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### Flash Research Assignment: Virtualization and Cloud Computing

There are considerable opportunities for savings \$14,000,000 over the next three years through an investment into virtualization of our servers. The virtual machine hardware will be able to consolidate servers and increase workload efficiency. This change will help lower costs of hardware and software maintenance, technical support, power and cooling, and generate the net benefit of \$9.2 million over the next three years.

The new datacenter will translate into 80% of our servers running as virtual machines, transforming the 1,000 traditional servers into 800 virtual machines and 200 traditional servers. We can consolidate 10 physical servers onto a single virtual machine and only have to purchase 80 additional virtual servers. All virtualization will occur in the cloud or in the servers that will be located and maintained offsite. Additionally, the new virtual machines will give our team access to expert assistance on all maintenance and configuration matters, thus reducing the need for in-house talent.

Over the next three years, the cost of implementation and maintenance of the new system will amount to \$4,800,000. However, by eliminating maintenance and installation costs of the physical servers, our company will save \$14,000,000 and acquire a net benefit of \$9,200,000 over the next three years.

## BENEFITS

|                                  | Year 1              | Year 2             | Year 3             | Total               |
|----------------------------------|---------------------|--------------------|--------------------|---------------------|
| Elimination of Maintenance Costs | \$2,000,000         | \$2,000,000        | \$2,000,000        | \$6,000,000         |
| Elimination of Server Costs      | \$8,000,000         | -                  | -                  | \$8,000,000         |
| <b>Total Benefits</b>            | <b>\$10,000,000</b> | <b>\$2,000,000</b> | <b>\$2,000,000</b> | <b>\$14,000,000</b> |

## COSTS

|                    | Year 1             | Year 2           | Year 3           | Total              |
|--------------------|--------------------|------------------|------------------|--------------------|
| Maintenance Costs  | \$640,000          | \$640,000        | \$640,000        | \$1,920,000        |
| Server Costs       | \$2,880,000        | -                | -                | \$2,880,000        |
| <b>Total Costs</b> | <b>\$3,520,000</b> | <b>\$640,000</b> | <b>\$640,000</b> | <b>\$4,800,000</b> |

## NET BENEFITS

|                     | Year 1       | Year 2      | Year 3      | Total              |
|---------------------|--------------|-------------|-------------|--------------------|
| Costs               | \$3,520,000  | \$640,000   | \$640,000   | \$4,800,000        |
| Benefits            | \$10,000,000 | \$2,000,000 | \$2,000,000 | \$14,000,000       |
| <b>Net Benefits</b> |              |             |             | <b>\$9,200,000</b> |

## Works Cited

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