

Nutanix Enterprise Cloud provides the easiness of deployment, simplicity and convenience of management, and flexible scale-out capacity



小米  
xiaomi.com

# Nutanix Enterprise Cloud Helps Xiaomi Deliver the “Fun” of Technology

## CHALLENGE

With the rapid expansion of Xiaomi’s ecosystem as Xiaomi broke ground in more categories, there was an exponential growth of demand for IT support from front-end operations, posing a huge challenge to Xiaomi’s existing IT infrastructure which adopted the traditional three-tier architecture comprised of VMware ESi 5.5 virtual machines and SAN storage. The massive increase of users and systems caused an excessive burden on the backend storage system and seriously undermined the overall performance of the entire IT infrastructure, especially the performance of key enterprise applications such as Microsoft Exchange, MS SQL Server and SAP Business Suite. The addition of an increasing number of devices also greatly increased the complexity of IT maintenance.

To meet its internal needs for stronger IT support, Xiaomi was constantly working to upgrade and optimize its IT system architecture, including by replacing its original storage arrays with flash to improve the overall performance of the backend storage system and break the backend storage bottlenecks. However, the SSD solution still proved inadequate as rapid business growth posed even higher requirements for the backend storage system. Meanwhile, the steadily growing IT architecture created a daunting pressure on the space and power consumption of the data centers.

## SOLUTION

After much deliberation, Xiaomi decided to adopt an all-new IT infrastructure architecture to thoroughly break the bottlenecks brought by backend storage to its entire IT infrastructure and also to benefit from more technology options. For this purpose, Xiaomi reexamined its existing IT infrastructure. As a company that believes in the power of technology, Xiaomi knows too well the importance of technology to the company and has always been very enthusiastic about new technology applications. In fact, in response to the challenges brought by business growth, Xiaomi adopted the virtualization technology very early. However, due to its traditional three-tier architecture, the virtualization platform was still using shared storage which was weak in scale-out, thus making the entire virtualization platform a single point lacking flexibility and scalability. Meanwhile, the weak performance of shared storage seriously hindered the development of the virtualization platform. Therefore, Xiaomi decided to adopt a new architecture to solve the issues of its entire IT infrastructure. It was then that the emerging hyper-convergence technology came into Xiaomi’s view. After getting a detailed understanding of hyper-convergence and having a comprehensive comparison with the traditional three-tier architecture, Xiaomi concluded that hyper-convergence could solve the issues of its IT architecture and decided to adopt hyper-convergence as the architecture of its virtualization platform.

With limited IT maintenance manpower, Xiaomi has very high requirements for IT solution providers and the stability, redundancy configuration, high-availability failover and data security of their solutions. Eventually Xiaomi turned to Nutanix, the market leader in hyper-convergence, and, after careful comparison and analysis of its hyper-converged products and testing in terms of performance, functionality and stability, it adopted Nutanix’s Enterprise Cloud platform as the new architecture of its

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– Wu Jiaqing, Leader of System Group,  
Infrastructure Architecture Department,  
Xiaomi Inc

**NUTANIX**  
Your Enterprise Cloud Platform

## RESULTS

The Nutanix Enterprise Cloud Platform, which Xiaomi has adopted for its virtualization platform, is mainly used for the deployment of Xiaomi's Microsoft Exchange, MS SQL Server databases, SAP Business Suite and IPV6-based set top box and Internet TV application demonstration systems, both of which are Internet-based systems subject to explosive growth of users and data traffic, a situation that the Nutanix Enterprise Cloud Platform can deal with outstandingly. In the same time, the Nutanix Enterprise Cloud Platform solution combining computing and storage, effectively solves performance and scalability bottlenecks existing in the backend storage system, and enormously improves the system performance of their key workloads including tier 1 databases and business critical applications.

With traditional storage systems, controllers generally will become a bottleneck as storage increases. One main reason for this is that storage metadata is stored in the controllers. As traditional system only can be scaled up to accommodate a limited number of controllers, the I/O load of each controller increases with the increase of virtual machines. In contrast, Nutanix's distributed metadata service, Medusa, can distribute cluster metadata across the entire cluster to deliver excellent scalability. Meanwhile, it can copy data to multiple nodes to achieve failover. This service supports high availability and tolerance of multiple module failures. Unlike traditional solutions that rely on a limited number of controllers and therefore cannot tolerate failures of multiple controllers, Nutanix's Medusa service not only perfectly solves the bottleneck brought by backend storage to Xiaomi's entire IT infrastructure but also endows its IT architecture with a scale-out capability.

Thanks to the easiness of deployment of the Nutanix solution, Xiaomi's IT support team can accelerate system deployment and quickly put the new system into operation, thus greatly improving efficiency of system launch and availability. Compared with former backend storage, it delivers a 300% improvement in storage performance as measured by latency and over 200% improvement in throughput. With the Nutanix Enterprise Cloud Platform, Xiaomi has also significantly reduced the physical occupancy and power consumption of its data centers, with 70% space and over 30% power being saved. More importantly, the Nutanix solution with its simplicity and convenience of management significantly reduces the workload of IT administrators by 50% and allows them to devote more energy to business innovation.

In addition, the deployment of the legacy three-tier infrastructure needs to consider the configuration and compatibility among network, computing and storage. While the deployment of the Nutanix Enterprise Cloud Platform has saved all the trouble, which greatly improved the deployment efficiency and shortend the deployment time from two weeks to two hours.

## FUTURE OUTLOOK

For companies that are considering implementing a virtualization platform or building a private cloud, Nutanix, as the leading Enterprise Cloud company, is their best choice in terms of both technology and application, according to Wu Jiaqing, leader of system group, Infrastructure Architecture Department, Xiaomi Inc. Nutanix's outstanding performance, easy management and quick deployment have left a deep impression on him.



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## Company

Xiaomi Inc., founded in April 2010, is an innovation-driven technology company that focuses on smartphone, Internet TV and other smart devices towards the building of a smart home ecosystem. Since its founding, Xiaomi has maintained a phenomenal speed of growth, selling 7.19 million smartphones in 2012, 18.7 million in 2013 and 61.12 million in 2014. As of the end of 2014, Xiaomi's business ecosystem had been comprised of 22 subsidiaries.

## Industry

Manufacturing

## Business Need

The exponential growth of demand for IT support from front-end operations, posing a huge challenge to Xiaomi's existing IT infrastructure.

## Solution

Nutanix Enterprise Cloud Platform

## Benefits

- › Greatly improved efficiency of system deployment – from two weeks to two hours
- › Increased storage performance by 200%
- › Significantly reduced the physical occupancy and power consumption of its data centers
- › Significantly reduced the workload of IT administrators by 50%, allowing them to devote more energy to business innovation

Nutanix makes infrastructure invisible, elevating IT to focus on the applications and services that power their business. The Nutanix enterprise cloud platform leverages web-scale engineering and consumer-grade design to natively converge compute, virtualization and storage into a resilient, software-defined solution with rich machine intelligence. The result is predictable performance, cloud-like infrastructure consumption, robust security, and seamless application mobility for a broad range of enterprise applications. Learn more at [www.nutanix.com](http://www.nutanix.com) or follow us on [Twitter@nutanix](https://twitter.com/nutanix).

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