

Whack-a-Mole Routing

The effects of ISP Traffic Engineering and Peering Agreements on Non-ISP Networks

Common Sources of Issues

Traffic engineering policies applied in response to an issue

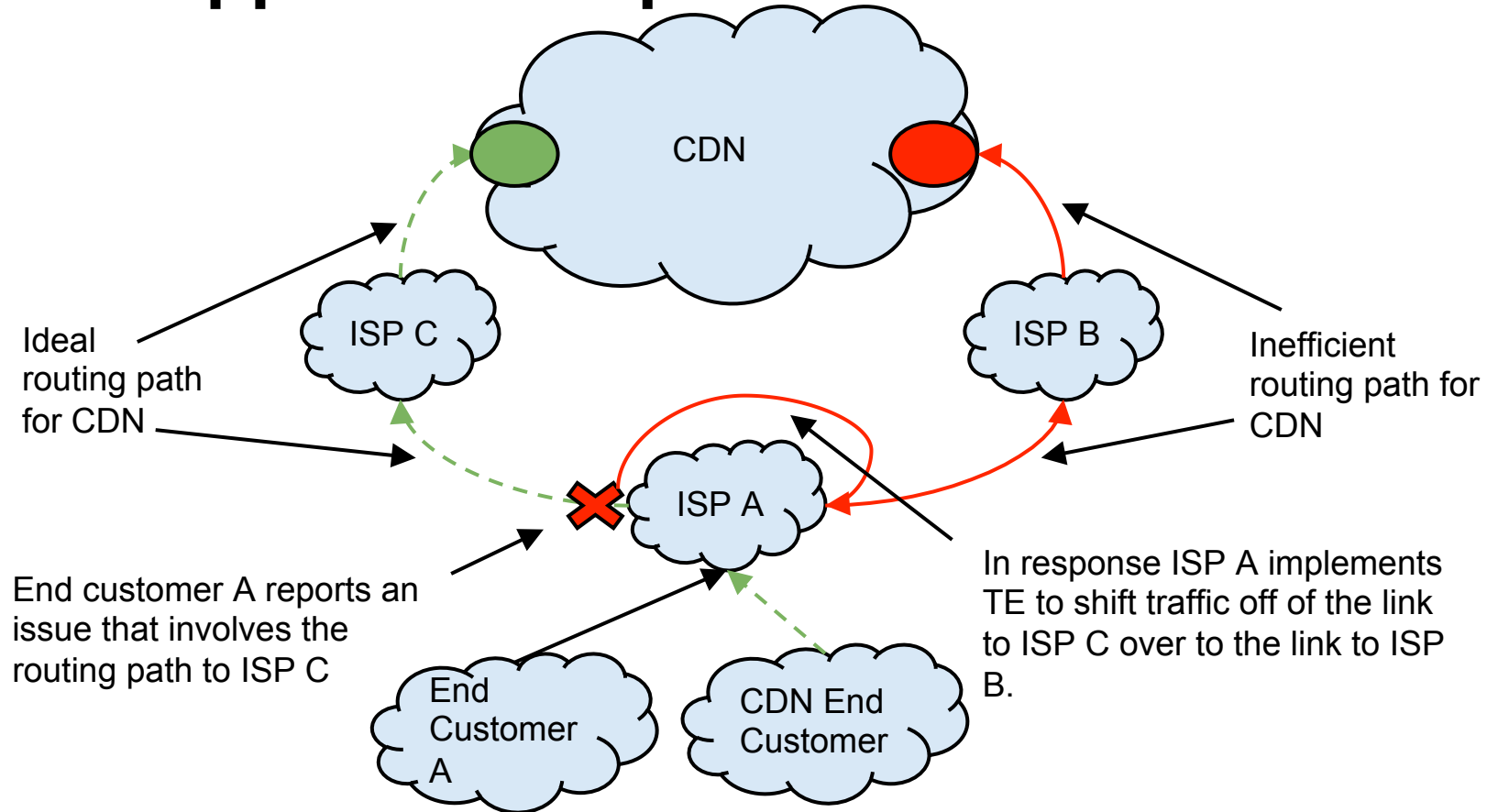
Traffic engineering policies applied in response to a business requirement

Change in formal relationship between two companies
(Going from Peer to a Transit customer etc)

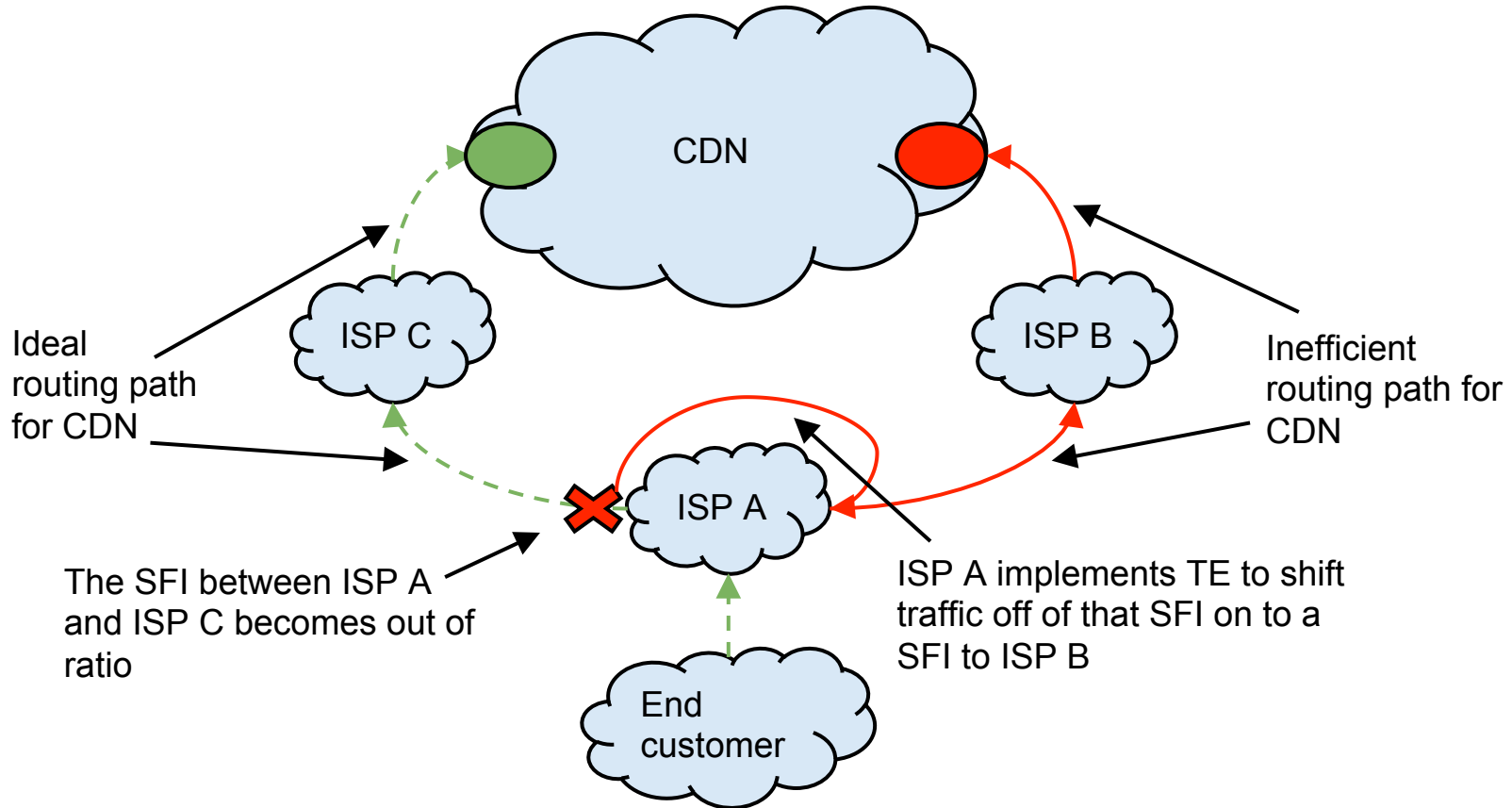
Misconfiguration

Single Global AS

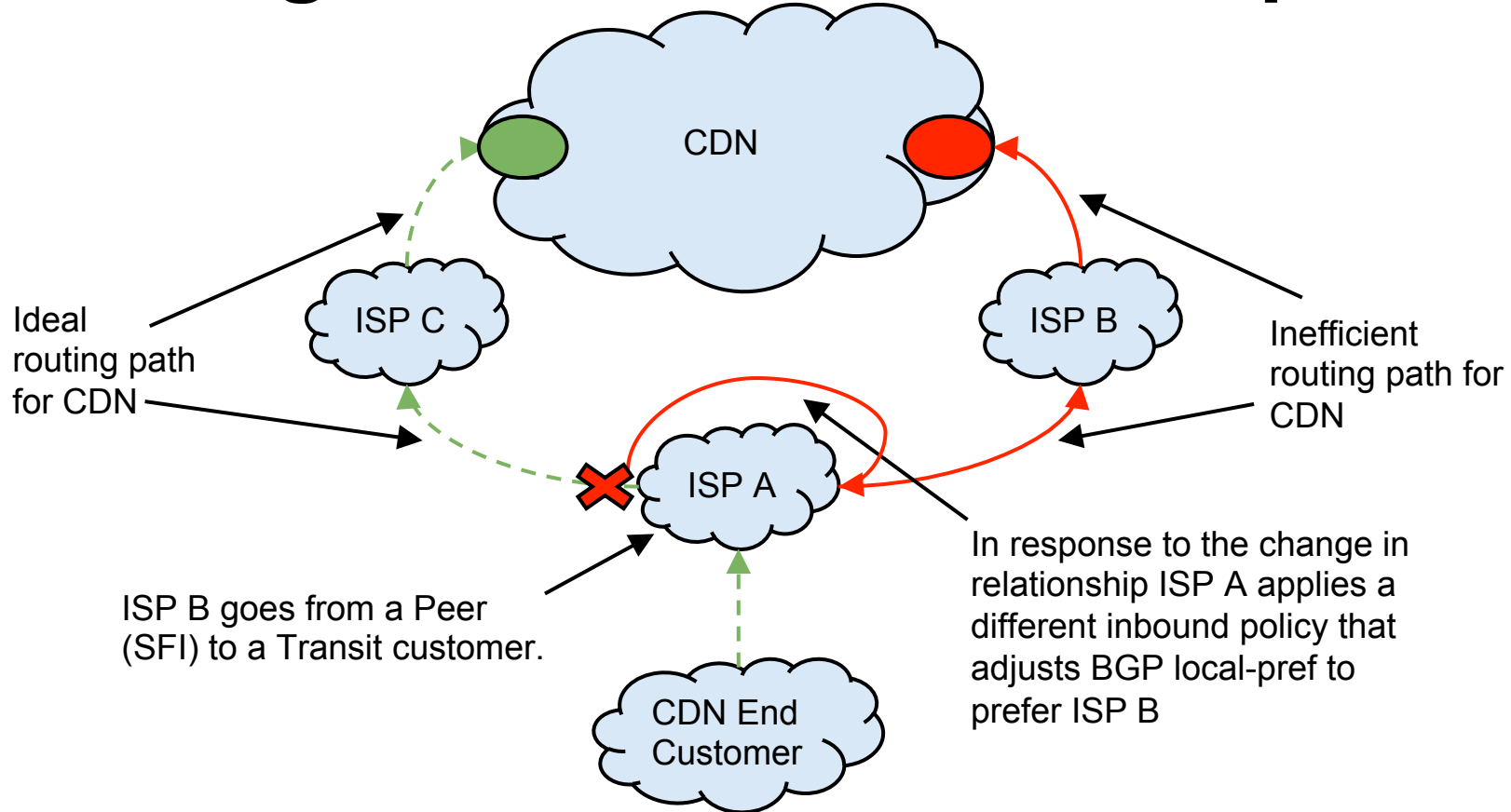
TE applied in response to an issue



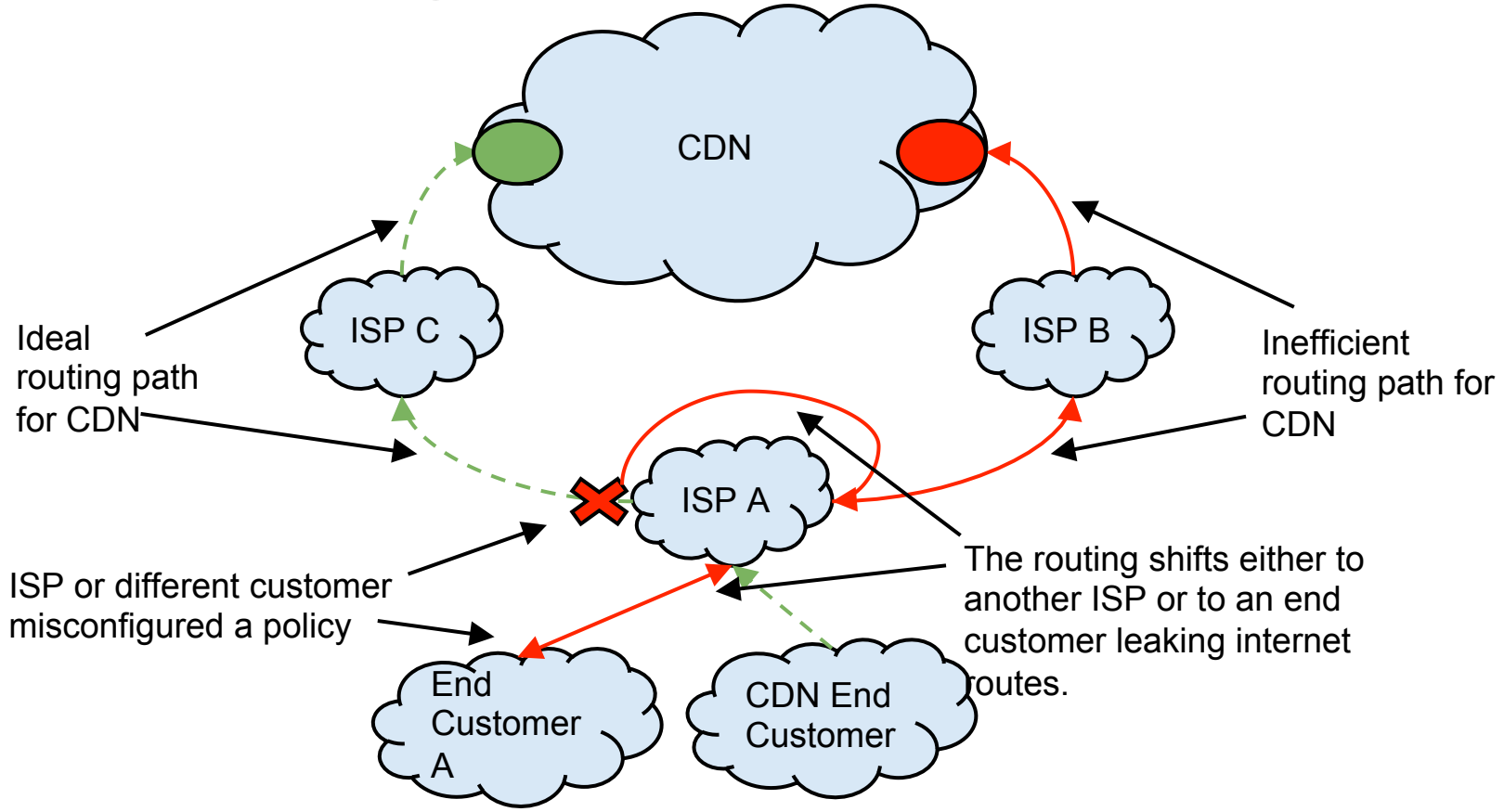
TE applied due to a business requirement



Change in formal relationship



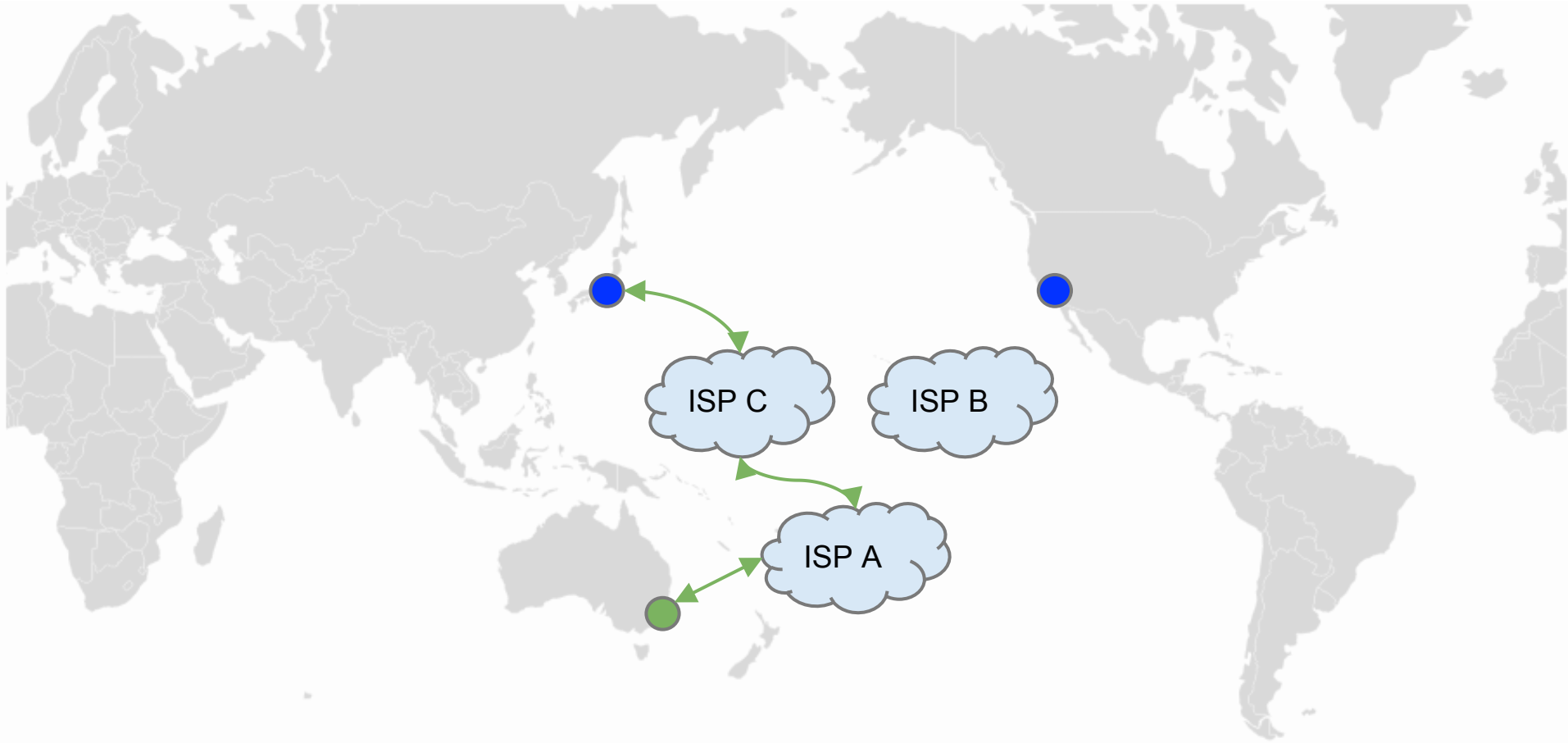
Misconfiguration



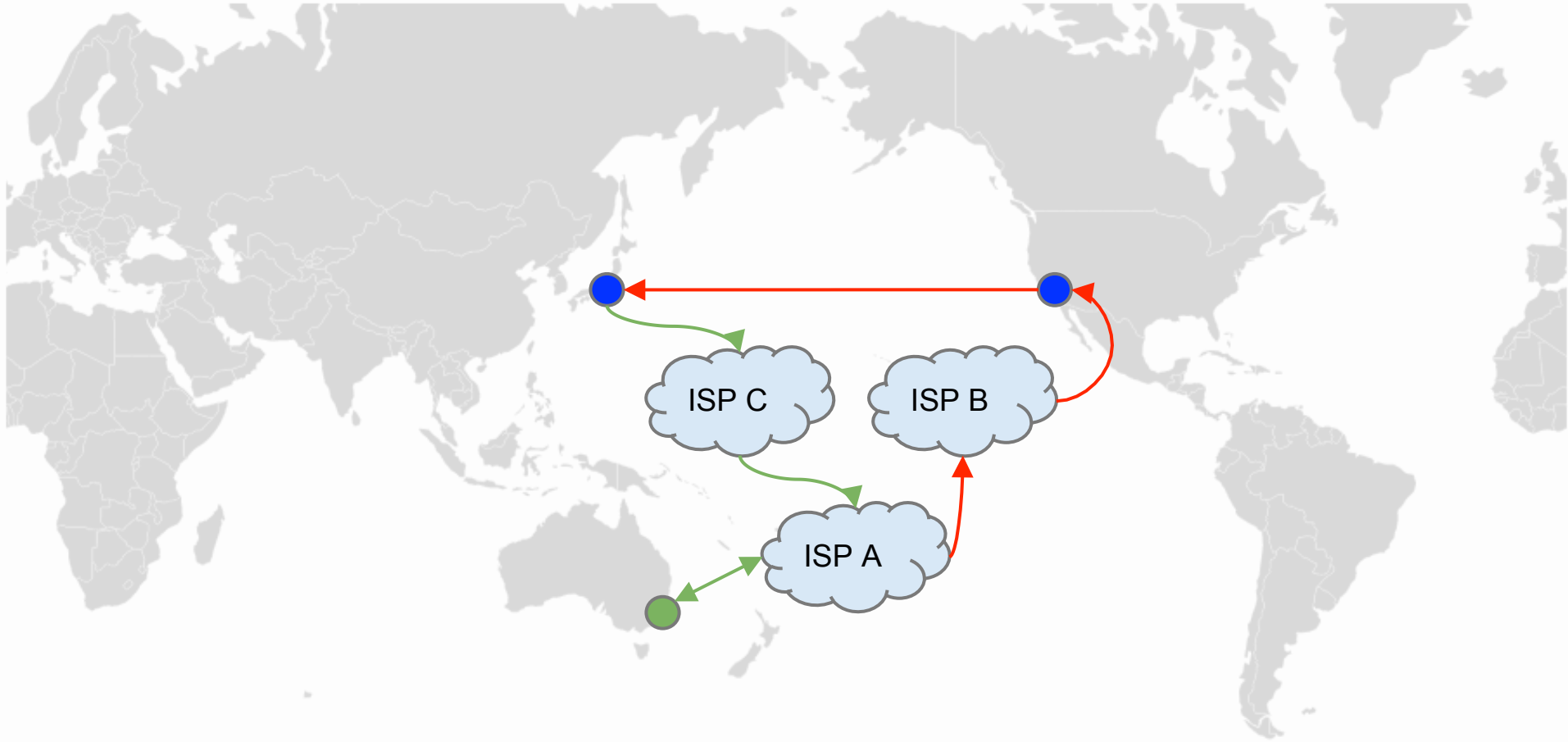
Why is one path better than another?

Especially if there is no packet loss...

Ideal Routing Path for CDN



Inefficient Routing Path for CDN



Impact of Inefficient Routing

Leads to increases to:

Time To First Byte (TTFB)

End-user Page Time (EPT)

Customer complaints

Difficulties

Trying to divine the intentions of the ISP or end customer.

Not having a formal relationship with the ISP.

How to handle this problem?

Contact the ISP in a non-confrontational manner.

Jointly contact the ISP with the end customer.

Solutions

Perform internal TE to mitigate

Work with ISP to undo the TE policy or fix
misconfiguration

Work with ISP to either use or create a BGP
community

Questions?

Thank you