Nutanix Kubernetes Platform (NKP)

Consolidate and master your cloud native operations
Deploy, Secure, Manage and Upgrade:
Enterprise-Ready Cloud Native Stack at Scale

"Mission-Ready Kubernetes: Secure, Scalable, and Simple with Nutanix for Government & DOD Operations"

"The Nutanix Kubernetes Platform is a secure, scalable, and fully integrated container management solution built to meet the mission-critical demands of the U.S. Government. NKP simplifies Day 0 to Day 2 Kubernetes operations with built-in security, persistent storage, and Infrastructure as Code automation. NKP is ready for air-gapped, IL5/IL6, and tactical edge environments out of the box. Whether you're modernizing legacy systems or deploying containerized workloads in disconnected operations, NKP ensures compliance with DoD DevSecOps, Zero Trust, and FedRAMP strategies—without the overhead of complex multi-vendor stacks."

Pure Upstream Kubernetes

- **Upstream Kubernetes Without Lock-In:** NKP uses pure, CNCF-upstream Kubernetes—no proprietary forks or vendor lock-in—ensuring maximum portability, interoperability, and ecosystem compatibility.

- **Integrated Open-Source Ecosystem:** NKP seamlessly integrates best-of-breed open-source tools (e.g., Prometheus, Fluent Bit, Calico, and Harbor), reducing complexity and enabling a secure, modular DevSecOps pipeline.

- **Full Stack Automation & IaC Ready:** With Terraform, Helm, and GitOps support built-in, NKP accelerates deployment and Day-2 operations—without needing third-party orchestration layers or proprietary scripting languages.

- **Security-Hardened by Design:** NKP applies open-source security frameworks (e.g., CIS Benchmarks, NSA Kubernetes Hardening Guide) out of the box, and extends Zero Trust with open-source tools like AccuKnox KubeArmor.

## Multi-Cloud to IL-6 Deployments Made Easy

- **Unified Multi-Cloud Control:** Manage Kubernetes clusters across on-prem, AWS, Azure, and classified IL-6 environments from a single pane of glass—eliminating siloed operations and reducing administrative overhead.

- **Disconnected Operations Ready:** NKP runs natively in fully air-gapped and tactical environments, enabling secure application deployment and lifecycle management even without internet connectivity.

- **Consistent Policy & Governance:** Apply standardized security policies, RBAC, and compliance controls across all environments—ensuring Zero Trust and DevSecOps best practices are enforced everywhere.

- **Simplified Lifecycle Management:** Automate provisioning, scaling, and patching of clusters in any environment—reducing operational complexity and accelerating time-to-mission in disconnected and classified domains.

Zero Trust Security

- **Enforce Least Privilege Access:** NKP integrates with AccuKnox to provide Kubernetes-native microsegmentation and runtime enforcement, ensuring every pod, user, and service operates with the minimum necessary permissions.

- **Continuous Runtime Security:** AccuKnox applies behavioral profiling and eBPF-based runtime protection to detect and prevent anomalous activity—supporting real-time Zero Trust enforcement in classified, IL5/IL6, and tactical environments.

- **Immutable Infrastructure-as-Code:** NKP supports GitOps and declarative security policies, allowing Zero Trust controls to be versioned, auditable, and consistently deployed across clusters—core to DevSecOps compliance.

- **Secure Multi-Tenant Isolation:** NKP's built-in multi-cluster and namespace isolation, combined with AccuKnox's workload-aware policy enforcement, ensures strict data and user segmentation aligned with DoD Zero Trust Architecture (ZTA) mandates.
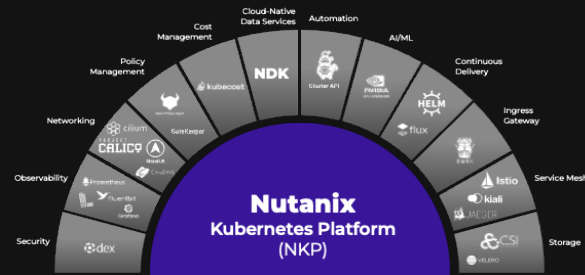
Nutanix Kubernetes Platform (NKP) Partner Solutions & Use Cases

Nutanix Enterprise AI (NAI)

- **AI-Enabled Mission Continuity:** Run and manage containerized AI/ML workloads across connected, disconnected, and classified IL-6 environments—ensuring real-time insights and decision support at the edge and core.

- **Unified Ops for AI & Kubernetes:** A single management console provides full-stack visibility and control over both Kubernetes clusters and AI pipelines—simplifying governance, orchestration, and resource optimization across clouds and air-gapped domains.

- **Multi-Cloud + Air-Gapped Flexibility:** Seamlessly deploy and scale AI-powered applications across AWS, Azure, on-prem, and IL-6 with consistent infrastructure, data pipelines, and security policies.

Pryon AI

- **Secure AI-Powered Knowledge Access:** Pryon enables instant, natural language access to structured and unstructured data—even in disconnected IL-6 environments—while NKP provides the secure, scalable platform to host it.

- **Consistent Multi-Cloud & Air-Gapped Deployment:** NKP delivers a unified Kubernetes platform to deploy Pryon across AWS, Azure, on-prem, and IL-6 environments—ensuring consistent AI capabilities across the mission spectrum.

- **Operational Efficiency at the Edge:** Pryon on NKP brings enterprise AI to air-gapped tactical environments, allowing warfighters and analysts to query mission-critical data at the speed of thought—without relying on cloud access.

AccuKnox KubeArmor Runtime Security

- **Accelerated ATO with Built-In Compliance:** NKP and AccuKnox align with DoD STIGs, NIST 800-53, and Kubernetes hardening guides—streamlining documentation and security controls needed for faster ATO approval.

- **Policy-as-Code for Continuous Compliance:** AccuKnox enforces runtime Zero Trust policies as code, enabling auditable, repeatable security postures across all environments—from cloud to IL-6 air-gapped deployments.

- **Secure Deployment in IL-6 & Multi-Cloud:** NKP and AccuKnox support full functionality in IL-6, air-gapped, and multi-cloud environments—enabling secure, mission-ready applications anywhere the warfighter operates.

Tactical Edge & JADC2 Use Case

- **Mission-Ready AI at the Edge:** Pryon delivers rapid, natural language access to critical data in disconnected environments—empowering warfighters with real-time intelligence aligned to JADC2's decision superiority goals.

- **Hardened, Portable Kubernetes:** NKP enables secure, lightweight container orchestration on tactical hardware, supporting consistent app deployment from CONUS to the edge, even in IL-6 air-gapped conditions.

- **Zero Trust Enforcement Anywhere:** AccuKnox ensures end-to-end security with microsegmentation, runtime protection, and policy-based controls—enabling secure data flow and resilient operations across all JADC2 nodes.

DoD Logistics & Supply Chain Optimization

- **AI-Powered Supply Chain Awareness:** Pryon enables secure, natural language access to maintenance records, inventory levels, and logistics directives—accelerating readiness and reducing bottlenecks across complex DoD supply chains.

- **Modernized, Portable Logistics Infrastructure:** NKP delivers a secure, scalable Kubernetes foundation for deploying containerized logistics applications across multi-cloud, on-prem, and tactical environments—supporting rapid fielding and sustainment.

- **Zero Trust Supply Chain Assurance:** AccuKnox enforces runtime security, microsegmentation, and SBOM integrity—empowering integrators to build and maintain trusted software pipelines from factory to foxhole.

C5ISR Operations Use Case

- **AI-Enhanced Situational Awareness:** Pryon enables secure, real-time access to intelligence reports, sensor data, and mission directives using natural language—accelerating C5ISR decision-making in contested environments.

- **Edge-Ready, Secure Infrastructure:** NKP supports the deployment of containerized C5ISR applications across multi-domain environments—from cloud to tactical edge—with high availability, scalability, and IL-6 readiness.

- **Zero Trust Cyber Defense for Mission Systems:** AccuKnox provides deep visibility and runtime enforcement across C5ISR workloads, ensuring secure communications, data integrity, and compliance with DoD cyber mandates.