clusterpower

Cluster Power
Ai as a Service

A flexible solution to empower
your business

April 2022

Why AI as a Service?

★ **Add value** to our services and **optimize AI operations**

★ **Address** multiple industry verticals and **scale** AI across the organisations

★ **Perform a vertical integration** with the cloud computing business.

★ **Provide a robust platform** and **development tools** for the AI applications

Scalable AI as the Main Driver

STRATEGIC IMPERATIVE

We view AI as an enabler of business transformation

POSITIVE RETURN ON AI

Achieve a positive return on AI investments

COMPETITIVE ADVANTAGE

Deploy scalable AI solutions faster to gain competitive advantage

The Benefits of AI at Scale Solutions

Accenture indicates that the benefits of leveraging AI at scale include:

2x

Success Rate

Comparing those who have strategically scaled their AI applications compared to those who are stuck in proof of concept

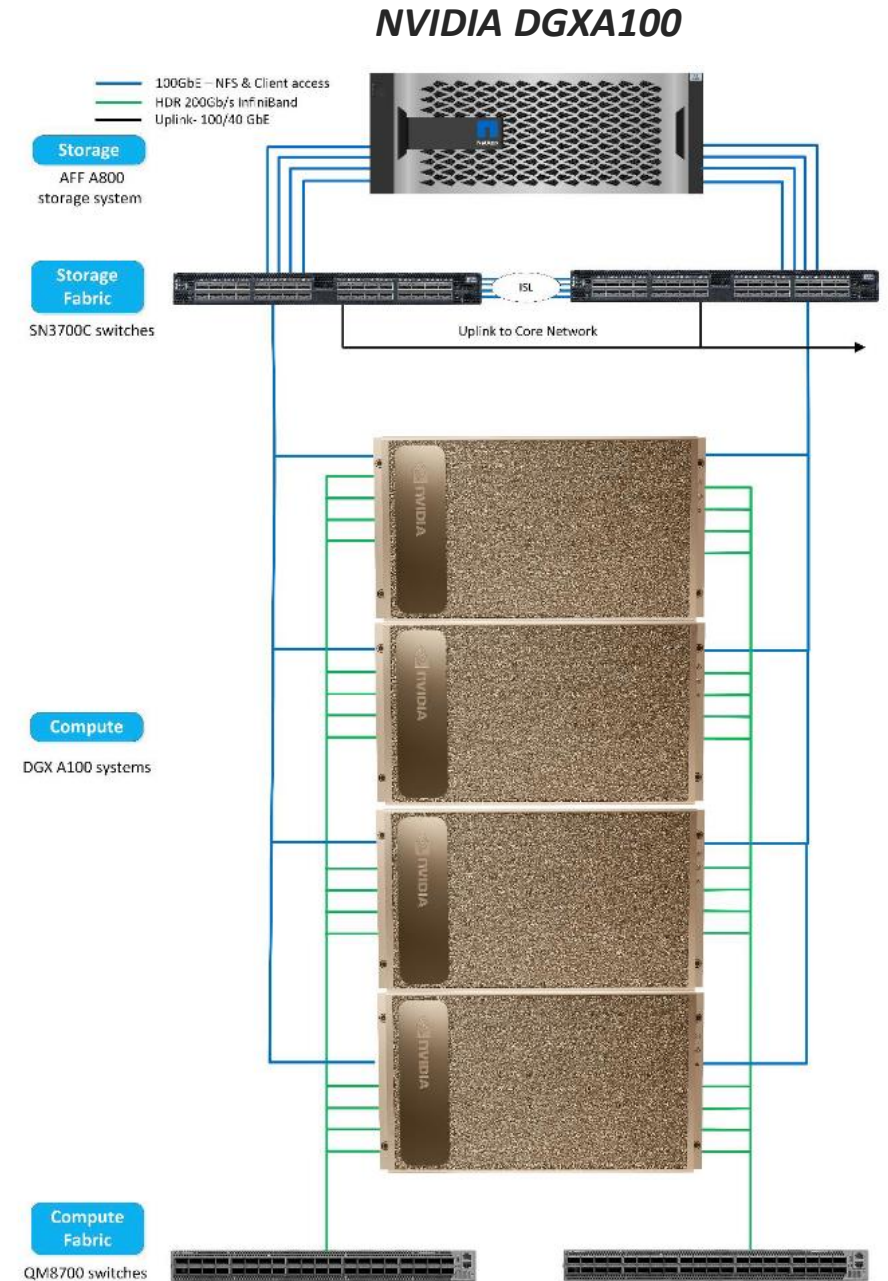| **35%**	**33%**	**28%**	**2x**	**45%**
Enterprise Value / Revenue Ratio	**Price / Earnings Ratio**	**Price / Sales Ratio**	**Forecasting Increase**	**Increase in Operating Income**

The Solution

- **An AI purpose build infrastructure (hardware and middleware) which is a turnkey solution for all types of AI workloads in one place**

- **Combining the latest and most powerful hardware technology, dedicated & tested architecture and the DEV-OPS tools required to get the job done faster and at optimized costs**

Solution Components and Benefits

MIDDLEWARE TOOLS

1. Data labeling	Label Studio
2. Data management	DVC
3. Development environment	VSCode and Jupyter
4. Remote debugging	VSCode remote Debugger
5. Code management	Git
6. Experiment tracking	MLFlow
7. Hyperparameter tuning	NNI
8. Distributed training	CP
9. Metadata management	MLFlow
10. Model management	MLFlow
11. Deployment	Seldon Core
12. Testing	Locust
13. Monitoring	Prometeus+Graphana
14. Interpretation	Seldon Alibi
15. Pipelines orchestration	CP
16. Resource orchestration	CP
17. Access control orchestration	CP

NVIDIA DGXA100

AI Success through **Integration**

SIMPLIFIED DATA PIPELINE

Build an integrated data pipeline with a single management platform powered by [NetApp® ONTAP® data management software](#) that spans edge, core, and cloud.

COMPLETE CLOUD DATA SERVICES

Easily incorporate the industry's most complete cloud data services, such as NetApp® Cloud Volumes Service, to make data-driven decisions faster.

AUTOMATED DATA TIERING

Automatically move inactive data to low-cost object storage tiers, such as Amazon S3 or [NetApp® StorageGRID® solutions](#), using FabricPool technology.

The Most Popular
AI Infrastructure Worldwide

8
of the 10 top US national universities

7
of the top US hospitals

10
global car manufacturers

7
of the top 10 global telcos

6
of the top 10 banks

10
of the top 10 US government institutions

The AI as a Service
Benefits to our Customers

- ⦿ **Close to bare metal performance – on cloud benefits with on-prem performance**

- ⦿ **Focus on science and increase productivity by leveraging our AI Infrastructure as a service and Platform as a service offerings**

- ⦿ **AI One-Stop Shop**

- ⦿ **Access a large ecosystem of subject matter experts**

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Digital transformation remains top-of-mind for auto companies, but the **data-accessing** struggle is real. From vehicle design to manufacturing, today's auto sector runs on data. But, if it's not connected and available, operations can't run efficiently.

- ✓ Autonomous Driving
- ✓ Mobility as a Service
- ✓ Connected vehicles
- ✓ Smart manufacturing

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Autonomous Driving

Autonomous driving is the holy grail of the automotive industry right now, but the challenges are significant. Each vehicle deployed for R&D generates up to 1TB of data per hour. Teams can expect to accumulate hundreds of petabytes of data as autonomous driving projects continue.

Connected vehicles

Vehicles use cellular and Wi-Fi connections to upload and download entertainment, navigation, and operational data. In the near future, we'll also see cars connecting to each other, to our homes, and to infrastructure. AI will play a role in predictive maintenance, in-car assistance, recommendations for infotainment, and more

Mobility as a service

Machine learning challenges in mobility as-a-service models are significantly different from those in autonomous driving; they include things like predicting demand, optimizing fleet efficiency, setting prices, and preventing fraud.

Smart manufacturing

Automotive companies must increase operational efficiency to free up capital for other investments. Industrial Internet of Things and Industry 4.0 technologies are key to streamlining business, automating and optimizing manufacturing processes, and increasing the efficiency of the supply chain.

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Predicting market trends, executing trades at high speeds and high volumes, and **detecting fraud**.

- ✓ Constant fraud attempts demand constant protection

- ✓ Compliance. Compliance. Compliance.

- ✓ Speed and agility

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FINANCIAL SERVICES

Constant fraud attempts demand constant protection

- ✓ Prevent loss
- ✓ Protect data and privacy
- ✓ Keep your business safe from malicious attacks
- ✓ Reduce your total cloud storage TCO

Compliance. Compliance. Compliance.

- ✓ Mapping sensitive data
- ✓ Locating privacy violations
- ✓ Producing impact analysis reports ike Data Subject Access Reports (DSARs) in seconds, instead of weeks.

Speed and agility

Edge computing, flash technologies, AI and ML, and a powerful unified data platform deliver access to your data at warp speed. We also make sure that you can dramatically reduce the time it takes to move from data to actionable insights.

Cluster Power:
AI as a Service

The world's leading game developers build games faster and reduce costs with highly efficient build farms. **Level up** your code and content management solutions and **improve workflow efficiency**.

- ✓ Performance
- ✓ Code & Content development
- ✓ Security

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GAME DEVELOPMENT

Performance

- ✓ Iterate faster and reduce costs with highly efficient build farms
- ✓ Copy and recycle data quickly; run more tasks in parallel
- ✓ Develop against new code; archive and age out old code without service disruptions
- ✓ Achieve sub-millisecond latency, with over 450k IOPs and 4.5 GiB/s throughput for your most demanding workloads

Code & Content develop.

- ✓ Improve workflow efficiency with space-efficient Snapshot™ technology and cloning
- ✓ Lessen the impact of interruptions and avoid rebuilding with code archiving, roll back, and recovery
- ✓ Accelerate access to disparate content, from code repositories to monstrous multimedia volumes, and seamlessly scale as needed

Security

- ✓ Benefit from best-in-class security and encryption technologies to ensure only the right people have access to your data
- ✓ Protect your IP and business operations from ransomware with Cloud Volumes ONTAP and Cloud Secure
- ✓ Function-like-a-public cloud with a catalogue-based approach to prevent and control shadow IT and procurement

Cluster Power:
AI as a Service

Streamlining and speeding access to critical clinical data to help deliver **better patient outcomes**.

- ✓ Opening the Digital Front Door
- ✓ Prescriptive Analytics
- ✓ Medical Imaging

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HEALTHCARE & LIFE SCIENCES

Opening the Digital Front Door

Patients expect to be able to access their medical information online via patient portals or be able to set appointments online.

Prescriptive Analytics

Use AI-based Prescriptive analytics not only to anticipate what will happen and when it will happen, but also why it will happen.

Medical Imaging

- ✓ Harness the power of AI to improve patient outcomes
- ✓ Use AI for computer-aided diagnostics
- ✓ Leverage the power of AI to master large repository of data

Cluster Power:
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Managing, storing, and accessing content for diverse **media workflows**.

- ✓ Content Creation
- ✓ Asset Management
- ✓ Distribution

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MEDIA & ENTERTAINMENT

Content Creation

- ✓ Consolidate storage silos into a data fabric that supports your performance and capacity needs
- ✓ Flexibly scale with disk, flash, and hybrid storage using a single namespace
- ✓ Respond quickly with fast, reliable data access through-out the creative pipeline

Asset Management

- ✓ Speed access to disparate content, from secure files to monstrous multimedia volumes
- ✓ Process massive content repositories and seamlessly scale as needed
- ✓ Meet deadlines and reduce costs with highly efficient storage

Distribution

- ✓ Support hundreds of streams in a combined post-production and delivery environment
- ✓ Reliably capture live content from multiple sources and support instant access to content
- ✓ Scale on demand. Seamlessly leverage cloud resources for unmatched flexibility

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Public sector organizations rely **on innovative AI data management solutions** for their storage modernization, next-generation data center, and hybrid cloud needs.

- ✓ Healthcare
- ✓ Education
- ✓ Cybersecurity for Government
- ✓ Government Services

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Healthcare

- ✓ Put your data to work improving patient outcomes.
- ✓ Streamline and speed access to critical clinical data.
- ✓ Run any application on-premises or in the cloud.

Education

- ✓ Improve data security for remote work and remote education
- ✓ Increase application performance and speed
- ✓ Control costs in the cloud

Cybersecurity for Government

- ✓ Protect your organization against data breaches whilst addressing changing employee and mission needs.
- ✓ Protect the data driven Government

Government Services

- ✓ Easier, faster and more reliable access to government services with a people centric digital approach.

Cluster Power:
AI as a Service

Managing **big data** to improve decision-making, accelerate exploration, optimize production, and maximize profits.

- ✓ Power your energy applications
- ✓ 3D Graphic Visualization
- ✓ Seismic Archiving

Cluster Power: **AI as a Service**

OIL & GAS

Power your energy applications

Manage big data to improve decision-making, accelerating data analysis for 3D modeling, exploration, seismic processing and rendering, as well as drilling simulations

3D Graphic Visualization

- ✓ Speed access to disparate content, from secure files to monstrous multimedia volumes
- ✓ Process massive content repositories and seamlessly scale as needed
- ✓ Meet deadlines and reduce costs with highly efficient storage

Seismic Archiving

- ✓ Leverage AI to deliver low-cost, massively scalable archival and compliance-enabling storage solutions for these same applications.
- ✓ A single set of management tools simplifies your enterprise data management and lowers TCO.

Thank you for your attention!

Let's connect!

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