

## Enterprises Want To Move Beyond Basic Virtualization

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### Introduction

Use of x86 server virtualization is now common in companies with 5,000 employees or more, with 85% reporting current implementations and 75% reporting that they are expanding or upgrading use of server virtualization, the foundation technology used for internal private cloud. Initially, enterprise IT managers were motivated to implement server virtualization because of consolidation benefits and costs savings. But many IT managers now recognize the additional benefits that server virtualization enables, such as increased manageability and faster deployments through automated management of virtualized servers, but they find that advanced capabilities are not easy to implement. This profile digs into how IT managers prioritize server virtualization best practices, as well as perceived difficulty and barriers to adopting virtualization best practices. It reveals that despite the challenges, many enterprise IT managers are exploring these techniques and features that will bring a broad range of benefits and capabilities associated with internal private cloud infrastructure.

### Enterprises Prioritize Virtualization But Lack The Best Practices To Make The Most Of It

According to Forrester Research's survey of IT infrastructure decision-makers at large enterprises (those with 5,000 employees or more), consolidation and virtualization are top IT infrastructure priorities. Eighty-two percent of decision-makers at North American enterprises see consolidating IT infrastructure as a "high" or "critical" priority, and nearly as many are specifically prioritizing broad use of virtualization as their standard deployment model for servers (see Figure 1). Automating virtualized servers is the next step toward efficiency and flexibility, and 65% see that as a "high" or "critical" priority. Although these technologies are foundation elements for on-premises cloud computing strategies, fewer respondents prioritize a comprehensive cloud strategy or an internal private cloud. Because many firms prioritize highly efficient virtualized infrastructure but don't necessarily use the term "cloud" to describe their intentions, Forrester believes that IT managers should compare themselves with other firms' implementation of virtualization best practices, not their use of the overhyped cloud buzzword.

When Forrester asks about reasons for adopting server virtualization, the result is a statistical three-way tie among lower cost of ownership, improved infrastructure management/flexibility, and creating a more efficient shared IT infrastructure. All three were rated by about 86% of large enterprises as "important" or "very important" in their decision to adopt virtualization (see Figure 2). These three reasons were found to be even more important than faster deployment, improved disaster recovery, and other compelling reasons. But it's not easy achieving the best practices necessary to make the most of server virtualization, and it can be even more challenging to advance to the efficiencies of private cloud, such as automation, self-service, and chargeback.

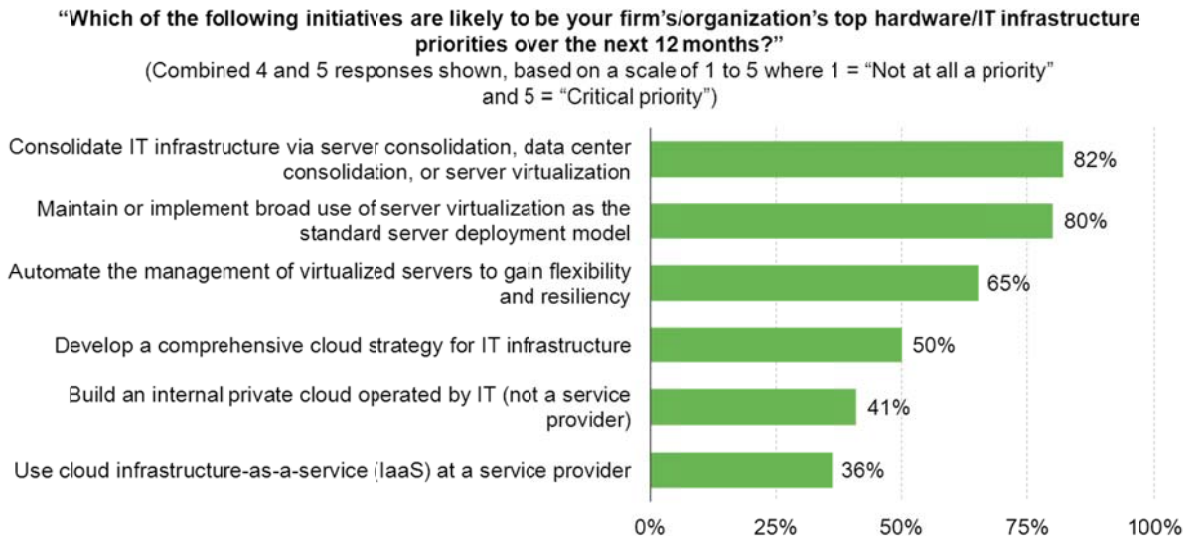


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**Figure 1**

Large Enterprises Prioritize Consolidation, Virtualization, And Automation More Than Cloud

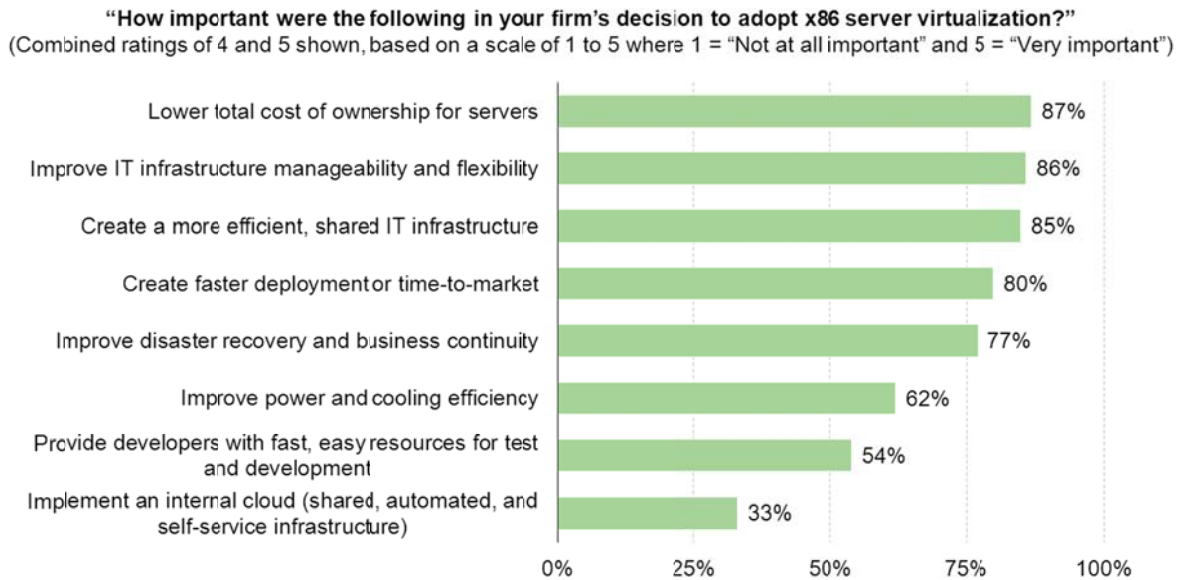


Base: 550 technology decision-makers at North American enterprises (5,000+ employees)

Source: Forrsights Hardware Survey, Q3 2011

**Figure 2**

Costs, Flexibility, And Efficiency Motivate Firms To Adopt x86 Server Virtualization



Base: 284 technology decision-makers at North American enterprises (5,000+ employees) planning to implement or currently using x86 virtualization

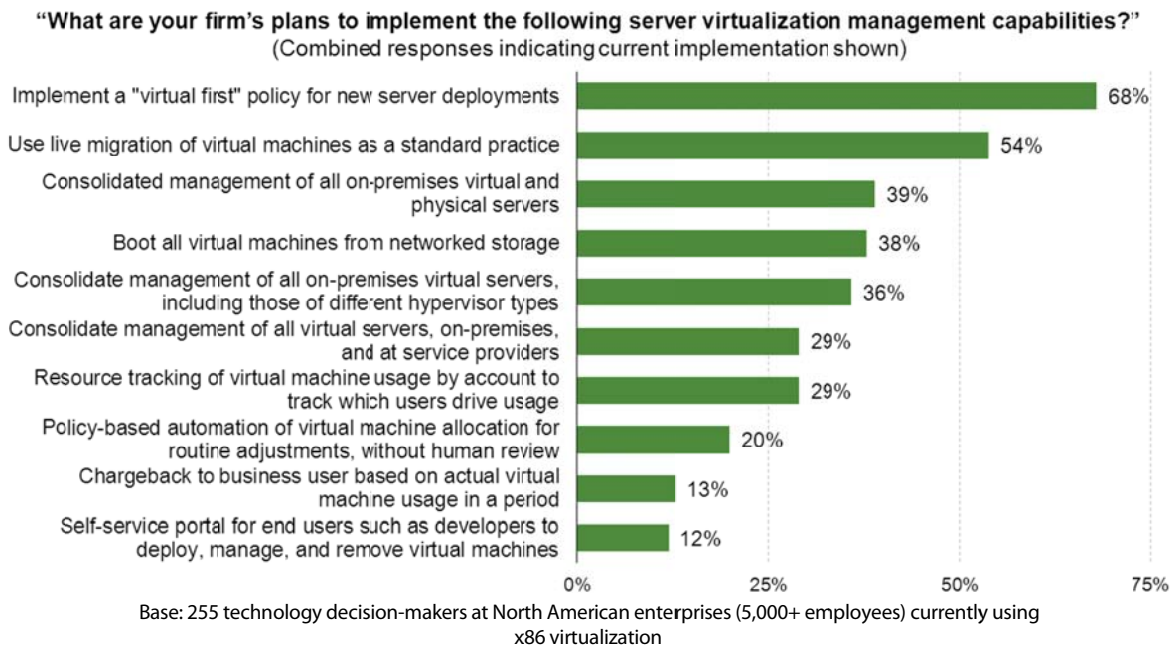
Source: Forrsights Hardware Survey, Q3 2011

There are several key best practices that firms must implement in order to get to the fourth and highest stage of server virtualization maturity.<sup>1</sup> While many enterprises are moving toward at least one of the virtualization best practices, they are a long way from full maturity. Many virtualized firms surveyed, about 68%, report having a

“virtual first” policy, while the fewest, 12%, report adopting self-service end user portals for virtualization management purposes (see Figure 3). Only 20% of enterprises surveyed using virtualization have implemented policy-based automation, a key first step to most of the benefits of server virtualization. And just 1% — three decision-makers surveyed out of 255 — has implemented all 10 of the best practices, which means that nearly every firm has significant opportunities to increase the benefits of server virtualization through implementation of best practices.

**Figure 3**

Few Firms Implement Most Of The Server Virtualization Best Practices



Source: Forrester Hardware Survey, Q3 2011

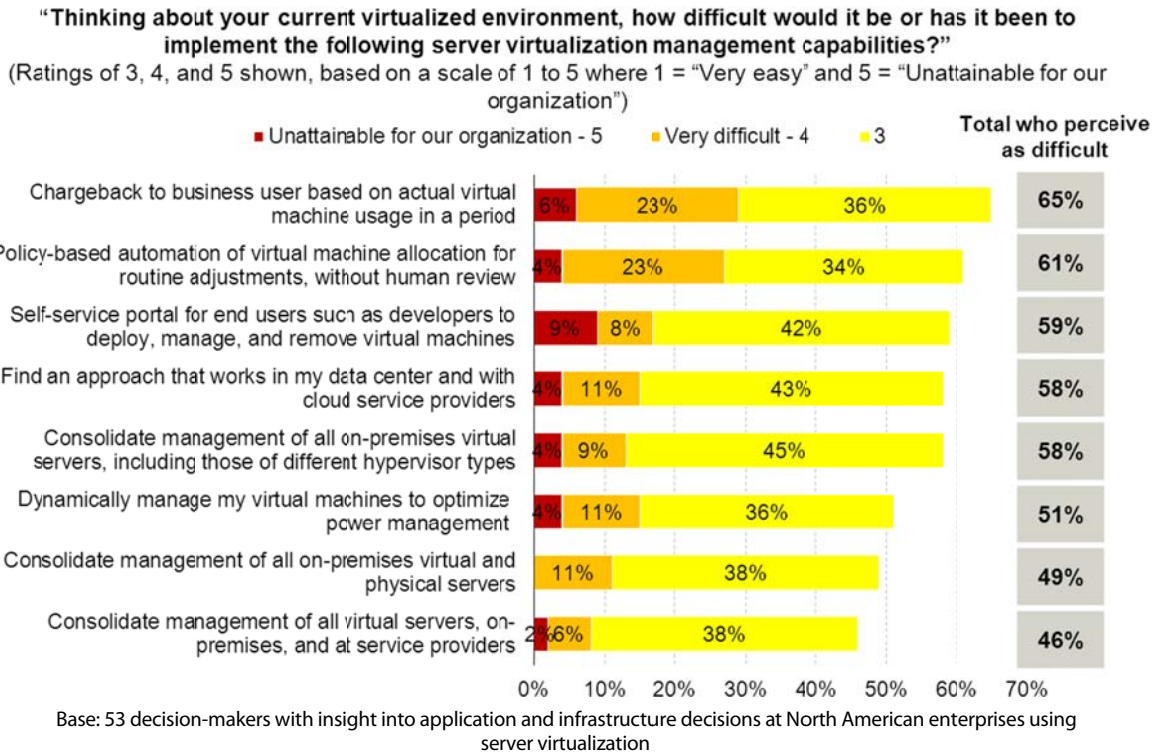
## IT Managers Find It Difficult To Implement “Cloud-Enabling” Virtualization Best Practices

In a custom study commissioned by Dell and Intel, Forrester delved into the difficulties organizations face in implementing virtualization best practices. Enterprise IT managers we surveyed openly admit that many of the best practices of virtualization management will be very difficult for them to implement (see Figure 4). Chargeback to business users is seen as the most challenging management capability, with 59% of enterprises reporting significant difficulty, and 6% reporting chargeback as completely unattainable. Policy-based automation, arguably the most important capability, is also reported as a major challenge, with 57% reporting difficulty and 4% reporting complete unattainability. It’s also interesting to note that 9% of enterprises reported the creation of self-service portals for end users/developers as unattainable — more than any other capability.

So what factors contribute to the difficulty in achieving virtualization best practices? According to enterprise decision-makers surveyed, lack of budget tops the list, with more than half surveyed reporting this as a significant or critical barrier. Lack of prioritization of management achievements is also rated as a major barrier (see Figure 5). But once these initiatives reach the starting point with budget and prioritization, enterprises will still have to find the skills to implement, which more than half see as a challenge and 29% see as a significant or critical barrier.

**Figure 4**

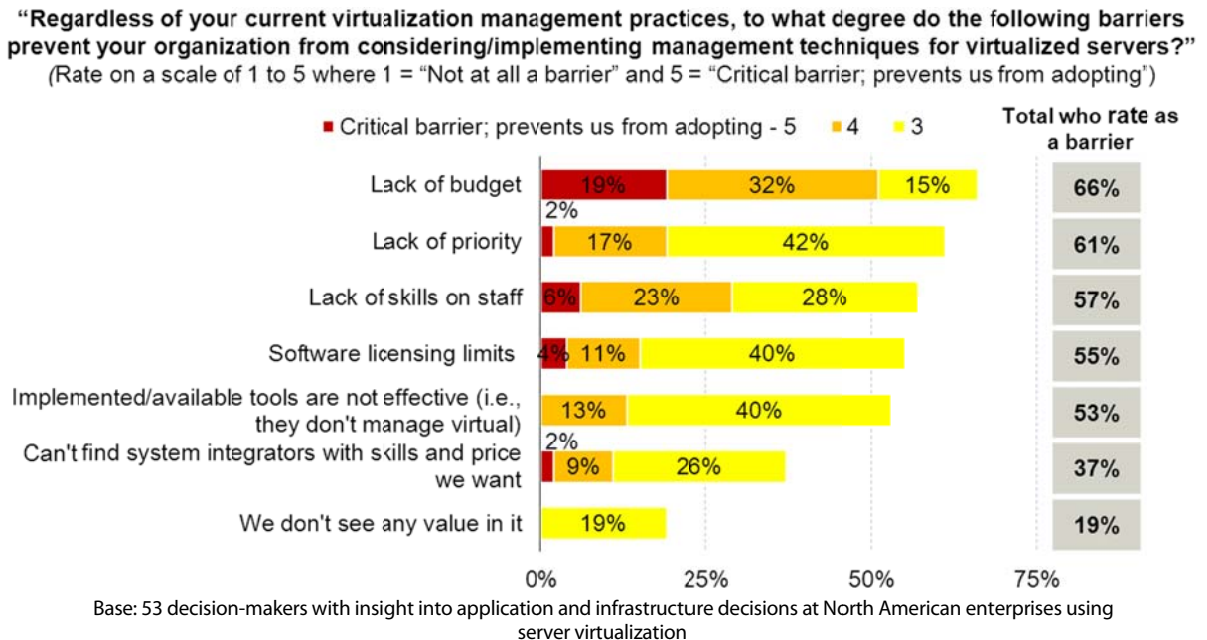
IT Managers Find Key Virtualization Best Practices, Such As Automation, Difficult To Implement



Source: A commissioned study conducted by Forrester Consulting on behalf of Dell and Intel, November 2011

**Figure 5**

Lack Of Budget, Priority, And Skills Are Top Barriers Preventing Implementation Of Virtualization Best Practices

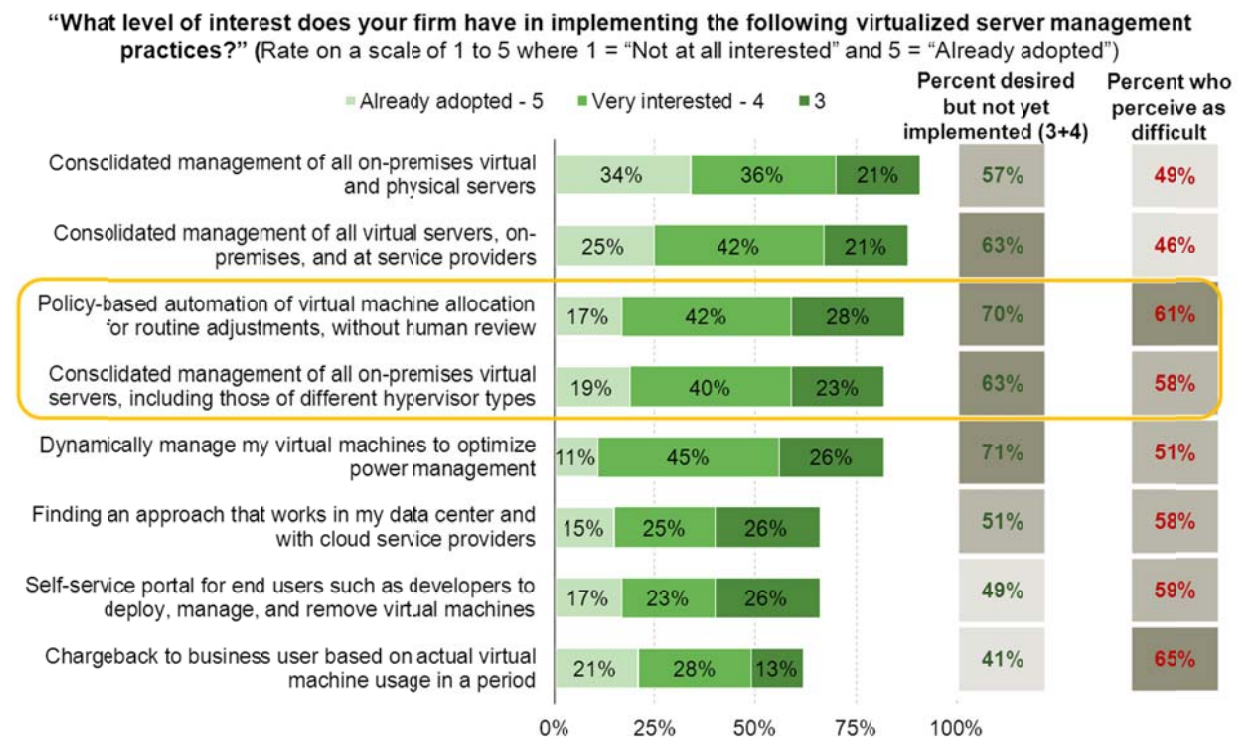


Source: A commissioned study conducted by Forrester Consulting on behalf of Dell and Intel, November 2011

Despite the challenges surrounding the next phase of virtualization best practices, the firms we surveyed are forging ahead. Around a third surveyed have already consolidated management of virtual and physical servers on-premises or virtual servers both on- and off-site (see Figure 6). Far more enterprises show great interest across the capabilities we asked about but have yet to implement. Policy-based automation is most wanted, with 70% reporting high interest. But as mentioned earlier, this capability is also seen as among the most difficult to achieve. Consolidation of all virtual servers, across hypervisor types is another highly desired but challenging initiative.

**Figure 6**

Policy-Based Automation And Consolidated Management Are Highly Desired And Challenging Best Practices



Base: 53 decision-makers with insight into application and infrastructure decisions at North American enterprises using server virtualization

Source: A commissioned study conducted by Forrester Consulting on behalf of Dell and Intel, November 2011

### Enterprises Will Pursue Server Virtualization Best Practices And Explore Private Cloud

Forrester’s surveys of IT infrastructure decision-makers lead us to believe that large enterprises are pursuing implementation of key server virtualization best practices, such as policy-based automation, despite the fact that many enterprise IT leaders report that they find it challenging to implement the best practices, and few have implemented many of them today. To take advantage of the full benefits of server virtualization and virtualized infrastructure, IT leaders will have to find ways to overcome the challenges in order to gain the benefits of efficient and flexible IT infrastructure. And these best practices also set up IT managers to explore the use of internal private cloud strategies, whether or not they like the cloud buzzword.

## Methodology

This Technology Adoption Profile was commissioned by Dell and Intel. To create this profile, Forrester leveraged its Forrsights Hardware Survey, Q3 2011. Forrester Consulting supplemented this data with custom survey questions asked of 53 North American decision-makers with insight into infrastructure decisions at enterprises with 5,000 or more employees that have already implemented server virtualization. Survey questions related to perceived challenges and current desire/implementation of virtualization management capabilities. The auxiliary survey was conducted in November 2011. For more information on Forrester's data panel and Tech Industry Consulting services, visit [www.forrester.com](http://www.forrester.com).

## Endnotes

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<sup>1</sup> "Assess Your Infrastructure Virtualization Maturity," Forrester Research, Inc., July 10, 2009.

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