PUBLIC, PRIVATE, OR HYBRID: WHICH CLOUD IS BEST FOR YOUR APPLICATIONS?

Public cloud offerings have proliferated, and private cloud has become mainstream. It's now a question of how to harness the potential of a hybrid cloud model and broker services in order to optimize both service delivery and business performance.

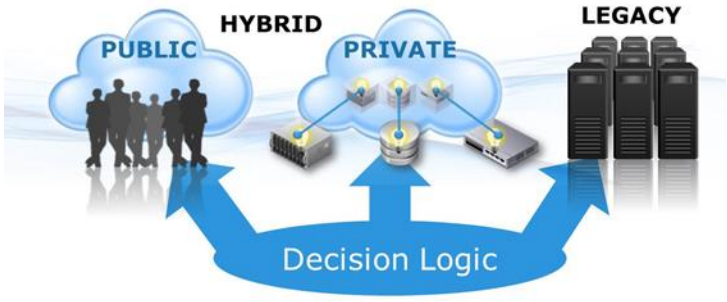
In this perspective, we'll show you how to determine the best cloud delivery model for your business applications—public, private, or hybrid.

TABLE OF CONTENTS

CLOUD DELIVERY OPTIONS ARE EXPANDING

Over the last several years, private cloud solutions have grown in number, concerns over the public cloud have diminished, and hybrid cloud has gone mainstream. The question now facing executives is not whether to use the cloud or how to implement a private cloud, but how to maximize the benefits of the cloud by moving to a hybrid cloud model.

As the market begins to move to hybrid cloud solutions, there are questions that must be answered: Where does each application belong, and where do you source new applications—in the public cloud, a private cloud, a hybrid cloud, or the organization's legacy computing environment? Where can you realize the best performance, cost, and flexibility? How can you design today's private cloud to be compatible with the hybrid cloud model you'll likely adopt within the next two years?



HYBRID CLOUDS ARE ON THE RISE

IT must provide a more agile set of services that deliver self-service and the performance and availability needed by the enterprise. A private cloud, built on a software-defined data center with automation and self-service options is only part of the solution. The reality is that many workloads are well-suited to run at a lower cost in the public cloud. As a result, IT must adopt a hybrid cloud model and broker services as appropriate from public cloud options.

IT now has additional incentive to change due to the increasing number of cloud service providers and the number of business stakeholders who are self-sourcing solutions from those providers and bypassing IT in the process. Enterprise IT's traditional monopoly on IT services has ended, as they are forced to compete for business with outside service providers. Success requires providing faster response and better service delivery for business stakeholders.

For many organizations, this requires a transformation in how they operate and conduct business. Enterprises must address fundamental assumptions about how IT is managed, delivered, and consumed. But the most important decision centers on optimizing application delivery models for hybrid cloud.

THE DELL EMC APPROACH

As enterprises implement hybrid cloud strategies as their preferred way to deploy IT, workload characteristics should be used to determine where each application should run. That enables IT to provide a seamless user experience for consuming IT services, regardless of the source of those services.

Using our sophisticated automated Adaptivity platform and best practices, Dell EMC helps businesses evaluate which applications and information are appropriate for cloud and which cloud model is the best fit for each. Dell EMC's approach involves looking at each asset and its potential migration to the cloud through the lenses of application alignment, application suitability, and application placement, as shown in Figure 1.

Figure 1: Dell EMC's Approach

Dell EMC uses the capabilities of its proprietary Adaptivity platform to more quickly and efficiently evaluate both business and technology concerns and place applications in the optimal cloud model. We can complete the evaluation 50 percent faster by adopting this automated approach versus employing traditional, manual techniques.

The two key elements (suitability and placement analysis) of the Dell EMC Adaptivity platform are shown in Figure 2. They allow us to evaluate the application suitability for cloud and to make placement recommendations in the optimal private, public, or hybrid cloud deployment model.

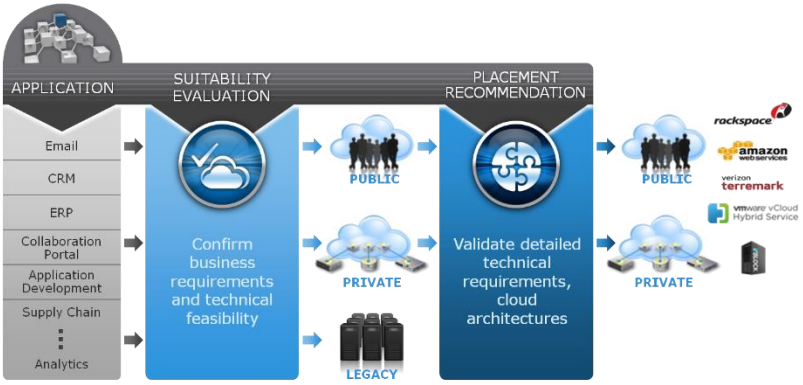


Figure 2: Adaptivity Performs Suitability and Placement Analysis

CLOUD APPLICATION ALIGNMENT

The application alignment phase includes the mapping of applications to specified business processes and activities to help the business understand how IT services the business today. It is here that we capture business demand drivers and validate the application functionality for the business activity. We then correlate business activity and validate application service levels.

Typical Application Delivery Model Designations

Public Cloud. Widely used but non-differentiated workloads not requiring 100 percent availability.

Private Cloud. Most core business applications—especially those with mission-critical SLAs.

Hybrid Cloud. Market-facing workloads such as e-commerce that require rapid scaling to meet peak demand.

Legacy Environment. Highly specialized workloads such as operational control systems.

CLOUD APPLICATION SUITABILITY

Determining cloud application suitability is an important phase where Dell EMC determines which applications are suited for a cloud delivery model versus legacy IT deployment, and recommends the most appropriate architecture. Here we evaluate how well different cloud models fit a company's specific business requirements by characterizing the application by a number of criteria: age, technical characteristics (such as data management, workload, workflow, and access), business service requirements (performance, availability, regulation/compliance), user demographics, and application type.

Characterizing the application workload enables the capturing of user demographics to access application peak usage cycles. By determining the application's fit for specific cloud models, we can capture cloud application requirements and drive design mechanics.

The sophisticated platform we employ has a knowledge database of application attributes, as well as the characteristics of a dozen public and private cloud architectures—from VMware® vCloud® Air™, to on-premises private clouds, to Amazon Web Services, to a hosted cloud managed by a vendor like Rackspace.

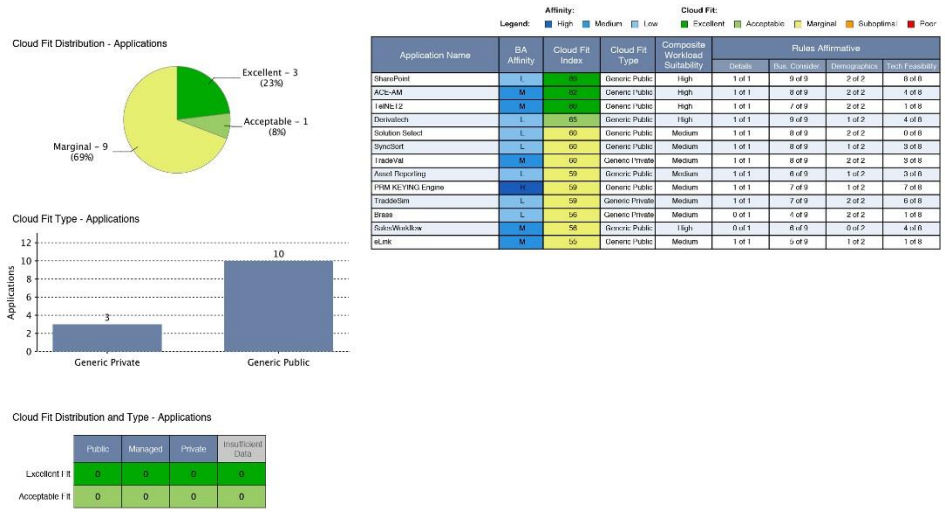


Figure 3: Application Suitability Planning Studio Analysis

Figure 3 depicts some results from the Adaptivity Planning Studio. The pie chart on the left hand side provides a summary of cloud suitability, while the graph beneath provides a summary of recommended cloud models across the portfolio. The right hand side shows business affinity by application, cloud fit score as ranked by each specific application, and the business and technology criteria driving the overall cloud fit score.

CLOUD APPLICATION PLACEMENT ANALYSIS

The cloud placement analysis determines the best architecture for cloud-suitable applications and recommends the optimal public or private cloud delivery model for specific applications. Here we create a more granular model of application consumption and deployment that enables us to provide a detailed logical architecture for cloud. Next we validate the application's current and projected infrastructure consumption based on business demand, which helps us forecast cloud capacity requirements and recommend a logical application configuration.

Figure 4: Adaptivity Application Placement Analysis

Figure 4 shows how we use specified application attributes to guide cloud suitability. The left-hand side shows the attributes for each application set, which may include lifecycle stage, development language, security environment, migration complexity, number of users, and business relevance. On the right, the pie charts compare the application's demographics against the entire portfolio to provide a dynamic dashboard that facilitates conversation between executives to drive decision making, and uncovers knowledge gaps related to the application environment.

CONCLUSION

The hybrid cloud combines the best features of public and private clouds and enables better business performance on multiple fronts simultaneously: cost, manageability, information access, new capability deployment, coordination and collaboration, business continuity and security, business innovation, and growth.

Dell EMC is at the forefront in deploying well-run hybrid cloud solutions. Our consultants leverage our sophisticated automated platform, best practices gained over thousands of engagements, and an information-centric approach to meeting business and technology challenges.

When you are ready to make decisions about which applications and information are appropriate for cloud and which cloud model is the best fit for each, Dell EMC can help you complete the evaluation 50 percent faster with our automated approach, leveraging the Adaptivity platform.

CONTACT US

To learn more, contact your local representative or authorized reseller.