

Installing Global Server Load Balancing

<https://campus.barracuda.com/doc/3539031/>

Execute these tasks to design your Global Server Load Balancing (GSLB) network and to configure one or more GSLB Controllers.

Step	Notes
Step 1. Define the layout of your GSLB network	
Step 2. Location-based Response Policy	If you plan to use a location-based Response Policy: <ul style="list-style-type: none"> • Define Regions (Region Only) • Turn on Location Definitions updates
Step 3. Set the DNS Service IP Address	On each active GSLB Controller, complete Step 3.
Step 4. Delegate a Sub-Domain to the GSLB Controller	For each sub-domain to be hosted, complete Step 4.
Step 5. Configure the DNS records on the GSLB Controller to identify the sub-domains that are being hosted	For each GSLB Controller that may receive traffic for a given sub-domain and which is not the passive system for a cluster, complete Steps 5-7.
Step 6. Choose the Response Policy	
Step 7. Enter the Failover IP address	
Step 8. Identify the rest of the sites that serve this sub-domain	

Step 1. Define the GSLB network layout

Decide which Barracuda Load Balancers is to act as your active and which is to act as your passive GSLB Controllers. GSLB Controllers must be externally accessible. They may also act as the load balancer for a server farm.

Decide whether the site selection should be based on region, geographical proximity or by pre-configured priority. Determine what will happen in the case of a site failure. Gather the IP addresses (IP addresses of Real Servers or VIP addresses of Services) of the sites.

Step 2. Location-based Response Policy

Skip the tasks in this step if you do not intend to use a geographically-based Response Policy (**Geo IP**)

or **Region Only**).

If the Response Policy is **Region Only**, decide which site or sites are associated with each region where requests originate.

In either case, make sure the Location Definitions are set to automatically update on every GSLB Controller. This setting is on the **Advanced > Energize Updates** page.

Step 3. Set the DNS Service IP Address

For each active GSLB Controller, select the IP address to be used as the DNS Service IP address. DNS requests will be sent to this IP address. It must be reachable from the WAN, LAN or VLAN of the GSLB Controller. If the GSLB Controller is in HA mode and a system failover occurs, the passive system will assume this address and handle the requests directed to it. If the GSLB Controller is not in HA mode, this address could be the externally reachable IP address of the GSLB Controller.

On each active GSLB Controller, go to the **Advanced > GSLB Services** page and enter the **DNS Service IP Address**. If this is a clustered system, the passive system will be updated automatically.

Step 4. Delegate a Sub-Domain to the GSLB Controller

This step needs to be done at your domain registrar or wherever your domains are hosted.

In order to delegate a sub-domain to be resolved by the GSLB Controller, records must be added to the zone file of the domain so that DNS requests for the sub-domain will be forwarded to the GSLB Controller for resolution.

For example, if the domain is **example.com**, and you want to host **www.example.com** behind the GSLB Controller, you will need to add a DNS NS (nameserver) record to associate **www.example.com** with each GSLB Controller. If there are two GSLB Controllers (one active, one passive) there is one record for the clustered pair:

www.example.com. IN NS ns1.www.example.com.

Add an A (host) record for the GSLB Controller with its IP address and the domain www:

ns1.www.example.com. IN A <DNS Service IP address of first cluster>

where **<DNS Service IP address...>** is the DNS Service IP address assigned to the clustered pair.

Do not enter the brackets (< >). Do add the dot (.) at the end of the nameserver.

The remainder of the steps are performed on the Barracuda Load Balancer(s) that may act as the GSLB Controller. If you have a clustered GSLB Controller, you only need to do these steps on the active system because the configuration between two clustered Barracuda Load Balancers are synchronized automatically.

Step 5. Create the Host DNS Record on each GSLB Controller

This step must be done on each GSLB Controller that is not a passive system in the cluster. Using the web interface of the Barracuda Load Balancer, create the records that describe the domain or domains that are available to the GSLB Controller.

The following example generates the A (host) record for **www.example.com** on the GSLB Controller. The domain name is **example.com** and the host is **www**. This A record is initially associated with one site IP address but more site IP addresses can be added later.

To create the DNS records on the GSLB Controller,

5a. Navigate to the **Advanced > GSLB Services** page.

5b. In the **Add New GSLB Service** section, supply the following information:

- **Zone Name** - the zone maintained by your existing DNS server, e.g. example.com
- **Host** - The host name (or sub-domain) to be resolved, e.g. www
- **Site IP** - The IP address that is to receive the traffic. This may be the VIP address of Service on a Barracuda Load Balancer, or the IP address of a server
- **Region**- This associates a region with the Site IP address.
 - If you want the GSLB Controller to select the site based on region, select the region from the list. If the region you want is not already defined, add a custom region using the **Advanced > GSLB Settings** page
 - Otherwise, select All Countries from the list

A DNS record is created for **www.example.com**. Some of the fields in the record will contain default values for settings such as the Response Policy, which you can customize by editing the entry in the table.

Step 6. Choose the Response Policy

Response Policies are described in the section [Response Policy Options](#).

The Response Policy is defined for a host e.g. `www.example.com`. Edit the Host record on the **Advanced > GSLB Services** page to modify the Response Policy.

Step 7. Set the Failover IP Address

If you have a site that can handle the traffic in the case of failure of all sites that match the Response Policy, enter its IP address as the Failover IP address in the Host record on the **Advanced > GSLB Services** page.

Step 8. Identify the rest of the sites that serve this host

To configure all of the sites that can process the traffic for this host (e.g. `www.example.com`), go to the **Advanced > GSLB Services** page and click **Add New Site**.

You may want to associate a new site with a region or assign a priority to it. Remember that regions are only relevant if the Response Policy is Region Only. Similarly, priority is only considered by the By Priority Response Policy.

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