

# Marketplace Update

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## Lenovo XClarity – Enhancing Server Value with Innovative System Management

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# Lenovo XClarity – Enhancing Server Value with Innovative System Management

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## Introduction

As with most mechanical devices, the cost of managing business servers over their lifecycle far outstrips their acquisition price. So it is wise for companies to adequately study their options prior to committing to any specific management platform. But in the case of Intel x86-based systems, the management solution market is remarkably complex and crowded with offerings from server vendors, OS players like Microsoft and Red Hat, virtualization solution vendors like VMware and third parties, including BMC.

Despite that complexity, significantly innovative solutions can and do exist. For example, the new Lenovo XClarity system management offerings qualify as a notable achievement that should please and benefit the company's server customers and prospects.

Lenovo XClarity is obviously complementary to its own system and data center solutions, including System x and Flex System offerings. But Lenovo has also ensured that the new solutions can be easily integrated with other widely used server solutions, like Microsoft's System Center and VMware's vCenter.

Most importantly, the Lenovo XClarity system management solutions offer organizations the flexibility to adopt and adapt to evolving data center technologies at the speed of their own business, not vendors or other parties.

## Modern server management: The challenge of complexity

The journey of Intel x86-based systems into enterprise data centers has profoundly affected businesses and IT. Numerous traditional scale-up systems have been replaced or driven entirely out of business and the IT environments they once dominated. But the shift to industry standard solutions has also delivered benefits, including greater competition and customer choice.

In addition, this evolution inspired numerous follow-on innovations that helped x86-based systems penetrate every corner of enterprise IT. Chief among these have been virtualization solutions like VMware's vSphere and Microsoft's Hyper-V which are central to the success of applications and services, including cloud computing. But commodity system innovation is also critical for every major business computing trend, including the development of mobile and analytics solutions.

That said, the success of scale-out systems have also resulted in new challenges, especially those related to increasing IT complexity. At one level, this simply reflects the nature of those technologies and the sheer volume of physical servers in sprawling corporate IT infrastructures. But at the same time, the popularity of complementary x86-based virtualization has resulted in "virtual sprawl" that makes managing and maintaining system dependencies that much harder.

Those issues have measurable negative effects on organizations' bottom lines. For example, market research firm International Data Corporation (IDC) has estimated that while the capital expenditures (CAPEX) global companies invest annually in servers has remained roughly even since 2004, operational expenditures (OPEX – management and administration costs) have more than doubled during the same period. In other words, complexity hits businesses directly and painfully in the pocketbook.

But organizations also face serious complexities related to market competition. Commodity x86 hardware is being created and leveraged by a diverse group of server vendors and ODMs, all of whom are trying hard to differentiate their solutions. A similar situation is apparent among ISVs, including those developing operating systems, virtualization offerings and management tools.

As a result, there are often wide disparities in various solutions' functions, features and benefits, as well as the way they integrate with third party offerings. Also problematic is how those issues are magnified exponentially as IT infrastructures grow, making them harder to manage and escalating deployment and integration challenges. That final point is crucial, since the lack of effective system management can erode the value of solutions across their entire lifecycle.

### **What businesses want/need from server management platforms**

So what do businesses want and need from x86-based system management, and what features should innovative solutions offer? We consider four issues to be critical:

**1. Simplify and automate IT processes** – In essence, businesses need easy to use solutions that make server management simpler and more effective. That's partly due to a need to accommodate generational shifts in IT staff and training with more intuitive user interfaces, but it also addresses the inherent complexity IT faces day to day. Automating IT processes can help lower or eliminate errors. Plus, by pursuing these efforts, organizations can reduce the tendency of IT to be a "cost center" and increase its overall business value.

**2. Ease server deployment/update processes** – Everyone loves new hardware, but deployment can be complex and is exponentially harder with larger numbers of systems. Simplifying both system deployments and updates is critically important for already time-pressured IT departments.

**3. Ensure that IT assets and processes are properly integrated** – This point should help ease procedures critical to system health and availability, like firmware updates that can be forgotten or ignored in complex circumstances. That is especially important in highly virtualized systems and environments where poorly performing systems can impair critical applications or even knock them offline.

**4. Align IT requirements and budget strategies** – The fact is that too many companies follow "organic" IT purchasing methodologies, buying new products rather than ensuring existing systems are working correctly. We believe that companies are best served by solutions that allow them to right-size IT purchases in accordance with their budget strategies and constraints.

In essence, effective system management solutions should enable companies to adopt and adapt to IT at the speed of *their* business and not be affected by subjective demands or pressures coming from within their own organizations or externally from others pursuing their own agendas.

### **Lenovo XClarity – A short overview**

Fortunately for enterprise IT customers, a new system management platform – Lenovo XClarity – has been developed to address these criteria. Practically speaking, the decision to create Lenovo XClarity began well over a year ago. That was before IBM's System x server organization and assets were sold to Lenovo but the company fully agreed with the need for a new server management platform and threw its weight behind the Lenovo XClarity effort.

The primary goal was to leverage the lessons learned from more than two decades of interactions with System x customers to create a product closely aligned with their specific technical and business requirements. But Lenovo's team also recognized that the general demands of x86-based systems, and System x in particular, had evolved considerably and could no longer be fully addressed with general purpose solutions like IBM's Systems Director.

The result is Lenovo XClarity, an all-new product with all-new code that's designed to meet the needs of Lenovo's server customers.

What were the specific design points pursued by the Lenovo XClarity team?

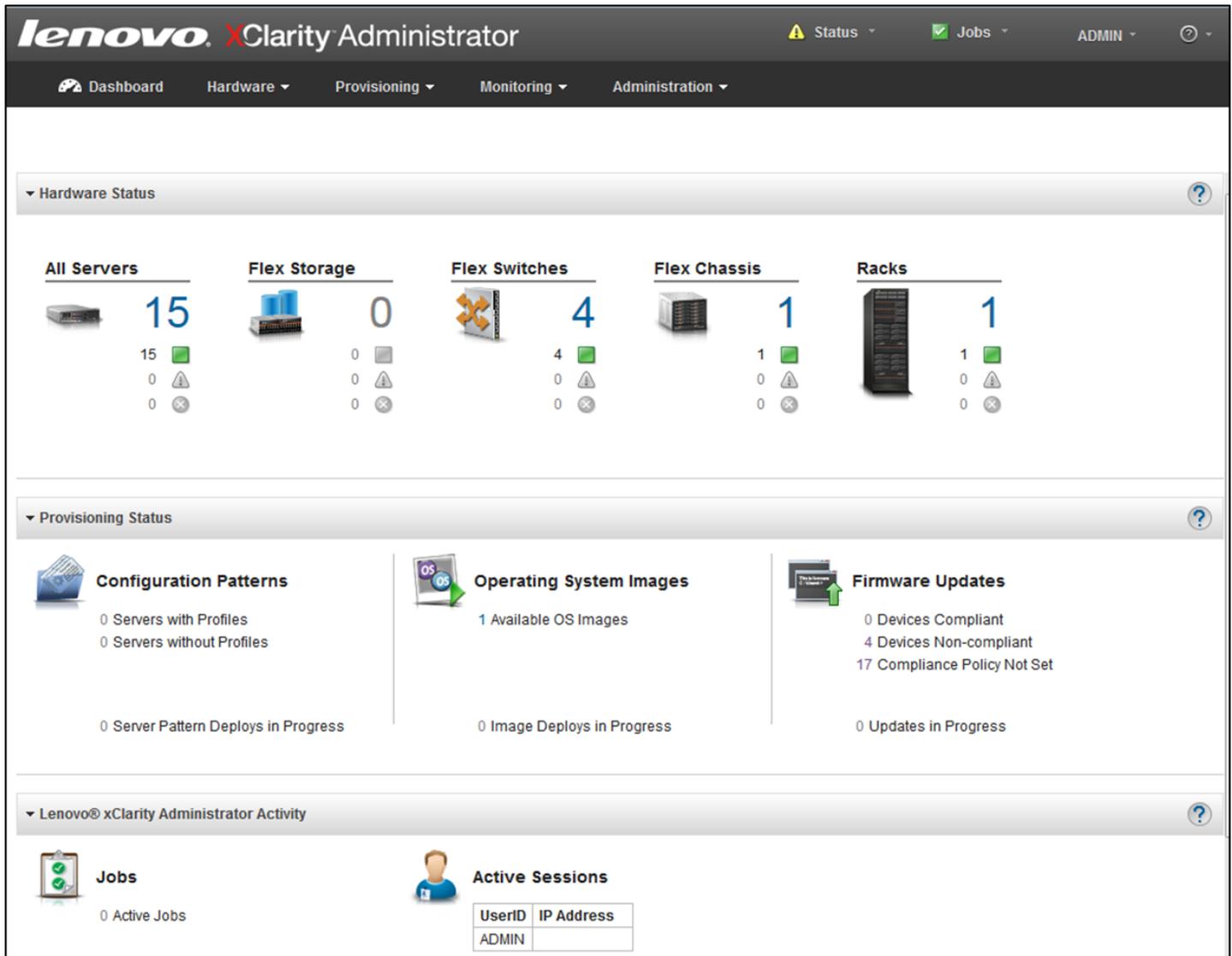
- Create an uncluttered, intuitive interface that simplifies processes for IT staff
- Improve core features and functionality
- Provide centralized point of integration into external, higher level software tools
- Support centralized SSL certificate management for endpoints
- Reduce errors and make repetitive tasks easier, including system deployment and update processes
- Enable visibility into/control over hardware resources
- Integrate easily with client's core platforms and third party tools,
- Enhance availability in virtualized clusters

The team decided to make the new solution available in two editions:

1. **Lenovo XClarity Administrator** – Designed as a centralized management platform that speeds and reduces the effort required to deploy and update Lenovo systems. Also simplifies a range of critical integration processes.
2. **Lenovo XClarity Pro** – Designed to ease integration with third party tools and to increase workload availability in clusters. The solution includes Lenovo XClarity Administrator, as well as Lenovo XClarity Integrator for Microsoft System Center and Lenovo XClarity Integrator for VMware vCenter. The Lenovo XClarity Integrators can also significantly enhance management tasks and system availability in clusters leveraging Microsoft Hyper-V and VMware vSphere.

## A deeper dive: Lenovo XClarity and customer benefits

Has the company achieved what it envisioned for Lenovo XClarity? Overall, we believe it has.



**Figure 1**

*Image provided by Lenovo*

The most impressive feature of Lenovo XClarity may well be the way in which it reduces the overall complexity of system management processes and staff interactions. Its intuitive interface (*Figure 1*) is designed to help IT administrators learn the solution, execute tasks quickly and easily find information when they need it.

That should prove remarkably helpful to overstretched IT departments, but Lenovo XClarity is also highly sophisticated technically. The solution is delivered as an agentless virtual appliance, minimizing its impact on system resources but offering deep insights into and control over Lenovo systems.

**lenovo XClarity Administrator** Status Jobs ADMIN

Dashboard Hardware Provisioning Monitoring Administration

Chassis > Demo - Lenovo demo chassis 00001

Graphic view Table view

Summary		Details
Name:	Demo - Lenovo demo chassis 00001	
Status:	<span style="color: green;">■</span> Normal	
Security Policy:	Secure	
Host names:	lenflex-00001	
Serial number:	00001X8721	
Type-Model:	8721-HC1	
System Board UUID:	F44E92339683385A8D97CD6348A6F45F	

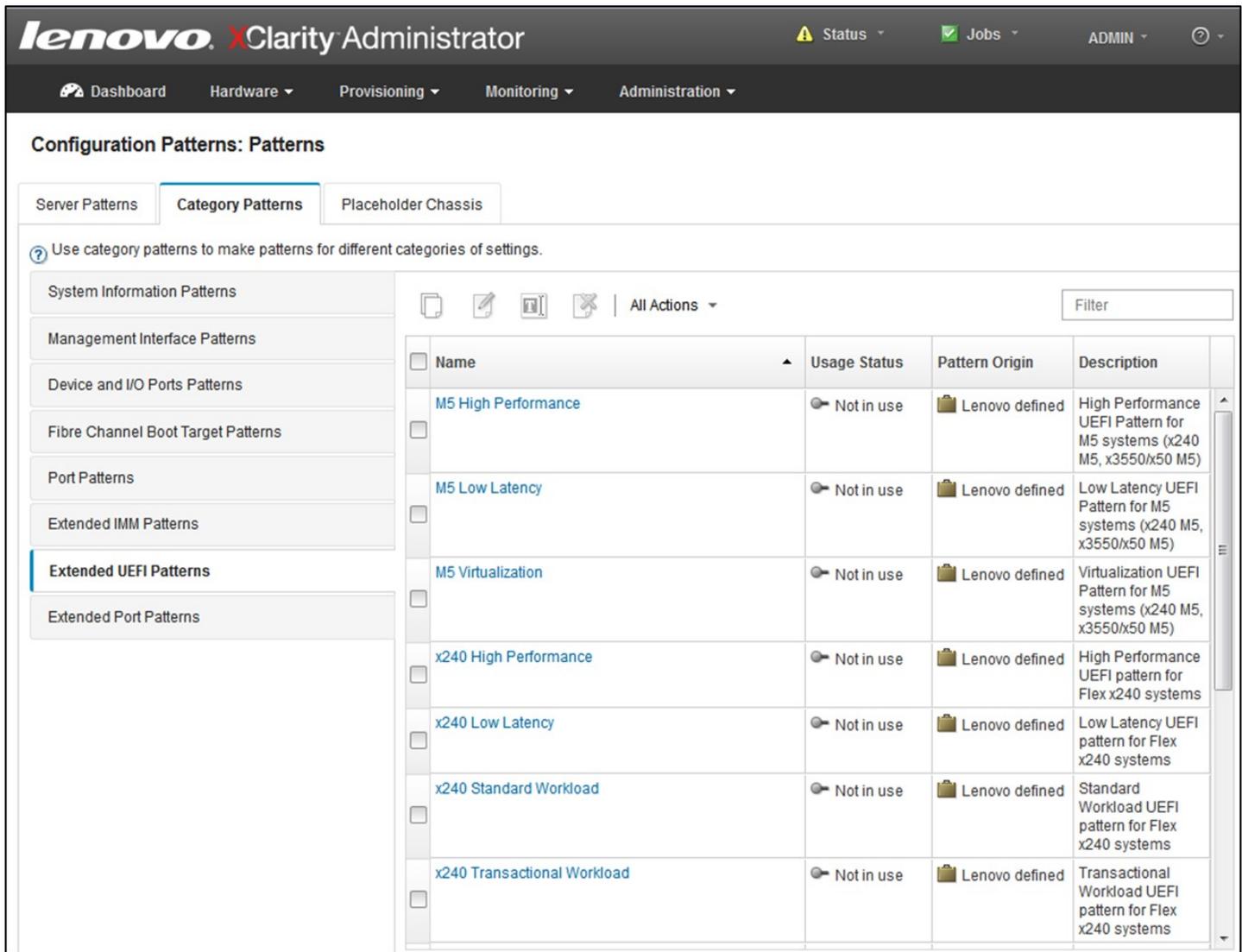
All Actions

**Figure 2**

*Image Provided by Lenovo*

Like most other system management solutions, Lenovo XClarity supports auto discovery and inventory of both existing and new Lenovo System x rack servers and Flex System. But Lenovo has gone a step farther by developing system configuration patterns and templates (Figure 2) that can be saved and reapplied to substantially reduce the time and headaches involved in deploying new servers. Depending on the situation, the company can either provide patterns and templates to customers or assist them in constructing their own.

Lenovo XClarity also includes features that should measurably improve the efficiency and response time of IT staff. In particular, its approach to firmware updates is worth considering. Many vendors simply notify clients that updates are available or rely on their partners to do so. In contrast, Lenovo fully tests and validates firmware updates in-house, alerts customers about their availability and then delivers updates ready for deployment. In addition, Lenovo XClarity allows users to define their own firmware compliance policies and then notifies them when their Lenovo systems are out of compliance.



**Figure 3**

*Image provided by Lenovo*

That hands-on approach is just one aspect of Lenovo XClarity that is designed to enhance server performance and availability. The platform also offers detailed map visualization of racks and chassis (*Figure 3*), allowing admins to easily trace system assets. In addition, Lenovo XClarity includes system monitoring and failure prediction features designed to alert IT staff to potential problems.

Similarly, in virtualized environments the solution can dynamically migrate workloads from affected vSphere or Hyper-V hosts during server reboots, firmware updates and predicted hardware failures. Lenovo XClarity also supports centralized SSL certificate management and audit trails that are fully NIST and FIPS compliant.

Finally, Lenovo's new solution is designed to support full levels of integration with the third party platforms and software common in modern data centers. The Lenovo XClarity Pro edition, which includes packaged integration with VMware vCenter and Microsoft System Center, is one example of this. But Lenovo XClarity also supports REST APIs and Windows

PowerShell CLI, providing great flexibility for integrating the new solution with external, higher level software tools or through scripting.

## **Final analysis**

Given these points and product details, what is the final verdict on Lenovo XClarity?

Overall, we believe that the company has succeeded in developing an entirely new system management solution that clearly capitalizes on existing Lenovo strengths and fresh innovations to provide valuable capabilities that meet the needs of the company's enterprise and service provider customers.

Generally speaking, Lenovo has succeeded in developing a solution that simplifies and automates IT processes, eases server deployments and updates, ensures the effective integration of IT assets and processes, and aligns IT requirements with organizations' budget strategies and priorities. More specifically, the company has achieved this by delivering an innovative offering that combines decades of experience with a deep understanding of modern data centers.

In essence, Lenovo XClarity qualifies as a solution that enables companies to adopt new business computing technologies and to adapt to market and technological changes at their own pace. Overall, we believe that existing Lenovo customers and organizations searching for effective system management solutions are well advised to consider Lenovo XClarity.

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### **About Pund-IT, Inc.**

*Pund-IT™ emphasizes understanding technology and product evolution and interpreting the effects these changes will have on business customers and the greater IT marketplace. Though Pund-IT provides consulting and other services to technology vendors, the opinions expressed in this commentary are those of the author alone.*