

# Private Clouds for Higher Education with Pextra CloudEnvironment<sup>®</sup>

## Power Your Campus, Research, and Innovation with Simplified Infrastructure

Colleges and universities face growing demands on their IT environments — more students, expanding online programs, advanced research computing, and rising security expectations. But aging infrastructure slows innovation, complicates management, and drives up costs.

**Pextra CloudEnvironment<sup>®</sup> provides a modern private cloud solution designed for higher education**, delivering integrated compute, storage, and networking that simplifies operations, boosts performance, and protects critical data — across campuses, research labs, and administrative offices.

## Why Higher Ed Institutions Choose Pextra<sup>®</sup>?

### Scalable Compute for Research, Labs, and Campus Systems

Support resource-intensive academic research, campus-wide learning platforms, and administrative workloads on Pextra's distributed compute clusters. Add capacity as demand grows without downtime.

### Flexible, High-Performance Storage

Pextra's cluster-based storage simplifies management while delivering the high-speed, reliable data access required for research datasets, student records, and institutional files.

### Advanced Networking with Built-In Security

Manage complex network topologies and secure inter-campus traffic with Pextra's programmable networking stack. Segment research workloads, secure administrative systems, and control traffic with ease.

### Rapid Deployment and Unified Management

Pextra installs on your hardware, with a full cluster setup in hours — not weeks. A unified web interface and CLI simplify ongoing management, while rich API access supports integration with existing tools.

### Support for AI, Scientific Computing, and Virtual Labs

Leverage GPU passthrough and device-level virtualization to support AI/ML research, simulation environments, and virtual lab deployments — all within a secure, scalable private cloud.

### Reduced Costs, No Lock-In

Pextra offers a cost-effective alternative to legacy platforms like VMware, eliminating expensive hypervisor licenses and providing full control over your environment. Educational institutions get special discounts on licensing and support subscriptions.

**From research breakthroughs to connected campuses — simplify IT, scale operations, and power innovation with Pextra CloudEnvironment.**

“Higher-education institutions that follow their own path to digital maturity through investments in the cloud, data, and analytics can achieve better results in the areas that matter most to educators: student success in enrollment, retention, and employment; operational efficiency; innovation in research; and innovation in learning.

- BCG



Higher education IT leaders are continuing their cloud transformations to streamline campus operations, enable operational agility, improve security and compliance, enhance the digital student experience, modernize IT infrastructure, and optimize IT costs.

- IDC



**Simplify Global  
IT Operations**



**Reduce Costs and  
Avoid Vendor Lock-In**



**Scale with Confidence  
across R&D, Production,  
and Services**



**Stay secure and compliant**

Pextra CloudEnvironment® is a next-generation private cloud platform that integrates compute, storage, networking, and security into one easy-to-manage, scalable solution. Our software-defined infrastructure is designed to simplify operations, reduce costs, and give organizations full control over their infrastructure, without suffering from vendor lock-in.

## Software-Defined Private Cloud

Built for modern workloads, Pextra delivers scalable compute, reliable storage, advanced networking, and enterprise-grade security — all running on your hardware of choice. Our architecture eliminates silos and complexity, making it easy to deploy and manage infrastructure for demanding applications.

## Simple, Unified Management

Everything in your private cloud is managed through an intuitive web interface and CLI, with rich API integrations available for automation and custom workflows. Deploy, monitor, and scale your environment without the overhead of legacy systems.

## High-Performance Storage

Pextra provides fast, reliable storage through cluster-wide abstractions, delivering high I/O performance for databases, file shares, media workloads, and more. Storage is configured on a per-cluster basis to simplify operations while maximizing efficiency.

## Advanced, Secure Networking

Our platform features a programmable, high-throughput networking stack built on Open vSwitch, with integrated L4 firewalls and workload isolation. Easily connect datacenters, secure internal traffic, and segment applications with confidence.

## Enterprise-Grade Security & Compliance

Pextra is built with security in mind — supporting multi-tenant deployments, role-based access controls (RBAC/ABAC), secure audit logging, and policy enforcement. Our platform is designed to meet industry security standards and help organizations stay compliant.

## AI-Ready & Hardware Flexible

Whether running AI training, virtual machines, or critical applications, Pextra's distributed design supports GPU passthrough and hardware paravirtualization — giving teams full control over their infrastructure performance.

## Minimal Vendor Lock-In

Pextra is built on open-source technologies, ensuring transparency, flexibility, and freedom to adapt. Migrate workloads, scale infrastructure, or integrate with your preferred tools — without proprietary constraints.



Researchers Weigh In - Cloud Is a Hit

- Scalability and exponentially higher compute capacity reducing time to results
- Efficiency gains that reduce capex, procurement, and maintenance burdens
- Seamless cross-border and ecosystem collaboration
- Access to applications and computing resources
- Research democratization

- IDC

## Ready to Get Started With Pextra?

To learn more about how Pextra can drive your private cloud infrastructure, visit [www.pextra.cloud/cloudenvironment/](http://www.pextra.cloud/cloudenvironment/), or contact our sales team at [sales@pextra.cloud](mailto:sales@pextra.cloud). To get a free evaluation license, visit our website and click on [Get Started](#).



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