

## Cloud NAT

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### NAT Gateway settings

**Nat Mapping:** Select which subnets to map to the NAT gateway

**Source(internal):**

The subnetworks to map to the NAT gateway. Your selection may depend on what kind of instance you're using:

Primary IP addresses are used by Compute Engine VM instances

Secondary IP addresses are used by Kubernetes Engine container pods

**NAT IP Addresses:** The set of source public IP addresses that should be used when performing NAT.

**Name**

shinehub-cluster-cloud-nat

**VPC network**

shinehub-cluster-network

**Region**

australia-southeast1

**Cloud Router**

shinehub-cluster-cloud-router

**NAT mapping** ?

**Source (internal)** ?

Select which subnets to map to the NAT gateway. Primary IP addresses are used by VM instances and secondary IP addresses are used by container pods. [Learn more](#)

Custom

**Subnet name**

shinehub-cluster-subnet (1...

**IP ranges**

Selected: 3

+ Add subnet and IP range

All VMs from selected subnet IP ranges will be able to communicate with Internet

**NAT IP addresses** ?

Manual

**IP address**

shinehub-cluster-nat-ip (34.87.229.128)

**IP draining** ?

Off (default)

+ Add IP address

Network service tier, IP versions

**Destination (external)**

Internet

### NAT Advance configuration

**Minimum Port per vm**

By default, a VM instance has 64 ports, which means it can open 64 connections to the same destination IP and port. A VM instance can open up to 64,000 connections across all protocols.

**Enable endpoint independent mapping:**

**Advanced configurations**

**Stackdriver logging** ?

Export Cloud NAT logs to Stackdriver

☒ No logging

☐ Translation and errors

☐ Translation only


☐ Errors only

**Minimum ports per VM instance** ?

64

Enabling Endpoint-Independent Mapping may impact the number of concurrent outgoing connections

**UDP:** The UDP idle connection timeout (in seconds). The default value is 30 seconds.

☒ Enable Endpoint-Independent Mapping 


Timeouts for protocol connections

UDP 

30 seconds

TCP established 


1200 seconds

TCP transitory 

30 seconds

ICMP 

30 seconds

 Hide advanced configurations

Save

Cancel

## Gcloud

### Useful points

- 1.
- 2.
- 3.
- 4.
- 5.

```
gcloud compute routers nats create NAT_CONFIG \
  --router=NAT_ROUTER \
  --nat-all-subnet-ip-ranges \
  --nat-external-ip-pool=IP_ADDRESS1, IP_ADDRESS2
```

Replace the following:

- **NAT\_CONFIG**: the name of your NAT configuration
- **NAT\_ROUTER**: the name of your Cloud Router
- **IP\_ADDRESS1**: a static reserved external IP address to use for NAT
- **IP\_ADDRESS2**: another static reserved external IP address to use for NAT