Pure Storage Joins the AI-RAN Alliance

The integration of artificial intelligence (AI) with radio access networks (RANs) is progressing rapidly, and organizations at the forefront of these technologies are consistently seeking methods to enhance their capabilities, performance, and scalability. In a significant development, Pure Storage is announcing its membership in the AI-RAN Alliance, a collaboration aimed at accelerating the adoption of AI-driven RAN solutions.

The AI-RAN Alliance is dedicated to advancing AI-driven solutions in RANs, enhancing network efficiency and service delivery. This partnership aligns with the commitment of Pure Storage to driving innovation at the intersection of AI and telecommunications.

This blog elucidates the necessity of modern storage solutions for AI-RAN and how innovative technology from Pure Storage can facilitate this transformation. Our

telco experts will be at NVIDIA GTC 2025, March 17-21. Book a meeting to speak with one, or drop by booth #1309.

The Role of the AI-RAN Alliance

The AI-RAN Alliance is a collaborative initiative that brings together leading technology companies, telecom operators, and research institutions to advance the integration of AI within radio access networks. The alliance aims to foster innovation, establish standards, and promote the implementation of AI-driven solutions in RAN. The AI-RAN Alliance is organized into several working groups that focus on different aspects of integrating AI into RANs:

- **AI for RAN:** This group focuses on leveraging AI to enhance the performance and efficiency of RAN. The objective is to apply AI to optimize network operations, enhance service delivery, and improve overall network performance.
- **AI and RAN:** This group addresses the spectrum, energy, and processing efficiency in RAN systems. It also looks into multi-tenancy RAN and AI workloads, ensuring that AI algorithms can run efficiently on RAN technologies without compromising on performance.
- **AI on RAN:** This group is focused on the technical requirements necessary for AI to run effectively on RAN. It looks into aspects like jitter, latency, and other critical performance metrics to ensure that RAN systems can support advanced AI applications seamlessly.

The Necessity of Modern Storage for AI-RAN

Modern RAN architectures must evolve to address the increased data traffic, diverse service requirements, and the necessity for rapid scalability and deployment. The integration of AI into RAN technologies requires a robust infrastructure capable of handling diverse, high-volume data applications, ensuring network reliability, availability, and performance.

With AI becoming integral to telecom networks, traditional storage architectures—relying on dedicated disk-based appliances or direct-attached storage—are no longer sufficient. The challenge lies in extracting data from network functions in real time and managing this data holistically. To address these requirements, a modern data architecture that supports both AI/ML automation and high-capacity, low-latency data operations is essential.

Pure Storage offers advanced data storage solutions perfectly suited to meet these demands. The Pure Storage platform simplifies and accelerates AI workflows, from data processing to AI model training and inference, effortlessly handling workload variability without adding complexity. This is achieved through:

- **A unified storage approach:** The platform eliminates data silos, integrates diverse data sources, and enhances overall network efficiency by sharing storage capacity and I/O bandwidth with multiple data-intensive applications.

- **Scalability and reliability:** Pure Storage systems relieve IT, data scientists, and AIOps teams from common storage management tasks, allowing them to focus on delivering high-performing environments for AI projects. These systems can scale on demand, adjusting to the needs of network, energy, and spectrum optimization; Open and Virtualized RAN Intelligence Controllers; and many other use cases.

- **Collaboration with NVIDIA:** Since 2017, Pure Storage has worked with NVIDIA, a leader in AI computation, to develop solutions that integrate Pure Storage FlashBlade//S™ storage systems with NVIDIA's DGX SuperPOD, BasePOD, and other models. This collaboration delivers a certified Ethernet-based solution that supports various AI applications in telco environments, enabling efficient AI model training and production without disruption.

By joining the AI-RAN Alliance, Pure Storage will leverage its expertise to enhance the alliance's ability to manage data storage needs, thus ensuring efficient and reliable network operations. This collaboration marks a significant milestone in advancing telecommunications infrastructure to meet the growing demands of AI-driven technologies.

How Pure Storage Facilitates AI-RAN Adoption

By joining the AI-RAN Alliance, Pure Storage brings its industry-leading expertise and innovative storage solutions to the forefront, aiding in the acceleration of AI-driven RAN technologies.

The AI-RAN Alliance represents a significant advancement in the evolution of telecommunications, and our membership in this alliance underscores our commitment to innovation and excellence. With our portfolio of modern storage solutions, Pure Storage is poised to play a pivotal role in addressing the challenges of AI-RAN and driving its widespread adoption. As we look to the future, the collaboration between Pure Storage and the AI-RAN Alliance promises to deliver more intelligent, efficient, and resilient networks, transforming the way we connect and communicate.

Learn more about Pure Storage solutions for telecom, and meet with us at NVIDIA GTC 2025.