

GRP

2/11/15

Investing in new server technology for our data center will save millions of dollars for our company over the next three years. (A combination of traditional and virtual servers will reduce our initial monetary investment in technology as well as reducing overall operating and maintenance costs. Virtual servers provide greater versatility, reliability, and efficiency to our data center while providing the same or improved services to the end users.) The migration of our current system from traditional servers to virtual servers will provide our company with a net benefit of \$9.2 million over the next three years of operations.

What are
Virtual
Servers.

Virtualization of servers is completed by establishing ^{mult} multiple server environments in digital form onto a single physical platform through software. Our plan involves virtualizing 800 ^{physical} servers and splitting them amongst 80 ^{virtual machine servers} physical servers. Each of these virtual servers continue to function as an individual unit, running its own software and applications but with greater efficiency. As a result of the majority of servers ^{the} being digital, if a physical server needs maintenance, its virtual servers can be moved to another physical server without interruption to the end user. If a server is damaged and needs to be replaced or a software upgrade goes awry, it can be cloned from a master copy of the virtual servers and be up and running again quickly. This increased flexibility will significantly reduce downtime as a result of server outages or maintenance.

Replacing ^{all} 1000 servers with all new physical servers would cost our company \$8 million in equipment and \$6 million in operating expense for the three year investment period.

Migrating to ^{80%} virtual servers ^{and 200 physical servers} would cost the company \$2.88 million in equipment and \$1.92 million in operating expenses for the same time period due to the significantly reduced power and cooling resources required. The switch to virtualized servers will produce a net benefit of \$9.2 million over three years while also reducing system downtime and increasing efficiency.