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The background of the slide is a dark gray circuit board pattern with white lines representing traces and components. The pattern is more dense and detailed in the top and bottom sections, while the middle section is a plain light gray gradient.

Game Over IPv4

The need of IPv6 for the future of games

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Motivation

- Many Brazilian Internet Service Providers (ISPs) have reported connectivity problems with online games.
- Our IPv6.br team did some research with the most famous online games
 - Many of them don't use IPv6.
 - Games require good connectivity.
 - Some games require incoming connections.



Talking about the problem

- Internet Service Providers' point of view
 - Some can not receive any more IPv4 addresses. Others can buy them but they are usually too expensive.
 - Many ISPs uses CGNAT which doesn't allow incoming connections.
 - Many ISPs have difficulty finding the right proportion between Client X Ports.



Solving the problem

- The best solution: IPv6!
 - Faster than IPv4
 - Allows end-to-end connectivity
 - Each user has their own public IPv6 address



BUT both sides (ISPs and Online game companies) must deploy it!

Debating the problem

- While IPv6 is not widely deployed, let's try to discover what problems there are with IPv4 and games
 - Do game companies use Blacklist?
 - How many ports should a client receive?
 - Do online games usually require incoming connections?
 - How worse is a double NAT connection?



Solutions and possibilities for collaboration

- Policy questions

1. What are the overall impacts of the IPv6 transition on the future of Online Games and gamers?
2. What issues might we face if IPv6 is not deployed or if this transition takes too long to happen?
3. What are the overall challenges of IPv6 deployment on ISPs and Gaming Companies?
4. What opportunities for collaboration and solutions exist?



GAME OVER IPv4

Thank you for playing!

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