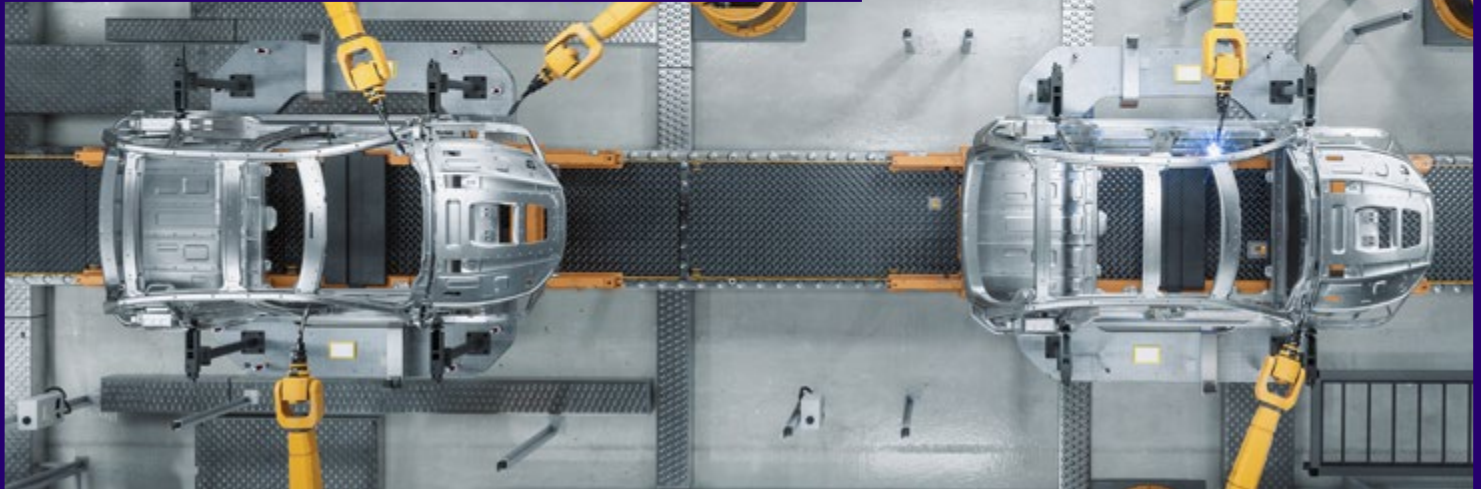**NetApp**

PUT SMART MANUFACTURING INTO PRODUCTION WITH NETAPP

Take automotive manufacturing to the next level with an intelligent data infrastructure that enables you to innovate more efficiently and sustainably.

The time to modernize is now

Smart manufacturing integrates advanced technologies such as the Internet of Things (IoT), AI, and cloud computing to create intelligent, efficient, and sustainable production systems that can optimize operations and improve product quality. From greater responsiveness to improved productivity, deeper analytics, and safer plant floors, smart manufacturing gives you a competitive edge. But first, you need a digital infrastructure that can make it all happen.

Get to the next level with NetApp

An intelligent data infrastructure built on NetApp can help you take your manufacturing operations to the next level. NetApp® solutions connect all of your people, machines,

and data sources from edge to core to cloud with a single, unified platform. Energy-efficient systems with built-in storage efficiency and monitoring help you meet your sustainability goals. Integration with all three of the world's largest public cloud providers makes agility and real-time global collaboration easier.

To help optimize your supply chain, NetApp solutions provide visibility across your entire data estate, on premises and in the cloud. Automated workflows enable more efficient and reliable operations from design to final distribution. And NetApp gives you peace of mind that your data is safely stored on the planet's most secure storage.

Meet your sustainability goals

- Use less energy for power and cooling.
- Store more data with less storage with incremental backups and deduplication technology.

Enhance agility and innovation

- Integrate seamlessly with AWS, Azure, and Google cloud for real-time collaboration and better-informed decision making.

Boost operational efficiency and resilience

- Enable faster and better data handling to detect defects quicker.
- Monitor your supply chain status in real time to prevent interruptions.
- Get 100% data availability, guaranteed.

Get unmatched data security

- Gain peace of mind, knowing that your data is stored on the most secure storage on the planet.
- Protect against cyberattacks with 99% detection accuracy and guaranteed recovery.

Meet your sustainability goals

The manufacturing industry accounts for 36% of global energy consumption and 20% of total CO2 emissions. That means immense pressure on manufacturers to reduce their environmental footprint, better manage energy consumption, and minimize waste.

NetApp can help you comply with sustainability mandates such as the Corporate Sustainability Reporting Directive (CSRD) and meet your sustainability goals with energy- and storage-efficient solutions. NetApp all-flash systems use fewer watts per TiB to run and require less energy for cooling, enabling you to significantly reduce your data center's carbon footprint and slash power and cooling costs. Built-in storage efficiencies like incremental backups and deduplication mean that you can store more data with less storage, further reducing your energy consumption.

In addition, NetApp solutions support digital twin technologies that help optimize resource usage, reduce carbon emissions, and improve supply and transportation networks—among other benefits. As an official member of the Industrial Digital Twin Association, NetApp plays a leading role as a provider of intelligent data infrastructure for digital transformation projects that pave the way for smarter, more sustainable manufacturing operations.

To help improve your sustainability posture, the NetApp BlueXP™ sustainability dashboard delivers visibility, insights, and guidance, along with a score that indicates how well you are doing in your quest to improve sustainability.

USE CASE

Meeting sustainabiltiy goals

A large aerospace equipment manufacturer was struggling with IT obsolescence and wanted to reengineer its IT infrastructure to make its line of business more efficient.

The company chose a NetApp ASA system with connection to Amazon Web Services. This solution reduces their physical footprint and delivers high availability, which is crucial for their SAP and other critical workloads. The solution helps meet the organization's sustainability goals by:

- Delivering greater than **4:1 storage efficiency** through deduplication.
- Consuming **70% less power** than competitors' systems and reducing their storage footprint.

Enhance agility and innovation

Winning in today's competitive market requires an agile infrastructure that enables innovation without bounds. An intelligent data infrastructure built on NetApp supports rapid development of new technologies and applications that are crucial for innovation and staying ahead of competitors. NetApp ONTAP® advanced data management capabilities help you to stay on the cutting edge with support for Internet of Things (IoT) solutions and AI.

Seamless integration with AWS, Azure, and Google Cloud enables you to integrate on-premises and cloud environments. This integration facilitates real-time data access and analytics, helping engineering and development teams to collaborate globally for faster delivery of better products, and enabling faster and better-informed business decisions.

Boost operational efficiency and resilience

To beat the competition, you need to get innovative products to market quickly and cost effectively. There's no time for downtime or slow operational systems. NetApp all-flash storage systems provide the performance you need to keep data and production lines flowing. With faster and better data handling, NetApp solutions help you to detect defects quicker and enable smarter product management, from initial concept to final distribution.

NetApp solutions also enable you to monitor your supply chain status and operations in real time. Fast, in-depth analytics help avoid supply chain interruptions and keep production lines moving.

To make sure your business stays up and running, NetApp provides rapid recovery capabilities with incremental Snapshot™ copies that enable complete backup and restoration in just minutes—minimizing downtime and financial loss in the event of a human-made or natural disaster. And to give you ultimate peace of mind, NetApp backs it all with a 100% data availability guarantee.
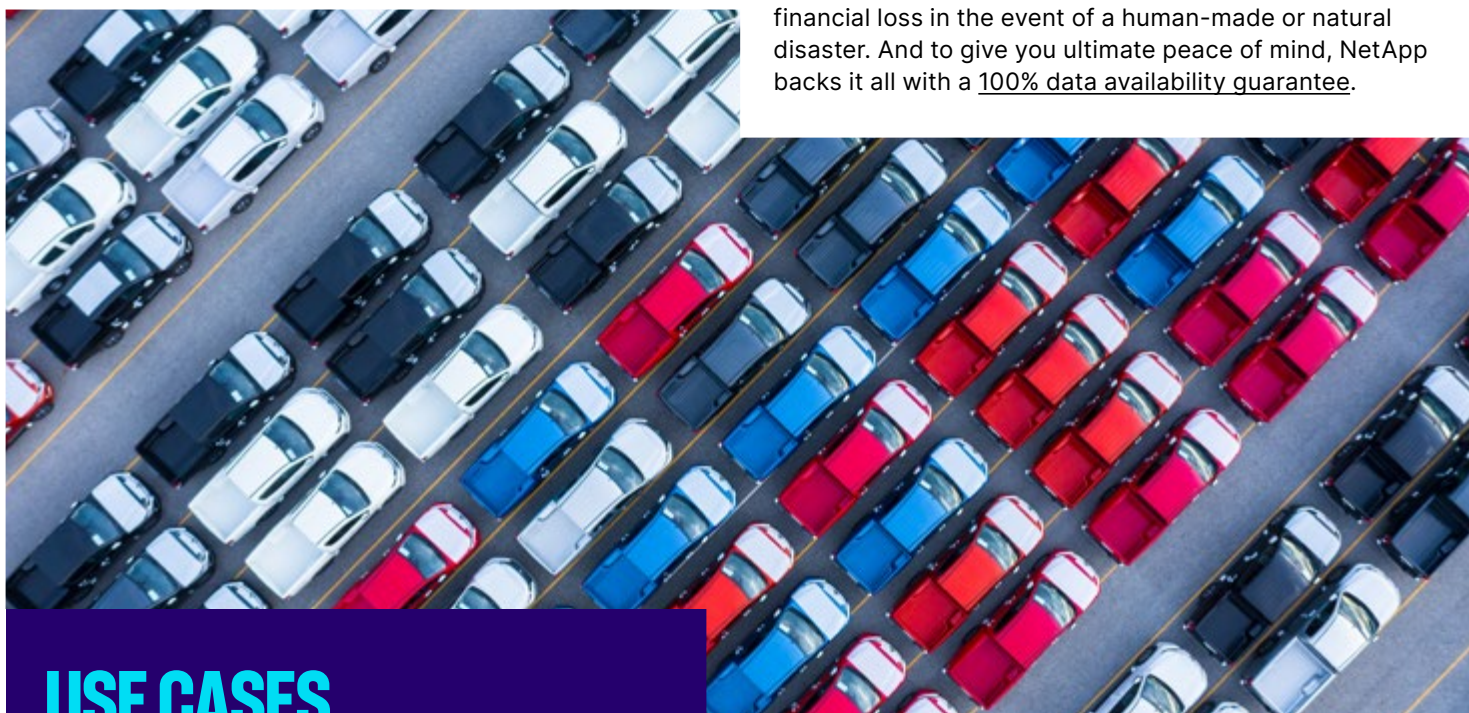
USE CASES

Integrated cloud connectivity

Data historian systems (DHS) and manufacturing execution systems (MES) enable Industry 4.0. DHS and MES are hybrid by nature and gather high volumes of data, mainly in a database structure. Using public cloud solutions for backup is an option, but cost is often a barrier.

A separate database storage solution based on NetApp ASA storage can be managed independently from other datasets (file and object). ASA, with a connection to AWS, offers **high resilience** and **optimized costs** with a low cost/GB through NetApp ONTAP One for the on-premises part of the solution. Using NetApp FlexClone® technology to instantly clone the database from on-premises to AWS provides fast, space-efficient backup.

Efficient and resilient operations

A large aircraft manufacturer was struggling with rising virtual desktop infrastructure (VDI) costs. They were looking for a storage infrastructure that could support its growing SAN environment.

The company chose NetApp ASA block storage as their virtualization backbone for its storage efficiency and business continuity capabilities, including NetApp SnapMirror® active sync between two clusters, built-in cyber resilience, and **4:1 storage efficiency** driven by NetApp data deduplication technology. After one year of use, they reported an even greater storage efficiency ratio. **Low price/GB** enables them to save money while enjoying the benefits of a modern storage infrastructure.

Get unmatched data security

Integrated supply chains and growth in data from IoT, AI, and data analytics make it difficult to keep up with constant security threats and ever-changing compliance requirements. With NetApp solutions, you get trusted data protection, compliance, and secure access for your distributed, diverse, and dynamic AI data.

NetApp enables you to integrate, protect, and secure your data pipeline from edge to core to cloud. Our unified data storage supports multiple data formats. With data encryption at rest and in flight, data is protected wherever it lives and wherever it moves to. We offer the only hardened enterprise storage that is validated to store top-secret data. In addition to being NIST FIPS 140 and CSfC certified, our solutions feature quantum-resistant encryption.

Not only are the hardware and NetApp ONTAP data management software certified, but NetApp software also provides extended features to help secure your environment. These features include:

- Multiadmin verification
- Creation of write once, read many (WORM) volumes
- Data classification
- Immutable and indelible backups
- Built-in ransomware protection

NetApp offers the most secure storage on the planet— no other storage solution provides equivalent security protection. We deliver unmatched data security with built-in versioning and traceability, built-in cybersecurity, and real-time, AI-powered ransomware protection with 99% detection accuracy and guaranteed recovery. NetApp BlueXP classification automatically identifies and classifies data to help you maintain compliance. Advanced AI and dashboards provide the automation and intelligence that you need to simplify data governance.

Envision tomorrow with NetApp

The benefits of smart manufacturing extend beyond the factory floor, transforming the entire value chain and creating a more responsive, resilient, and competitive manufacturing ecosystem. Partnering with NetApp can help you create a smart manufacturing solution that unlocks new opportunities and drives your business toward a smarter, more sustainable future.

→ Learn more at NetApp solutions for manufacturing.

Contact Us

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