



Legend

	Google Cloud Interconnect or Partner Connect		Customer Managed
	Internet Connection		VMware Managed HCX Service
	HCX Traffic		Google Managed
	Management and vMotion Network		Content Library
	Workload Traffic		
	vSAN Network		

Firewall Rules

PORTS	TYPE	SOURCE	DESTINATION	DESCRIPTION
902	TCP	ESXi Mgmt	HCX-IX	HCX Cold Migration (bidirectional)
31031	TCP	ESXi Mgmt / Replication	HCX-IX	HCX Bulk Migration / DR
44046	TCP	ESXi vMotion	HCX-IX	HCX vMotion Protocol
8000	TCP	vCenter Server	HCX-IX	HCX vMotion Protocol
443	TCP	vCenter Server	HCX Connector	HCX HTTPS
443	TCP	vCenter Server	HCX-IX	Control traffic for HCX vMotion migration operations
902	TCP	vCenter Server	HCX-IX	Network File Copy (NFC) based Cold Migrations
9443	TCP	HCX Admin	HCX Connector	Activate and Register vCenter Server and Management Systems
443	TCP	HCX Admin	HCX Connector	Configure / Manage HCX Services
22	TCP	HCX Admin	HCX Connector	SSH
443	TCP	HCX Connector	vCenter Server	vSphere API, vSphere 6.0 + SSO Lookup Service
9443	TCP	HCX Connector	vCenter Server	Web-client/Plug-in
7444	TCP	HCX Connector	vCenter Server	vSphere 5.0 SSO, Lookup Service
443	TCP	HCX Connector	NSX Manager	NSX API
53	TCP/UDP	HCX Connector	DNS Server	DNS
123	TCP	HCX Connector	NTP Server	NTP
514	TCP/UDP	HCX Connector	Syslog Server	Syslog
902	TCP	HCX Connector	ESXi Mgmt	OVF Import / Deployment
443	TCP	HCX Connector	HCX-IX, HCX-NE	HCX Internal Control
8123	TCP	HCX Connector	HCX-IX	HCX Bulk Migration Control
443	TCP	HCX Connector	HCX-IX	HCX vMotion Control
443	TCP	HCX Connector	HCX Manager	Site Pairing, authentication and management of HCX service jobs coordination
443	TCP	HCX Connector & Cloud	connect.hcx.vmware.com	Activation and service updates
443	TCP	HCX Connector & Cloud	connect.hcx.vmware.com	License activation, system updates, and enhanced support
500	UDP	HCX-IX	HCX-IX	The IX transport path carries HCX migration and DR traffic.
4500	UDP	HCX-IX	HCX-IX	The IX transport path carries HCX migration and DR traffic.
902	TCP	HCX-IX	ESXi Mgmt	HCX Cold Migration (bidirectional)
8000	TCP	HCX-IX	ESXi vMotion	HCX vMotion Protocol
80	TCP	HCX-IX	ESXi Mgmt	ESX Authentication
443	TCP	HCX-IX	ESXi Mgmt	ESX Authentication
902	UDP	HCX-IX	vCenter Server	HCX vMotion Control
514	TCP/UDP	HCX-IX	Syslog Server	Syslog
443	TCP	HCX-IX	vCenter Server	VPXA Listener
500	UDP	HCX-NE	HCX-NE	Network Extension Tunnel
4500	UDP	HCX-NE	HCX-NE	Network Extension Tunnel

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- 1 Create Google Cloud Platform project and VPC Network, for hybrid connectivity use cases.
Note: VPC Network range should not overlap with on-prem networks.
 - 2 Procure Google Cloud Interconnect, required for HCX workload mobility with Google Cloud VMware Engine. Provides dedicated and secure connectivity between On-Premises and Google Cloud VMware Engine.
 - 3 Deploy Google Cloud VMware Engine Private Cloud, this will deploy ESXi Hosts, vCenter Server, vSAN, NSX-T and HCX Cloud Manager automatically. Google Cloud VMware Engine Private Cloud ranges should not overlap with on-premises networks.
 - 4 Configure Private Service Access and Custom Routes for routing between Google Cloud VMware Engine, on-premises, and native cloud services.
 - 5 Configure DNS conditional forwarders from on-premises, then create and apply DNS profiles on the private cloud for FQDN resolution.
 - 6 To download the HCX Connector OVA, login the HCX Cloud Manager appliance in Google Cloud VMware Engine. Navigate to the Systems Updates section and click Request Download Link. Deploy and configure the HCX Connector to the on-premises vSphere environment.
Note: Link provided from Google Cloud VMware Engine console to HCX Manager and download license.
 - 7 From the on-premises vSphere environment [Source] create an HCX site-pair with the Google Cloud VMware Engine Private Cloud HCX Cloud Manager [Destination]. Proceed to configure the HCX Network and Compute profiles, followed by Service Mesh. Service Mesh will automatically deploy the corresponding appliances in Google Cloud VMware Engine Private Cloud.
 - 8 Begin Network Extension and migration activities such as Bulk Migration, vMotion, and Cold Migration from on-premises to the Google Cloud VMware Engine Private Cloud.
 - 9 With VMware workloads migrated to the cloud, customer has direct access to other native Google Cloud Services.
Note: VMware HCX lifecycle is maintained by the customer on both source and destination. HCX managers on both sides will need to be updated first, followed by service mesh appliances.

