WHITE PAPER

IT as a Service Broker: A Financial View

By Dan Kusnetzky

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Introduction

Enterprise IT organizations have faced a very challenging environment. On the one hand, the organization must support a very complex and yet dynamic environment. On the other hand, it must constantly be looking for ways to be more effective. This means keeping things running reliably, making sure that workloads perform well, while also seeking out ways to reduce the overall costs of supporting and operating the enterprise IT infrastructure.

It is quite possible that some highly publicized security breaches can be attributed to business units taking actions without fully considering the potential results.

Another key challenge is that business units, often not understanding how complex the overall IT environment has become, have chosen to engage outside service providers for applications such as collaborative software, customer relationship management, or software designed to address a specific market need, often known as Software-as-a Service (SaaS); Infrastructure for their own custom or off-the-shelf applications, known as Infrastructure-as-a-Service (IaaS); or even for specific IT functions such as storage, database, security management, configuration management or performance management.

Business units often take this approach without consulting with the enterprise IT organization as a way to address their own short-term needs. In their haste to address their own challenges, they may not consider the long-term impact, risks these actions may impose on the whole enterprise, how these moves impact security, data governance or regulatory compliance. While it is not clear, it is quite possible that some highly publicized security breaches can be attributed to business units taking actions without fully considering the potential results.

One approach that has proven successful is for the IT organization to take on the role of being the services broker for the organization. This approach can make it possible for enterprise guidelines to be met while also offering these business units the flexibility, agility and cost structure required to address their own business requirements.

This paper examines the financial impact of the service broker model, how it can be implemented in reasonable increments, as well

as how this approach allows the IT department to satisfy the needs of business clients, in a timely fashion while minimizing risk and upholding corporate IT management standards.

The IT Squeeze Continues

Enterprises have long faced divergent forces when information technology is considered. On the one hand, enterprises know that efficiency, agility and increased opportunities for revenues coming from serving both their current markets and developing new ones.

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On the other hand, it is clear that IT is an expensive proposition and enterprises are doing their best to squeeze the costs out of all components of their operation. Over the years, each component of the enterprise IT organization has been examined to reduce costs while still maintaining and expanding the level and types of IT-based services the organization uses and offers.

This has driven enterprises to look at each IT function and consider questions such as:

- "Should this continue to be done in-house?"
- "Would a third-party be able to do this better or at less cost?"
- "Would working with a third party give us access to higher levels of expertise and at a lower overall cost?"

At first this line of thinking was focused on creating custom software. Later it moved on to managing data center facilities. Today the focus is on should the enterprise own and operate their own data centers and support the total burden of the facility, its power, communications, hardware acquisition, software licenses and staff.

The Squeeze Has Always Been There but, It's Getting Worse

As the enterprise faces intense worldwide competition, it is clear that it must move much more rapidly. This may mean moving into and out of markets to maximize its revenues and minimize its costs. This often means developing and deploying new IT workloads and retiring others. This, of course, exposes the enterprise to a whole series of costs ranging from acquiring and managing real estate,

managing relationships with communications suppliers, power utilities, as well as both systems hardware and software suppliers.

Since the competition is so fierce, the enterprise must move quickly to face customer requirements while the opportunities exist. Rapid acquisition of computing resources, application development, testing, deployment, operations and, finally, retiring applications is becoming the rule rather than an exception.

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When the enterprise IT organization doesn't move quickly enough or doesn't adopt the newest fad or technology, the industry is increasingly seeing business unit management going out on its own to acquire access to computing services, applications, application development, communications tools and even entire computing environments on its own. The enterprise IT organization often is not consulted, doesn't know the details of the contractual agreements, and yet, in the end, is likely to face expectations that it will be there to be the final layer of support. Business unit management typically asserts that time to market, revenues and profit trumps slow, careful and reliable processes from the past.

The Good News

The good news is that business unit managers soon learn that IT is hard. After getting a taste of managing an IT project, they often learn that they don't want to be left "holding that bag." The Kusnetzky Group often sees IT, if it is open to working this way, being brought in as an advisor early on in the projects.

Although the industry often describes the options as traditional, private cloud, public cloud and hybrid, it is useful to consider the categories of location, use of resources, application architecture and management structure separately. As **Figure 1**, page 4 shows, IT has a fine grain set of options that it may not have considered in the past due to its focus on creating and operating its own IT solutions.

Category	Option 1	Option 2	Option 3
Location	On-premise	Off-premise	Hybrid
Resources	Shared	Dedicated	Hybrid
Application architecture	Traditional	Cloud services	Hybrid
Management structure	Self-managed	Provider managed	Hybrid

If we examine each of the categories, we see the following:

- **Choice of location:** IT functions and entire workloads may now be executed on-premise, off-premise or a hybrid. This allows decision makers to determine where application components or whole applications execute on an application-by-application basis. Critical functions and can be hosted on-premise without making it a requirement that other functions and data also reside on-premise.

- **Chose of resource use:** IT functions can be executed on dedicated systems, on shared resources, or on a combination of resources depending upon the needs for performance, reliability, availability and security.

- **Choice of application architecture:** IT functions can continue to be built using in-house applications and services, built as cloud services, or as a hybrid of these approaches regardless of the choice of data center location and ownership.

- **Choice of management structure:** These IT functions and workloads could be managed by the enterprise, by a service supplier or a combination depending upon the requirements of the application.

These choices can be made for each application or workload based upon which offers the best mix of cost, performance, reliability, availability, agility, security and data governance.

IT's New Opportunity

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something else. It can continue to operate as the gatekeeper to assure the highest levels of reliability, availability, data governance and security or it can take on a new role: that of being a service broker.

IT as a Service Broker

The enterprise IT organization could take up the role of being a service broker. This would mean that it would seek out input from each of the business units concerning their business requirements and what services they need to address those requirements. IT staff would then be able to use their experience and expertise to review available services, evaluate how the suppliers address requirements for performance, availability, reliability, data governance, and security and their typically fees for the use of their service offerings.

Key Considerations for the IT as a Service Broker Model

Once all of the information is available, IT would be in a position to negotiate volume purchase plans; special terms and conditions that meet the needs of the enterprise; and make sure that the enterprise's needs are be addressed. A list of vetted services that included their terms and pricing structure could be offered to the business units. Business units would then be required to select services from that list or justify the use of a service that is not on the list.

Here are a few key considerations for IT as a service broker:

- IT staff must create and publish the procedures used to evaluate service providers
- IT staff must be seen as objectively, efficiently and quickly evaluating available services
- IT staff must also be seen as delivering an list of high quality, reliable and cost-effective service offerings allowing business unit decision makers to make good decisions without having to deal with the challenges of gathering data and evaluating that data themselves.
- IT staff must be able to objectively evaluate on-premise versus off-premise solutions, traditional or cloud-based architectures and self-managed versus supplier managed solutions.

This approach offers a good mix of flexibility, the ability to adopt new technology and methods, and help assure the enterprise that it is making the best use of its resources, capital and time.

Different Scenarios and Configurations in the Service Broker Model

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Scenarios

Some of these scenarios are the following:

- **Bursting** – if an application appears to be best implemented on-premise, can the service supplier offer the ability for some or all of this function be handled off-premise during peak times. This would allow the enterprise to acquire and operate only amount of system resources needed for the most commonly seen levels of use. When the demand requires more resources, they can be quickly be acquired and put to use. When the demand goes back to normal, those resources could be released. The enterprise would only pay for those resources when they are used.

- **Disaster recovery** – In the case of a weather-related or natural disaster, resources would quickly be available so that the enterprise could continue operations. These additional resources would be utilized until the enterprise could bring its own resources back on line. Once again, the enterprise would not need to support the complete costs of a separate data center, its resources or staff.

- **Development and testing** – Enterprises would be in the position of having access to resources for development and testing without having to incur the full cost of systems, storage, networking equipment, communications services and both operations and facilities staff each time a business unit wants to evaluate a new product or service. This typically lowers the level of risk while also increasing the level of business agility.

When a product or service is a success, the enterprise could chose to bring it back in-house or leave it where it is.

Configurations

In the past, the only configuration that the enterprise had was to use its own resources and its own data centers. Today there are a number of options that can be considered including the following:

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1. **On-premise traditional** – the enterprise owns its own data centers, systems and software licenses. The applications are architected and hosted in a traditional fashion.

2. **On-premise private cloud** – the enterprise owns its own data centers, systems and software licenses. The applications have been re-architected to execute in a private cloud. This allows systems and storage to be seen as a pool of resources that can be quickly allocated to a task, the systems provisioned for that task and then used to host a given application. Later, when the task completes, the underlying resources can be de-allocated to allow them to be used by another task.

3. **Off-premise dedicated private cloud** – this is very similar to approach 2. The only difference is that data center itself, the systems, the storage, the networking equipment, the communication services and staff are owned or under contract to a service provider. Although the systems would be in a shared data center, they would be dedicated to a single client.

4. **Off-premise shared public cloud** – this is very similar to approach 2. The difference here is that the workloads would be executing on shared systems. Other tenants would use the resources of these systems when the enterprise is not using or sharing them.

Evaluating the ROI of the IT as a Service Broker Model

A complete return on investment model is beyond the scope of this paper, however, it is clear what factors must be included in such a model. The enterprise must be able to understand how the costs of

executing workloads in-house and on-premise, outsourced and off-premise in a shared environment, outsourced and off-premise in a dedicated environment, and various forms of hybrid models as the needs of each workload are considered.

TCO comparison elements: in-house versus outsourced.
Each of the following cost elements should be considered as part of a careful evaluation of the costs of using in-house resources versus those outsourced in an off-site data center.

A complete evaluation would go beyond just the IT-related costs.

IT Costs in Both Environments

- Cost of systems and the related maintenance contract costs
- Cost of software licenses and the related software maintenance costs
- Costs of networking equipment and the related maintenance costs
- Communications costs for both primary and backup services
- IT labor costs
- Data center facilities costs including real estate, buildings, security equipment and staff.

The enterprise would be forced to support the full cost of these items when in-house and on-premise resources are used. The enterprise would only be forced to pay a portion of these costs when the resources are off-premise regardless of whether they were dedicated or shared resources.

Non-IT costs

A complete evaluation would go beyond just the IT-related costs. The following costs should be evaluated for both the in-house/on-premise approach and for the outsourced/off-premise approach.

- Business unit overhead that is shared by all business unit functions
- Revenue loss during an outage, slowdown or failure
- Time to market advantages as well as time to profit when considering a new venture
- Costs of achieving service level objectives including an

evaluation of recovery time objectives. Care must be taken to make sure that the objectives match the real world impact of the loss of an application or resource.

Comparing ROI and TCO models when operating as a Service Broker

Once all of the data is available for systems, data centers and other resources, it would then be possible to consider how those would be different when IT was acting as a service broker as well as a supplier of services. It is important to remember to consider the costs of developing and operating an in-house service broker agency while considering the potential savings in other areas.

The IT organization has to develop a keen understanding of the business issues facing each of the business units.

When all of the business requirements, regulatory requirements and data governance requirements are considered, some workloads serve best when they are kept in-house, on-premise and under the direct management of the enterprise. Other workloads may be more cost effective when they are placed off-premise but still managed by the enterprise. Still other workloads may be more cost effective when they are placed off-premise and are managed by the service supplier.

It is clear that when services are outsourced and shared, the enterprise would only be required to pay for the services actually being used. Other tenants would pay for the costs of the services they used.

Cost, of course, isn't the only consideration. Some applications support key business functions and business value. It is not likely that these functions will be placed in a totally outsourced environment. They might, however, be placed in the data center of a service provider that offers dedicated hosting and makes it possible for the enterprise to manage the systems and software.

Best Practices for IT Functioning as a Service Broker

The IT organization has to develop a keen understanding of the business issues facing each of the business units and not see the challenge as merely a technical one or much of the value of this

approach is likely to be lost. It is critical that business units come to see IT as a helpful solution partner, not the land of "No."

This means that IT staff must adopt a viewpoint that they are there to help the business units succeed while also making sure that the enterprise is able to keep costs under control, comply with government regulations, manage data in accordance with government and enterprise guidelines and yet offer practical advice and support to the business units.

IT has an opportunity to turn the adoption of cloud computing into a place where it can show thought and business leadership.

The research process should result in an actionable set of suggestions and workable solutions that are described in business, not technical, language. If the business unit decision makers don't understand what IT is suggesting, it is unlikely that they will follow those suggestions.

The available options and processes to select and deploy services should be simple, straightforward and easy. The list of options should be keep up to date and include new technology and approaches when they are supportable.

A process to allow business units to justify and acquire services that aren't currently on the enterprise service list must be in place. If a business unit hears "No" and it doesn't see a good reason or a better option, it is likely to go ahead and acquire that service without telling the IT organization.

Conclusion

IT has an opportunity to turn the adoption of cloud computing into a place where it can show thought and business leadership. It is also an opportunity for the enterprise to learn about and use new technology and new approaches with a limited exposure to risk and costs.

If this prospect appears daunting to IT and it fears that it doesn't have the needed expertise or experience, turning to a solution partner, such as Rackspace® would be wise. Rackspace has a long track record of success providing managed infrastructure, managed

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operations for system administrators, managed operations for developer/operators and can advise enterprises on how others have moved into a more dynamic world. ■

Daniel Kusnetzky, Analyst and Founder of Kusnetzky Group LLC, is responsible for research, publications, and operations at Kusnetzky Group. Mr. Kusnetzky has been involved with information technology since the late 1970s. Mr. Kusnetzky has a strong foundation to understand the information technology marketplace. Before founding Kusnetzky Group LLC, Mr. Kusnetzky held the positions of VP of Research Services at The 451 Group, Executive VP of Corporate and Marketing Strategy at Open-Xchange, VP of System Software Research at International Data Corporation, and Intel/UNIX business manager at Digital Equipment Corporation. This allows him to understand the entire product life cycle of hardware, software and professional services. He is also a well-known author of IT industry research, insight and opinion.

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