Online gaming that streams video games directly to a user's device from remote servers is known as cloud gaming, also known as gaming on demand or gaming-as-a-service. In more everyday terms, cloud gaming refers to playing a game remotely from a cloud. It differs from conventional gaming methods where a user's video game console, personal computer, or mobile device runs a game locally. In a typical scenario, you would insert a CD into your computer or gaming console or download a game to your hard drive. Due to the requirement for sufficient computing power, the game plays well and looks fantastic. With cloud gaming, you play games through a distant server rather than a local machine. Like Netflix videos, you can stream games, but with the difference that cloud gaming depends on the user sending inputs back to the cloud server while simultaneously receiving video and audio. Each time you press a button to direct your character to perform an action, that input is transmitted to a distant server, which then notifies the game of what you did and sends you a fresh video frame to display the outcome. A few years ago, this project seemed overly ambitious. Even for someone streaming it themselves, latency, low bandwidth, and a few other issues could make that challenging for someone playing on a local machine. However, it appears that these businesses are committed to resolving those problems, making it possible for playing games in the cloud to be as enjoyable as playing them locally on a console, computer, or smartphone. For cloud gaming to function, a sizable infrastructure is needed, including servers to run the games and high-bandwidth, low-latency internet connections to deliver the stream to users. Cloud Gaming has some great advantages to it such as:

* Security: As the game data is not stored on a local machine, traditional bypassing, interrupting, or hacking of the game client will be more difficult.
* Privacy: industry standards are in place to safeguard your information (so little opportunity for hackers).
* reduced costs — cloud-based systems operate on a "pay as you go" basis, where businesses only pay for the services they actually use.
* game support—you won't lose your game progress if your computer malfunctions. Additionally, installing games and updating content is not necessary with cloud gaming.
* Users can play high-end games on low-end devices of any kind, so you can enjoy superb quality even with a cheap laptop.
* Users have easy access to a variety of games and can quickly switch between them.
* reduce the likelihood of piracy – Since piracy is much more difficult in the absence of physical copies of gaming software, the cloud lowers the possibility of unauthorized manipulation.
* Cloud gaming supports the use of numerous devices including smartphones, laptops, desktops, and other gaming consoles.

As wonderful as they are there are some challenges to cloud compass well.

The distributed denial of service (DDoS) attack is the most blatant and popular threat to the cloud-based gaming sector. The cloud is where the user account and saved games are kept. Therefore, it would be impossible to play any games if the service was down. Direct attacks against the game servers are made in this manner. They could also become the target, along with the entire gaming platform, and do significant harm. They could also completely shut down the system, blocking authentications for cloud-based accounts and saved games. They are a significant problem for game developers and game studios and are most prevalent on the PC platforms. A multiplayer game's success can be ruined by cheaters in a number of ways, including changing skills, using scripting hacks, wallhacking, and obtaining infinite or unlimited amounts of money, health, ammo, achievements, etc.