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Dell Technologies and Microsoft Deliver Azure Cloud— Everywhere

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Abstract: Today, a need exists for a consistent cloud experience, everywhere. Fortunately, Dell and Microsoft have embarked on a joint collaboration to deliver Azure on premises as part of APEX.

Overview—the Problem

The cloud operating model has transformed IT operations, application development efforts, and organizations' ability to capitalize on business opportunities. Research by TechTarget's Enterprise Strategy Group shows that organizations decide to leverage public cloud services for various reasons, including improving time to value (cited by 52%) and enabling better access to new and innovative functionality (cited by 50%).¹

A cloud-only model, however, is not ideal for every workload. The characteristics of the data, compliance considerations, security issues, and strategic decisions that have been made, along with the existing investments in technology and personnel, can all lead to a given application needing to stay on site. Consider that when Enterprise Strategy Group asked organizations to identify which attributes might lead to an application being unsuitable for cloud migration, the responses included:

- Low-latency performance could be achieved more cost-effectively on premises (cited by 30%).
- Difficulty implementing security measures (29%).
- Too costly or too complex to migrate (29%).
- Governance policies or industry regulations would be violated if the workloads were not on premises (25%).²

Those are all legitimate concerns that would limit which apps and data should move off premises to public cloud environments. Still, organizations have a persistent desire to leverage a cloudlike experience and its associated benefits everywhere, including on prem. In fact, only 8% of surveyed organizations expect to maintain their "data center status quo" for the foreseeable future. The rest want to modernize.

So, clearly, the natural next step in the evolution of cloud IT is to make cloud services and cloud-native applications available everywhere the business requires them—not just within data centers managed by cloud providers—while offering a consistent, familiar management and governance experience. To that end, Dell Technologies and Microsoft have partnered to deliver Dell APEX Cloud Platform for Microsoft Azure.

¹ Source: Enterprise Strategy Group Research Report, *2023 Distributed Cloud Series: The State of Infrastructure Modernization Across the Distributed Cloud,* to be published July/August 2023. All Enterprise Strategy Group research references and charts in this showcase are from this research report unless otherwise noted.

² Source: Enterprise Strategy Group Complete Survey Results, <u>Multi-cloud Application Deployment and Decision Making</u>, May 2023.



The Future of Cloud Is Everywhere

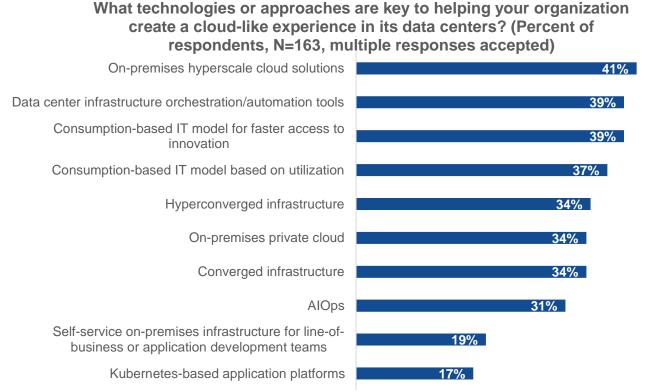
Enterprise Strategy Group research points to the need for this kind of infrastructure modernization on premises. Consider that the average number of data centers operated by organizations is likely to increase. Specifically, Enterprise Strategy Group forecasts that the percentage of organizations running six or more data center locations will grow from 32% today to 50% over the next five years. Essentially, even as organizations shift many applications to public clouds, their on-prem infrastructures won't disappear; they will instead increase, just not as fast as public cloud environments will.

With that fact in mind, IT leaders recognize that they need to modernize their on-premises environments to complement their public cloud investments, maximize the value of apps and data, and increase the organization's agility and flexibility in a hybrid cloud environment. When Enterprise Strategy Group asked those leaders to identify their strategies for their on-premises data centers over the next three years, 43% identified a need to improve connectivity with public cloud infrastructure, and 33% identified a need to invest in technologies that provide a cloudlike experience on premises.

As Figure 1 shows, among organizations that are trying to create a cloudlike experience in their data centers, leveraging hyperscale cloud solutions such as Microsoft Azure on premises is a common approach (cited by 41%). Additionally, 64% of respondents mentioned either one or both of the following approaches:

- Leveraging a consumption-based model with the intention to accelerate innovation (39%).
- Leveraging a consumption-based model with the intention to simply pay according to utilization (37%).

Figure 1. Top Approaches to Creating a Cloudlike Experience on Premises



Source: Enterprise Strategy Group, a division of TechTarget, Inc.

The findings highlight the importance of not just leveraging a cloud experience, but also having consumption flexibility to pay based on usage. The consumption-based usage model is now highly in demand.



Dell and Microsoft Collaborate to Deliver the Consistent Azure Experience— Everywhere

Organizations desiring a cloud operational experience everywhere should know that two IT industry leaders are collaborating to offer them exactly that. APEX Cloud Platform for Microsoft Azure is delivered by Dell Technologies on Dell infrastructure, and it is designed to operate within data centers or edge locations. In organizations using APEX Cloud Platform for Microsoft Azure, the IT team controls the delivery of the Azure experience to application and developer teams. The solution is a result of extensive engineering collaboration between Dell and Microsoft.

This solution delivers numerous benefits, including:

- **Dell APEX Cloud Platform Foundation Software**—This software provides deep, cross-layer integrations and intelligent automation to simplify initial deployment and ongoing operations across the full technology stack. Importantly, the software integrates with Microsoft Windows Admin Center and Azure Portal, enabling IT teams to use familiar tools and a simple, consistent, centralized mechanism to run dispersed Azure deployments.
- Consistency of automation, tools, and overall experience across data centers, edge locations, and Azure public cloud deployments—Azure Arc extends the Azure platform to provide the consistent experience across cloud, on-prem, and edge locations. The native integration with Dell APEX Cloud Platform Foundation Software makes it a seamless, integrated experience for organizations.
- Application modernization, everywhere—Having the same technology on premises and in the cloud
 improves application portability across environments. The result is more streamlined IT modernization and,
 with Azure APIs everywhere, a uniform way to leverage cloud-related advantages. Azure offers the Arcenabled, hybrid, on-demand app and data services that simplify app environments and improve DevOps agility
 and efficiency. Dell optimizes the delivery of these services on the APEX Cloud Platform so organizations can
 freely innovate—everywhere.
- Form-factor flexibility—Dell Technologies offers multiple infrastructure options through its next-generation PowerEdge servers designed for increased performance and reliability across core data centers, public clouds, and edge locations—including edge-optimized nodes designed to reduce footprint and energy consumption—enabling organizations to tailor their on-premises infrastructure to fit the specific requirements of their apps. Giving organizations more choice makes it easier for them to ensure their infrastructure is optimized to meet the demands of every application. And with the Dell APEX Flex on Demand payment structure, organizations can ensure their infrastructure will be able to scale and grow in the future, while still paying only for what they use today.
- Intrinsic security from both Dell and Microsoft—The APEX Cloud Platform for Microsoft Azure takes an intrinsic, multilayer approach to security, with security capabilities embedded in both Dell and Microsoft technology components of the stack. The capabilities include infrastructure lock, secure boot, role-based access control, and multifactor authentication. The solution also integrates with Azure management and governance services, enabling IT to enforce consistent security and compliance policies across dispersed deployments.

Conclusion

The Dell-Microsoft partnership is a powerful one, and this most recent result of their collaboration is impressive: the first Azure Stack HCl solution of its kind, delivering native integration and capabilities far beyond what exists in the market today.

The APEX Cloud Platform for Microsoft Azure is an ideal way to address today's hybrid cloud priorities. It is a platform that helps companies create and innovate by giving them the freedom to do so and by providing a consistent on-site/cloud experience, easy deployment, flexibility (both operationally and in terms of capacity consumption), and a multitude of highly differentiated software- and security-related capabilities.



At a time when many organizations are simultaneously trying to modernize their environments and struggling to find and retain skilled IT specialists, having those advantages available to them is especially important. Ultimately, this solution—the outcome of years of combined Dell and Microsoft engineering experience—is a way for organizations to bridge the cloud divide.

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