

Your Network Performance Doesn't Have Extra Lives

How to win in the gaming industry

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Chapter 1

Introduction

The growth of the online gaming industry is unstoppable. There are now more than 2 billion gamers worldwide, and they generate over 50 TB of data per day.²

With the fantastical popularity of massive multiplayer online games (MMO) and Esports, game networks are under some of the heaviest pressures to perform. It's necessary to render perfectly detailed environments and flawlessly respond to monumental amounts of user-inputs—from players who are interacting and competing around globe.

Your network is every much a part of the play as the games themselves. We'll explore essential networking considerations, industry trends, and security measures you need to deliver immersive, uninterrupted gaming experiences that will delight, and definitely not disappoint your audience.



The gaming industry generated **over \$120B** in revenue in 2017 and is expected to reach **more than \$180B** in 2021¹



Mobile gaming
revenue will reach
\$70.3B in 2018,
or 51% of the global
market share⁵

Chapter 2

Responding to the mobility call to arms

Gaming has evolved way beyond disks, and even consoles are now in steady decline. Before delving into network considerations, it's important to realize that mobile is now the highest growth segment within the gaming industry.³ A brand that already has vast amounts of experience and proficiency as a mobile provider will be prepared for the shift to mobile gaming.

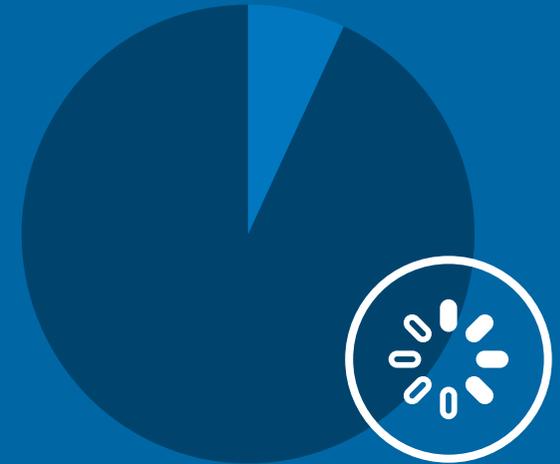
For example, did you know gamers' satisfaction on mobile clients is most directly related to graphics quality? This is quite different from their expectations of desktop clients, in which they are more concerned with game controller quality.⁴ To meet the video quality standard of today's gamers, carrier-grade ethernet and world-class MPLS are required. So gaming companies are wise to have the players' mantra of 'anywhere, anytime' running in their heads.

Chapter 3

Many gamers are up all night, is your network?

Disruptions or delays of any kind that undermine the immersive and competitive aspects of games can easily cause users to quit your game for good. It may seem like an extreme reaction, but while playing, milliseconds can feel like an eternity and drastically alter outcomes for players.

Consider how massively multiplayer online games (MMO) and Esports are data-intensive on sheer volume alone. Then add in all the rapid commands from your users, as they battle in shootouts or try to coordinate moves with teammates from around the world. The stakes get really high, really fast. If your network can't keep up, you've got a real "Game over, man!" scenario on your hands. There are ways to keep your performance future-focused.



Online gamers are 2x as likely to abandon a game when they experience a network delay of **500 additional milliseconds⁶**

The performance of your network comes down to five key elements:

1 Bandwidth

The provider you choose should have room to spare, so you can scale on a token and keep on moving. A 39-megawatt capacity site should do the trick.

2 Reliability

99.999% uptime (five nines) is the twirling, golden coin standard. Your users won't accept any less.

3 Data centers

Online games perform best when the users are near a data center. At the very least you need redundant, bicoastal centers.

4 Adaptability

The service should be agile, smart and responsive. You should be offering hosting options and around the clock professional services.

5 Security

Gaming security has special considerations, which we'll explore in more depth on the next page.



The gaming industry
accounted for
**79% of DDoS
attacks in 2017⁸**

Chapter 4

Build your fortress to last the ages

Distributed denial-of-service (DDoS) attacks are a pervasive and costly threat. According to a survey in 2017, they cost enterprises an average of \$2 million.⁷ During these attacks there are issues that are common and, in some cases, unique to the gaming industry. The assaults are often strategically orchestrated to take place during peaks in traffic and new product releases, and include:

- Data theft through phishing and spoofing
- Cheating as a result of breaches between the server and client
- Hacking client-side prediction for unfair advantages
- Malicious downloads

There are treacherous and cunning characters out there, but you can protect your network with:

- Robust identity and access management
- Closed networking that ensures data sovereignty
- Continuous in-line detection of traffic activity and threats
- 24/7 real time management, monitoring, and customization at a reasonable price



Prep your play:

4 ways to design that slaughter latency

Ready for a boss-level challenge? Low-latency is a beast of a nemesis. Your network will do the heavy-lifting, but you can streamline your designs with these four techniques, before they even reach a server:

- 1 Render in client**
Create templates that front-load your apps, allowing game interfaces to self-update.
- 2 Store data in your client**
Web storage is your friend. HTML5 offers plenty of space, so cut down the remote requests.
- 3 Preload apps with intelligence**
Reliable prediction doesn't require psychic talents. A bit of coded logic can anticipate user inputs and empower them to execute "speedier" commands.
- 4 Asynchronously relay commands**
It's a virtual smoke and mirrors technique that displays instantaneous responses to user commands. Provided your server doesn't have any issues, your users will be happy.

Your game master revealed

BCE Nexxia—a Bell Canada Company, which is Canada’s largest service provider. We offer carrier-grade reliability, the fastest in-line detection of traffic activity and mitigation of threats, and the most data centers across the country. We hope you’ll consider our services and look forward to helping you gain and maintain many loyal players.

Email us

Learn more



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