Ref: <https://www.youtube.com/watch?v=7K0WUb9tTys>

Cloud for real-time and personalized services that offers IT service environment and cloud computing capabilities at the most lucrative point in the mobile network edge. It is characterized by ultra-low latency, high bandwidth, real-time read in a token context information.

Before 5G we hosted third party authorized apps in the mobile/network / operators’ network

Now the new meeting point is where operators’ apps and context providers collaborate

5G has extreme requirements:   
-massive broadband  
-critical machine communication  
-massive communication

We deploy application in close proximity in order to provide real-time services to satisfy the demanding requirements for ultra-low latency and high bandwidth also automation and scalability and offers additional privacy and security and ensures significant cost saving.  
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Ref: <https://youtu.be/fIwkdlfD_mY> and <https://www.wwt.com/article/edge-computing-and-its-vital-role-in-the-5g-economy>

Set of technology that is deployed at the edge of a server providers infrastructure. Big investment that needs to be monetized. The end user will have increased cost. Enterprise customers are the main customers then the end user. They need to figure out how to monetize it (server providers).   
Challenges are mainly cost and scalability.

In fact, given its role in the [5G delivery ecosystem](https://www.wwt.com/article/service-providers-should-invest-in-these-technologies-to-best-monetize-5g) — if mobile operators are racing to be first to deliver a true 5G network, edge computing may very well be the vehicle they use to get to the finish line — edge solutions need to be vertically focused and strategically deployed.

Ref: <https://itnspotlight.com/edge-caching-tackling-in-5g/>

It no longer makes sense for all the data collected from those devices to be processed in a national or regional data center. Edge computing exists to bring the [data center closer to where it’s needed](https://www.wwt.com/article/is-your-cloud-living-on-the-edge), thus allowing for faster processing time.

It’s a tongue in cheek example and most consumers don’t need that type of latency to share cat videos — streaming, in most cases, works just fine with 4G. But for many services, such as the self-driving car or virtual reality, incremental milliseconds of latency can make a world of difference.

No matter the location, the goal remains the same — to provide computing power as close to the device producing data as possible to increase speed and lower latency.

Service providers have invested trillions of dollars to build out 3G and 4G networks only to see over-the-top services such as Netflix or Amazon truly derive value from that connectivity. Service providers today and moving into the future will invest enormous sums into 5G networks and cannot afford to miss out like they did with 3G and 4G.

Edge computing allows for [faster monetization of 5G investments](https://www.wwt.com/global-service-provider) by delivering next-gen applications to consumers and, more importantly, enterprise customers.

Tying it all together:

Similar to 5G, edge computing is not a single technology, but a set of technologies being deployed in unison to achieve a business outcome. And to achieve the scale needed with edge deployments, white box hardware will undoubtedly play a part.

The [disaggregated nature of 5G](https://www.wwt.com/topic/network-function-virtualization) adds further complexity. White box hardware alongside open source software stacks provide significantly more innovation and development opportunities. But as simple as it may sound, it is complicated.

Disaggregating software from hardware allows service providers to realize cost savings by deploying original design manufacturer (ODM) equipment while leveraging the power of software to become a nimbler operator that can provide best-of-breed solutions tailored to industry verticals.

Service providers desire the [value white box can deliver](https://www.wwt.com/news/world-wide-technology-deploys-advantech-white-box-universal-cpe-in-advanced-technology-center), but typically can’t commit to the labor-intensive processes needed to validate and deploy white box solutions effectively nor able to dedicate the time or resources needed for ongoing support.

Deploying white box-based solutions is building something new and unknown. For service providers, it’s critical they have [confidence the solutions they deploy will work as intended once deployed in the field](https://www.wwt.com/supply-chain-integration-services). Operators need an experienced integrator that can oversee multi-vendor solutions, validate and ensure design requirements are met, rollout the solution quickly at scale, optimize the solution on an ongoing basis and provide technical support between various vendors.

<https://www.zdnet.com/article/where-the-edge-is-in-edge-computing-why-it-matters-and-how-we-use-it/>

<https://www.zdnet.com/article/the-edge-takes-shape-the-5g-telco-cloud-that-would-compete-with-amazon/>

<https://www.linux.com/tutorials/challenges-and-solutions-edge-computing-future/>

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