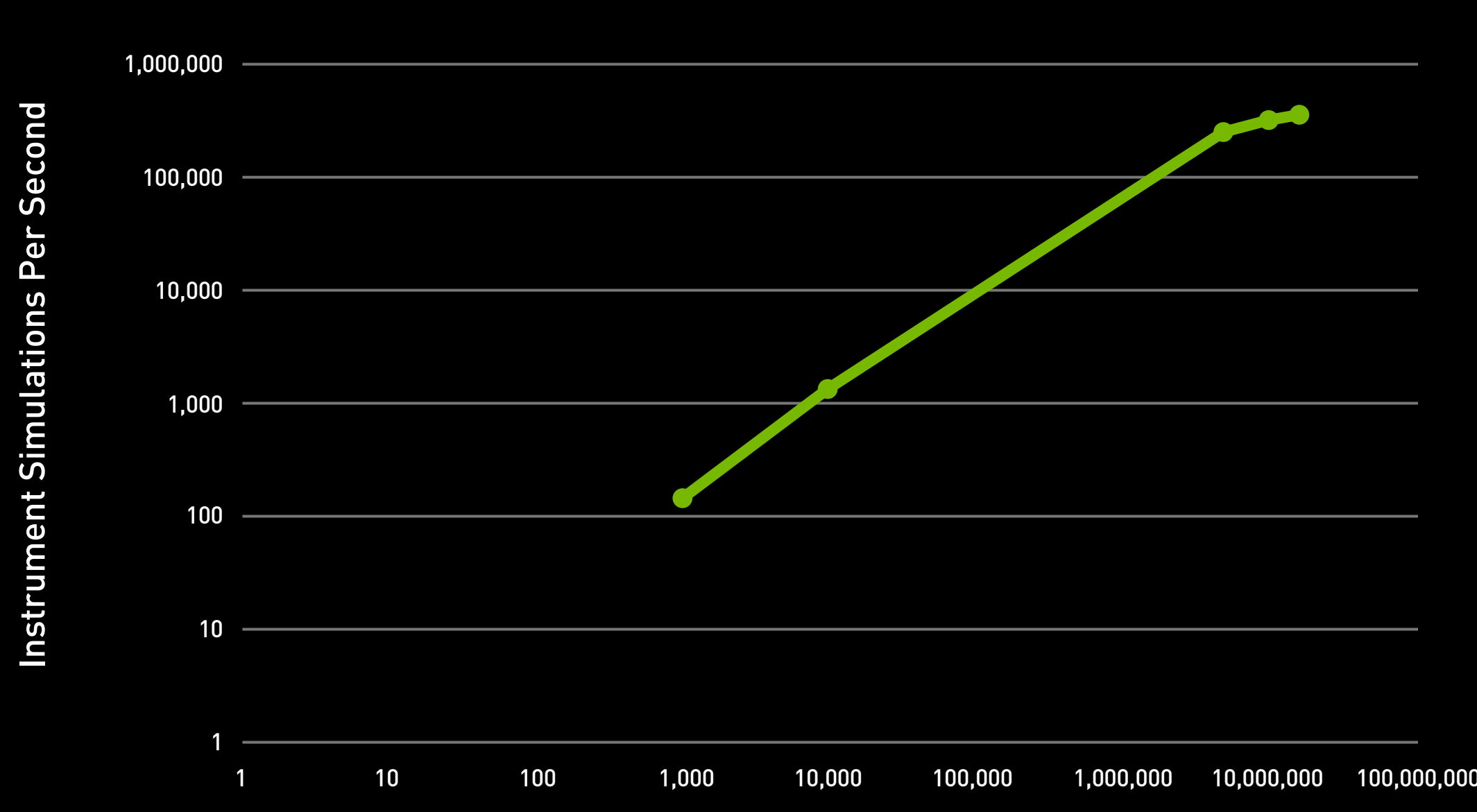


MORE ACCURATE  
ALGORITHMS

## SCALE WITH OUTSTANDING PERFORMANCE

The new standard also delivers impressive scalability. Even with as few as 1,000 simulations, the NVIDIA solution delivers significantly more instrument simulations per second than the previous solution. And performance continues to improve as the number of desired simulations grows and utilizes all the GPUs in the DGX-2—to orders of magnitude beyond what was possible before.

Scalability



Results from STAC-A3.61.SWEEP.SCALING.TIME  
DGX-2 system is 1 node (16 V100 GPUs) – SUT ID: NVDA190425

## THE TECHNOLOGY BEHIND THE BREAKTHROUGH

The STAC-A3 results mean that traders can think beyond their current algorithms. With the ability to run millions of simulations in an hour, it's possible to develop more complex algorithms and get them to market faster than ever.

This industry-changing breakthrough was powered by NVIDIA DGX-2 running accelerated Python and RAPIDS.



### NVIDIA DGX-2

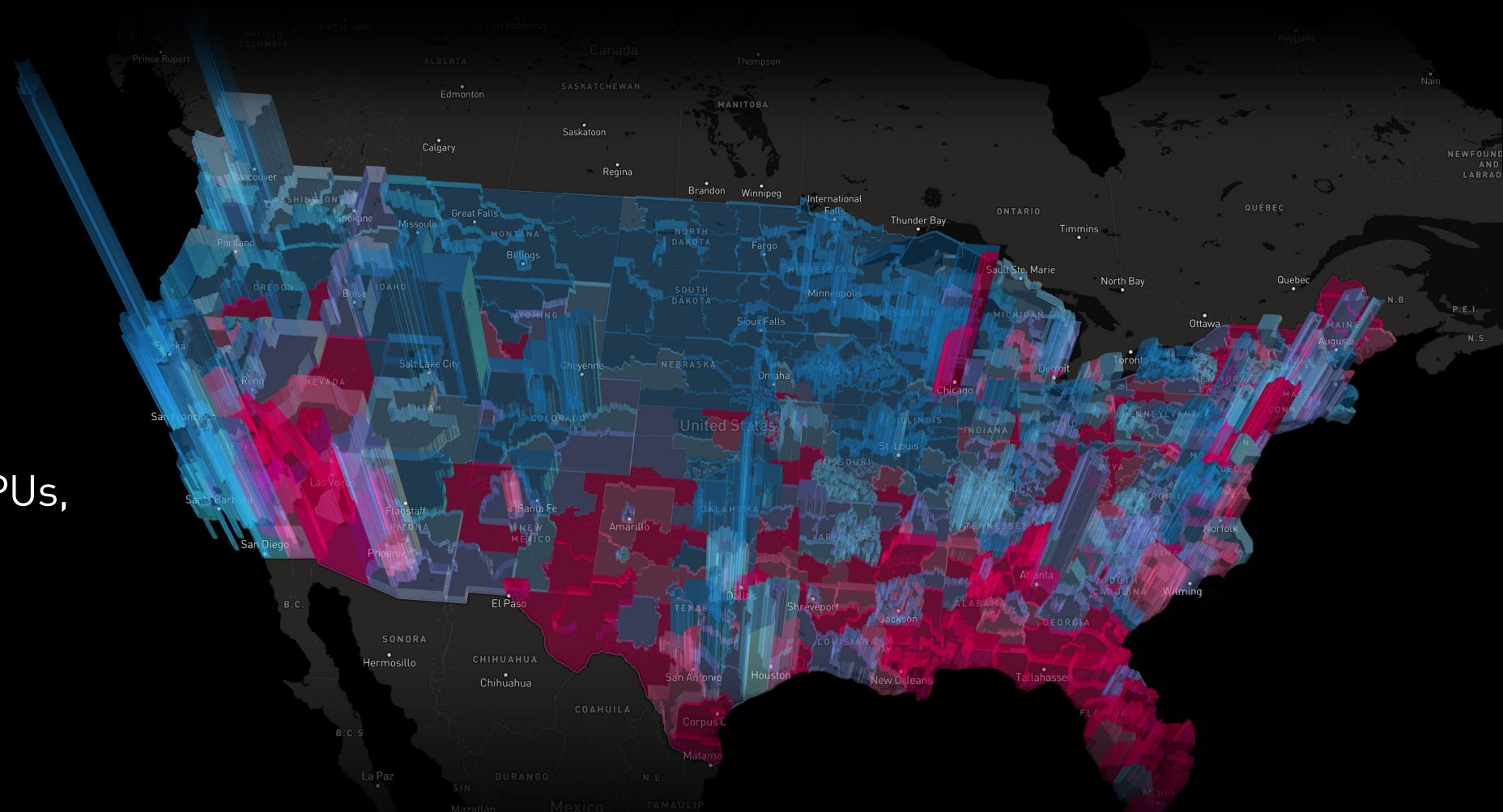
The World's Most Powerful AI System

NVIDIA DGX-2 is the world's first 2-petaFLOPS system. It combines 16 interconnected GPUs for the highest levels of speed and scale.

### RAPIDS

Suite of Data Science Libraries

RAPIDS, built on NVIDIA CUDA-X AI, executes end-to-end data science pipelines on NVIDIA GPUs, reducing training time from days to minutes.



LEARN MORE ABOUT DGX-2  
[www.nvidia.com/dgx-2](http://www.nvidia.com/dgx-2)

VISIT THE OPEN-SOURCE RAPIDS PAGE  
[rapids.ai](http://rapids.ai)