ANALYST BRIEF
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Enterprises are focusing on day 2 infrastructure operations to improve resilience, ensure compliance, and control costs for existing workloads and add new AI-enabled applications to private clouds.

Achieving Operational Excellence by Modernizing Day 0 to Day N Operations

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Introduction

Enterprises continue to rely heavily on on-premises and edge environments as an essential infrastructure architecture for modern applications. Business requirements, new workload challenges, and compliance needs mean the private cloud is here to stay. While technology trends change frequently, IDC found that traditional datacenters remain central to business continuity and consistent application delivery. Furthermore, 88.8% of organizations continue to run some production workloads on premises, reflecting the sustained strategic importance of private infrastructure across industries, as noted in Figure 1.

Figure 1 highlights a clear operational reality for IT: After 15+ years of public cloud migration, the private cloud remains a viable option for both existing and new workloads, including AI. Private cloud has a proven ability to scale, withstand disruptions, be cost effective, and deliver stable performance. Many AI use cases require data privacy, which a private cloud AI ecosystem provides. In addition, data sovereignty and government regulations are driving enterprises to consider AI workloads on private clouds. One example is the EU AI Act, most of whose provisions apply from August 2026.

Today, enterprises have more advanced tools and capabilities to manage their private cloud infrastructure. These platforms add greater automation and observability, ensuring that mission-critical workloads, from financial systems to AI analytics, run efficiently and securely. Enterprises can now leverage the same capabilities locally as they can in the public cloud. Line-of-business owners require modern IT operations and site reliability engineering (SRE) teams to deliver proactive, dynamic incident response while keeping applications performant. Essential capabilities include self-healing, predictive insight, software-driven resilience, and policy-driven governance.

At the center of this requirement is the evolution of day 2 post-deployment IT operations. New capabilities in an infrastructure operations solution are necessary to achieve these business metrics. These capabilities for day 2 include continuous monitoring, remediation, patching, optimization, cost predictability, and security compliance assurance. As

AT A GLANCE

KEY STAT

Production workloads continue to run in on-premises datacenters and company-owned edge locations. Further:

» 88.8% of companies still run production workloads on premises.

WHAT IS IMPORTANT

Only 8.4% of Global 2000 companies have moved all production to the public cloud after years of migration.

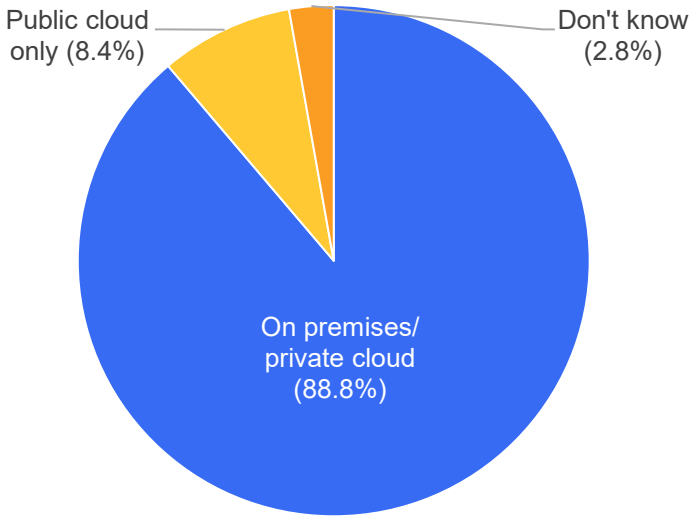
KEY TAKEAWAY

Private clouds continue to be heavily leveraged to support business outcomes. IT leaders need an effective strategy to manage on-premises workloads effectively. Day 2 operations are necessary to deliver resilient applications, control costs, and meet security compliance requirements. Private clouds are getting a fresh look due to increased capabilities and the requirements of new workloads, such as AI.

enterprise workloads grow more complex, day 2 operations determine not only application availability but also the organization's operational cost and risk structures for these new applications. Successful strategies integrate automated telemetry analysis, life-cycle orchestration, and data-driven decision-making frameworks, enabling teams to maintain high performance with reduced manual intervention.

FIGURE 1: ***Production workloads: On premises/private cloud versus public cloud***

Q ***What is the approximate percentage of your organization's total IT production transactions processed by location type today?***



Source: IDC's *Intelligent Cloud and Edge Operations Survey*, 4Q25 (n = 107)

Benefits

Enterprises need a modern solution for day 2 operations that helps IT teams be more efficient in several key areas. They should look for full-stack visibility to effectively meet service-level agreements, which often require advanced monitoring and reporting. Tight integration with a private cloud platform and IT automation enables the infrastructure operations solution to deliver business objectives for resilience, compliance, and cost. Reducing complexity so innovation can flourish is a key benefit of an effective infrastructure operations solution. IDC believes the essential areas for delivering these capabilities and reducing complexity are life-cycle orchestration, infrastructure management, and security compliance:

- **Life-cycle orchestration:** Also called fleet management, this includes upgrading and patching datacenter infrastructure and virtualization components across the entire landscape, which can dramatically lower complexity and costs. Single sign-on and infrastructure software licensing are centrally controlled and integrated. IT teams often struggle with the expiry of Certificate Authority–signed certs and password rotation. Both should undergo monthly reviews via a visual dashboard and alerts, with automated updates to keep them up to date proactively. Finally, tag management is essential for cost control and allocation, but it is often difficult to keep up to date. A modern operations tool provides simplified, unified management of all infrastructure tagging.

- **Infrastructure management:** The backbone of any solution is to provide IT teams with deep insight into how their infrastructure is performing in real time. AI-enabled troubleshooting means faster time to resolution and lower downtime costs. As companies move to modern container-based applications, the infrastructure operations solution must integrate with Kubernetes and provide insights into the end-user experience. Network, storage, and data protection monitoring are essential for maintaining agreed-upon metrics for site resilience. Built-in incident detection and providing known resolutions in the knowledge base further enhance resilience. Health metrics are reported in HTML for easy integration into enterprise dashboards. Advanced teams can use PowerShell to quickly gain access to alerts and create custom reports. By integrating capacity management into daily operations, IT teams shift from merely maintaining infrastructure to proactively enhancing performance, reducing costs, and increasing business value. Capacity management becomes more strategic with resource planning, moving beyond traditional spreadsheets. A modern private cloud platform can help teams oversee capacity requirements while supporting their business goals.
- **Security compliance:** With enterprises using multiple security software and hardware solutions, it is vital to have a comprehensive real-time view of user permissions, authentication, and infrastructure elements. The ability to quickly audit infrastructure for suspicious activity or violations ensures that accountability is never sacrificed. Detecting threats and consistently applying best-practice compliance standards reduces risk for enterprises.

Considerations

All technology carries risks and challenges to navigate during the initial implementation and beyond. While consolidating multiple infrastructure tools into a single comprehensive solution offers long-term savings and efficiency, migration and implementation can be challenging. IDC recommends using an experienced vetted partner to accelerate migration from third-party or older versions to the latest infrastructure operations solution.

Enterprises should not overlook training existing staff on new or upgraded software. To get the most out of an infrastructure operations solution, teams need to understand its use cases and capabilities. Investing in training and providing a technical sandbox for safe testing of a day 2 infrastructure operations tool helps enterprises derive more value from the solution more quickly.

Trends

Private infrastructure operations have advanced significantly over the past two years, adopting AI-assisted management and ML-based analytics to enhance situational awareness. These intelligent systems analyze metrics and logs across compute, storage, and network layers to anticipate disruptions and optimize resource utilization in real time. The modern operational model is increasingly proactive, detecting anomalies, recommending configuration updates, and initiating automated mitigations well before end users are affected. This intelligence enables IT organizations to meet service-level agreements with their business leaders, providing greater predictability and efficiency. With containers and more complex applications becoming commonplace, IT teams must rise to meet these challenges with improved tools and training.

Another example of this complexity is the rise of data-intensive workloads. New applications in AI, agentic AI, real-time analytics, data lakehouses, and industrial automation require predictable low-latency large-scale compute resources and strict compliance controls. Meeting these requirements demands not only high-performance infrastructure but also a tightly integrated infrastructure operational solution. Enterprises are increasingly consolidating tooling and modernizing

processes to combat this new complexity. By adopting platforms that harmonize automation, observability, IT operations, cost governance, and policy control across core and edge locations, enterprises can stay one step ahead of this complexity.

Conclusion

Day 2 operations can be a key differentiator in infrastructure effectiveness and competitive advantage.

Private cloud and on-premises infrastructure continue to play strategic roles in enterprise IT, supporting a broad range of production workloads that demand performance consistency and operational control, as well as data privacy, data sovereignty, and other regulatory compliance requirements. IDC research confirms that most organizations will maintain significant on-premises processing into the future, underscoring that private cloud infrastructure is a long-term architectural strategy. As enterprises expand into AI, real-time analytics, and data-intensive applications, the operational maturity of private environments becomes increasingly critical to business outcomes.

Organizations should no longer treat operations and SRE teams as afterthoughts once provisioning and application deployment are complete. Day 2 operations can be a key differentiator in infrastructure effectiveness and competitive advantage. Modern enterprises require operations solutions that go beyond basic monitoring. Next-generation tools deliver automation, intelligence, and policy-driven governance across the infrastructure life cycle. They form the backbone of the business' value. The focus is now on building self-optimizing, autonomous, and resilient-by-design environments that scale horizontally while maintaining governance consistency. As IT leaders refine their operational architectures, they are establishing modern capabilities that include life-cycle management, performance analytics, and security into a single operational fabric.

In effect, private infrastructure operations tools and IT teams that evolve into an intelligence-driven day 2 strategy will deliver on the promise of autonomous, adaptive, and proactive IT infrastructure that meets the enterprise's priorities. They are not merely a technical discipline but a strategic foundation for delivering business value. As organizations pursue growth and innovation through data- and AI-driven initiatives, the ability to manage, optimize, and govern infrastructure at scale will define the next frontier of operational excellence.

About the analyst

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Research Vice President Jevin Jensen covers IDC's Intelligent Cloud and Edge Operations with FinOps. His areas of expertise include infrastructure as code, GitOps, IT infrastructure and cloud automation, cloud cost transparency, FinOps, hybrid/public/multicloud management platforms, and edge management.

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VCF Operations improves efficiency through these capabilities:

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- **Operate:** Optimize troubleshooting and real-time observability for all VCF component infrastructure, including health and diagnostics through intuitive dashboards.
- **Protect:** Strengthen posture through encryption monitoring, compliance audit trails, and security posture management to mitigate risks.

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