Week 7 Paper

This week, we continued to learn about vertical and horizontal scaling. I will explain the differences between the two, why a company would choose one over the other, and which one would I recommend to a company.

First, we must understand what vertical scaling is. Vertical scaling is about adding more resources to the server. It is commonly used in applications and products. You would find it in more of the small or medium sized companies. With this, companies will find themselves upgrading their server hardware. This includes increasing IOPS, amplifying CPU/RAM capacity, and disk capacity. Some examples of horizontal scaling is Cassandra and MongoDB.

Horizontal scaling on the other hand is found around high availability of services are required. With this, companies add more physical machines to their server or databases. This adds more nodes in the cluster, which reduces the responsibility of each member node by spreading the key space wider and providing more end-points for the client connections. Companies that have high levels of computing or applications or services will use horizontal scaling. The load for the nodes is decreased due to the distribution between separate server nodes. Some examples of vertical scaling are MySQL.

A big question that companies have is, what scaling should we use? Vertical or horizontal? That is a valid question and one that has to be determined carefully due to the costs and the risk to each. With my research and study of each. I would recommend companies to use horizontal scaling. This is due to the fact that horizontal scaling has less down time, has less limits, and has more ability to get the job done without the possibility of the system crashing. Sure, the startup cost of horizontal scaling will be higher, the outcome will be better and well worth it. Where vertical scaling will cost less up front, the limit of space and possible downtime will cost more in the end.

Reference:

* <https://www.esds.co.in/blog/vertical-scaling-horizontal-scaling/#:~:text=Vertical%20scaling%20refers%20to%20adding,small%20and%20middle%2Dsized%20companies>.