

Streamlining Infrastructure Automation:

A Service Provider's Approach

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Service provider organizations today need to streamline infrastructure provisioning processes, achieving seamless integration across complex toolsets encompassing public, private and hybrid cloud models as well as on-premise automation solutions.

Today, there are dozens of software providers pitching cloud and on-premise infrastructure automation tools. With so many options and so much information, it is difficult to sift through the noise and understand how everything fits together.

Introduction

The relative ease of accessing needed infrastructure and other cloud based services has been augmented by the advent of web standards, allowing API-based integration seamlessly into provider infrastructure. As a result, utility computing providers like Amazon and Microsoft Azure have created a new paradigm of infrastructure service delivery. This shift has created a need to change the way traditional service providers approach the market.

How does a provider organization differentiate their offering where customers can easily access and procure services in such a competitive marketplace?

The New Service Provider Landscape

After the last few years of marketplace change, the lines that differentiate companies that offered “specialized capability” are massively blurred, resulting in an aggressively competitive landscape. Telcos, Service Providers, Data Center Hosting, Utility Computing and Software Conglomerates are all jockeying for a piece of the pie.

Which is more important; lowest price or features? In both cases, how can any service provider remain competitive against large scale providers like Amazon and Microsoft?

The answer is to differentiate from your competition. Instead of just providing competitively priced offerings that mirror what the competition is advertising, smart providers have begun bundling value-add products and services to offer complete solutions to customers. These bundled solutions attract a specific customer, who then become the target demographic and niche for the smart provider.

Repeating History: Amazon.com's Disruption to Retail; What Service Providers Can Learn

It may seem like a complicated riddle to solve, but to understand how to win against disruptive competitors in an overly saturated and complex marketplace you need to look no further than the shift and re-shift in the business models within the retail market over the last dozen or so years. That marketplace, almost a decade ago, was vastly different than what exists today. Online shopping was a new and unproven approach to getting goods/ services for the average person.

In the early 2000's, big box electronics and household goods retailers were rapidly growing. Their stocks were hot commodities on the market, as they were guaranteed quarter-over-quarter gains due to their low-overhead, low-value-add approach. Their business model allowed for customers to wander in, look at the vast array of goods laid out on the miles of shelving and choose their goods quickly and easily without having to deal with the annoyance of salespeople. Often the only added value was a suspicious, company-provided extended warranty upsell at the checkout register.

For a long time, all was well in the world of these retailers.

A monumental paradigm shift occurred when Amazon.com came along. Amazon figured out how to simplify the user experience by providing an intuitive, customer focused shopping portal that was easily accessible and walked the customer through their options in making decisions of what they wanted. On the back-end, they were eliminating overhead through automation, driving down labor overhead, while speeding up order delivery logistics. The result was an easily accessible shopping experience where prices on commoditized goods (such as electronics and housewares) were less than the prices offered by the traditional big-box retailers.

Within a very short period of time, Amazon.com seemed to be everywhere. They gained the trust of the marketplace by eliminating perceived barriers and focusing on e-commerce. They offered an excellent customer experience, free delivery, and easy return policies. Once a customer found out how easy it was, they were hooked. For anything that didn't require specialized help in making decisions to purchase, they flattened the retail segment and forever changed the way people will buy things.

The ascent of Amazon.com happened so fast that any remaining traditional companies were truly blindsided. Some of the big box retailers (Circuit City for example) went from massive growth with routine store openings to struggling to stay in business within a few fiscal quarters. All of the retail world was suddenly fighting the same battle to survive.

What were traditional retailers doing wrong? Their customer engagement model was antiquated if not obsolete. They operated physical locations that required a captive audience from which they could draw in customers. The focus was on cross-selling and upselling inter-related offerings. If a customer is interested in a TV's, for example; a retailer might also offer power strips or DVD players, And, since a person shopping for a TV may need a power strip and a DVD player, there is a great chance that they could up or cross-sell the buyer at the time of purchase.

But, Amazon.com was doing it differently. They offered an intuitive web-based portal as their "storefront". They made things simple to search for, price compare, order and check status. Amazon.com's focus was all about customer experience. Specifically, Amazon.com made it easy, low-cost and efficient for the customer.

To lower operating overhead, Amazon approached material handling differently. Rather than rely on error prone humans to fulfill orders, Amazon set out to automate as much of the picking, packing and shipping processes with robots. They partnered with Kiva Systems, a robotics manufacturer that offered a different approach to

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material handling automation. The Kiva approach was more efficient than legacy material handling systems because it used robots to execute many small, key functions in the “pick-pack-ship” process of order fulfillment.

By automating inventory management and warehousing functions, they were able to create three times the efficiency in their order fulfillment process. Compared to other retailers at the time, the result was less labor overhead for order fulfillment. This enabled Amazon to lower prices further and ensured fast delivery with minimal error.

Consumers no longer needed to travel to a physical location, interact with salespeople or worry about if they were getting a fair price. All the information they needed was right in front of them. Amazon also did not require a captive audience. If customers wanted a TV, a set of coffee mugs, drywall spackle and “AA” batteries, you could get it all from one place. And customers knew they were getting the lowest price available.

Amazon.com innovated the retail industry by focusing on the customer experience and pricing commoditized goods as low as possible.

The screenshot shows the Kinetic Data ERM Catalog interface. The user is Kelly Heikkila, who is online. The main navigation menu includes Home, My Requests, My Approvals, Facilities Requests (5), Finance Requests (1), IT Requests, HR Requests (7), and Provision Servers (1). The main content area displays the following summary cards:

- My Requests:** 1 request. View Your Requests
- My Approvals:** 0 approvals. View Your Approvals
- My Assets:** 11 assets. More info
- Knowledge Base:** 728 items. More info

Below the summary cards, there is a table of 'My Requests' and a 'Popular Services' section.

Item Requested	Details	Requested By	Date Submitted	Status
Report Request Form	Report Request Form - People by role	Kelly Heikkila	Mar 30, 2016	Submitted

The 'Popular Services' section includes:

- Facilities Request:** This request is used for submit...
- New AWS EC2 Instance:** Use this service to request and...

Sample Portal

What does this have to do with Service Providers?

Competing on price with a competitor that has lower overhead for similar goods/services is futile. Instead of competing directly, offer something “different”. To compete, a company must create unique value. This can be done by innovating products or services, or combining them to provide new value.

For some retailers who were less affected by the Amazon paradigm had valuable differentiation in their offerings.

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By being specialized and having limited offering overlap, some retailers were able to continue on their ascent without having to worry about price. Tractor Supply Company for example, has a very low percentage of product overlap with Amazon creating a differentiated product set.

Other retailers like Apple, took the approach of making the customer experience amazing, but also providing in-store expertise that would make it worth the trip for someone to come in to the physical location to make a purchase. In both of these examples, critical to finding the competitive edge against Amazon was to have an offering that is truly differentiated.

Coincidentally, Amazon is also the greatest cloud service disruptor. There are similarities in their approach to both the retail and infrastructure hosting space that must be addressed if Service Providers are going to survive.

Any of the retailers that have survived and/or climbed back to prominence in competing with Amazon have done so by focusing top-to-bottom on two key things: Customer experience and differentiation.

There are some obvious design choices that directly impact Amazon's ability to disrupt the existing marketplace.

Service Availability - The Amazon store is always open and available from anywhere in the world at any time by any device. This is critical to providing an "always available" model for customer engagement.

Automation - Amazon automated their inventory management and logistics operations as much as possible. Not only did it speed the delivery of orders for customers, but it eliminated labor overhead significantly. To illustrate this point the top brick-and-mortar retailer in the world employs 9 times the number of employees as Amazon as of 2015.

Customer Empowerment - By providing a great online customer service experience where users can be walked through buying decisions by an intuitive, dynamic and easy-to-use system, there is no need for interaction with "experts" in the form of salespeople. There's no need to talk to someone on the phone, or wait for someone to help you. Everything the customer needs is right in front of them, always available with intuitive help built right into the catalog.

Infrastructure Delivery for Today's Service Providers

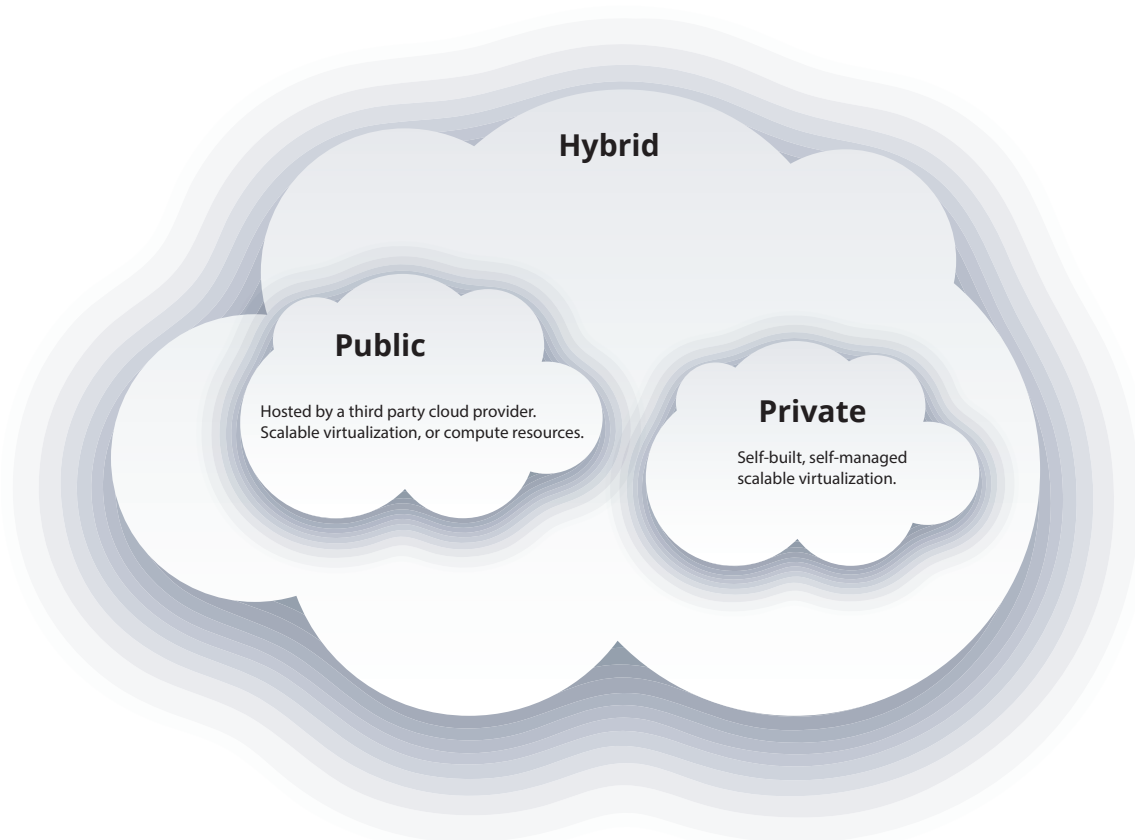
For service providers, the challenge of delivering infrastructure services is a dynamic puzzle that evolves constantly and must be solved faster and at a lower cost. To do so, most providers have created various models for infrastructure-as-a-service solutions including hybrid, public, private and community cloud offerings.

The confusion in the world of infrastructure-as-a-service is both good and bad:

The good: In confusion lies lots of opportunity for providers (experts) to profit by guiding customers to make the journey to cloud nirvana. By having a solid approach to delivering infrastructure services, providers can offer customers a consumerized model, taking a lot of the pain out of the experience. Organizations will gladly pay for help when they don't have the capabilities or desire to handle challenges alone. This means building value-oriented managed service solutions.

The bad: It is not an easy challenge to solve. There are so many facets to providing customers a complete solution that the complexity can be overwhelming. To effectively profit and gain market share with so much competition, tools and resources must be wrapped into a consumable solution that can evolve over time based on business need. It must also be easy to use, secure, scalable, flexible and fully integrate with existing solutions.

Service solutions aren't always limited to just hosting. Service providers can add valuable complementing services such as system administration, performance management, and security into a total managed services solution.



Typically, managed service delivery models are complex and contain dozens of automation tools and fulfillment silos. Frequently, they contain a mix of both internal and external tools. Due to the complexity and disparity of tools across data center, network, mobility and desktop functions, it is rare that a single vendor toolset will suffice in providing the entire solution top-to-bottom as required by the business need.

Often to achieve a solution many different commercially available tools are combined with custom-developed solutions. The reason for this is driven by the need for differentiation in the competitive world of outsourcing, managed services and systems integration. Typical offerings would include components such as cost management, billing automation, capacity management, portfolio management, customer relationship management and service integration capabilities which can be modified as needed.

In order to evolve, it is critical that service providers have the flexibility to differentiate against the competition while also ensuring SLA's are met all while providing world-class user experiences.

Services need to be readily accessible, manageable at scale and flexible enough to be iteratively improved, all while lowering the cost of delivery. Therefor automation must be employed where services are integrated end-to-end for the customer. As a result, there is currently a lot of focus in understanding how to achieve an effective Service Integration and Management (SIAM) strategy.

SIAM: Not just Service Brokering

Historically corporations and large government agencies chose vendors with large tool and service portfolios, in an effort to speed rollouts of frameworks for service delivery like COBIT or ITIL. Many benefits were gained

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through the adoption of frameworks, but just like most specialized process improvement best-practice endeavors, the perceived “end state” that was promised by these vendors at the start of these engagements was often never realized.

Today in the Enterprise, Service Integration and Management (SIAM) is the process improvement concept that will help large enterprises realize and build a sustainable and scalable model for the future.

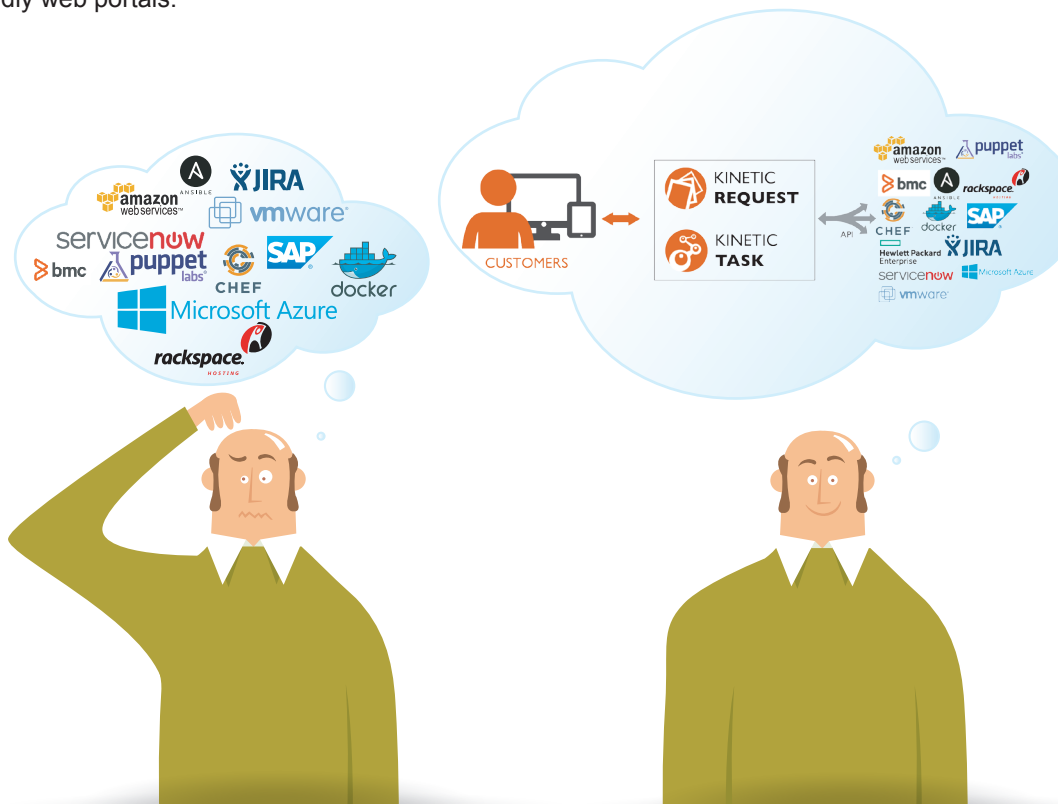
The SIAM approach is about seamlessly delivering service to customers with many different vendors, processes and tools working in concert. The resulting trend is that many enterprise tool vendors are mistakenly labeling their services “service brokering”. However, this is a misnomer based on the definition of what brokering actually is, compared to what the SIAM approach can provide when properly executed.

The concept of brokering is not new. In the world of Managed Services, an organization would not describe themselves as a broker, but instead as a provider. This implies that they are responsible for the actual delivery to the customer, not in handing things off to someone else to provide. This holds true for both internal shared service organizations, as well as external service companies.

It is critical that throughout service delivery, the provider is the one responsible for the end-to-end process, regardless of which organizations are involved. As a result it is critical that the tools and methods chosen to automate and deliver services can do so end-to-end in a scalable, manageable and cost-effective way.

The Kinetic Data Approach to Infrastructure Automation

Kinetic Request is the leading Enterprise Request Management (ERM) solution in the marketplace. The solution is designed for use by service providers and built for transaction volumes at web scale. Providers have full control over both user experience and process design while also maintaining corporate branding standards and mobile-friendly web portals.



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The solution offers simplicity and flexibility to integrate and automate services for an entire enterprise. This is particularly useful in the world of infrastructure provisioning and automation. With the modular design of the solution, exceptional customer experience is provided via dynamic, mobile-enabled portals, where service delivery models can be seamlessly integrated across cloud, hybrid and on-premise infrastructure automation tools.

Interactions are streamlined which means customers don't need prior knowledge of specific infrastructure automation platforms. Regardless of the choice of Cloud Service or virtualization partner, the delivery of infrastructure services are standardized and can be bundled with value-add services to the customer.

This enables providers to offer an intuitive, customer-focused, and easy to use experience where assimilated services delivered seamlessly to the customer regardless of the delivery model on the fulfillment side.

Infrastructure Automation Benefits

The one constant in infrastructure delivery and support is **change**. Kinetic Data focuses on enabling providers to evolve continuously as new and unknown challenges arise, resulting in fast evolution at the speed required by the business.

- Multi-tenant design enables flexible go-to-market strategies to be delivered by in a scalable approach, without needing custom code to enable functionality.
- A flexible user experience allowing for consistent customer interaction via the storefront approach, where services on the back-end are not just brokered, but fully integrated across the delivery landscape.
- Software empowered service providers simplify customer interaction while leveraging key investments specialized fulfillment systems. This includes both cloud-based and on-premise technologies where delivery models can be matured with a focus on continuous service improvement.
- Value-added functions can be integrated with services seamlessly on a per-service basis into the service portfolio. Providers are able to differentiate their offering by providing real customer value beyond just commoditized infrastructure.

What's Next?

Start a discussion, learn more or request a demonstration. Kinetic Data lives, eats and breathes Self-Service driven Automation and Integration. We love this space and hope you will too.