

How Virtualization Technology Can Transform Data Centers

 a Consonus Article

[Virtualization](#) is an IT paradigm that enables the efficient use of processing power through the ability for one user to access multiple devices at once or for multiple computers to combine their processing power for one task. In this sense, virtualization eliminates the direct physical requirement for a computing device to be dedicated to one task. This has a huge impact on [data centers](#). [Cloud computing](#) firms like Consonus utilize their own computing resources or in combination with a client's IT resources to provide data center services to clients, significantly reducing the capital investment burden of companies to build their own IT department and infrastructure.

Consonus offers a full virtualization plan for data center services. From design to implementation, any system can be put into practice whether it is full virtualization or a hybrid system utilizing onsite resources supplemented through Internet accessible assets.

Virtualization in Action

Virtualization leverages physical computing, networking, other IT resources for maximum efficiency. The typical PC or server sits idle for the majority of the day, typically only in use during business hours. The large capital expenditures and maintenance costs are invested in an asset that is only utilized for less than half a day. This scheme unnecessarily costs companies money.

Consonus offers data center services such as colocation through virtualization and cloud computing to significantly reduce or even eliminate the need for physical servers.

Consonus enables remote access to data centers and all of the necessary data center services. Cloud computing avoids the requirement for each computer in a business to have special software or connections to local server architecture; only Internet access is required. Adding a new user to the system is as simple as connecting to the virtualized infrastructure. Massive savings are realized: the capital expenditures involved in the purchase of physical computing systems such as servers, and specialized software and other infrastructure required by end users.

In the end, computers are computers and they can all perform the same tasks. It is not necessary for one server or computer to be wholly dedicated to one task. A calculator can perform any duty that its owner requires, from simple math to statistics and accounting or calculus. In the same way, a computer network can process sales and orders for one company, then the next moment manage the work flow for a manufacturer and then turn around and run a sort-and-search on a client information database for a financial services firm.

Consonus employs virtualization to keep its clients' operating costs and capital expenses low.

Data Centers and Cloud Computing

Utilizing cloud computing for data centers offers many additional benefits. Beyond cost savings on capital expenditures and operating expenses, Consonus offers cutting edge IT solutions.

For example, building an in-house IT department is a massive time investment. Establishing the infrastructure, hiring and training a team, and integrating all of the business functions without bugs or errors can be a long-term ordeal. There is no real way to avoid all of those growing pains when starting from scratch. By obtaining data center services through cloud computing, all of the foundational work has already been performed and all of the systems have been tested and optimized. And the managed services offered - such as Remote Backup Services or Virtual Infrastructure Services - are essentially turnkey solutions.

Data security and stability issues have really come into the forefront in recent years. Information is as guarded as vigilantly as the front door to the office building, and for good reason. Consonus is always on the leading edge of IT security, with a highly-available and redundant infrastructure and by proactively managing against potential threats such as power outages and viruses. With cloud computing, your own IT resources will never be caught off-guard by a deliberate attack. Data protection is also a big issue; a natural disaster or physical damage to a single server can destroy years of critical business data. Consonus data center and colocation services spread your data sources between multiple physical locations to eliminate this risk.

We've all learned that technology moves forward at an ever increasing pace. Techniques and equipment are becoming obsolete faster than ever before. It is difficult for a company to keep up, especially when IT infrastructure is only one aspect of a company's operations and typically not the company's core business. Technology upgrades involve an inherent risk: if the new hardware or software fails to work

properly, productivity suffers while the errors are fixed. By utilizing cloud computing services, the risk is mitigated by Consonus' dedicated staff that keeps up to date with the latest technology. With a virtualized infrastructure, the loss of one system does not affect the overall service provided. Virtualization gives any business access to the latest technology advances while minimizing or eradicating operational risk.

Virtualization and cloud computing ultimately allow any company to fully leverage an expert company's substantive investment in IT resources and world-class data centers, such as the Consonus SAS70 Type II data centers. By eliminating the prohibitive costs that limit the best implementation of technology is how Consonus offers its services that scale to any business's needs.

