GCP Global VCP Additional Design Considerations

Here are further considerations that you may need to know.

- Evaluate the need for multicloud connectivity and consistent architecture. Keep in mind that GCP Global VPC is a GCP-only feature.
- Remember that GCP Global VPC features are only available in GCP. In a multicloud scenario, the customer would need to make additional efforts to implement a similar or compatible option in another cloud, which could delay the project, increase time-to-market, increase MTT, and increase cost due to technology and skill gap challenges.
- Understand that Global VPC Network peering requires non-overlapping address space.
- Assess the manual route management efforts required if the use case involves traffic steering to a 3rd party VM for service insertion/chaining use case.
- Evaluate the requirements of using tools such as packet capture, tcpdump, packet drop, traceroute, ping, etc. with GCP Global VPC.
- Understand the GCP Global VPC routing quota, BGP feature set, and advanced traffic engineering options. This should be reviewed for routes advertised to on-prem and the number of routes received from on-prem.
- Understand that line rate IPSec encryption over GCP Cloud Interconnect could pose challenges as it would restrict that throughput to 1.25 Gbps.
- Review the options supported by GCP VPC if overlapping IP is the requirement to ensure requirements are met.
- Assess the manual route management efforts required to create segmentation and isolation with a policy-based approach.
- Analyze costs. If VMs are deployed in the same Global VPC, heavy inter-zone charges may be incurred. This would lead to designing a regional VPC.
- Review the network telemetry, VPC flow logs, firewall rules log, and cloud NAT charges for processing and storing the data

Review the following resources for the latest GCP Global VCP design considerations.

https://cloud.google.com/architecture/best-practices-vpc-design#shared-common-vpc
https://cloud.google.com/vpc/docs/overview
https://cloud.google.com/vpc/docs/overview
https://cloud.google.com/vpc/pricing