



**MANAGED
VIRTUALIZATION**

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Starting the Journey to Managed Infrastructure Services

A GUIDE TO SELECTING INITIAL WORKLOADS FOR MIGRATION

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Starting the Journey to Managed Infrastructure Services

A GUIDE TO SELECTING INITIAL WORKLOADS FOR MIGRATION

EXECUTIVE SUMMARY

As more business users adopt Next Generation IT models to drive innovation and growth, IT has unwillingly found itself behind the curve. A required focus on operational efficiency and “keeping the lights on” has often prevented IT from being a true partner to the business. Now with new managed infrastructure services IT leaders can get back in the game.

This white paper provides a guide to help IT organizations select the optimal workloads for initial migration, and to start shifting their focus back to innovation.

A NEW AGE OF INNOVATION

An unprecedented wave of new technologies is hitting the enterprise, creating exciting new possibilities for IT and business transformation. While these next-generation models have each evolved independently, many of them are highly complementary, creating more powerful benefits when leveraged in combination. These include:

- Cloud Computing including Software-as-a-Service (SaaS), Platform-as-a-Service (PaaS) and Infrastructure-as-a-Service (IaaS) models.

- DevOps software development and continuous delivery methodologies.
- Big Data and analytic platforms for large and unstructured data sets.
- Mobility including smart phones, tablets and other devices.
- Social Media including social networking and collaboration platforms.

These technologies are creating opportunities to build new business models, create strategic advantage and drive market disruption. This is particularly true of cloud with its ease of deployment, cost and flexibility advantages. Users can quickly launch new services or capabilities in response to customer demand, competitive dynamics or market trends while minimizing capital expenses.

Given these dynamics, we find that the lines of business have taken the lead on driving technology-enabled innovation. Gartner states that CIOs report that a quarter of IT spending will happen outside the IT budget in 2014.¹

CURRENT IT BUDGET SPEND:



>70%

on maintenance, operations and capacity expansion.

PIVOT POINT FOR INNOVATION:



Offload activities to focused vendors with economies of scale, experience and expertise.



Drive leadership, innovation and growth.

IT HAS REACHED THE PIVOT POINT

The past decade has been difficult for many IT organizations. Financial pressures have required CIOs to focus resources on ensuring the availability, reliability and stability of the most business critical systems and applications while also reducing costs.

This necessary focus on “keeping the lights on” has come at the expense of innovation, with over 70% of IT budgets now spent on ongoing maintenance, operations and capacity expansion.² Instead of identifying opportunities to help the business leverage new technologies like cloud, IT professionals have had to focus on mundane operations, management and support activities.

Now the pendulum is shifting. To maintain relevancy and serve as a true partner to the business, IT focus now needs to rapidly turn away from efficiency and stability. Business stakeholders in fact want more IT leadership around innovation. In a recent survey by Forrester, 29 percent of respondents believe that the CIO is the most important figure in driving or supporting transformation efforts, highest among any C-suite executives including the CEO.³

How can IT get “back in the game” around innovation? While cloud and next-generation IT models are enabling the business to drive innovation, they also provide opportunities for IT. External cloud and managed infrastructure service providers offer attractive opportunities for IT to offload activities to focused vendors with economies of scale, experience and expertise.

THE EMERGENCE OF “ZERO-INFRASTRUCTURE” MODELS

As they pivot from a focus on cost to innovation, one area that CIOs are actively evaluating is infrastructure. In fact many organizations are actively seeking ways to “get out of the data center business”, with IT infrastructure consolidation and optimization a top priority for 77% of IT hardware decision makers in 2014.⁴ Why?

- **External Competition** - new cloud and managed infrastructure service providers can achieve scale and expertise beyond what is achievable for even the largest enterprise.
- **Flexibility** - the shift towards consumption-based pricing of infrastructure with IaaS models enables organizations to [shift IT spend from CapEx to OpEx](#).
- **Complexity** - while new private, public and [hybrid cloud models](#) create opportunities for corporate IT, they also create new operational complexity.
- **Talent** - CIOs are finding that attracting and retaining next-generation IT skills to support new digital paradigms is difficult, if not impossible. In fact Gartner states that 42% of CIOs don't feel they have the right skills and capabilities in place to face this future.⁵

CURRENT IT CHALLENGE:



42%

of CIOs don't feel they have the right skills and capabilities in place.

CAPABILITIES & EXPERTISE



Rackspace

VMware[®] Certified

Professionals

- **Distraction** – perhaps most importantly, many organizations are finding that innovation does not require IT to manage infrastructure, and in fact serves as a distraction.

Gartner surveys find that 56% of the typical IT budget is spent on infrastructure and operations.⁶ Despite this fact, many organizations are concluding that it cannot create competitive advantage, and are launching new “zero-infrastructure” initiatives that seek to migrate infrastructure to external service providers.

PICKING THE RIGHT STARTING POINT FOR MIGRATION

Managed infrastructure services models offer organizations a variety of options, including dedicated, virtualized, private, public and hybrid cloud environments. While a number of factors come into play, the optimal infrastructure delivery model is typically highly dependent on the nature of the application or workload that it supports.

To avoid the business and technical risks associated with “big bang” migration to managed infrastructure models, most organizations choose to take an incremental approach. Instead of attempting to migrate a diverse workload portfolio with widely varying infrastructure requirements, organizations will seek to migrate an initial workload or set of workloads in a new managed infrastructure environment. This approach allows organizations to both gain comfort with the managed infrastructure services model, as well as to gain familiarity with their service provider.

For most organizations, this means focusing on existing workloads that do not require significant re-architecture or re-building to migrate to a managed infrastructure services environment. This means focusing on workloads that can be easily migrated to a virtualized hosting environment, rather than targeting private or public cloud environments. But this still leaves the question of where to start, as most enterprise workload portfolios contain hundreds, if not thousands of workloads that currently run in virtualized or dedicated on-premise models, and that could be viable migration candidates.

When identifying workloads for initial migration to a managed infrastructure model, a series of business, technical and operational characteristics need to be considered. IT organizations should use these factors to identify attractive initial migration candidates that provide low risk opportunities to evaluate a managed services model as well as the service provider.

These top ten common workload considerations include:

- 1 Application / workload architecture and compatibility** – ideal workloads for migration will have already been virtualized or running on dedicated servers, and also run on platforms and technology stacks supported by the service provider.
- 2 Business criticality** – initial migration candidates should preferably not be considered mission or business critical, and as a result also should not have significant disaster recovery (DR), backup or data replication requirements.
- 3 Availability / performance** – to minimize technical risk, initial workloads should ideally not have significant high performance, availability, latency, data transfer or IO requirements.
- 4 External / internal dependencies** – optimally, initial workloads will have minimal external application dependencies. If dependencies should exist or are unavoidable, accessibility will need to be maintained.
- 5 Networking** – the geographic location of the service provider’s data center needs to be considered, as well as workload bandwidth requirements. Ideal workloads will have a geographic delivery profile that can be replicated with the service provider.
- 6 Application integration** – ideal initial migration candidates should not have significant integration requirements with on-premise or external applications, data or required shared services.
- 7 Application monitoring / management** – consideration will be need to be given as to whether integration will be required with existing agent-based systems management, service management, performance monitoring or security tools.
- 8 Compliance** – to minimize business risk, ideal initial workloads should not be subject to compliance mandates that include physical security requirements. In particular, priority workloads should not require access to personally identifiable information (PII), protected health information (PHI), payment card data or other sensitive information subject to HIPAA, PCI or other compliance mandates.
- 9 Security** – to minimize security risks, ideal initial workloads should not have significant or exceptional data security, authentication or authorization requirements. Ideally initial workloads will not require significant integrations with Microsoft® Active Directory and/or other identify management solutions.
- 10 Capacity requirements** – finally, the CPU, memory and storage requirements for a given workload should be considered. Attractive initial migration candidates for virtualized environments should typically require less than four cores processing and / or 48 gigabytes (GB) of memory.

In addition to the items above, particular attention needs to be paid ensure that domains/subdomain structures are updated or migrated as required to enable a given workload.

By applying the considerations above to current workloads in the portfolio, organizations can rapidly identify the most attractive “first candidates” for migration. After evaluating their workload portfolios, most organizations will find that the most attractive “first mover” candidates for migration will fall into one of three major categories:

“FIRST MOVER” CANDIDATE CATEGORIES

-  Development and test (dev/test) and Proof-of-Concept (POC) environments.
 -  Collaboration platforms, such as Microsoft SharePoint® and Exchange, customer relationship management (CRM), and project management solutions.
 -  Websites and web applications based on three-tier architectures.
-

Dev/test in particular provides an example of ideal first migration candidate. Why? Let’s take a look at the typical characteristics of a dev/test environment or workload. **When most organizations apply the checklist above, they will find that dev/test environments possess the following characteristics:**

- Compatible workload architecture
- Low business criticality
- No high availability / performance requirements
- No external / internal dependencies
- No / limited networking constraints
- No application integration requirements
- No application monitoring / management requirements
- No compliance impacts (assuming use of test data)
- Minimal security requirements
- Acceptable capacity requirements

While many will find dev/test to be the ideal first migration candidate, other organizations may find that other workloads are more appropriate starting points. It also is important to note that the characteristics above in



The right service provider will provide expertise, experience and capabilities across a range of next-generation infrastructure models, enabling IT organizations to shift as much focus as possible to the important work of innovation.

no way preclude migration to a managed infrastructure services model. The considerations above are intended to identify and prioritize the “low-hanging” fruit that provide the most attractive initial candidates that minimize risk, and serve as an effective way to review a new service provider.

After migrating initial workloads running on bare-metal or virtualized platforms, many organizations then turn to more complex applications and use cases. These workloads may require additional migration investment, but also may present attractive opportunities offered by private, public or hybrid cloud models. To capture the opportunities presented by these next-generation models, careful consideration needs to be given to the choice of service provider. The right service provider will provide expertise, experience and capabilities across a range of next-generation infrastructure models, enabling IT organizations to shift as much focus as possible to the important work of innovation.

CONCLUSION

New, managed infrastructure service models offer attractive opportunities for IT to refocus on innovation and shift resources to areas of true competitive advantage. While many organizations are recognizing the opportunity, the biggest challenge is often figuring out how to get started.

By applying a common set of business, operational and financial characteristics, IT leaders can rapidly identify the initial workloads that make most sense to move to a managed services model. By taking an incremental workload-centric migration approach, organizations can begin to gain comfort and capture benefits from a new managed services model.

While migrating virtualized workloads to hosted environments, organizations need to be keenly aware of the broader opportunities associated with cloud and next-generation IT platforms. The right managed services partner should provide capabilities and expertise across both dedicated and cloud-based platforms, enabling IT to capture the long-term benefits of new infrastructure models while at the same time freeing up resources to accelerate innovation.

As one of the largest VMware Service Provider Program (VSPP) partners, Rackspace has expert VMware Certified Professionals available and experience that comes with managing over 45,000 VMs. To find out more how Rackspace can start your journey towards the right service provider, call 800-961-2888.

ABOUT RACKSPACE

Rackspace® (NYSE: RAX) is the global leader in hybrid cloud and founder of OpenStack®, the open-source operating system for the cloud. Hundreds of thousands of customers look to Rackspace to deliver the best-fit infrastructure for their IT needs, leveraging a product portfolio that allows workloads to

run where they perform best—whether on the public cloud, private cloud, dedicated servers, or a combination of platforms. The company’s award-winning Fanatical Support® helps customers successfully architect, deploy and run their most critical applications. Headquartered in San Antonio, TX, Rackspace operates data centers on four continents. Rackspace is featured on Fortune’s list of 100 Best Companies to Work For.

For more information, visit www.rackspace.com

NOTES

- 1: Gartner Inc., Taming the Digital Dragon: The 2014 CIO Agenda, Dave Aron, Graham Waller, December 31, 2013.
- 2: Forrester Research, Inc., Forrsights: IT Budgets and Priorities in 2013, April 25, 2013.
- 3: Forrester Research, Inc., The CIO’s Role in Business Transformation, June 12, 2013.
- 4: Forrester Research, Inc., The Future of IT Infrastructure and Data Centers: A New Wave of Consolidation and Optimization, Doug Washburn blog post, September 30, 2013.
- 5: Gartner Inc., Taming the Digital Dragon: The 2014 CIO Agenda, Dave Aron, Graham Waller, December 31, 2013.
- 6: Gartner Inc., Gartner Key IT Metrics Survey 2014.

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The information set forth is intended as a guide and not as a step-by-step process, and does not represent an assessment of any specific compliance with laws or regulations or constitute advice. We strongly recommend that you engage additional expertise in order to further evaluate applicable requirements for your specific environment.

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