

internet

# THE SHUTDOWN GAME

shutdowngame.apc.org



blockages

curfews

diverting traffic

dns hijacking

closedowns

censoring

disruptions

throttling

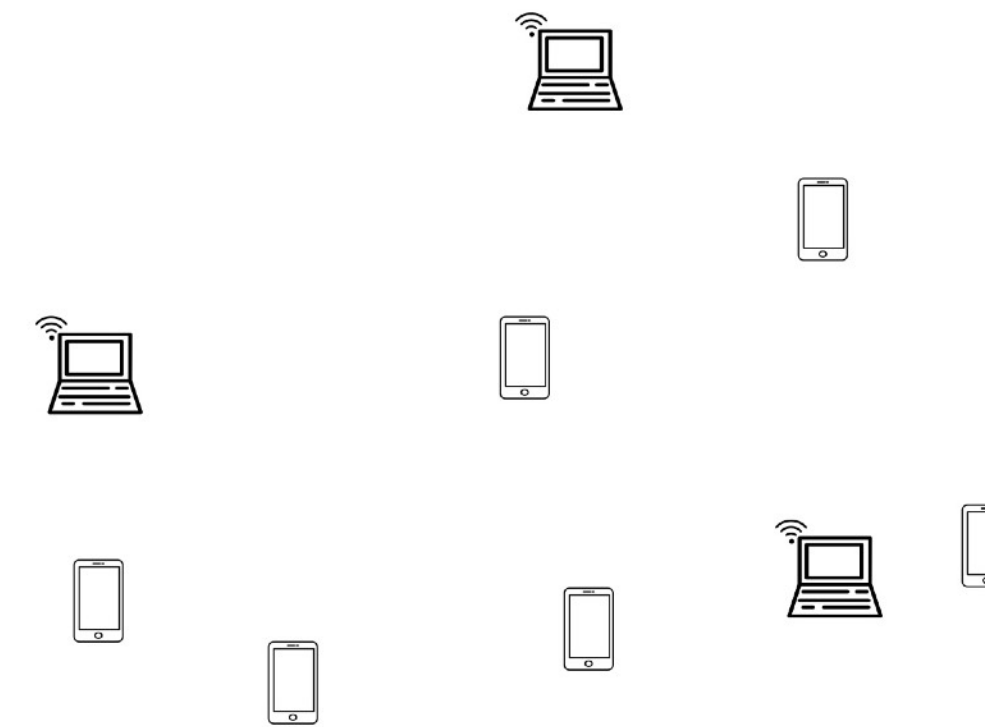
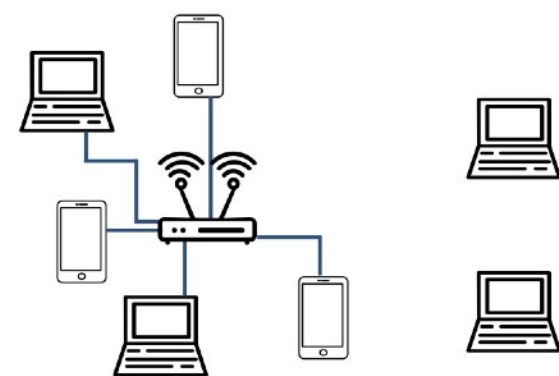
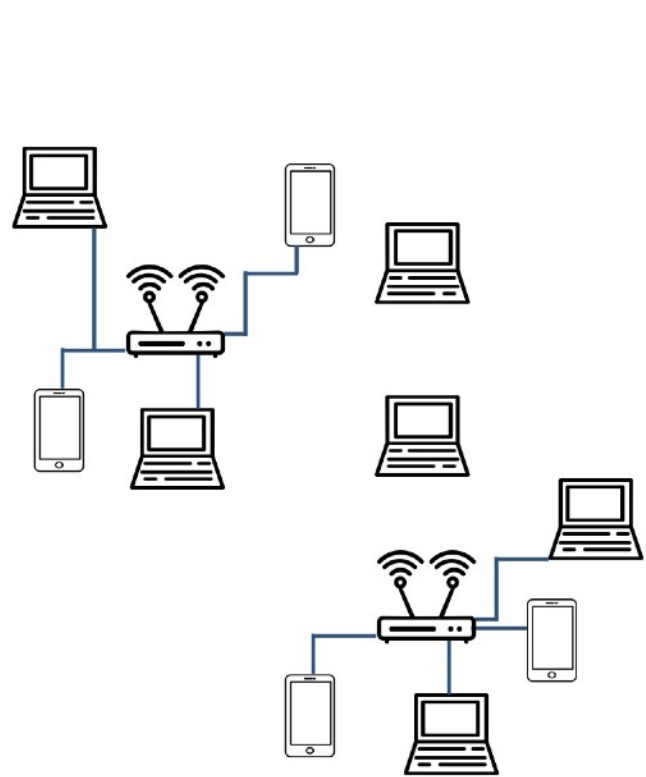
shutdowns

banning

blackouts

# GAME OBJECTIVES

- **Understanding internet infrastructure:** provide participants with a comprehensive understanding of the fundamental technical concepts governing internet infrastructure and enabling participants to gain insights into how the various types of shutdowns are technically executed.
- **Circumventing shutdowns:** To enhance participants' knowledge about the mechanisms and strategies that can be employed to circumvent internet shutdowns. This includes exploring ways to protect themselves from potential government retaliation, thereby empowering individuals with the skills and awareness needed to navigate and mitigate the impact of shutdowns effectively.
- **Facilitate learning in a safe environment** where all can participate and all voices are respected.

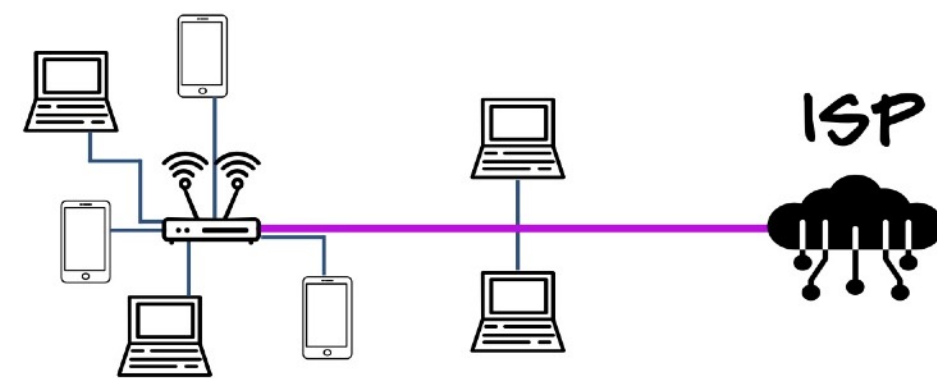
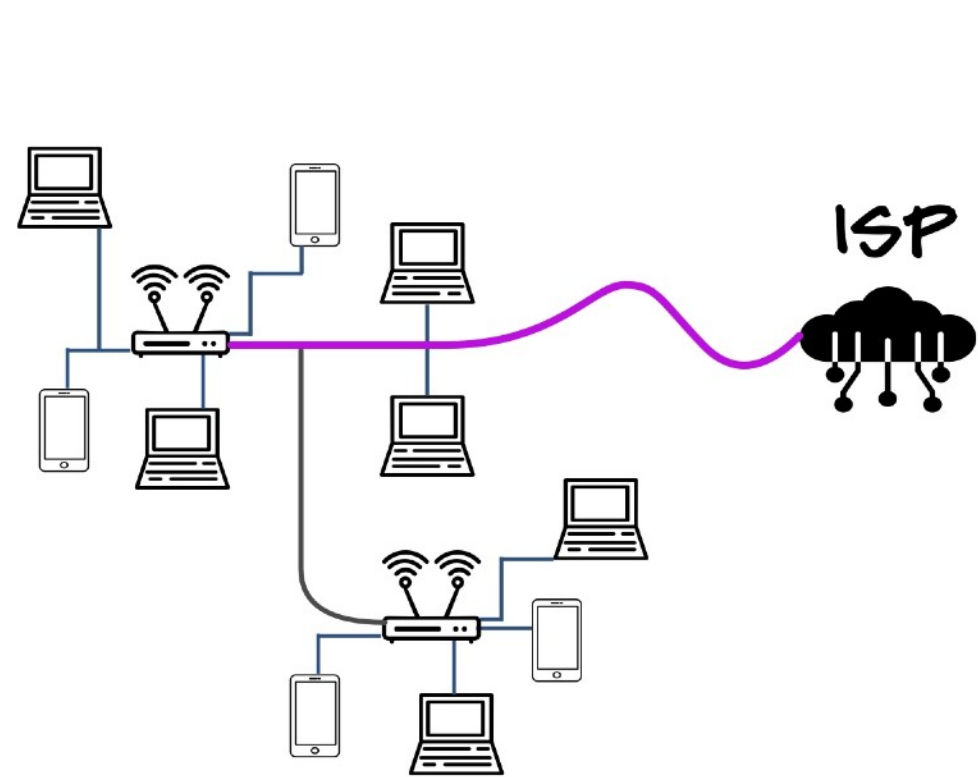


COUNTRY

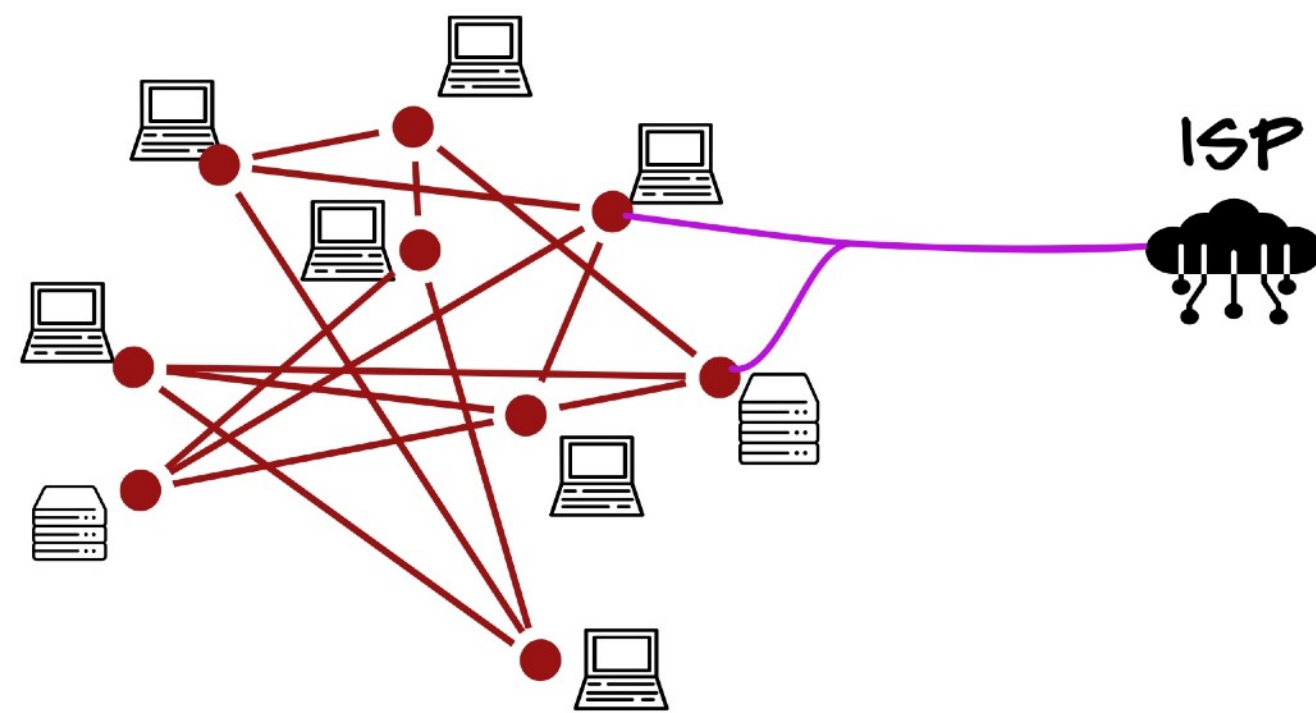
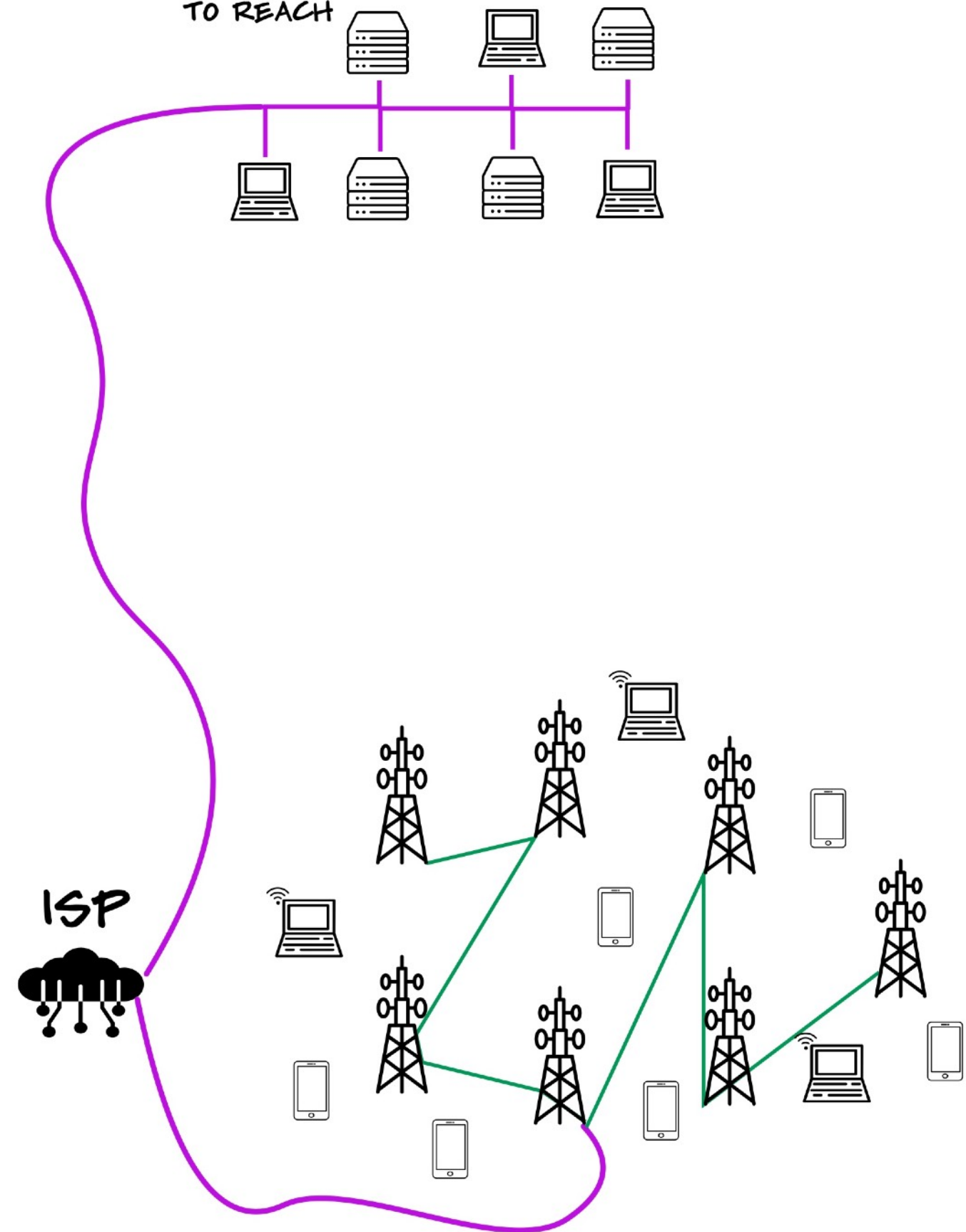
REST OF WORLD







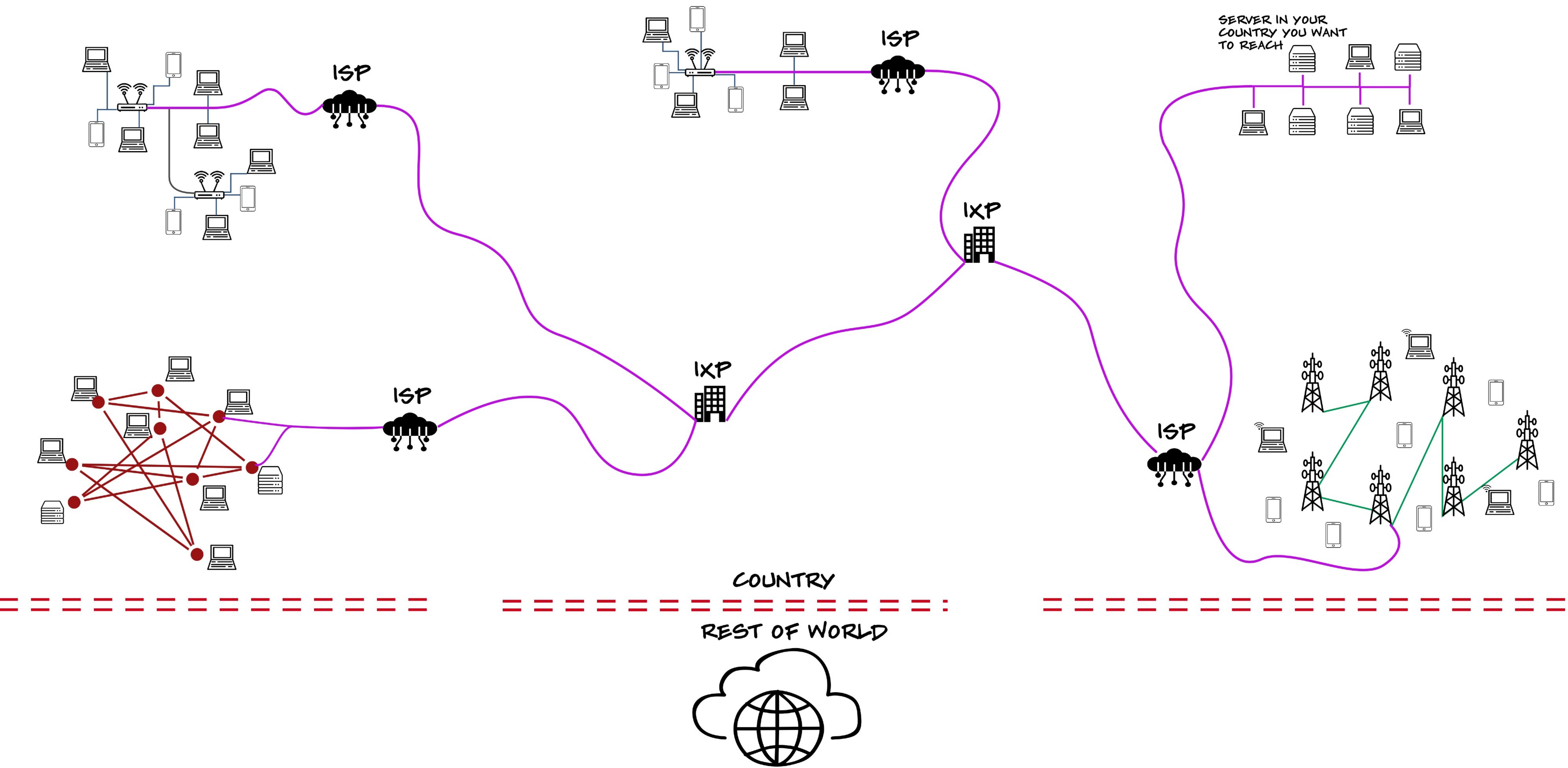
SERVER IN YOUR  
COUNTRY YOU WANT  
TO REACH



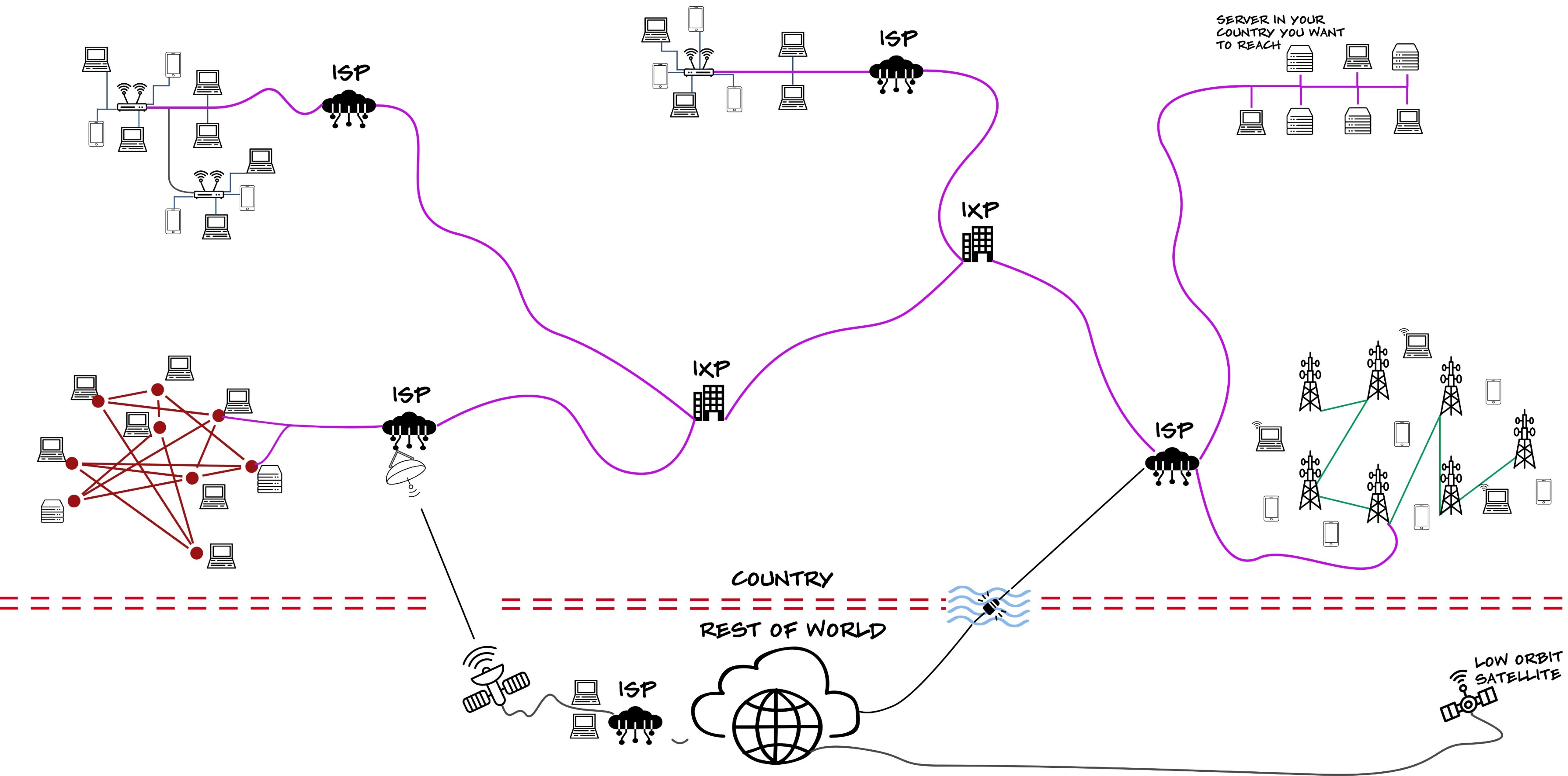
COUNTRY

REST OF WORLD

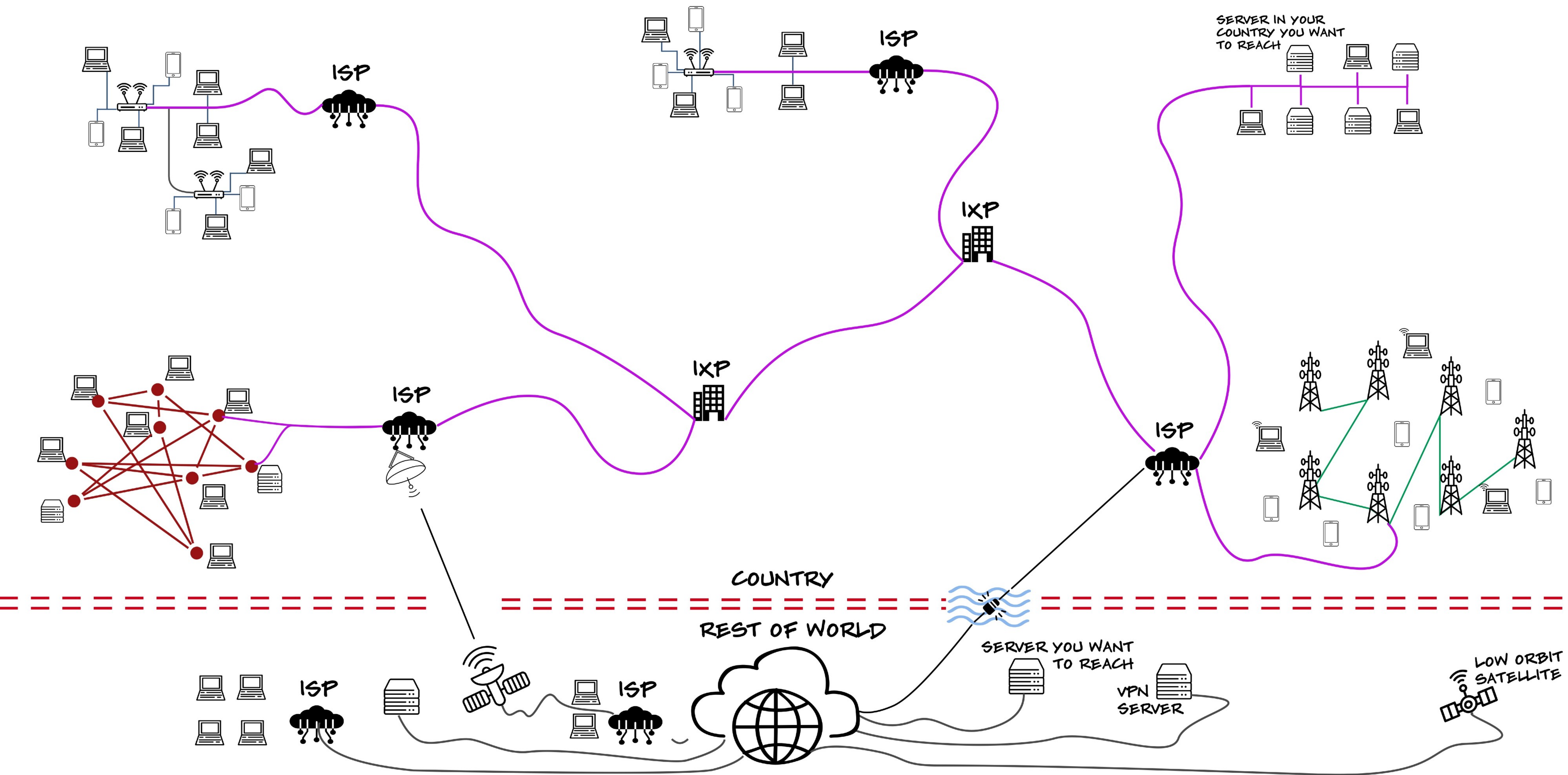




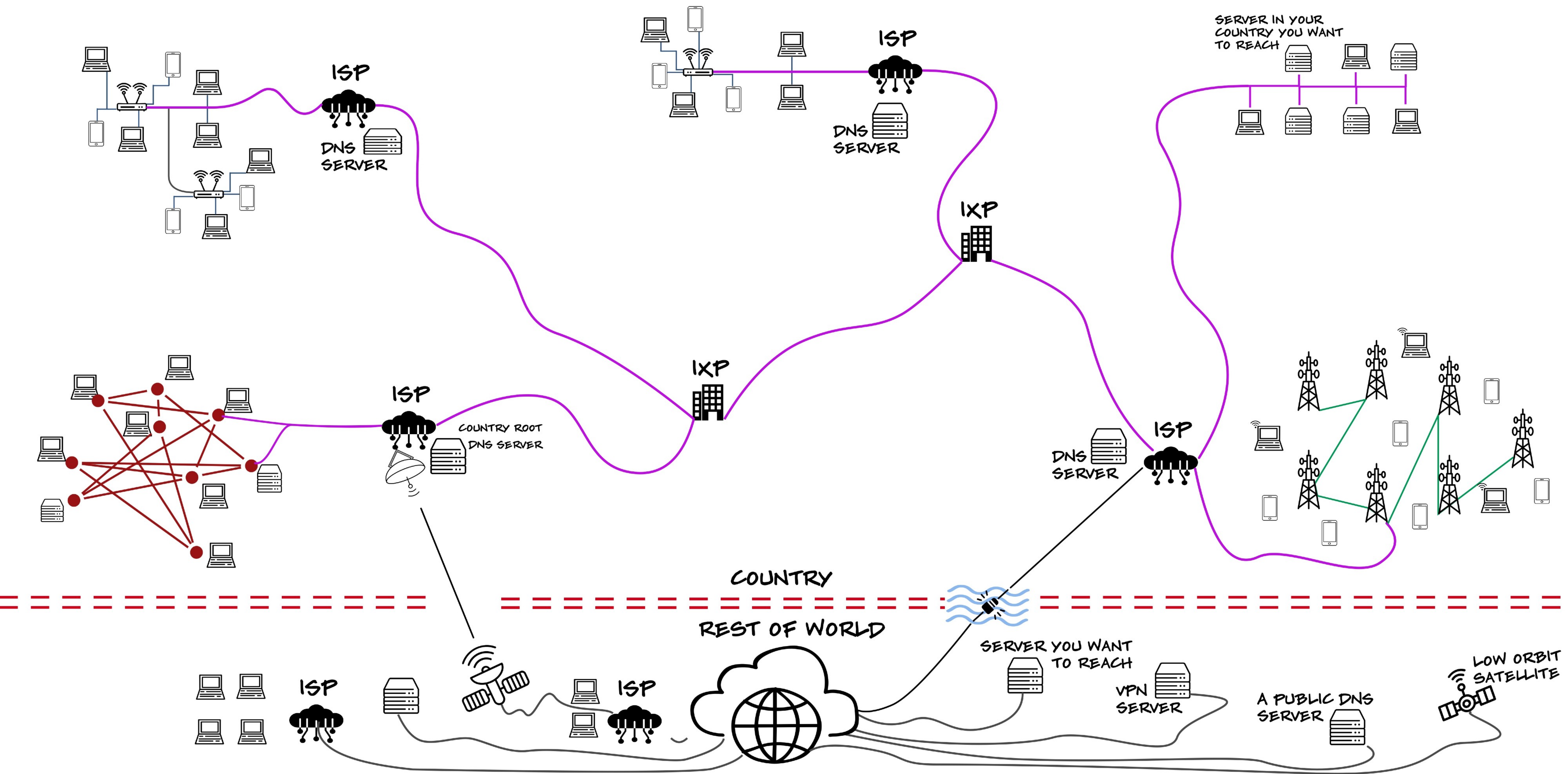












# READY TO PLAY?

- You will be divided into two competing teams that will work in two breakout rooms
- We will present a real world shutdown scenario happening on the map
- You will be given a set of cards to play to circumvent the blockage.
- Each team will go to their breakout room to discuss the best solution and select one card
- After 10 minutes we will come back to the main room to discuss the solutions
- Each team must share the selected card privately with the facilitator

A card played correctly is +1 point.  
....but incorrectly it is -1 points!



# CARDS YOU CAN PLAY



Have a backup  
internet connection



Install and  
use a VPN



Connect to a  
public wifi network



Use Tor  
(anonymous browser)



Wildcard!  
(any other creative  
but technically viable  
solution you can think of)



Change your  
computer DNS  
configuration



Use a foreign SIM  
Card to connect



Satellite connection  
(can only be used  
once in the game!)

Play one card per round.  
Send to the facilitator  
via the defined channel.  
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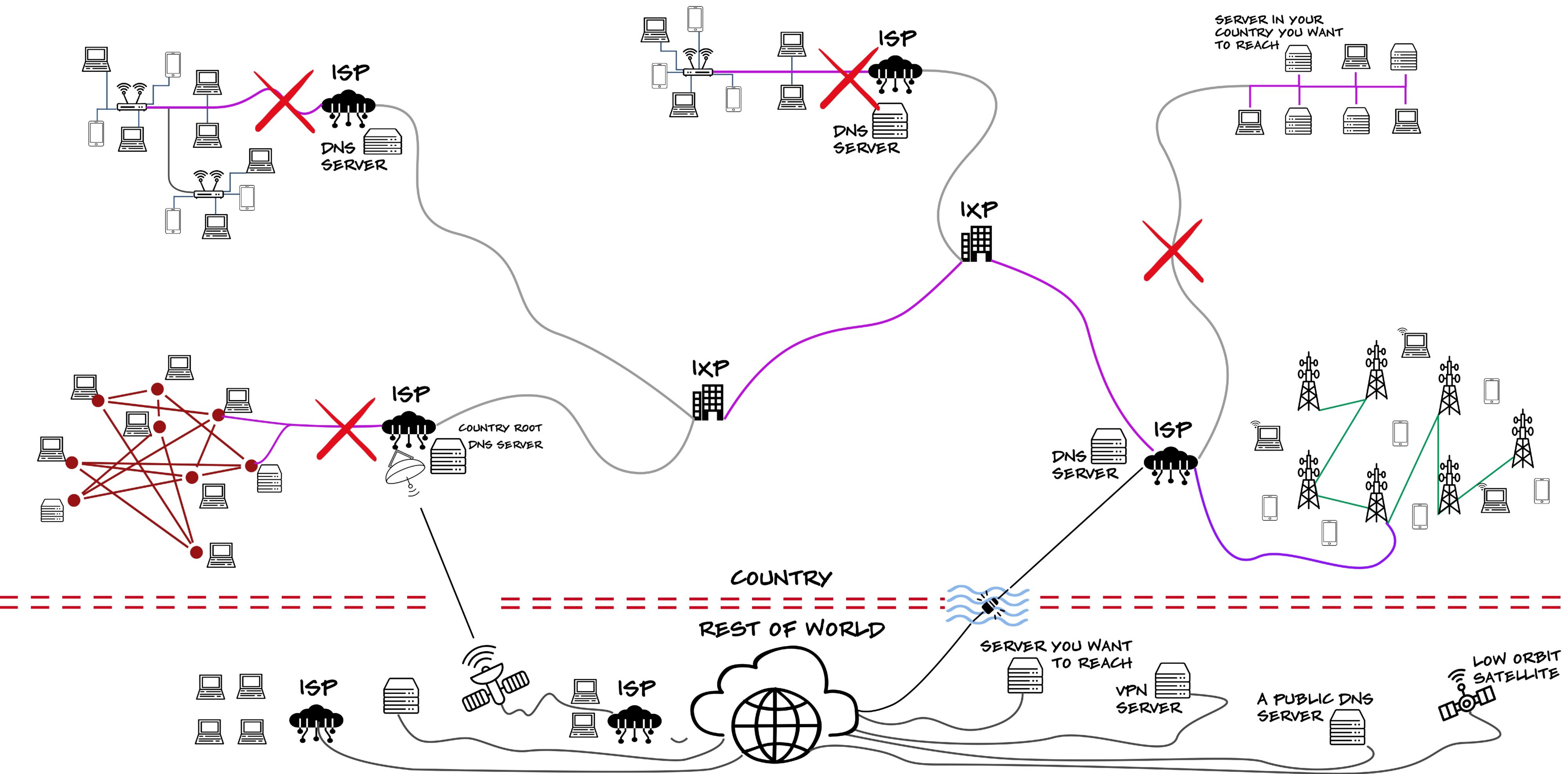


# SCOREBOARD

	Team A	Team B	Team C
Scenario 1			
Scenario 2			
Scenario 3			
Scenario 4			
Scenario 5			
Scenario 6			
Scenario 7			
Scenario 8			
Scenario 9			
Scenario 10			
Total			

# SCENARIO 1: CURFEW

- It is exam time and the government has imposed a broadband curfew.
- You have broadband at home, and your internet connection is down.
- What card do you use to be able to connect anyway?





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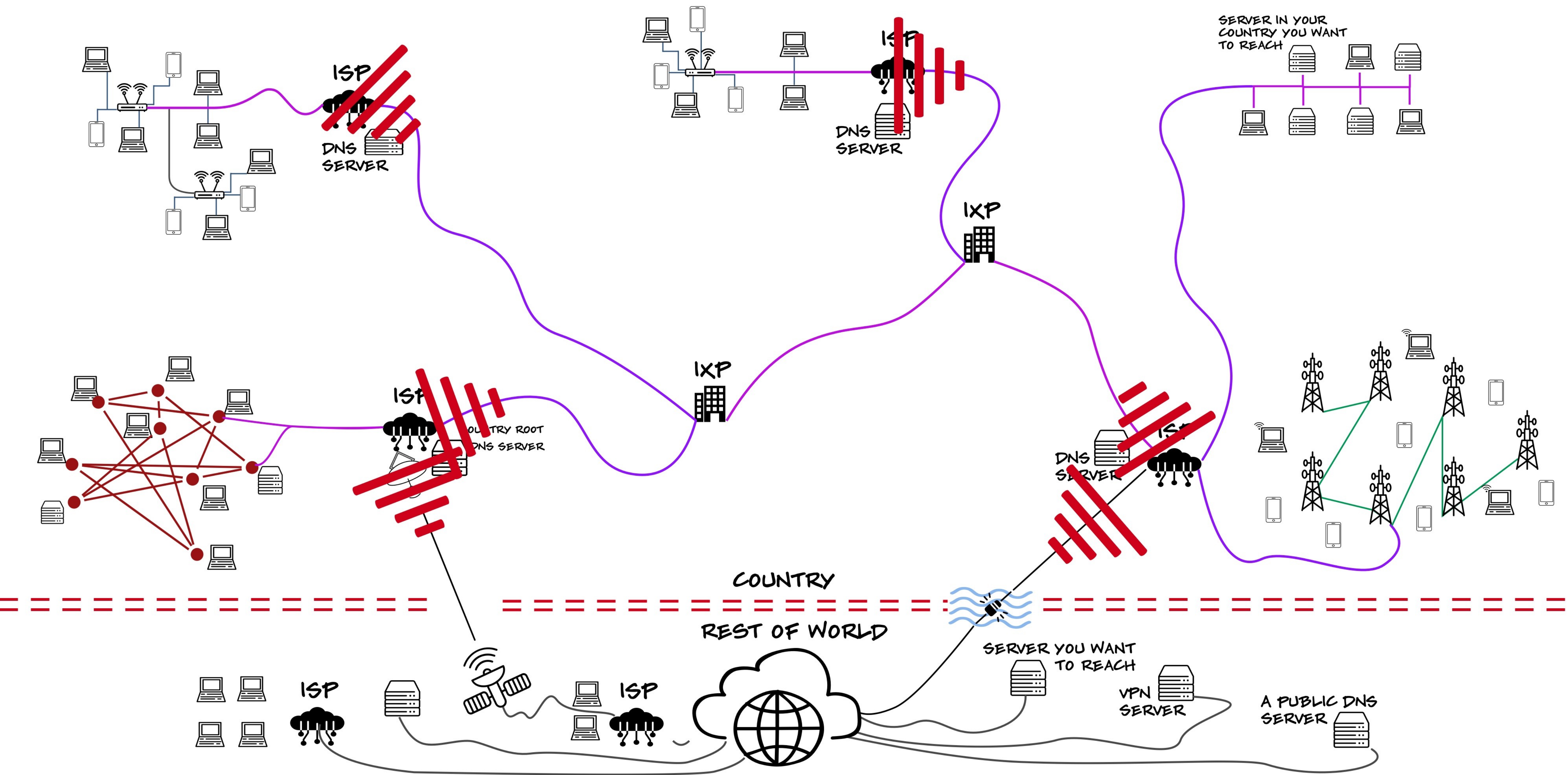
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# SCENARIO 2: CONTENT BLOCKING

- To quell protests, the government has blocked access to Facebook, Twitter and WhatsApp during an election.
- What card do you use to bypass the blockage ?







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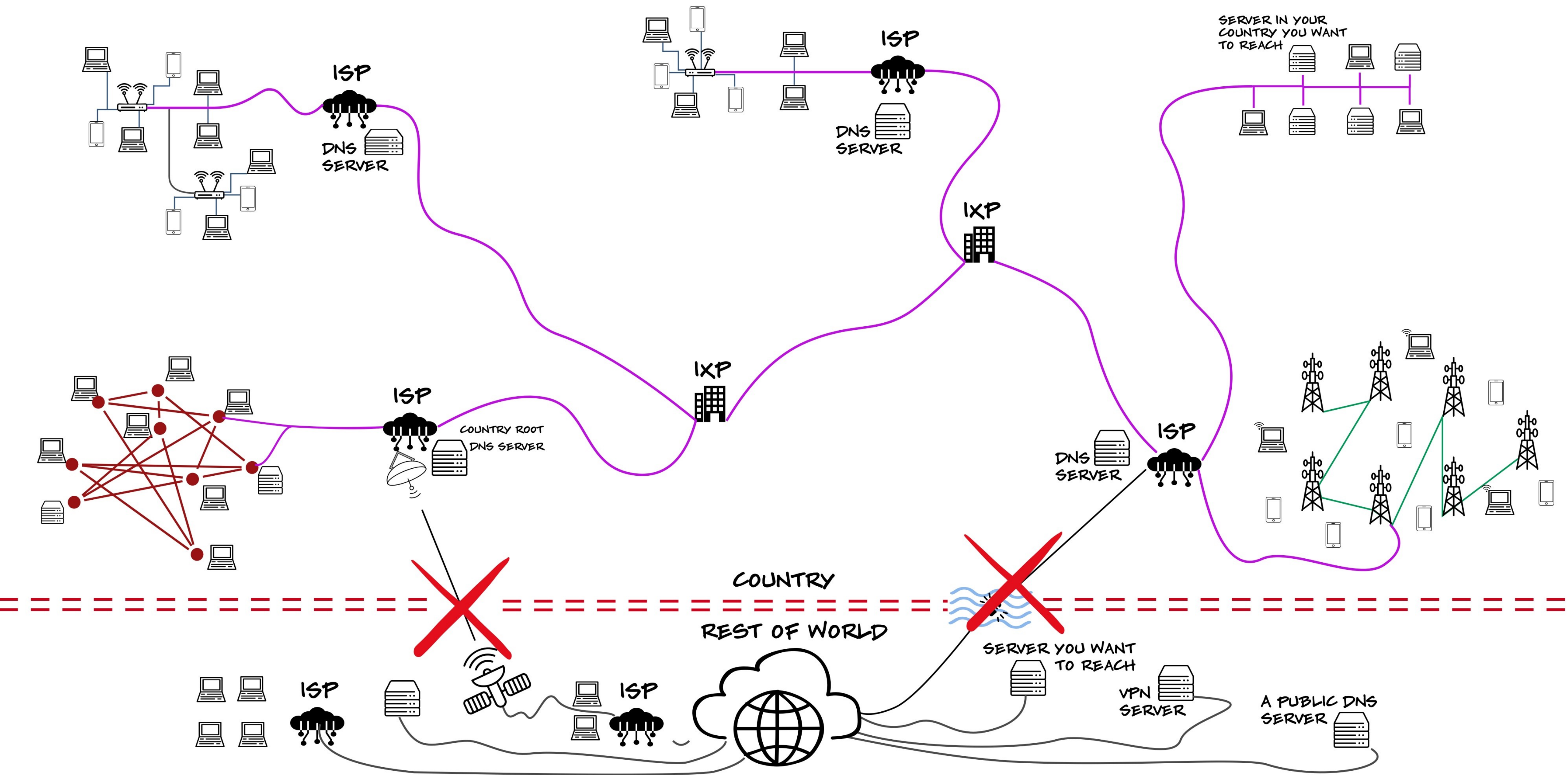
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# SCENARIO 3: GATEWAYS BLOCKED

- You try to access a website abroad and you get an error message. You realise that this is happening with every site abroad.
- You conclude that the internet international connection point(s) have been blocked by the government.
- What card do you use to connect to access content from a site abroad?





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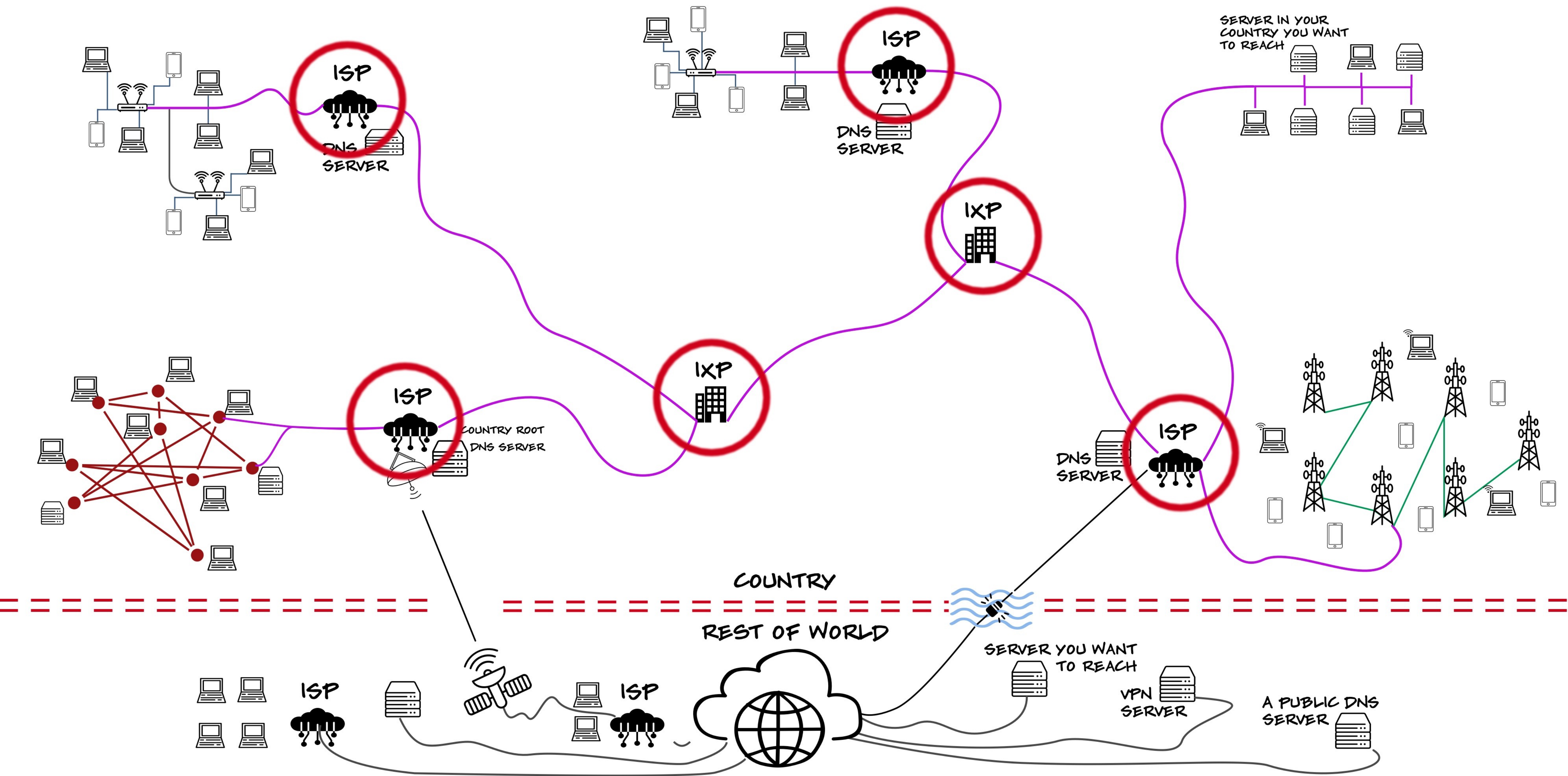
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# SCENARIO 4: TRAFFIC BLOCKING

- The government does not want you to access a foreign website with certain information.
- It has ordered all internet service providers (ISPs) in your country to delete traffic destined to this site's IP address.
- What card do you use to be able to access this site?







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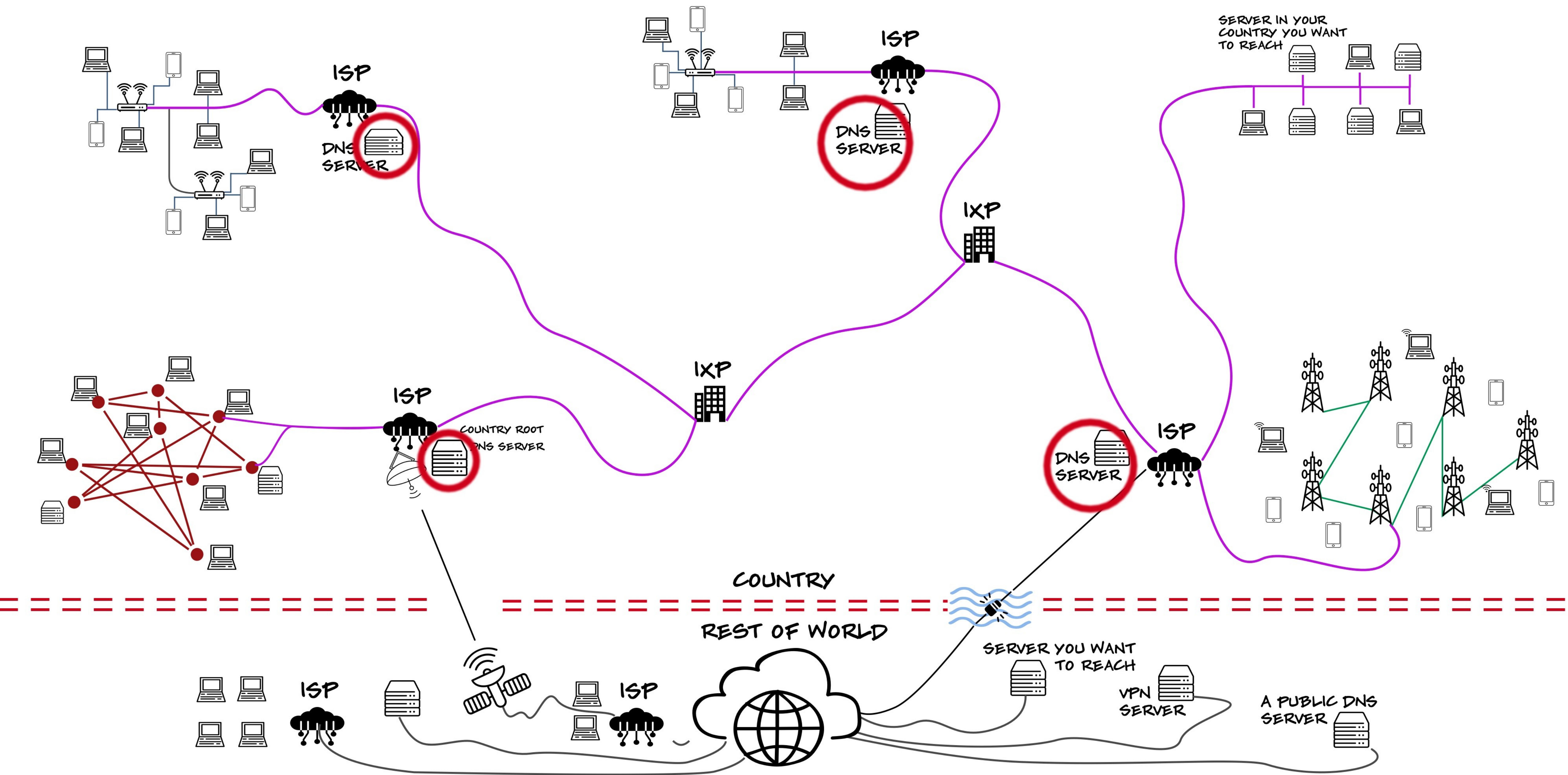
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# SCENARIO 5: DNS FILTERING

- The government has ordered all national ISPs to change the DNS resolution for a domain where you could have accessed a protest site.
- When you try accessing the site, it sends you to a fake government-managed site instead.
- What card do you use to be able to access the protest site?







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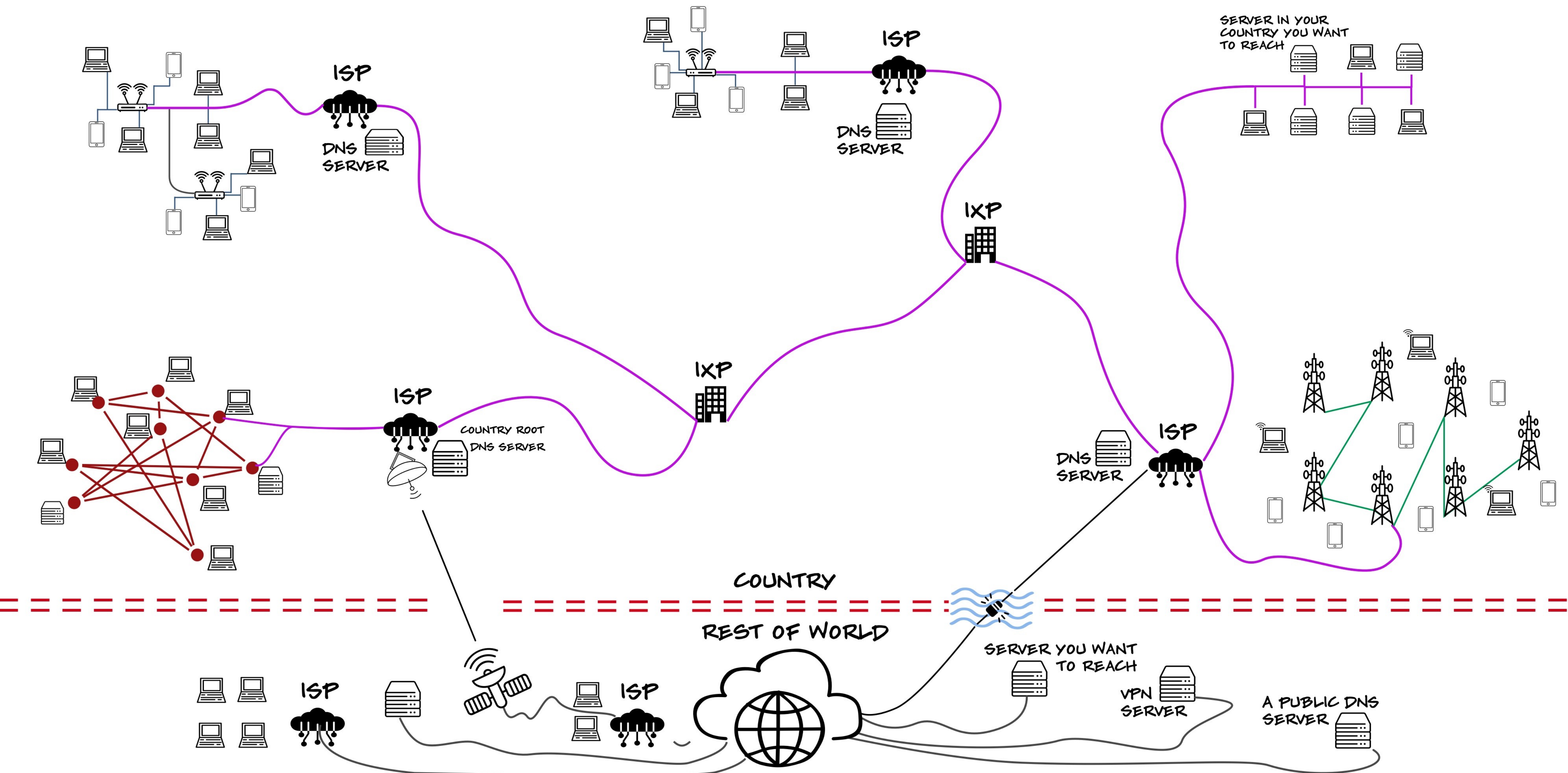
# SCENARIO 6: PROHIBITED VPN

- The government has said they will punish anyone they can prove is using a VPN...

but you *want* to use a VPN to connect to a specific website.

- How do you ensure that you cannot be caught?





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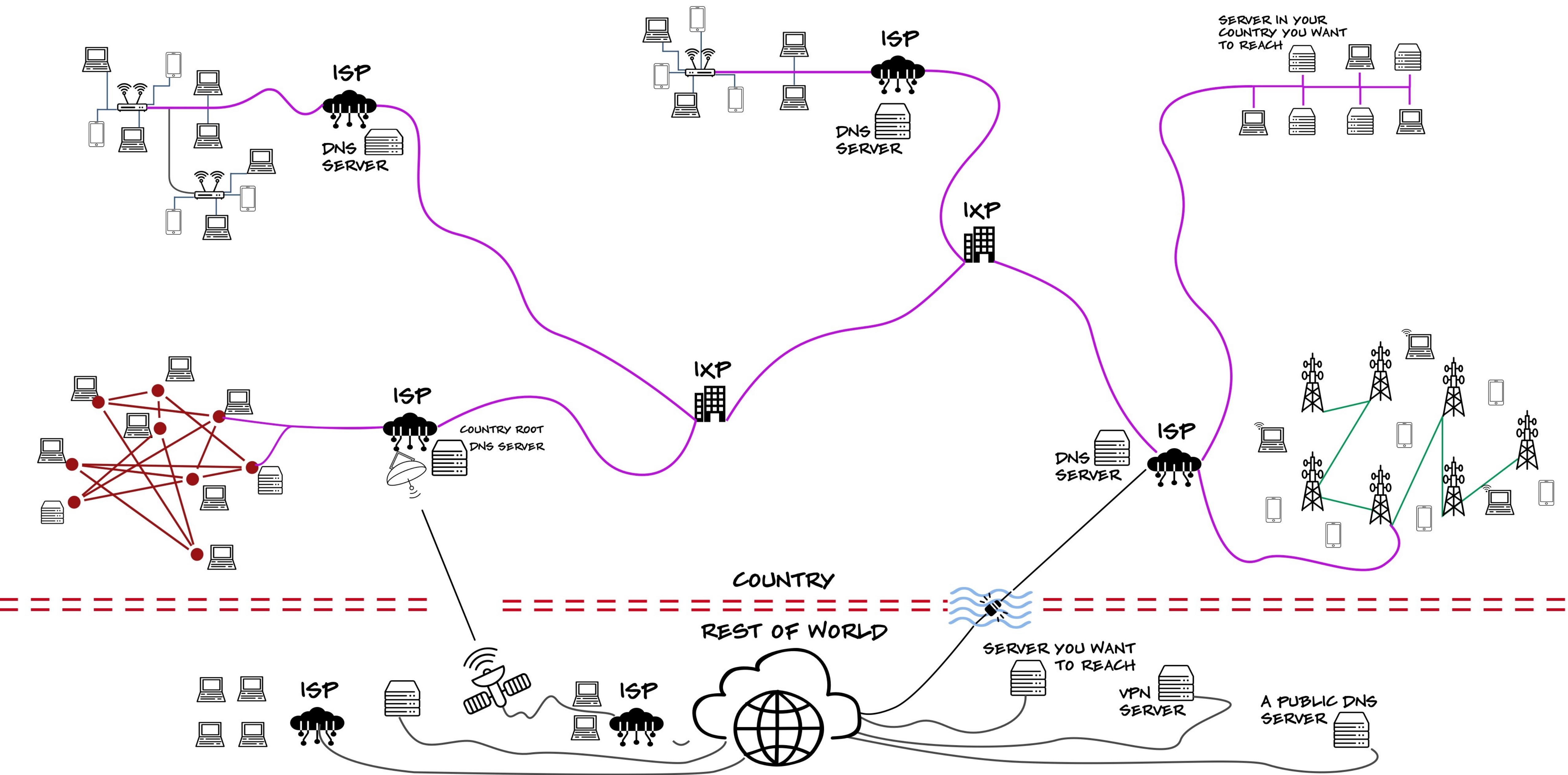
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# SCENARIO 7: GEOLOCATION

- In your region, the government is preventing you from downloading a certain app (e.g. a social media platform, Telegram) or blocks specific known IP addresses of certain VPNs.
- How can you download and use this app anyway?





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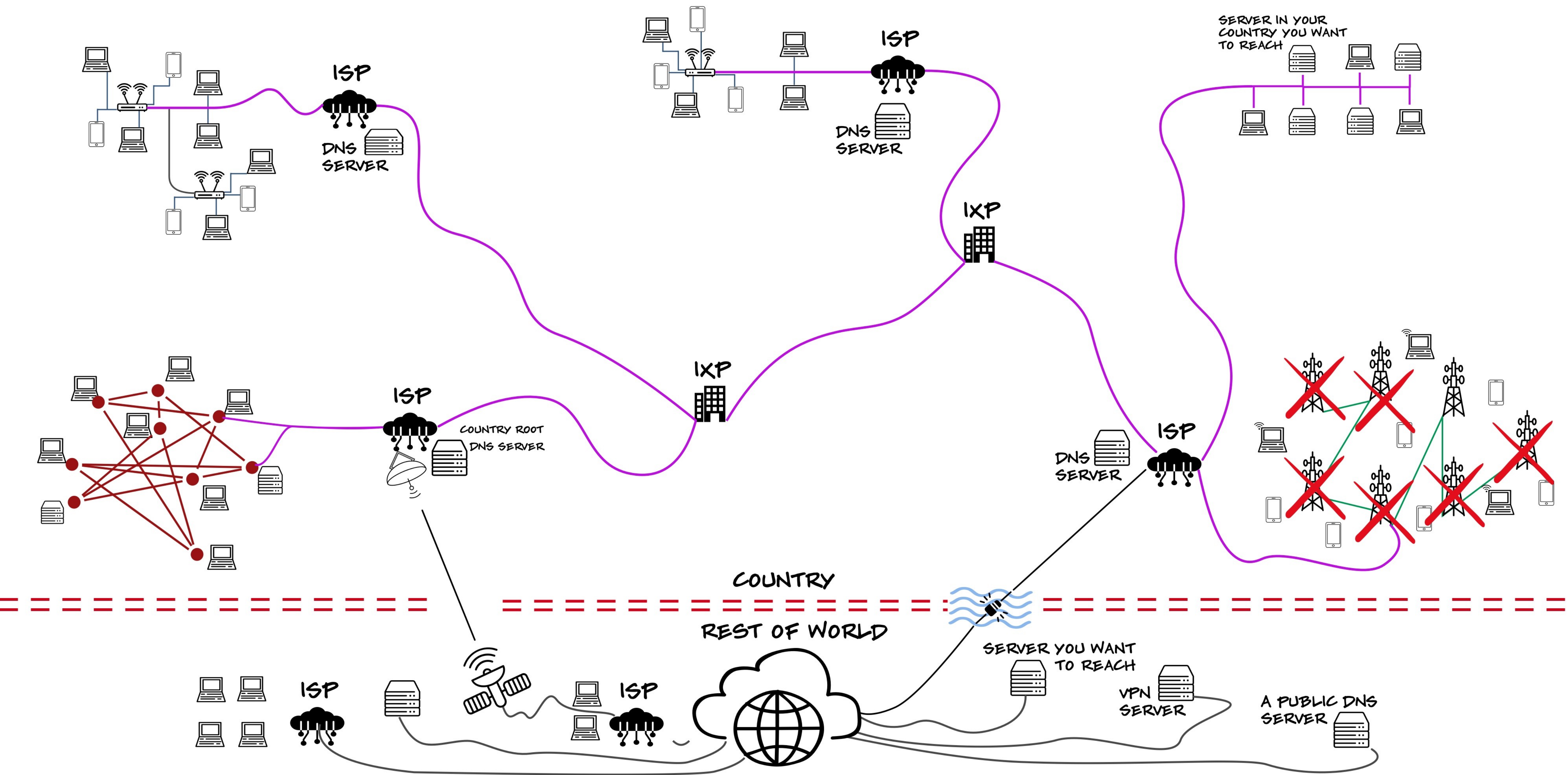
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# SCENARIO 8: CELL PHONE JAMMING

- You are in a protest together with your friends. You are using the cell (mobile) phone network. You have good cell phone reception, but you are unable to send or receive messages. You suspect the network is jammed.
- What can you use to stay connected to your fellow protestors?
- Please note this scenario requires a solution based on a wildcard (so no standard circumvention card will work)







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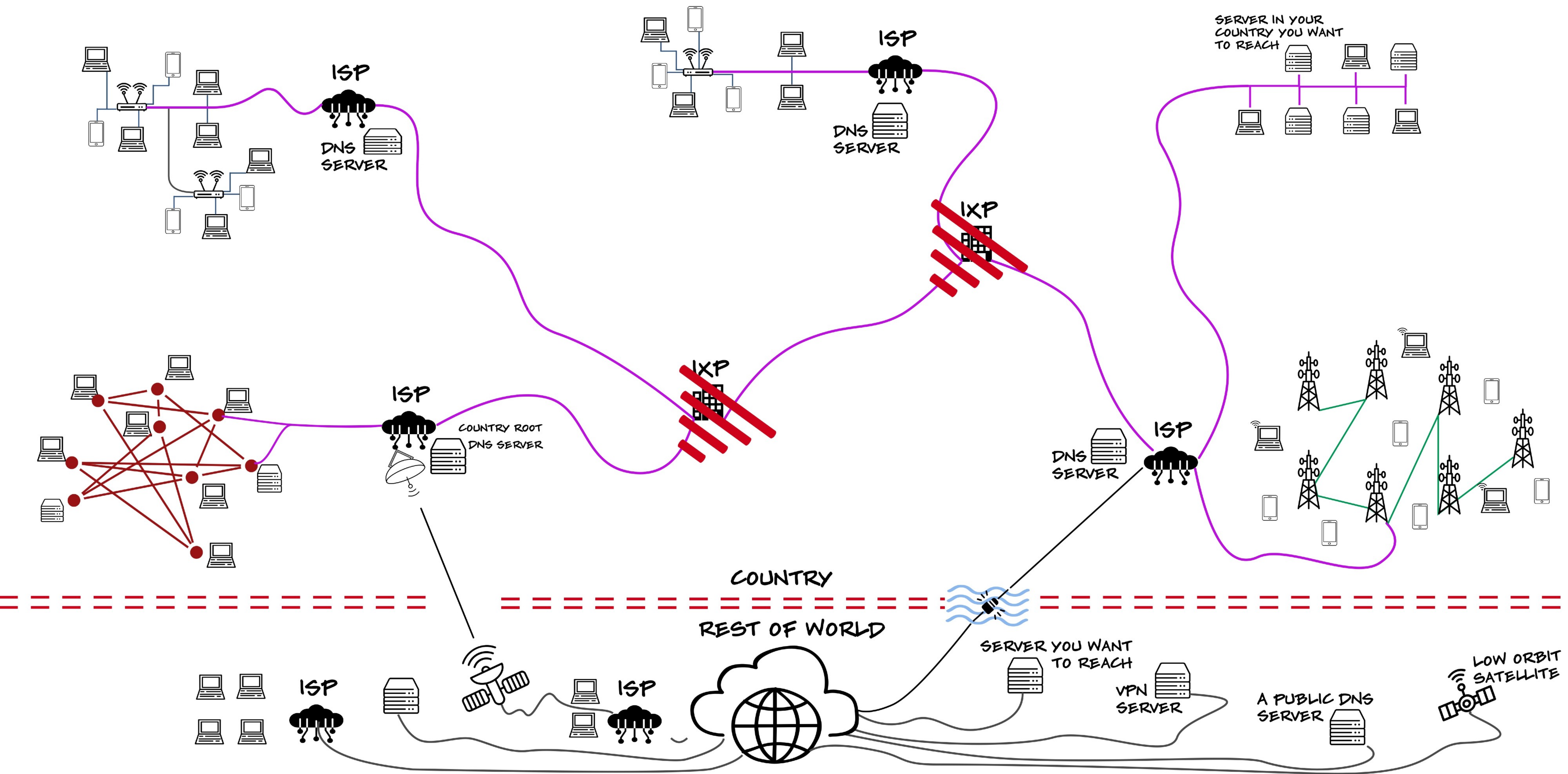
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# SCENARIO 9: LOCALISED SHUTDOWN

- Due to protests, the government does not want citizens from your region to connect to the internet.
- It is said that when data packets with their IP addresses reach the government-managed IXPs, the packets are discarded.
- What can you do?







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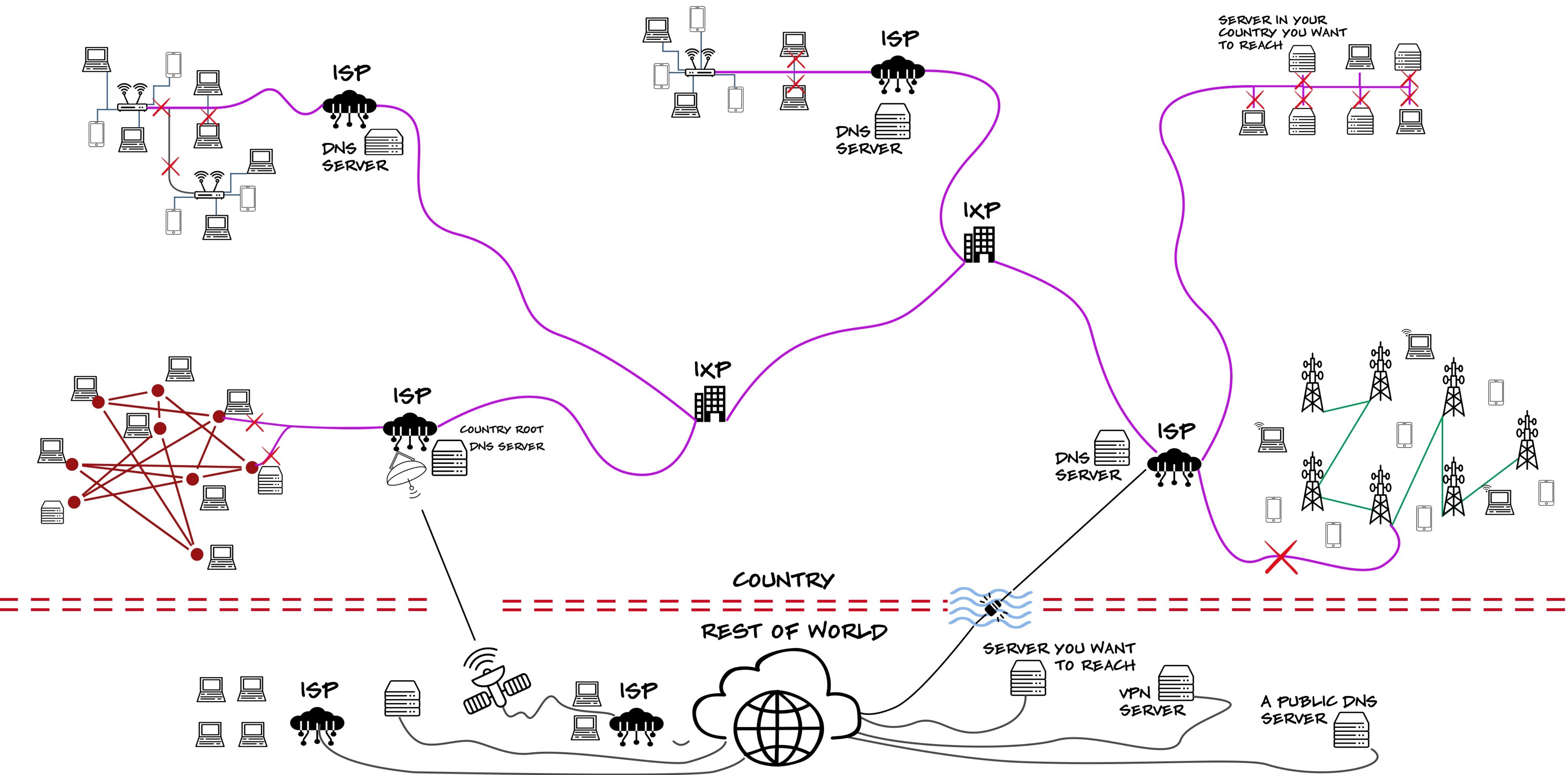
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# SCENARIO 10: ONLY VIPS CAN CONNECT

- When you send information via the internet, it seems to be blocked, you can't reach any server!
- However, your neighbour and best friend who works in the government tells you that she can access all resources just fine.
- You are both connected to the same ISP.
- What cards can you use to reach the internet now?





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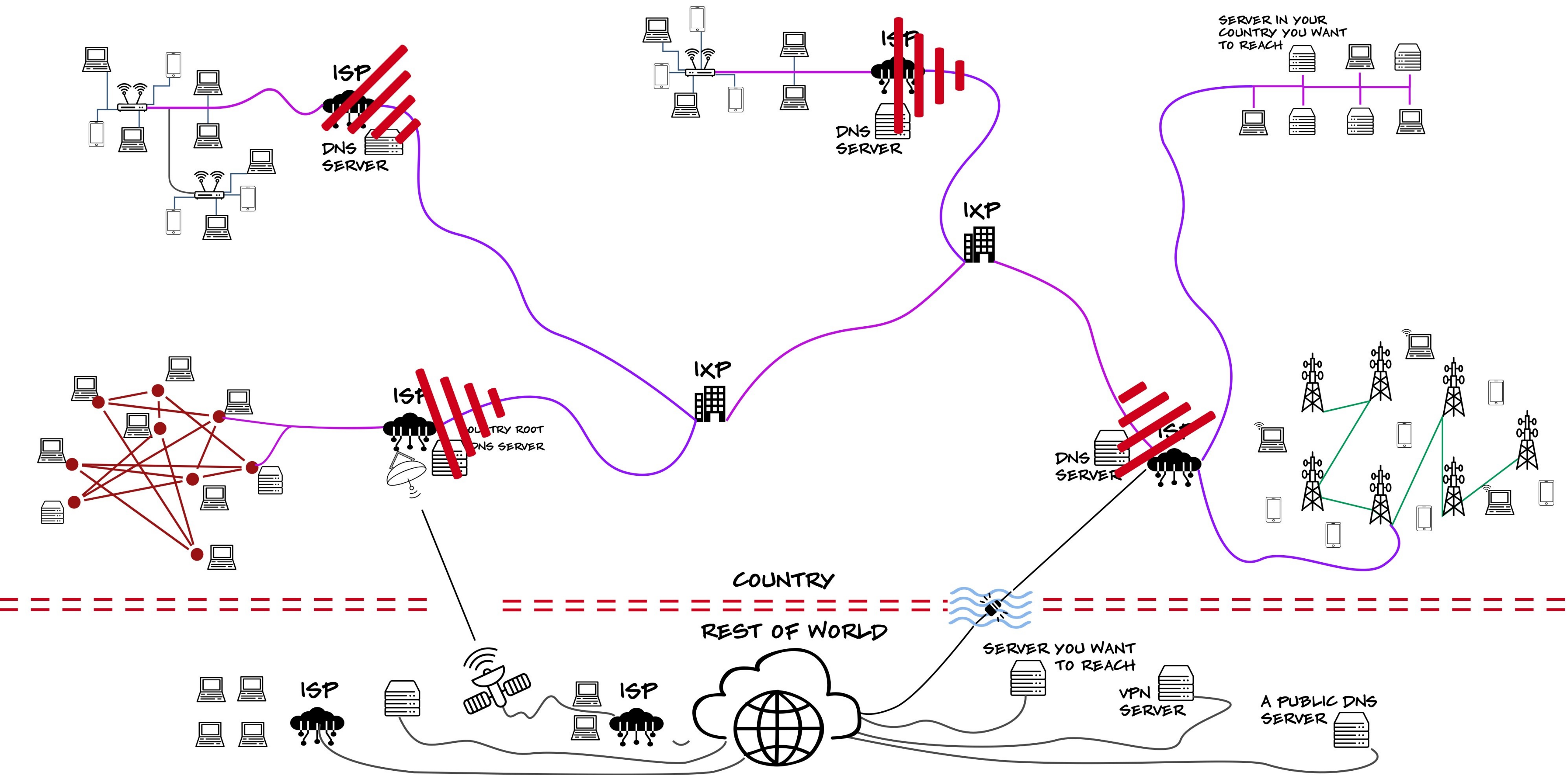
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# SCENARIO 11: INTERNET THROTTLING

- Throttling is defined as “artificially restricting, but not stopping, the flow of data through a communications network”.
- In this scenario, your internet access may seem available, but it is extremely slow and is effectively unusable for information consumption and sharing.
- What card(s) can you use to use the internet again?







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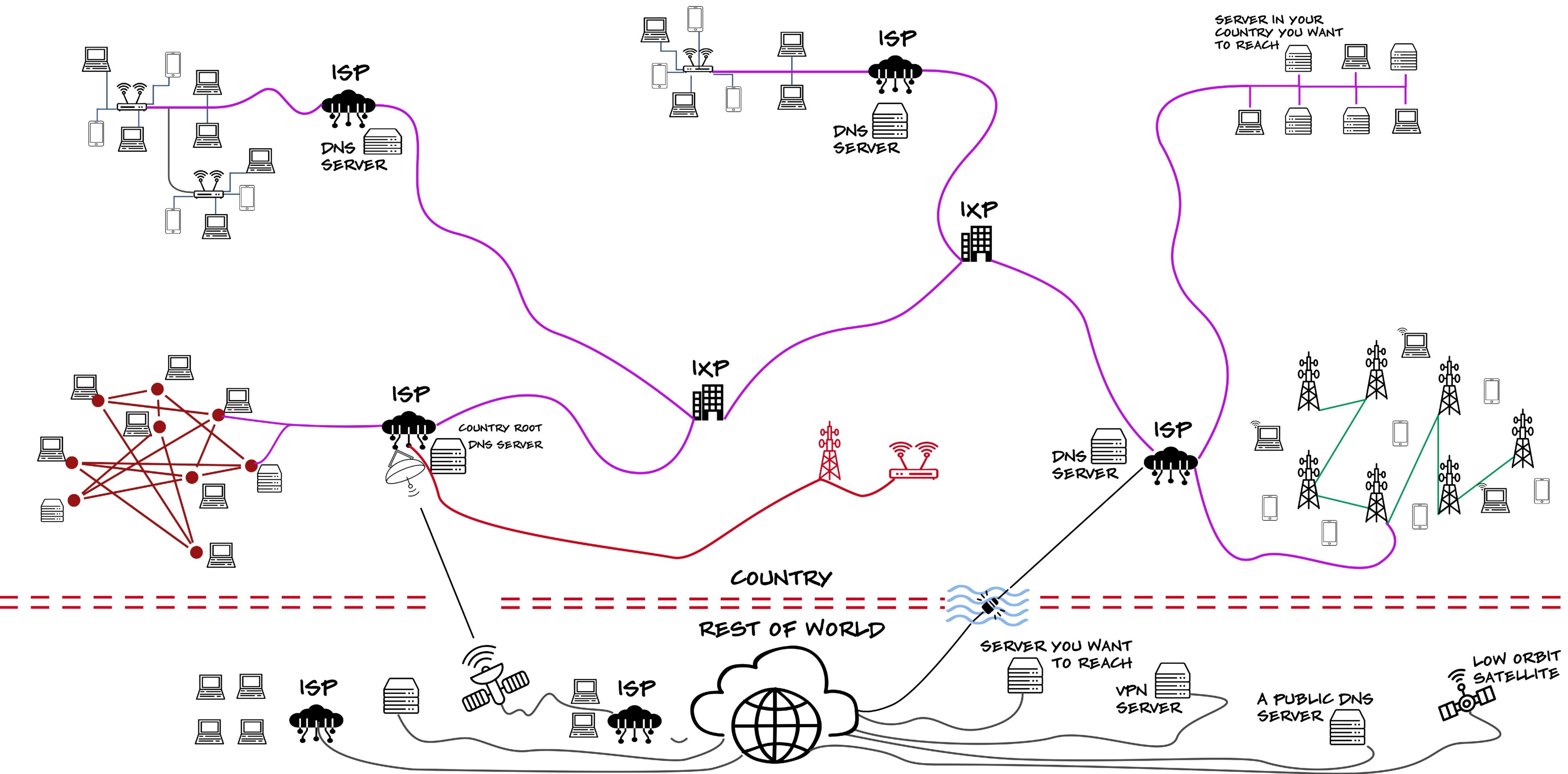
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# SCENARIO 12: ROGUE INFRASTRUCTURE ATTACK

- You are in a protest.
- You can see “new” Wi-Fi access (or cell phone access) points that the government promotes as faster internet access, with a much stronger signal.
- The connection points are suspicious and seem to lead to government- controlled sites.
- What do you do?





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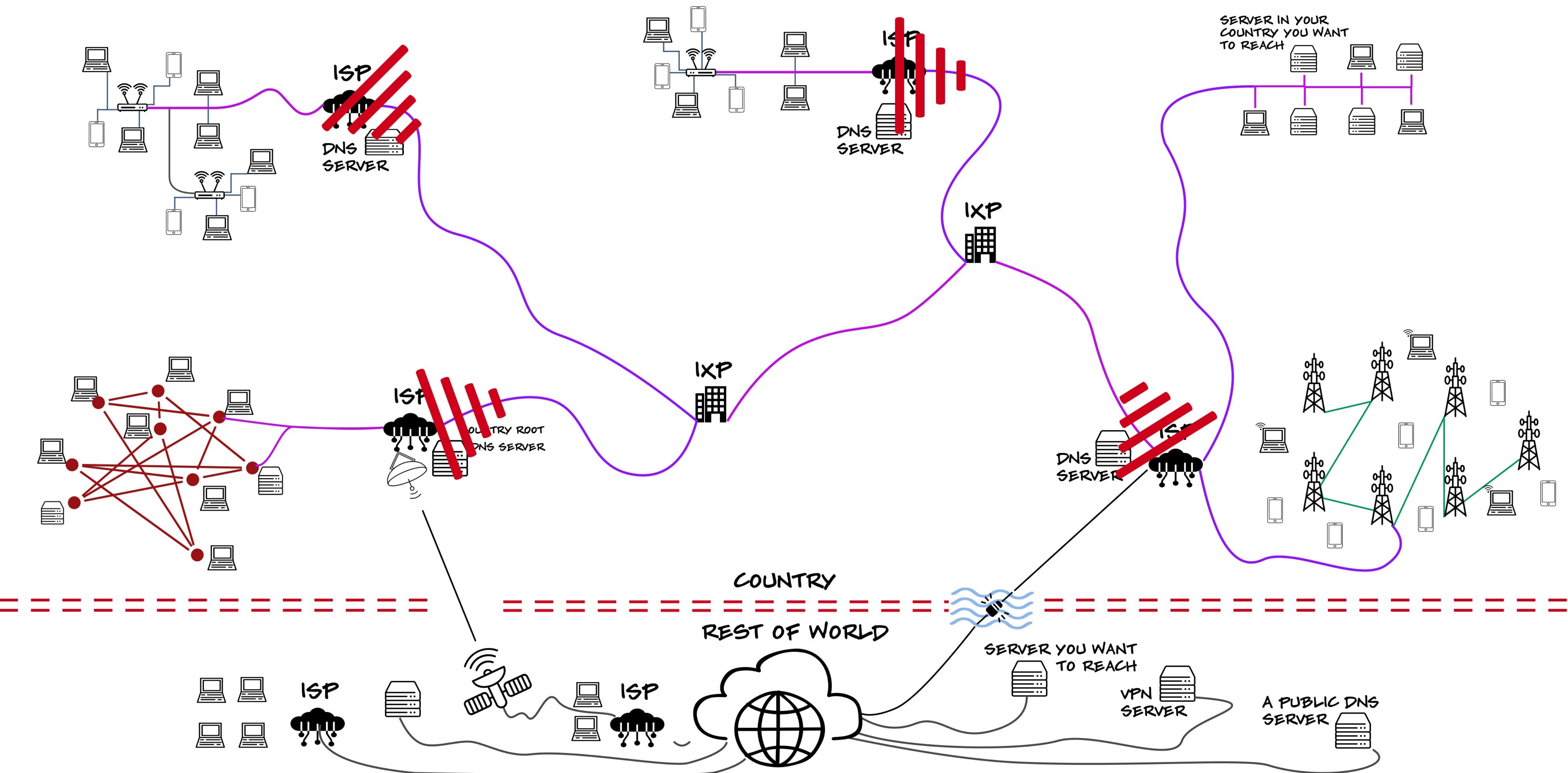
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# SCENARIO 13: DEEP PACKET INSPECTION (DPI, ALSO KNOWN AS PACKET SNIFFING)

- You conduct a search for certain politically controversial keywords in your favourite search engine, and the search fails. But you are certain it should be returning valid results, it is such a key issue!
- You are also certain that Internet connectivity has been getting slower on average over the last few months...







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