Google Cloud Interconnect

Google Cloud Interconnect provides options to connect your networks together using Dedicated Interconnect, IPsec VPN, Direct Peering, or Carrier Peering.

Interconnect	Peering
Direct access to RFC1918 IPs in your VPC (SLA)	Access to Google public IPs only (No SLA)
Dedicated Interconnect	Direct Peering
IPsec VPN	Carrier Peering

Excluding IPsec VPN, by peering with Google you get the benefits of low latency, high throughput connections. This enables fast high volume data transfers or supports latency sensitive applications.

Explanation

The Internet is a collection of separate and distinct networks referred to as autonomous systems, each one operating under a common framework of globally unique IP addressing and global BGP routing.

The relationships between these networks are generally described by one of the following three categories:

- Transit (or pay) – The network operator pays money (or settlement) to another network for Internet access (or transit).
- Peer (or swap) – Two networks exchange traffic between their users freely, and for mutual benefit.
- Customer (or sell) – A network pays another network money to be provided with Internet access.

Following are the options for interconnecting with Google:

- Dedicated Interconnect:
  - Category: Peer
  - Private IP Support: True
  - Directly connect your on-premises network to your GCP VPC.
  - Require a common point-of-presence with Google.
  - Router requirements must be met.
- IPsec VPN:
  - Category: Transit
  - Private IP Support: True
  - Connects your on-premises network to your GCP VPC through an IPsec VPN.
- Direct Peering:
  - Category: Peer
  - Private IP Support: False
  - Uses BGP with public AS numbers.
  - Connect directly to Google to save on egress fees.
- Carrier Peering:
  - Category: Transit
  - Private IP Support: False
  - Uses BGP with public AS numbers.
  - If you do not meet the requirements for Direct Peering you can connect with a Carrier Peering partner.