

The logo for VDURA is displayed in a bold, orange, sans-serif font. The background of the top section of the page features a collage of mathematical concepts, including the equation $E = mc^2$, the Pythagorean theorem $a^2 + b^2 = c^2$, and a geometric diagram of a triangle inscribed in a circle with radius R and diameter $2R$.

VDURA

SOLUTION BRIEF

VDURA for Academic Research

Unleash your research potential with an intelligent data storage and management platform.

Introduction

Universities and research institutes have brilliant minds, talented data scientists, and powerful compute at the ready. What's often missing is an intelligent data platform capable of fully unleashing that potential.

We've designed the solution.

Small IT teams, multiple research groups, lean budgets, massive datasets, mixed workloads – these cease to be problems with VDURA as your data foundation.

Accelerate complex mixed workloads and AI initiatives

Universities have seen a major increase in the quantity and complexity of their high performance computing (HPC) workloads, and researchers are adding cutting-edge AI techniques to advance their discovery pipelines. These types of mixed workloads are incredibly taxing – if not impossible – on legacy storage systems.

The VDURA Data Platform has built-in dynamic data acceleration, a proprietary software feature that automatically adapts to the changing and evolving small-file and mixed workloads in AI and HPC that other storage systems struggle to support. Your hard drives are never burdened by inefficient small-file and metadata writes, leaving them free to stream your large files, so you get consistently high performance, even for heavy concurrent and mixed workloads.

Consolidate with a scalable, intelligent, and cost-effective solution

Research data volumes are increasing rapidly, but the academic funding pool certainly is not. Universities need adaptable and highly performant storage that can easily scale to support thousands of researchers working on hundreds of AI and HPC projects – without blowing the IT budget.

The VDURA Data Platform utilizes the most efficient combination of mixed media to optimize speed, capacity, and economics, so you never overpay for hardware that doesn't directly contribute to the performance levels you need. It also cuts the complexity and costs of traditional tiered storage

systems by providing a single all-hot tier with automatic capacity balancing for no hotspots.

Rest easy with multi-layer data security and protection

Universities are particularly hot targets for cyberattacks, and data loss incidents can wipe out years of research progress in an instant. Aging data infrastructures, untrained user networks, and understaffed IT departments can be a recipe for disaster. With so many research teams needing to manage their own environments, security has become a top concern.

To safeguard your data, VDURA takes a defense-in-depth approach: ACLs, SELinux support, and hardware-based encryption at rest prevent unauthorized access while the realm is both online and offline. The VDURA Data Platform also uses patented per-file object erasure coding to ensure maximum protection, as well as built-in prevention and automated rapid failure recovery logic engineered to avoid corruption issues common in open-source solutions. Translation: We've got you covered.

Eliminate time-consuming storage complexity and downtime

Open-source storage solutions require considerable staffing effort to set up and maintain. To make matters worse, they lack the high-grade reliability needed for 24/7/365 operations at most research institutes. As the landscape in academic research becomes increasingly competitive, unplanned downtime and frequent outages wreak havoc on project timetables.

VDURA rolls in preconfigured, taking you from dock-to-data in less than a day. Our low-touch management requires no deep technical skills or large dedicated staff for ongoing administration – a single part-time admin can easily manage up to 1,500 VDURA storage nodes. One VDURA customer reports going eight years without a single minute of unplanned downtime.

Your partner in research excellence

VDURA has a long history of partnering with the world's leading research institutes and universities to support their groundbreaking projects. We know that data storage is a bedrock for research, and we're committed to delivering the versatile, simple, and economical solutions that academic researchers need. You bring the vision and the talent – we'll handle the data storage.