M247

Data Centers: Paving the Way for the Next Virtual Playgrounds

Introduction

As streaming has become the preferred delivery method for multimedia content, the technology behind it has had to evolve tremendously over the past few years. From audio and video content to mobile apps and MMO games, software requiring **permanent online connectivity** implies a great deal of data, which needs to be stored and processed in a secure environment.

Since the ENIAC (Electronic Numerical Integrator And Computer) of the 1940s, data centers have come a long way. Even though most may still take up entire rooms or even buildings, in terms of computing power and amount of data stored. Besides that, **design, energy and network infrastructure standards** have been set and perfected over time, to ensure optimal conditions for data storage. As a result, modern data centers represent not only a desirable, but a necessary piece of infrastructure for enterprises handling big data.

This material addresses the needs of managers who want to **leverage the latest technology on the market against competitors**. While the main focus is on the entertainment and gaming industries, data centers are solutions that prove effective well beyond that.

Data Centers Industry
Towards a greater success

Technology advancements lead to impressive changes in terms of growth, footprint and energy sources. So much so that significant increases can be noticed over short periods of time, sometimes as short as one year.

Data center construction will also experience a boom over the next three years, and it's estimated to increase nearly fivefold. In addition, enterprises currently build an average of 2.2 new data centers, but within that year the number will get to 4.5. Overall, by 2021, enterprises are estimated to build 10.3 data centers.

Big data is generated in diverse industries, ranging from healthcare and IoT to gaming and entertainment. Not only the amount of stored data increases with each passing day, but also the traffic. So much so that it's estimated that **by 2021, global IP traffic will increase to 3.3 zettabytes per annum**, from 1.2 ZB in 2016.

For some enterprises, cloud computing may sound like a more viable alternative to data centers, but an all-in approach no longer makes sense. If not too long ago it seemed that on-premises data centers represented merely a path to public cloud, now most architectures and strategies feature both of them. In fact, as many as **55% of enterprises relied both on on-premises data centers and the public cloud** in 2017. That number is expected to increase significantly in the coming years. When it comes to the ratio, however, each enterprise needs to decide on its own, so that it meets the speed and reliability requirements.

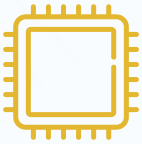
Enterprises having to choose between **shared servers and dedicated servers** have to look at the costs of each before making a decision. Shared hosting is clearly the more affordable option, but it does not come with the security and overall stability of dedicated servers.

Since the resources of shared servers are split among the users, the organizations may encounter limitations as:

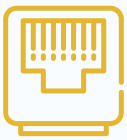
Read and write speed

Memory

Storage capacity



CPU speed



Bandwidth

That is not the case with dedicated servers, where organizations can benefit from more storage and a greater bandwidth.

Because of the specific way that they approach **storage and distribution**, industries such as media, entertainment and gaming benefit the most from storing and running their applications in a data center.

Data Centers in the **Gaming Industry**

Data centers have become so important for the gaming industry that both AMD and nVidia, the world's top manufacturers of graphics cards are attributing their skyrocketing growth to these, instead of crypto. MMO games are currently experiencing unprecedented levels of popularity, meaning that companies providing them need to ensure **uninterrupted uptime, continuous security and an overall pleasant experience** to all customers.

With increased popularity of multiplayer video games comes a need for greater stability. Systems would have to support a large number of gamers. For that, security, **large bandwidth and high processing power** are a must. Once a dedicated server is added to the equation, all such requirements are met and typically exceeded, in order to allow for some overhead.

Since the video games market is estimated to reach over $90 billion in 2020, companies wishing to make an impact have to get in the game early. Distribution of **smartphone games market revenue** is expected to reach 34% of the market in 2019, up from 32% in 2018. In the case of **console and VR games**, the percentage will presumably decrease from 27% to 26%. Interestingly enough, the percentage of **PC/MMO games** will get from 26% to 25%, suggesting a possible saturation.

Using a dedicated server is not without challenges. First of all, the performance associated with dedicated servers comes at a cost, which may result in some financial pressure. From this perspective, such solutions may be more suitable for large businesses, rather than startups. Secondly, companies need to ensure that the provider of dedicated servers can provide **technical and non-technical support** that's on par with the media or gaming service. Making sure that the hosting provider is reliable should be among the first criteria when looking into dedicated servers.

Entertainment and Media Industry

Organizations in the media & entertainment industry that are willing to ensure and maintain high standards of quality often turn to data center solutions. In their particular case, there is a great **focus on security and scalability**. First of all, the data of all consumers needs to be stored in a secure environment, both from a digital and a physical perspective. Secondly, the number of consumers can grow or drop overnight, meaning that media enterprises should be prepared at all times to **scale up or down as required**.

The increasing number of cord-cutters, correlated with the growing number of subscribers to video on-demand services is only one of the things that suggest that data centers are becoming more and more important for this industry. To put things into perspective, the number of cord-cutters has increased threefold since 2013. With **streaming being the main distribution method**, it's becoming clear that storage and bandwidth are essential.

Besides lower costs, data centers come with a plethora of benefits for media & entertainment companies. First of all, when the entire content is stored in a data center, the catalogue is available forever. Both **the safety and the security** of the IT infrastructure are ensured continuously, meaning that the systems will function within optimal parameters all the time. In most cases, data centers come with real-time support, so any issue is solved promptly as soon as it is reported. Even though dedicated circuits and connections are provided, the costs remain manageable.

General Benefits

For both media and gaming companies, the high bandwidth and high computing power associated with dedicated servers translate into scalable services and an uninterrupted experience for the customers. The ability to scale up or down is innate to data centers, with security being an added bonus.

Providers of dedicated servers typically take both on-site and remote security measures. In other words, The assets are always protected against hackers and the online environment is secure at all times. Continuous monitoring should also be supplied, so that there are no cases of unauthorized access. Complex encryption algorithms are used as an additional security layer.

On top of everything, it should be noted that dedicated servers allow companies to access the data and apps remotely. That way, adjustments can be made whenever needed, without anyone having to visit the data center. On-site assistance is also provided, so that the disruption time is reduced to a minimum, should issues ever occur.

Conclusions

For companies in the gaming, entertainment and media industries, data centers with dedicated servers are the **optimal solution for scalability and security**. Only this way it is possible to achieve the highest possible standards of quality, which are needed when wishing to provide reliable services or products.

Considering how often games and media catalogues are updated, and how many concurrent consumers can be using the service or product, it becomes clear that **dedicated servers are preferable to shared ones**. Dedicated servers hosted in professional data centers offer the necessary performance and bandwidth for a high-quality service.

Would you like to find out more about how your gaming or media & entertainment could benefit from storing and running applications in a data center?

Get in touch with us!

About M247

As one of the fastest growing providers of IT infrastructure in Europe, we are able to ensure **top connectivity speeds** and the **flexibility** that your gaming or media & entertainment company needs when scaling up or down.

Among the benefits you can get by choosing us as your organization's connectivity provider we should mention **rapid delivery, 24/7 support, flexibility and cost savings**. In turn, this will enable your business to reduce time-to-market for all online products, to cut down or even eliminate downtimes, and to invest more in innovation.

Our awards and nominations, including the UK Customer Experience Awards 2013, M.E.N Business of the Year 2015 and Cloudex stand as proof of our professionalism and of the high-quality that we pursue when delivering any of our services.

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