

Principled Technologies research study explores the advantages of HPE Private Cloud AI

The study report discusses the considerations around public cloud versus on-premises for AI and contrasts three on-premises approaches

HOUSTON, TX, UNITED STATES, May 15, 2025 /EINPresswire.com/ -- As organizations increasingly adopt artificial intelligence technologies, many face critical decisions about where and how to deploy these AI workloads. Principled Technologies (PT) conducted a research study comparing three primary on-premises AI deployment strategies—build-your-own, reference architecture + services, and turnkey. Their report highlights HPE Private Cloud AI as a leading turnkey solution that simplifies procurement, accelerates deployment, and reduces ongoing maintenance burdens.

Key findings from the report include:

- **Faster time to value:** HPE Private Cloud AI offers pre-validated hardware and software stacks delivered in pre-engineered configurations. This enables customers to deploy AI infrastructure within hours or days rather than months.

- **Enhanced security and compliance:** By hosting AI workloads on premises within a private cloud environment powered by HPE GreenLake, organizations maintain full control over sensitive data,



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On-premises AI approaches: The advantages of a turnkey solution, HPE Private Cloud AI

Artificial Intelligence (AI) theories and approaches have been around for decades, but in 2022, AI became more accessible and understandable to users everywhere with the release of ChatGPT. Since then, the pace of AI improvement has been fast and furious, with a whole ecosystem emerging of model development, AI-specific hardware product lines, and services that tie all the technology together. The rapid pace of AI ecosystem change can be overwhelming for organizations looking to harness the power of this tool. Understanding, assembling, and deploying the hardware and software elements necessary for these complex systems might require greater technical expertise than these organizations have.

Alongside the complexities of building AI solutions are the ever-present concerns of compliance and security. How do organizations begin to capture value from AI without surrendering their private data and intellectual property to public-cloud-based AI systems, which may have varying ways of capturing and using that data? Decision-makers who wish to strike this balance are looking at private cloud AI solutions, which can offer a turnkey way to reap the potential benefits of AI while maintaining control and governance of their systems.

Gain the advantages of a turnkey fully managed on-premise AI solution with HPE Private Cloud AI

Streamline procurement and deployment with pre-engineered, full-stack configurations

Accelerate data science productivity with pre-installed data engineering applications

Get a RAG-based LLM application up and running in just a few steps

Summary of findings

Turnkey approach – HPE Private Cloud AI – Simplest and fastest time to value

- Deployment involves selecting a pre-determined size and after receiving, can be up and running in days after delivery
- Updates handled entirely by HPE
- Built-in tools and private cloud integration allow data management from a single pane of glass, saving engineering and IT management cycles

Reference architecture approach – Dell AI Factory with NVIDIA – Moderate complexity and time to value

- Deployment involves use case definition with sales, pre-scoping, and services
- Updates provided by Dell and NVIDIA
- No private cloud integration out of the box

Build-your-own approach – Greatest complexity and time to value

- Deployment involves manual selection, configuration, and procurement of components, can be a months-long undertaking
- Updates procured and installed by internal IT staff or a third party

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addressing compliance requirements such as GDPR and reducing risks associated with public cloud breaches.

- Integrated AI software ecosystem: Unlike other approaches, HPE's turnkey solution comes with pre-installed data engineering and data science tools—including Apache Apar, Airflow, Kubeflow, and NVIDIA AI Enterprise—providing a unified platform for AI developers, administrators, and data scientists.
- Simplified management: Role-based access controls, single sign-on, and lifecycle management are built into the solution, minimizing IT overhead and allowing teams to focus on innovation rather than routine maintenance.

From the report, "While a validated reference architecture + services approach such as Dell AI Factory simplifies deployment by offering validated components, it leaves management, integration, and orchestration to the customer, that company's services group, or a third party. In contrast, the turnkey HPE Private Cloud AI provides a pre-validated stack with hardware and AI toolsets, integrated data services software, and a cloud delivery model for administrators, data engineers, and data scientists—all of which lets organizations hit the ground running. It combines ease of procurement, setup, and management with a rich selection of out-of-box AI software and data tools, while providing the control and security of an on-premises deployment."

To learn more, read the in-depth research report at <https://facts.pt/PXgubnF>.

About Principled Technologies, Inc.

Principled Technologies, Inc. is the leading provider of technology marketing and learning & development services.

Principled Technologies, Inc. is located in Durham, North Carolina, USA. For more information, please visit www.principledtechnologies.com.

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