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MIS 2501-Flash Research Assignment 2

2/11/14

### Servers and Storage Technologies

With the ongoing power and cooling crisis facing data centers our company needs to invest in liquid cooling. If we do not protect our equipment effectively we will face an increase in downtime leading to stinking profits. By using liquid cooling, the cooling solution efficiency is greatly enhanced, and less fan power is needed. According to Gartner this technology will have high benefits and will be mainstream in 2 years.

Liquid cooling is a technology that uses a liquid such as water or a refrigerant rather than air, to cool the data center and equipment. As the liquid passes through the heat in a data center, heat is transferred from the hot equipment to the cooler liquid. The hot liquid then moves out to a radiator at the back of the case and transfers the heat to the air outside of the case, this transfers allows the cooling solution to be brought closer to the heat source, requiring less fan power. This method of cooling is much more efficient at drawing heat away from the processor and outside of the system. Another benefit of liquid cooling is the reduction of noise within the data center. Most current heat sink and fan combinations generate a lot of noise from the fans that need to circulate air thought out the data center and through the systems.

Investing in liquid cooling will benefit our company right away. Having a more effective cooling system will lead to cost savings in a number of areas. Liquid cooling will guarantee that our equipment is safe from overheating. If a system were to go down from overheating we would be unable to conduct everyday business and face lost revenues and customer loyalty. Since liquid cooling will do away with the need for fans, we will also save money every month on our electric bill. Data center expansion costs could also be avoided with liquid cooling, because we will be able to fit more servers within the same area.

## Work Cited

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