



# Enterprise Cloud Essentials

Multiple Clouds, Hybrid Environments and  
Support for Mission-Critical Applications

*Prepared for:*



research. analyze. neovise.

White Paper

## Background

During February and March 2013, Neovise surveyed 161 U.S.-based IT decision makers on the actual experiences their organizations have had with public, private and hybrid infrastructure-as-a-service (IaaS) clouds. The statistics in this white paper come from that research. For more details on the research, please visit [Virtustream](#) for a copy of the report titled, “Public, Private and Hybrid Clouds – When, Why and How They are Really Used.”

## Enterprise Cloud Essentials

Public clouds get plenty of attention within the broad world of IaaS. The commodity version of public clouds – those built with commodity-grade infrastructure along with minimal if any service level agreements (SLA) – seems to get a disproportionate share. Commodity public clouds are certainly an interesting option, but they are not the only option. In fact, research by Neovise has revealed that the majority of IT organizations are not sufficiently served by a commodity public cloud alone.

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While there are many additional requirements for organizations using IaaS, three essential needs for enterprise organizations emerged from the research:

### Multiple Clouds

IT organizations consistently use more than one IaaS cloud – both in type and number. The following chart shows the breadth of the types of clouds used.

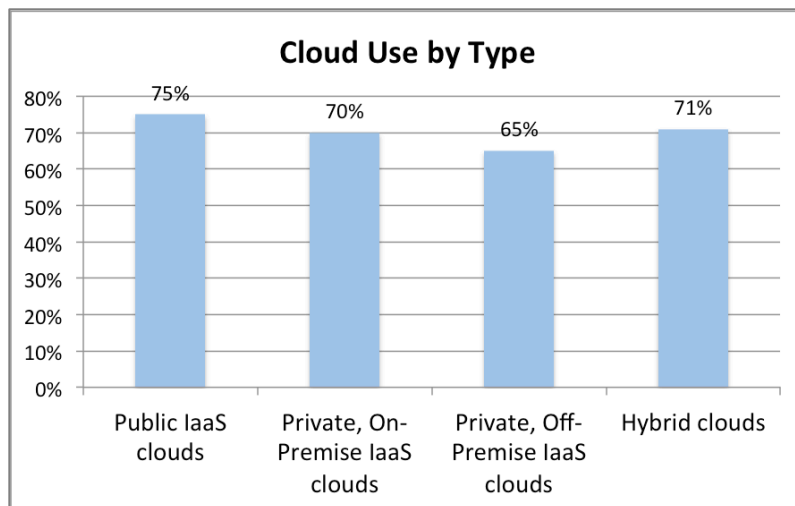


Chart 1 – Types of Clouds used among IaaS Users

Additionally, 40% to 50% of organizations that use a given type of cloud – for instance, a public IaaS cloud – use more than one of the same type. Simply put, most IT organizations have chosen a multi-cloud strategy to meet their IaaS needs.

### Hybrid Environments

As seen in the previous chart, hybrid clouds are a popular choice. While other data from the research shows that hybrid cloud deployments are less mature than public and private deployments, it is clear that IT organizations are pursuing the hybrid model. At the same time, larger organizations are even more likely to use hybrid clouds. Among those using public or private IaaS:

- 86% of organizations with more than 1,000 employees, use hybrid clouds
- 59% of organizations with fewer than 1,000 employees, use hybrid clouds

Another way to view this is that larger organizations – those with more than 1,000 employees – are 46% more likely to use hybrid clouds than smaller organizations. As cloud users find the right solutions to get the most out of hybrid deployments, we expect hybrid clouds to be used much more intensely and for maturity to increase.

### Mission-Critical Applications

Cloud users want to deploy mission-critical production applications to cloud environments. Of the 161 organizations surveyed, 63% had already run these applications in private clouds and 25% had run them in public clouds. While most types of applications and workloads are more likely to be run in a private cloud than a public cloud, this 38 percentage point difference is significantly larger than for other types of applications. For example, running non-essential production applications in a public cloud versus a private cloud only shows an 11 percentage point difference.

*“Cloud users want to deploy mission-critical production applications to cloud environments.”*

We believe that if more public clouds were designed to support mission-critical applications, there would be a significantly higher rate of deployment of mission-critical applications on them. The issue is not lack of demand, but lack of support.

### Enterprise Cloud Challenges

As enterprise IT organizations increasingly take advantage of cloud computing services, a clear picture of their essential needs is emerging. Yet, clarity of needs also provides insight to the challenges which must be overcome in order to fulfill them.

As organizations deploy multiple clouds – and multiple types of clouds – they can face a number of challenges. They may utilize public cloud services from separate providers, resulting in multiple points of contact for billing and support as well as incompatible feature sets. They may also select a private cloud solution that lacks integration with a public cloud, preventing them from progressing toward the benefits of hybrid cloud computing.

Finding a safe way to deploy mission-critical applications in a public cloud can be even more challenging. Commodity public clouds are simply not designed to support these applications without significant architectural changes or the use of additional costly solutions to improve reliability, performance and/or scale.

## Virtustream

Virtustream is a provider of both software and services used to enable enterprise-class cloud computing in public, private and hybrid environments. xStream is Virtustream’s secure, high-performance, enterprise class cloud computing platform. xStream is based on unique Virtustream  $\mu$ VM™ technology, making it up to 30% more efficient than traditional virtualization.

As shown in the figure below, xStream is available in several editions:

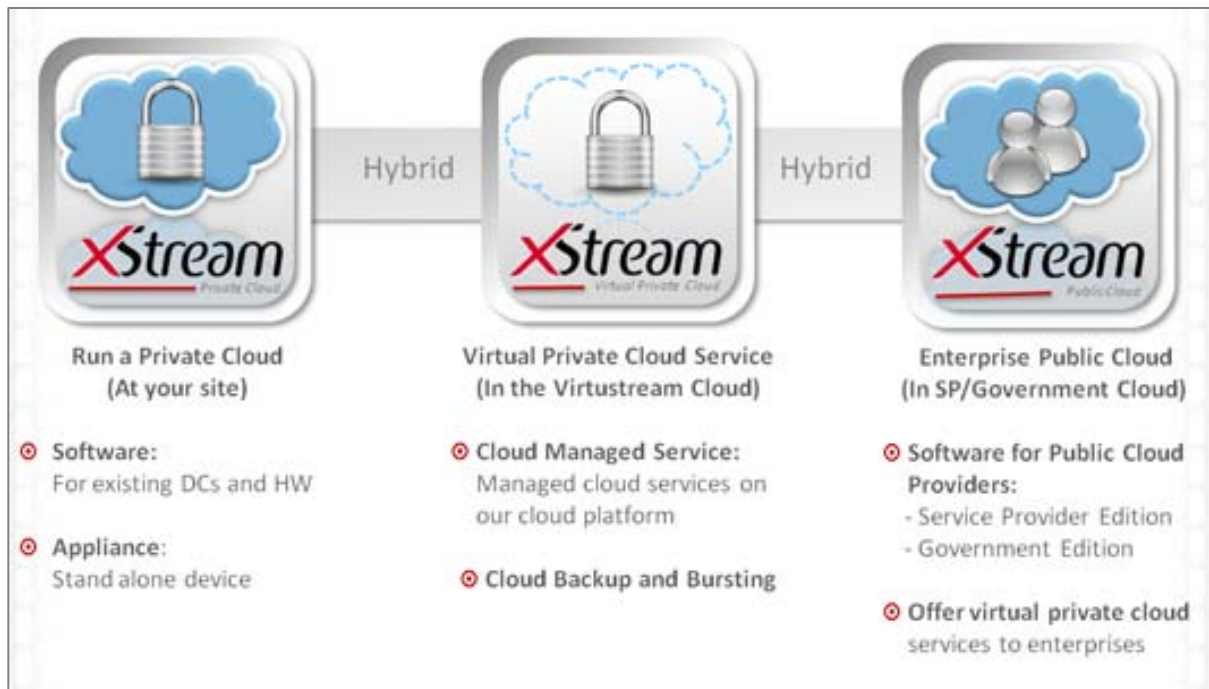


Figure 1 – Editions of xStream Cloud Computing Platform

More information on each of the xStream editions can be found at the following links:

- [xStream Private Cloud](#) - software/appliance for enterprises to run in existing data centers
- [xStream Virtual Private Cloud](#) - managed cloud services running on Virtustream's cloud
- [xStream Public Cloud](#) - for service provider and government customers to offer enterprise cloud services

Importantly, solutions from Virtustream deliver on the essential enterprise needs of multiple clouds, hybrid environments and mission-critical applications – while at the same time overcoming the related challenges.

Virtustream enables enterprise organizations to use multiple clouds of different types, all from a single vendor. These customers can build and manage their own on-premise cloud with existing hardware by using xStream Private Cloud. They can also take advantage of secure, on-demand cloud services by using off-premise services from xStream Virtual Private Cloud. This not only consolidates vendor management, it provides feature compatibility between on-premise and off-premise clouds, smoothing the path toward hybrid cloud computing and enabling backup, disaster recovery and cloud-bursting for additional capacity.

xStream Virtual Private Cloud also overcomes the challenges related to deploying mission-critical applications in an off-premise, hosted cloud. Customers get the economic benefits of a multi-tenant public cloud and also gain additional security, reliability and performance to enable mission-critical production applications to safely run without modification. Unlike some “enterprise-class clouds,” xStream Virtual Private Cloud goes beyond the use of enterprise-grade hardware. It provides application performance SLAs and is focused on reliability and availability. It also delivers high levels of security and compliance, meeting SSAE16, ISAE3402, PCI-DSS 2.0, FISMA, ISO 27001-2005, ISO 9001-2008, HIPAA/HITEC, and other leading cloud certifications and compliance frameworks.

Virtustream has a large number of enterprise customers successfully using its solutions to run mission-critical applications from SAP, Microsoft and many others. Neovise recommends that organizations seeking enterprise cloud computing solutions put Virtustream on their short list.

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### **About Neovise**

Based on independent research and analysis, Neovise delivers essential knowledge and guidance to cloud-related technology vendors, service providers and systems integrators, as well as business and IT organizations that purchase and use cloud-related services and technology. Our offerings include research, advisory and collateral development services that help our customers—and their customers—make optimal decisions and formulate winning strategies. ***Research. Analyze. Neovise.***

For more information, visit [www.neovise.com](http://www.neovise.com).