**Renting vs. Owning Servers**

Like everything there are pros and cons to buying your own servers or outsourcing them to a company like Amazon Web Services (AWS), Google Cloud Services (GCS), and Microsoft Azure (MA). It mostly depends on your needs and scale of your business.

Small Business

If your business is to make t-shirt designs and is small and does not have technical experts, you would probably rent servers from AWS, GCS, or MA. The costs of doing this would be significantly less than the cost of maintaining your own hardware and software and since your company does not specialize in computing, the best option would be renting one. The price of this also depends on your needs and requirements. A small business like this one would probably pay $1,000 to $5,000 a month if they rented 50-100 servers.

Small Technology-Based Business

If your business was small but specialized in computers/technology you would probably still want to rent servers rather than buy because it would still be more cost effective and the scale of a small business would not support space for 1-100 servers. A small business could simply not support this many servers based on their income, physical space, and the amount of employees a small business has. That is why renting servers from companies may be the best and only options for small, technology-based businesses.

Medium-Sized Business

For a medium-sized business, you have more options with renting verses owning your own servers. You could own your own servers and probably a dedicated building and staff for them, but it would probably still be a better option to rent them rather than buy and maintain them. The reason for this is you probably want to focus more on your core team and line of business. You would probably need to rent or own 100-800 servers made in 2014 and up.

Large or Corporate Business

For a larger or corporate business, I would say it is important to do both. You would have your own servers act as emergency backups where all of your data is backed up in case of an emergency. The servers would also provide local needs for employee data. This would be an in-house data service for your company. Then, have Amazon Web Services (AWS), Google Cloud Services (GCS), and Microsoft Azure (MA) act as the primary services for your consumers. The reason I would have a set up like this would be Amazon Web Services(AWS), Google Cloud Services (GCS), and Microsoft Azure (MA) already have the infrastructure to support peak demands of connections and faster loads time then what your servers could provide. I would use the owned servers for internal purposes and have the external connections ready for use in case Amazon Web Services (AWS), Google Cloud Services (GCS), and Microsoft Azure (MA) go down or have technical difficulties. The chances of this happening would be less than 1%, but it is always better to be prepared to except the worst.

To do this setup it would cost $40,000-80,000 for 1,000 servers from Amazon Web Services (AWS), Google Cloud Services (GCS), and Microsoft Azure (MA) a month. It would cost $450,000-$650,000 for the initial price for 1,000 servers. You would also incur the cost of the building to house the servers. Monthly maintenance and recurring fees would cost $10,000 - $25,000. You would probably want to upgrade these servers every 5 years as these will be used for emergency backups and local employees. The total cost of having the best of both worlds would be about 5.3 million over a period of 5 years including your internal server upgrades. It would be about $936,000 for renting and owning servers per year.

Conclusion

Overall, renting servers from Amazon Web Services (AWS), Google Cloud Services (GCS), and Microsoft Azure (MA) would be the best option for small to medium sized businesses. Renting is most of the time cheaper then owning servers because these companies that specialize in providing data services offer better deals on their hardware because they have a lot of customers they provide to which means they can lower their costs and still make a large profit while having their customers pay less. There are some risks to this though. You are trusting the company that has all your data on their servers to protect your information from security breaches. Your information is vital to the operations of your company and trusting it to an outside source can be considered dangerous. However, Amazon, Google, and Microsoft are all very well trusted and have proven to their consumers they know what they are doing and can be trusted more than a smaller, lesser known company. For small business, renting servers would be most feasible due to cost effectiveness. For large or corporate businesses a combination of owning and renting servers would be the best option due to cost not be such a limiting factor. Owning and renting allows the business to achieve the best of both worlds.

**Buying Servers**

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| **Possible Pros** | **Possible Cons** |
| Know exactly what specs and hardware you want | Hire staff for maintenance |
| Better Deals buying them in bulk | It is up to your knowledge and skill to maintain your servers |
| Physical Access | Security may not be as good as renting |
| Have more control/power over them | Unexpected down-time |
| No extra fees for colocation | Not as frequent upgrades/updates |
| Connect them on a private server to reduce bandwidth costs | Usually more expensive |
| No surprise fees | ISP prices and bandwidth speed |
| Decide who to hire for staff | More work than renting |

**Renting Servers**

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| **Possible Pros** | **Possible Cons** |
| Less money outlay | Lose control |
| No maintenance | Possible privacy issues |
| No need to house servers | Monthly cost increases/inflation |
| Experts with experience | Colocation Fees |
| Frequently Updated Hardware | Unexpected down-time |