Automation eases the integration of hybrid cloud environments

Brokerage services help optimize infrastructures and improve management

Highlights

Development and management of hybrid cloud environments is difficult, typically requiring specialized skills to optimize and manage disparate systems. Integration can also often be a problem: many organization need help meshing existing systems and tools into the new hybrid environment, then developing a centralized way to manage that environment. Cloud brokerage software and services can help meet these challenges.

Hybrid cloud computing can help propel business. By melding traditional IT infrastructures and private clouds with an array of purpose-bought public cloud platforms, hybrid clouds can provide the type of scalable, agile and easily deployable environments that speed time-to-market for innovative new applications. Concurrently, the use of relatively inexpensive public cloud platforms can help IT meet budget constraints while limiting the need for capital expenditures.

But hybrid cloud has a downside. Development and management of hybrid environments is difficult, typically requiring specialized skills to optimize and manage disparate systems. Integration can also often be a problem: many organization need help meshing existing systems and tools into the new hybrid environment, then developing a centralized way to manage that environment. This paper will examine how cloud brokerage software and services can help meet these challenges.

The challenges of instituting and managing a hybrid environment

Traditional, manual processes for the integration and optimization of hybrid cloud environments are complicated and unwieldy. IT must first develop an overall hybrid cloud implementation plan that aligns with business goals. As part of this plan, IT has to prioritize components to be standardized and rationalized. IT must then implement a central catalog of cloud services, populated with IT-approved resources that meet the needs of application developers and other line-of-business users. A significant degree of automation must be built into the system if it is to provide the speedy deployment capabilities these users expect. Of course, these platforms must also smoothly and securely integrate with the rest of the infrastructure, including existing tools and processes.

After infrastructure architects design and implement the new infrastructure, IT operations professionals must decide how to best manage the hybrid environment. They must determine ways to obtain a comprehensive view of all infrastructure components. A central platform should provide management capabilities for computing systems in use, while helping IT monitor order status and administer accounts and credentials. Since cost is always a concern, this platform should also help IT conduct financial analyses of the hybrid environment.

Hybrid cloud computing can help propel business, but manual processes for integration and optimization are time-consuming and unwieldy.

These challenges are significant. That's why so many organizations choose to work with third-party providers for cloud brokerage software and services.

Brokerage platforms ease implementation, management processes

Cloud brokerage platforms offer pre-seeded catalogs of public cloud offerings. Often, IT can augment these catalogs with public and private cloud offerings of its own choosing. The platform provides insight into each cloud offering—typically including information on capabilities, security and cost—that can help IT determine which cloud services are best for each application. These platforms can help IT decide which applications to migrate, and to which platform—then ease the migration process itself. They can even help organizations:

- Automate the order lifecycle with an IT-approved service store of offerings that can be used by employees throughout the organization
- Standardize infrastructure components for faster application deployment
- Simplify the ongoing management of the hybrid ecosystem through a single, comprehensive tool
- Gain access to specialized capabilities and services

Combining a cutting-edge platform with proven services

IBM® Cloud Brokerage Solutions offers a cloud brokerage platform and associated services that can help organizations source, provision, integrate and manage hybrid environments across cloud models, regardless of provider.

The IBM Cloud Brokerage platform offers a catalog pre-seeded with the offerings of several major cloud providers—VMware, IBM Bluemix® Infrastructure, Amazon and Microsoft among them—along with an ecosystem of specialty services. The platform provides insight into each cloud offering, typically including information on security, capabilities and cost, that can help IT determine which cloud services are right for its various business needs.

The dynamic nature of this catalog helps automate orders for cloud platforms and services (see Figure 1). It can expand the catalog with other public clouds, private clouds, managed services and traditional IT resources. And it's just as easy to replace platforms and services at use in the organization as business needs evolve.

Manufacturer achieves fast deployment of cloud services with IBM
When a major American manufacturer needed to securely deploy Amazon Web Services (AWS) computing capabilities, it contacted IBM Cloud Brokerage Solutions. The company wanted to be able to create ISEC-compliant AWS Windows virtual machines within hours as computing demand required. IBM worked with this company to implement a dynamic brokerage catalog that automates the IT order lifecycle and provides users with self-service access to a broad range of IT and business services. As a result of its work with IBM, the company was able to obtain the computing power it needed, when it needed it. It was also able to better control consumption of cloud services.
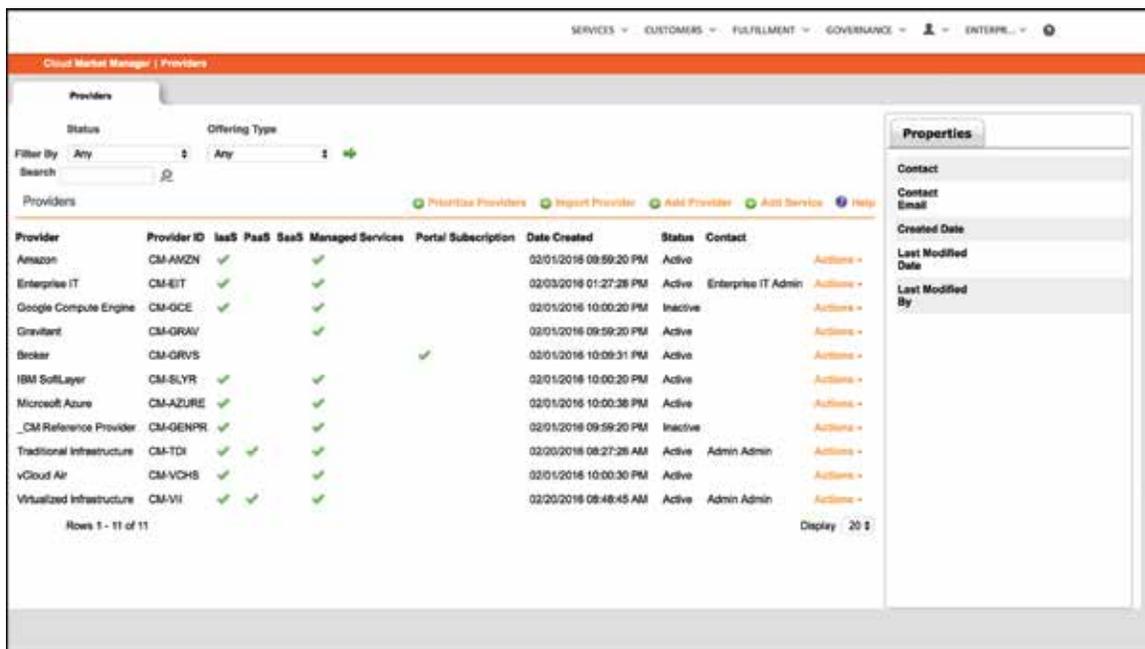
Figure 1. The IBM Cloud Brokerage platform helps IT manage cloud providers through a single, centralized location.

Automating the lifecycle, standardizing components

IT, developers and line-of-business employees needing computing capacity can access these cloud platforms via a virtual store. There, automation is further improved, and standardization accomplished, though the use of solution blueprints. These are virtual containers housing infrastructure specifications and available managed services for certain categories of applications. These containers are standardized to ease deployment and help organizations avoid vendor lock-in. Solution blueprints are defined by IT but customizable by developers and line-of-business employees.

Consider the case of application development as one example of the platform's automation capabilities. Developers visit the virtual store to choose a task-specific blueprint for the type of application they wish to design. Choice of blueprint automatically triggers provisioning of infrastructure

and middleware. Upon completion of app design, the development team saves its blueprint. The quality assurance team can then access the same blueprint and use it as a basis for a test environment. Once testing is complete, IT can provision a production environment based on the updated blueprint and deploy the app. Blueprints also help IT track versioning and configuration changes.

Simplifying integration

The IBM Cloud Brokerage platform can simplify management of hybrid environments. It accomplishes this in part by easing the integration of existing tools and processes. Useful systems including configuration management databases, IT service management ticketing systems, cloud management tools and single sign on capabilities can all be integrated into the IBM Cloud Brokerage platform and used to manage hybrid cloud environments.

Providing services

To further optimize and integrate hybrid environments, many organizations benefit from IBM cloud services.

IBM experts can examine, test and model interactions between on-premises IT, private clouds and public clouds to help optimize the entire infrastructure. These proven processes include identifying which workloads should remain in traditional data center infrastructures or private clouds, and which are suited to public cloud deployment. IBM can help organizations consolidate information on capacity planning, consumption and delivery. IBM can serve as the organization's representative with public cloud providers, handling billing, contract and services processes and disputes, and negotiating for discounts when possible. IBM can also act as a cloud services help desk, providing user support as needed.

Since integration can also be challenging, IBM offers a host of integration services. These services integrate traditional IT, clouds and management tools into a single comprehensive system, while providing for consolidated service management across traditional and cloud environments. Application lifecycle management technologies and third-party orchestration engines are included in the integration process. IBM architects also enable fulfillment of services ordered through the brokerage catalog and can design service packages with end-to-end automation for specific use cases.

Hybrid cloud computing capabilities can help improve business, but manual processes for integration and optimization are time-consuming and unwieldy. Ease integration and improve data center management with the automation and standardization capabilities of IBM Brokerage Solutions.

For more information

Talk to an IBM expert in detail about your hybrid journey, or contact an IBM sales advisor at 1-877-426-3287. For more information, visit the following website:
ibm.biz/brokerageservices