Accelerate operations and innovation with AI

A private cloud for AI for telco

Hewlett Packard Enterprise

The telecommunications industry faces significant challenges in maintaining performance, customer satisfaction, and operational efficiency in an increasingly competitive landscape with tight margins. Telcos must continuously innovate to meet customer expectations and improve network reliability.

The following are some of the key problems faced by the industry:

- **Edge computer vision:** The deployment of edge computing resources to process visual data from surveillance cameras, IoT devices, and other sources can significantly improve real-time decision-making. However, traditional methods of data processing are often centralized, leading to latency issues and slower response times.
- **Customer retention support:** With high churn rates and intense competition, telcos must find ways to retain their customer base. Traditional customer support models, which rely on reactive measures and limited data insights, often fail to address the root causes of customer dissatisfaction.
- **Network anomaly detection:** The risk of anomalies such as unauthorized access, service disruptions, and performance bottlenecks is higher than ever. Traditional network monitoring tools often struggle to keep pace with the sheer volume generated by modern networks. This can lead to delayed detection and response to anomalies.
- **5G deployment:** The rollout of 5G networks presents numerous challenges, including the need for substantial investment in new infrastructure, managing spectrum allocation, and ensuring compatibility with existing networks. Additionally, 5G requires dense networks of small cells, which can be difficult to deploy and maintain.
- **Bandwidth demand:** As consumer demand for high-speed internet and data-heavy applications grows, telcos must continually upgrade their networks to provide sufficient bandwidth. This can be a costly and technically challenging process, especially in densely populated urban areas.

Solving key challenges with AI

Artificial intelligence (AI) can help solve industry challenges in a better way. Here's how AI can support various aspects of telecommunications.

- **Enhance edge computer vision:** AI-powered systems can process visual data at the edge, reducing latency and enabling real-time decision-making. They can identify patterns and anomalies in visual data that might indicate maintenance issues, security threats, or other operational concerns, allowing for immediate intervention and improved service delivery.
- **Improve customer retention:** AI-driven analytics can assess vast amounts of customer data to identify behavior patterns and predict churn risk. By understanding the factors that lead to customer dissatisfaction, telcos can take proactive measures to address these issues before customers decide to leave. Virtual assistants can also facilitate triage and case resolution.

- **Accelerate response to threats:** Machine learning models can continuously monitor network data to detect unusual patterns and anomalies in real time. These models can learn from historical data to identify potential threats and performance issues, allowing for rapid response and mitigation.
- **Deploy 5G efficiently:** AI can optimize the planning and deployment of 5G infrastructure by analyzing vast datasets to determine the best locations for new cell towers and small cells. AI-driven tools can simulate network performance under various conditions to ensure efficient 5G rollout and minimize coverage gaps.
- **Optimize network performance:** AI can predict and manage bandwidth demand by investigating usage patterns and dynamically allocating resources to prevent congestion. AI-driven traffic management systems can prioritize critical applications and optimize network performance during peak usage times.

A private cloud for AI for telcos

HPE Private Cloud AI is the engine behind implementing these new value streams in the telecommunications industry.

HPE Private Cloud AI, part of NVIDIA® AI Computing by HPE, is a turnkey private cloud solution for inference, retrieval augmented generation (RAG), and fine-tuning use cases. Codeveloped with NVIDIA, it delivers a cloud-based experience to simplify AI complexity, improve productivity, and speed time to value—while keeping data private, secure, and under complete control of enterprise IT. The solution can be deployed on-premises in colocations, edge locations, or data centers. And unlike full-stack AI solutions based on reference architectures that can take months to plan, build, and deploy with professional services, HPE Private Cloud AI is ready to use out of the box—providing productivity to AI and IT teams in minutes. All managed through HPE GreenLake cloud, it enables customers to expand and add AI capabilities as demand within the enterprise grows.

Key benefits of HPE Private Cloud AI

- **Instant AI productivity:** Get self-serve access to essential AI tools
- **Unified access to all your data:** Remove data siloes with one global namespace for seamless access to different data types, anywhere
- **Enterprise-grade confidence and control:** Protect data and models, and maintain performance and reliability of AI infrastructure, with multilayered controls
- **Cloud experience that keeps your data and IP private:** Deployed on-premises, designed for hybrid; flexible and modular with cloud technologies, economics, and scalability

Up and running in **three clicks**

2x increase in AI development productivity[1]

4x faster time to inference[2]

Flexibility to consume and manage as demand grows

[1] 90% developer productivity increase is based on 2023 UA data: Reduction in total time to build, train, evaluate and operationalize ML model using bespoke tools in comparison with fully integrated workflows and self-service access to data and ML frameworks.

[2] The 4x faster time to inference is in comparison with the typical DIY manual steps to operationalize large language model (LLM) versus automation in AI essentials (for example, virtual assistant chatbot solution accelerator with RAG).

Accelerate AI success with Hewlett Packard Enterprise and NVIDIA

AI holds immense potential for driving transformation. However, the vast and fragmented ecosystem of AI software and hardware choices creates complexity and can jeopardize a company's most valuable asset—its proprietary data.

HPE Private Cloud AI helps to solve these challenges—simplifying complexity and improving productivity while managing enterprise risk from AI.

Wherever you are on your AI journey, HPE Private Cloud AI can help you accelerate success. Start fast, remain open, and consume flexibly to meet future AI opportunities.

Learn more at

HPE.com/us/en/Private-Cloud-AI.html

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