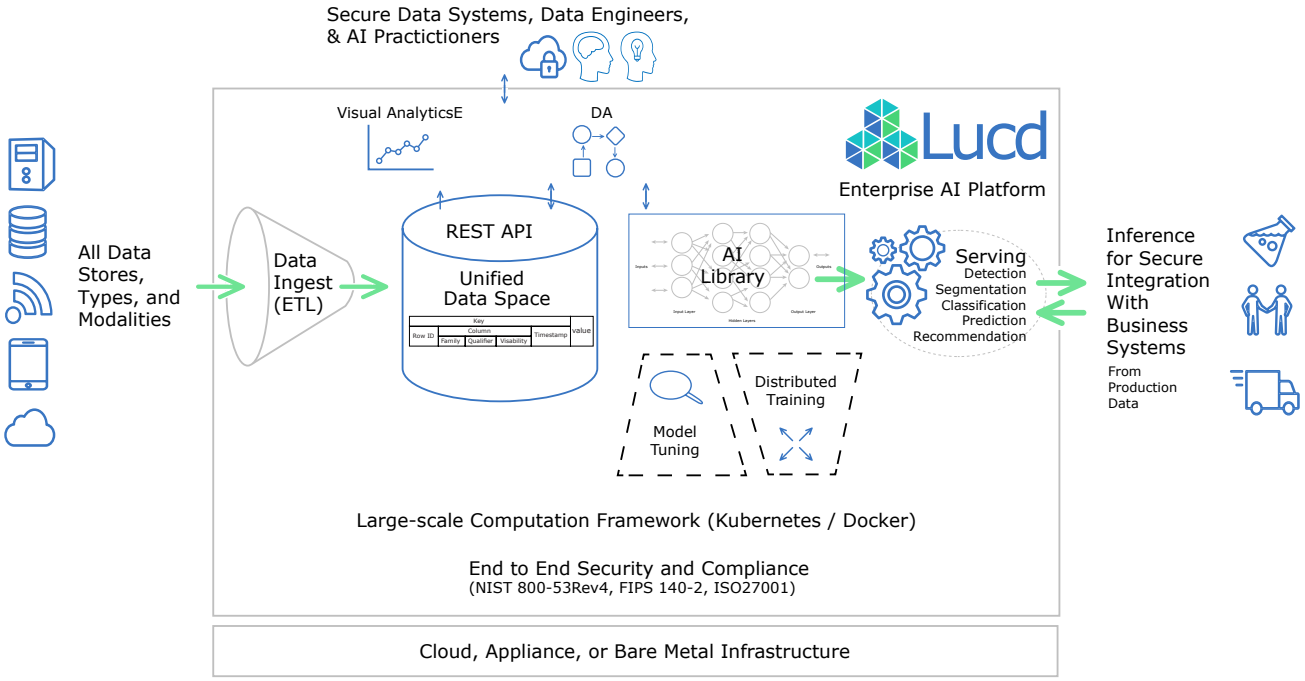
The Platform for AI Innovation

Driving Enterprise AI Success

DISTRIBUTED OPERATING SYSTEM

Successful AI depends heavily on training on large amounts of data. This often requires distributed computing that Lucd incorporates with its DoS. Lucd DoS takes advantage of large processing power, and is able to leverage greater than 10,000 CPUs to develop and train models where required accuracies are achieved faster and with less or less expensive compute requirements.

PRODUCT ARCHITECTURE



AI REQUIRES HORIZONTAL SCALING

The rise of machine learning based on deep neural networks can directly contributed to success. Specifically deep neural networks are usually more successful in providing accurate inference that can be used in AI opportunities (i.e. Computer Vision or Natural Language Processing). But, the success of this method of AI is predicated on large amounts of data to train the network and large, sophisticated, and complex network designs. These requirements have lead to the use of more sophisticated GPUs and TPUs over traditional CPUs to speed up training large complex neural networks from very large datasets. But, even single GPUs are not sufficient to train many models and datasets, so parallel processing and distributed computing are used.

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BUSINESS CONSTRAINTS REQUIRE EFFICIENT DISTRIBUTED COMPUTING FOR AI MODEL TRAINING

Businesses are always constrained. GPU and TPU price may limit their use either in private networks or cloud networks. Even with larger budgets access to the volume of GPUs and or TPUs may be lower than the access to available CPUs. And even with sufficient budget and GPU, TPU, and CPU access, time constraints may limit the ability to build models. And even with all that, accuracy constraints may be high for specific types of business uses.

LUCD DOS PROVIDES INDUSTRY LEADING DISTRIBUTED COMPUTING FOR TRAINING AI MODELS.

Lucd's DoS capability enables organizations to develop high quality deep learning models that are both wider and deeper than anything available in the commercial or open source communities. Lucd DoS is a fully distributed compute engine leveraging dis.ai Lucd intellectual property based on optimistic computing.

Lucd DoS provides massive scaling across most high performance and supercomputing platforms available today, including all the available cloud hosting providers such as Amazon and Azure. Developed over the past 17 years, Lucd™ has been tested on HPC clusters comprised of commodity HP, Dell and Rackspace servers, as well as the IBM Blue Gene family and Cray XT series supercomputers. The solution is developed as an ANSI C library for distributed computing and leverages either MPICH or TCP sockets for communications.