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## Site Selection Algorithms

<https://campus.barracuda.com/doc/3539036/>

When the [Global Server Load Balancing \(GSLB\) Controller](#) receives a DNS request to resolve a sub-domain, it replies with a list of one or more IP addresses of valid sites that are both available and that match the site selection algorithm. This site selection algorithm is also called the Response Policy. Three Response Policies are available: one is based on site priority and the other two are based on location.

### Failover IP Address

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If no sites match the Response Policy or if all sites that match the Response Policy fail the health check, a pre-configured Failover IP address for the sub-domain is returned. This is the IP address of a site that can accept the traffic if the other systems become unavailable.

The health of the site at the Failover IP address is not monitored.

### IP Address and Location Database

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In order to provide location-based Response Policies, the Barracuda Load Balancer uses a database of IP addresses and geographical locations. This database is updated by the Location Definitions which are part of the Energize Updates maintained by Barracuda Central.

### Response Policy Options

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Three Response Policies are supported: Geo IP, Region Only and By Priority. Geo IP and Region Only are based on the location of the client. By Priority is based only on the configured priority of the site.

- **Geo IP** - The GSLB Controller determines the location of the system making the request based on the Location Definitions and compares that to the location of each site. It returns a list of site IP addresses ordered from closest to furthest.  
Geo IP does not consider site priority.
- **Region Only**- The GSLB Controller determines the region of the system making the request based on the Location Definitions.
  - If the originating system is in a region that is associated with one or more sites, a list of the healthy site IP address(es) is returned. The most specific matches appear first in the list; any sites that are associated with All Countries are last in the list.

- If the location of the originating system cannot be determined then any healthy sites that are associated with All Countries are returned.
- If neither of the preceding cases identifies at least one site IP address, the Failover IP address is returned.  
**Region Only** does not consider site priority.
- **By Priority** - The GSLB Controller returns a list of site IP addresses ordered from lowest to highest priority value. Location is not considered.

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