



Hybrid cloud on your terms: Dell Cloud Manager with Dell Hybrid Cloud System for Microsoft

In an era of digital transformation, the future is hybrid cloud



Many organizations recognize the critical need to quickly evolve as a digital enterprise — to become an organization that can embrace and apply social media, mobile, analytics and cloud technologies to create business improvements and enhance customer experiences. In this context, hybrid cloud computing offers agility for today's disruptive and competitive business environment.

Hybrid cloud promises that organizations can gain the flexibility and choice to run workloads across multiple clouds. The hybrid cloud model can make it possible for enterprise IT teams to deploy new applications in hours or minutes instead of days or weeks, helping to drive business innovation. Hybrid cloud also lets organizations dynamically expand or contract application resources across their cloud environments to ensure an adequate, but not wasteful, supply of resources at all times. These are some of the reasons that 9 out of 10 IT decision-makers say hybrid cloud is important for a "future-ready" enterprise.¹

At the same time, hybrid can be complex. Today, most enterprises find that they have applications spread across four, five or even more cloud providers, both public and private

Transform IT into a trusted cloud advisor

Enable your IT organization to become the trusted advisor and go-to broker for cloud services in your organization. As a trusted service provider, IT can make increased contributions to overall organizational performance by:

- Streamlining access to the cloud applications and services that business users require
- Matching the right application to the right clouds
- Empowering end users with self-service provisioning
- Unifying management with a single point of control over all your private and public clouds
- Extending existing governance policies to the cloud

(see figure). Furthermore, that mix of providers is often dynamic, with cloud environments regularly being added to or removed from the collection. It is also likely that some decisions to add new cloud elements are being made by groups other than IT — and these decisions are often made outside the sphere of IT’s influence or knowledge.

Despite IT’s natural inclination to define a simple solution that utilizes a single cloud environment addressing all of a company’s cloud computing needs, the reality is that companies will use a variety of cloud solutions, including private and public clouds, cloud-delivered software-as-a-service (SaaS) applications, cloud-based services (file sharing, backup and recovery) and perhaps managed/ hosted clouds. The true reality of enterprise cloud, therefore, is a mix of cloud environments that must be managed on an ongoing basis.

Determining the right hybrid cloud solution for your business

Multiple approaches are available for organizations adopting hybrid cloud. Some organizations may opt to build their environment in-house or use multiple vendors and manage the overall environment internally. However, these options require knowledgeable resources

for hardware, software, clouds and services. Many businesses simply do not have the in-house resources or budget to meet these requirements. In addition, implementation can be slow, negatively affecting time to value and return on investment. These can be significant challenges to hybrid cloud adoption.

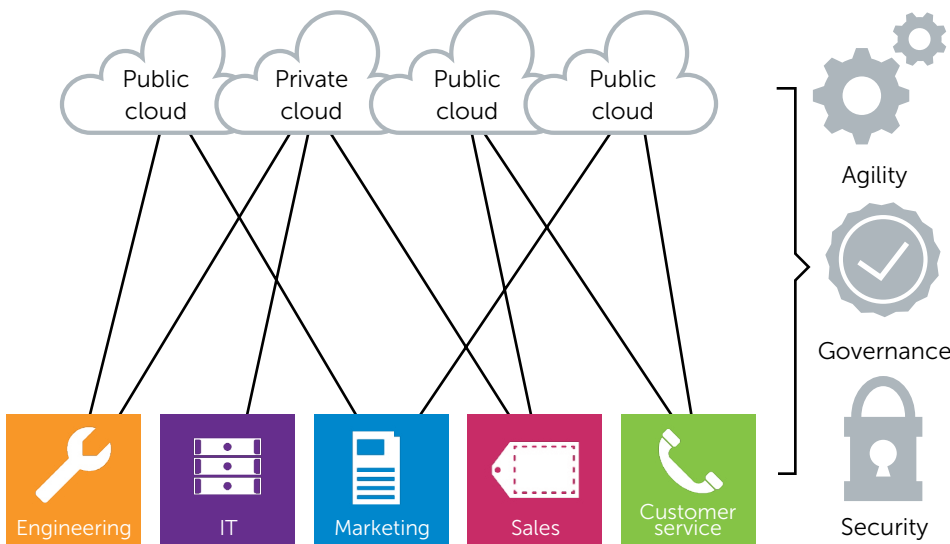
A better choice for many organizations is to automate and simplify cloud deployment and management with an integrated, pre-engineered solution that takes the complexity out of capitalizing on hybrid cloud. Built-in, multi-cloud management capability is an essential requirement of such a solution. Administering multiple management mechanisms (one per cloud environment) consumes both time and resources — and adds unnecessary complexity. An integrated management solution for both private and public clouds can help IT gain control and reduce costs.

Automation is also essential to achieving the full application and business agility that hybrid cloud promises. Having a service catalog of approved application or service stacks with parameters for auto-scaling and auto-recovery, self-service provisioning for server launching, and the ability to distribute applications and loads across multiple clouds, are just a few of the ways in which automation can be useful within a hybrid cloud environment.

Addressing complexity: Dell Hybrid Cloud System for Microsoft with Dell Cloud Manager

Dell delivers the cloud computing capabilities that organizations need with Dell Hybrid Cloud System for Microsoft. Dell and Microsoft have co-engineered Hybrid Cloud System to address the key adoption challenges for hybrid cloud. The system is the industry’s first integrated cloud solution validated with Microsoft Cloud Platform System Standard.

This integrated, engineered system ships with hardware preassembled and with software preinstalled. Automated



Mix of cloud environments that must be managed in hybrid cloud computing



deployment and system-level updates are all built in, and the entire system is designed with modular components that can be implemented based on each organization's own timeline.

Dell Cloud Manager software caps off the system with multi-cloud management, policy-driven cloud governance, and seamless user access and tracking. Windows Azure Pack is supported out of the box, and Dell Cloud Manager provides the ability to easily connect and manage existing or new Microsoft® Azure® public cloud accounts. With Dell Cloud Manager, you can also add and manage additional cloud accounts from other leading public and private cloud vendors, with a single point of control.

Dell Hybrid Cloud System for Microsoft can help IT reassert control with a robust cloud infrastructure and integrated control and management toolset to match the right application to the right cloud — private and/or public, in any combination. It is also adaptable to support your journey to cloud on your own path, at your pace. Dell and Microsoft have designed and engineered Dell Hybrid Cloud System for Microsoft to be flexible and modular to help future-proof your business and drive your digital transformation.

Many clouds, one pane of glass

Dell Hybrid Cloud System for Microsoft with Dell Cloud Manager delivers a single pane of glass to manage private and public clouds — including the premier public cloud providers in the market. Starting with Windows Azure Pack and Microsoft Azure, you can expand the number of virtual machines you are managing or add additional public and private cloud accounts. As your hybrid environment grows, the system continues to provide a single point of control over all your clouds. The Dell Cloud Manager unified dashboard enables you to:

- Create service catalogs of preapproved technology stacks
- Deliver governed self-service across clouds through a single end-user portal
- Track and manage cloud services spend
- Deploy services on the clouds of your choice

Rapid service provisioning

Provisioning new services is simple and quick with cloud-specific implementations regardless of the number of clouds you need to support. With Dell Cloud Manager you can create a service catalog of blueprints that can be launched into any supported cloud (see figure). Each blueprint is represented by a single template with

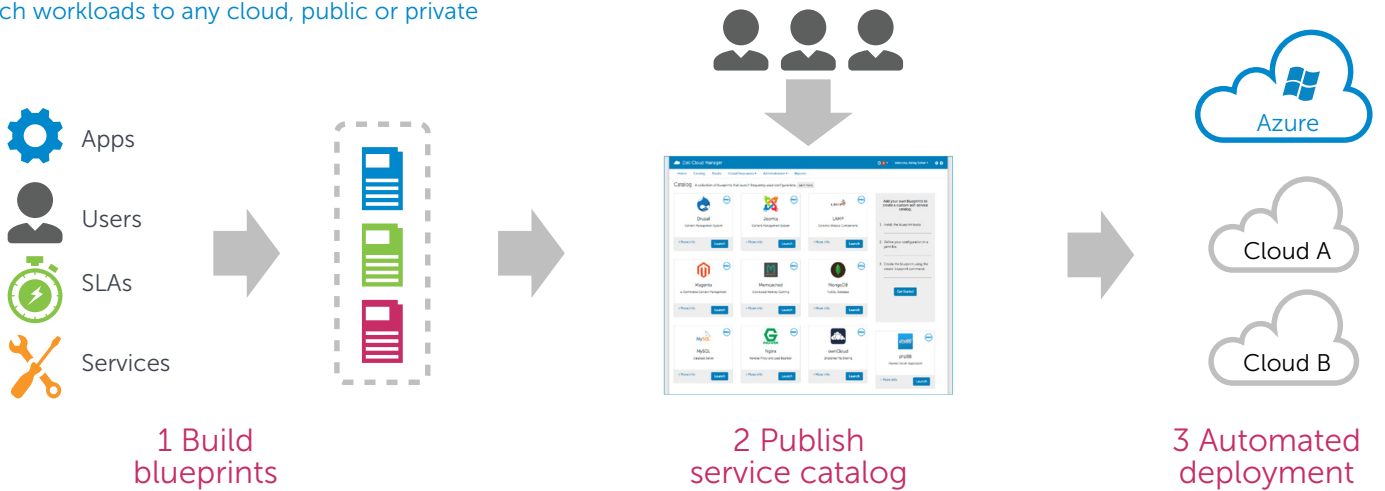
Ready to run

As a turnkey integrated hardware and software system, Dell Hybrid Cloud System for Microsoft provides rapid deployment, allowing you to go from zero to cloud in less than three hours. The system integrates:

- An optimized, modular, expandable cloud infrastructure
- Microsoft Cloud Platform System Standard
- Dell Cloud Manager for:
 - Multi-cloud management, user access control and IT services provisioning
 - Management of Microsoft Azure, Windows Azure Pack and other public and private clouds
- System updates powered with intelligent automation and dependency awareness
- Dell ProSupport
- Optional: Dell Cloud Dedicated for Dell Hybrid Cloud System, Dell Cloud Application Services
- Multiple Dell Scale Ready payment solutions

Rapidly provision services to any cloud

Match workloads to any cloud, public or private



Service provisioning using Dell Hybrid Cloud System for Microsoft with Dell Cloud Manager



multiple cloud configurations that will turn on services and infrastructure appropriately depending on which clouds the administrator defines and the user chooses.

In addition, by enabling secure access to cloud resources and accelerating resource provisioning, Dell Hybrid Cloud System for Microsoft with Dell Cloud Manager makes it easy to set up a consistent self-service experience and apply fine-grained access controls. Specific individuals can be allowed to launch instances under particular circumstances — for example, controls could allow a software writer to rapidly stand up an instance for coding work. Group associations are also enabled so access controls can be set for entire groups.

Rich management and governance

Dell Hybrid Cloud System for Microsoft with Dell Cloud Manager provides consistent functionality across each cloud environment, so you can continue to use the same management tools no matter how complex the hybrid cloud computing environment becomes.

The system includes robust access and financial controls, logging and monitoring capabilities and the ability to integrate with existing back-end tools and services. Key features include the ability to set billing codes, which allows managers to assign different budgets to individual business groups, track how much each team is using and set hard or soft quotas to prevent resource consumption from growing out of control. This enables managers to control and optimize cloud costs.

Dell Cloud Manager meets key requirements of a hybrid cloud environment

Dell Hybrid Cloud System for Microsoft is designed to make your IT services agile and more efficient. Dell Cloud Manager is integrated into this system to provide multi-cloud functionality. Dell Cloud Manager is essential for meeting three

key requirements of an optimized hybrid cloud environment.

1. Ability to support a wide variety of clouds

Given the growing complexity of corporate cloud computing environments, it is essential to manage a wide variety of cloud computing platforms and providers. Dell Cloud Manager supports the leading private and public clouds, enabling the addition or subtraction of cloud environments as driven by business requirements.

2. Consistent governance across cloud environments

Dell Cloud Manager efficiently and effectively supports complex hybrid environments by providing governance mechanisms across clouds, including the ability to integrate with corporate identity management systems such as LDAP/Microsoft Active Directory®.

3. Full application agility across all environments

To help deliver the agility required in today's business arena, Dell Cloud Manager supports rapid application deployment automation and scalable elasticity. With built-in native integration to configuration management tools Chef™ and Puppet, it helps provide complete orchestration of application stacks and minimizes the risk of manual error.

Making an important choice for your business

Choosing the right hybrid cloud computing system is just as important as selecting your cloud providers, since it can greatly simplify administration of complex environments. Dell Hybrid Cloud System for Microsoft with Dell Cloud Manager is the right choice. It provides a complete, integrated package to drive transformation and innovation, with the flexibility to allocate and control resources in the hybrid world.

Learn More

To learn more about Dell Hybrid Cloud System for Microsoft, contact your Dell representative or visit: Dell.com/dhcs



¹2015 Dell and Penn Schoen Poll

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