Smart Manufacturing with Pextra CloudEnvironment®

Simplify Your Infrastructure. Boost Agility. Stay Ahead.

Manufacturers today face growing challenges — stagnant productivity, supply chain disruptions, and rising pressure to modernize operations. Smart Manufacturing, Industry 4.0, and connected factory initiatives offer the path forward — but they depend on reliable, scalable, and easy-to-manage infrastructure.

Pextra CloudEnvironment® provides a secure, high-performance private cloud platform designed for manufacturing, delivering simplified compute, storage, and networking to support production facilities, distribution centers, and remote operations — without adding IT complexity..

How Pextra® Supports Modern Manufacturing?

Reliable Compute for Factory Floor and Beyond

Run your production systems, engineering tools, IoT workloads, and business platforms on distributed compute clusters that scale with your operations. Keep mission-critical systems running with built-in backups, fault tolerance, and high availability.

High-Performance Storage for Industrial Data

Simplify storage for sensor data, digital twins, CAD files, and operational records. Pextra's cluster-wide storage ensures fast, reliable access — whether at a single plant or across global locations.

Advanced Networking for Connected Operations

Isolate factory networks, segment workloads, and secure remote sites with Pextra's programmable, high-throughput networking stack. Support connected machines, control systems, and secure plant communications with confidence.

Resilient Infrastructure for Global Operations

Pextra's geo-distributed design enables manufacturers to deploy private cloud resources at the edge, across plants, and in centralized datacenters — ensuring operations stay connected and productive, even during global disruptions.

Secure, Simplified Management

Protect IP, production data, and sensitive business information with built-in access controls, secure audit logging, and policy enforcement. Manage your entire infrastructure from a single intuitive interface, with easy API integration for your existing systems.

Cost-Effective Alternative to Legacy Platforms

Modernize your IT infrastructure without the high costs and complexity of legacy virtualization. Pextra offers an open, flexible platform built for operational efficiency. .

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Manufacturing demands speed, reliability, and simplicity — Pextra CloudEnvironment delivers all three, helping you accelerate Smart Manufacturing, reduce costs, and adapt to global challenges.

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.

Ready to Get Started With Pextra?

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

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