



Selective Assignment of a GSLB Service to DNS Virtual Services

Avi Technical Reference (v18.1)

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Avi Vantage supports GSLB configurations that need to selectively assign DNS request-handling on a sub-domain basis to particular Avi DNS virtual services.

Use Case

Consider an environment with * DNS responsibility pushed to all DNS virtual services in the GSLB setup, * global services in multiple subdomains, and * application VIPs residing in separate routing domains.

The health checking Avi DNS SEs perform would necessarily require crossing routing-domain boundaries, which may be unacceptable.

The Avi Vantage alternative is to: * configure several GSLB DNS virtual services, * probably one per routing domain, and * selectively assign DNS request-handling on a sub-domain basis to the various Avi DNS VSs, * such that the VIP-serving SEs can reside in the same routing domain as the DNS VS that serves up their virtual IPs.

Avi CLI Configuration

Step 1. Using an ID having administrative privileges, login into the Avi shell of the GSLB leader's Controller. Step 2. Invoke the `configure gslb` command, specifying the name of the configuration. For example: `configure gslb Default`
Step 3. In response to the `gslb` prompt, keying in two tabs reveals the subcommands available to you:

```
[admin:topol-controller]: gslb>
cancel                Exit the current submode without saving
clear_on_max_retries  Max retries after which the remote site is treated as a fresh start. In fresh start all the conf
client_ip_addr_group  (submode)
description           Help string not found for argument
dns_configs           (submode)
do                   Execute a show command
is_federated          This field indicates that this object is replicated across GSLB federation.
leader_cluster_uuid   Mark this Site as leader of GSLB configuration. This site is the one among the Avi sites.
maintenance_mode     This field disables the configuration operations on the leader for all federated objects. CUD c
name                  Name for the GSLB object.
new                   (Editor Mode) Create new object in editor mode
no                    Remove field
save                  Save and exit the current submode
send_interval         Frequency with which group members communicate.
show_schema           show object schema
sites                 (submode)
tenant_ref            Help string not found for argument
third_party_sites     (submode)
view_id               The view-id is used in change-leader mode to differentiate partitioned groups while they have th
watch                 Watch a given show command
where                 Display the in-progress object
```

Step 4. The `sites` sub-command gets invoked three times, once per DNS to be assigned:

```
[admin:nmandeyam-topol-controller]: gslb> sites index 1
[admin:nmandeyam-topol-controller]: gslb:sites> dns_vses index 1
[admin:nmandeyam-topol-controller]: gslb:sites:dns_vses>
cancel          Exit the current submode without saving
dns_vs_uuid    This field identifies the DNS VS name for this site.
do             Execute a show command
domain_names   This field identifies the subdomains that are hosted on the DNS VS. Gs
no            Remove field
save          Save and exit the current submode
show_schema   show object schema
watch        Watch a given show command
where        Display the in-progress object
[admin:nmandeyam-topol-controller]: gslb:sites:dns_vses> domain_names com
[admin:nmandeyam-topol-controller]: gslb:sites:dns_vses> save
[admin:nmandeyam-topol-controller]: gslb:sites> where
Tenant: admin
+-----+-----+
| Field          | Value                                     |
+-----+-----+
| cluster_uuid   | cluster-544c06d2-9e5e-45a6-ab92-56658dcdca2f |
| name          | SiteA                                     |
| ip_addresses[1] | 10.10.24.126                             |
| port          | 443                                       |
| username      | admin                                     |
| password      | <sensitive>                               |
| member_type   | GSLB_ACTIVE_MEMBER                       |
| enabled       | True                                      |
| dns_vses[1]   |                                           |
|   dns_vs_uuid | virtualservice-d5e163f9-alc2-46e6-9088-de6c7b5eb141 |
|   domain_names[1] | com                                       |
| dns_vses[2]   |                                           |
|   dns_vs_uuid | virtualservice-a500e091-94a9-4f3c-a4d0-2ac688f3618b |
| dns_vses[3]   |                                           |
|   dns_vs_uuid | virtualservice-a131680f-9739-4d2e-b0fc-7007e0aa2eff |
+-----+-----+
```

Figure 1. Assigning DNS vs-1 to subdomain com.

```
[admin:nmandeyam-topol-controller]: gslb:sites> dns_vses index 2
[admin:nmandeyam-topol-controller]: gslb:sites:dns_vses> domain_names edu
[admin:nmandeyam-topol-controller]: gslb:sites:dns_vses> save
[admin:nmandeyam-topol-controller]: gslb:sites> where
Tenant: admin
```

Field	Value
cluster_uuid	cluster-544c06d2-9e5e-45a6-ab92-56658dcdca2f
name	SiteA
ip_addresses[1]	10.10.24.126
port	443
username	admin
password	<sensitive>
member_type	GSLB_ACTIVE_MEMBER
enabled	True
dns_vses[1]	
dns_vs_uuid	virtualservice-d5e163f9-a1c2-46e6-9088-de6c7b5eb141
domain_names[1]	com
dns_vses[2]	
dns_vs_uuid	virtualservice-a500e091-94a9-4f3c-a4d0-2ac688f3618b
domain_names[1]	edu
dns_vses[3]	
dns_vs_uuid	virtualservice-a131680f-9739-4d2e-b0fc-7007e0aa2eff

Figure 2. Assigning DNS vs-2 to subdomain edu.

```
[admin:nmandeyam-topol-controller]: gslb:sites> dns_vses index 3
[admin:nmandeyam-topol-controller]: gslb:sites:dns_vses> domain_names net
[admin:nmandeyam-topol-controller]: gslb:sites:dns_vses> save
[admin:nmandeyam-topol-controller]: gslb:sites> where
Tenant: admin
```

Field	Value
cluster_uuid	cluster-544c06d2-9e5e-45a6-ab92-56658dcdca2f
name	SiteA
ip_addresses[1]	10.10.24.126
port	443
username	admin
password	<sensitive>
member_type	GSLB_ACTIVE_MEMBER
enabled	True
dns_vses[1]	
dns_vs_uuid	virtualservice-d5e163f9-a1c2-46e6-9088-de6c7b5eb141
domain_names[1]	com
dns_vses[2]	
dns_vs_uuid	virtualservice-a500e091-94a9-4f3c-a4d0-2ac688f3618b
domain_names[1]	edu
dns_vses[3]	
dns_vs_uuid	virtualservice-a131680f-9739-4d2e-b0fc-7007e0aa2eff
domain_names[1]	net

Figure 3. Assigning DNS vs-3 to subdomain net.

Step 5. Save the configuration:

```
[admin:nmandeyam-topol-controller]: gslb:sites> save
[admin:nmandeyam-topol-controller]: gslb> where
Tenant: admin
+-----+-----+
| Field | Value |
+-----+-----+
| uuid | gslb-e28132d6-0fae-41a5-aca0-63e23fa7952f |
| name | Default |
| dns_configs[1] | |
|   domain_name | com |
| dns_configs[2] | |
|   domain_name | net |
| dns_configs[3] | |
|   domain_name | edu |
| sites[1] | |
|   cluster_uuid | cluster-544c06d2-9e5e-45a6-ab92-56658dcdca2f |
|   name | SiteA |
|   ip_addresses[1] | 10.10.24.126 |
|   port | 443 |
|   username | admin |
|   password | <sensitive> |
|   member_type | GSLB_ACTIVE_MEMBER |
|   enabled | True |
|   dns_vses[1] | |
|     dns_vs_uuid | virtualservice-d5e163f9-alc2-46e6-9088-de6c7b5eb141 |
|     domain_names[1] | com |
|   dns_vses[2] | |
|     dns_vs_uuid | virtualservice-a500e091-94a9-4f3c-a4d0-2ac688f3618b |
|     domain_names[1] | edu |
|   dns_vses[3] | |
|     dns_vs_uuid | virtualservice-a131680f-9739-4d2e-b0fc-7007e0aa2eff |
|     domain_names[1] | net |
|   leader_cluster_uuid | cluster-544c06d2-9e5e-45a6-ab92-56658dcdca2f |
|   send_interval | 15 sec |
|   clear_on_max_retries | 20 |
|   view_id | 0 |
|   maintenance_mode | False |
|   is_federated | True |
|   tenant_ref | admin |
+-----+-----+
```

Figure 4. GSLB save the site

Avi UI Configuration

Navigate to Infrastructure > GSLB > Site Configuration to view and/or set the settings related to the selective assignment of a GSLB service to DNS virtual services.

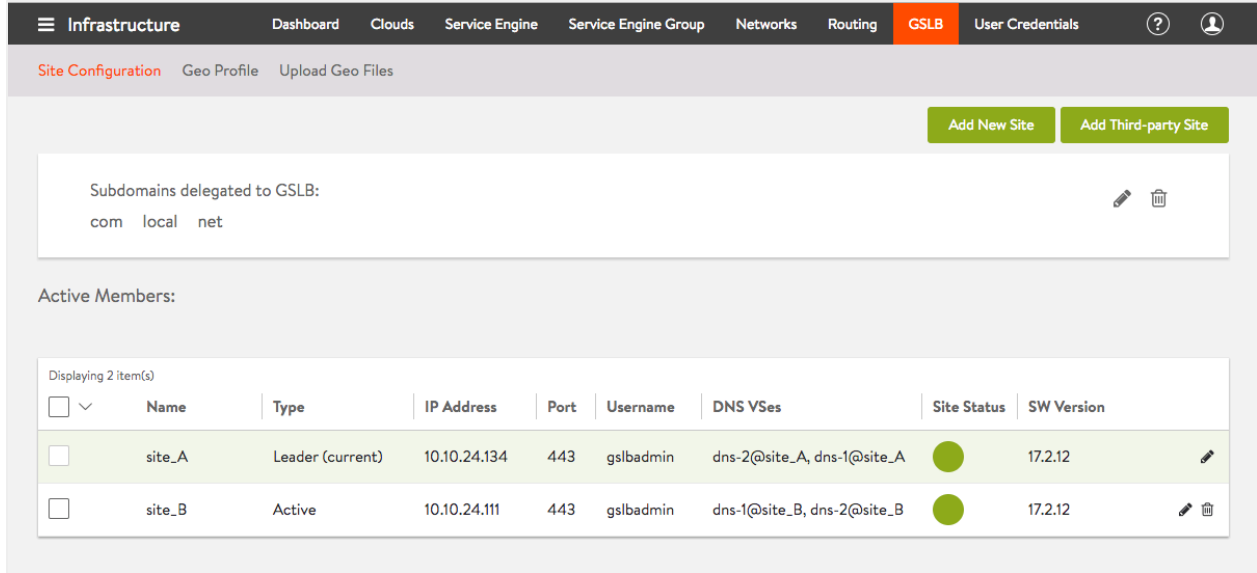


Figure 5. GSLB Site Configuration.

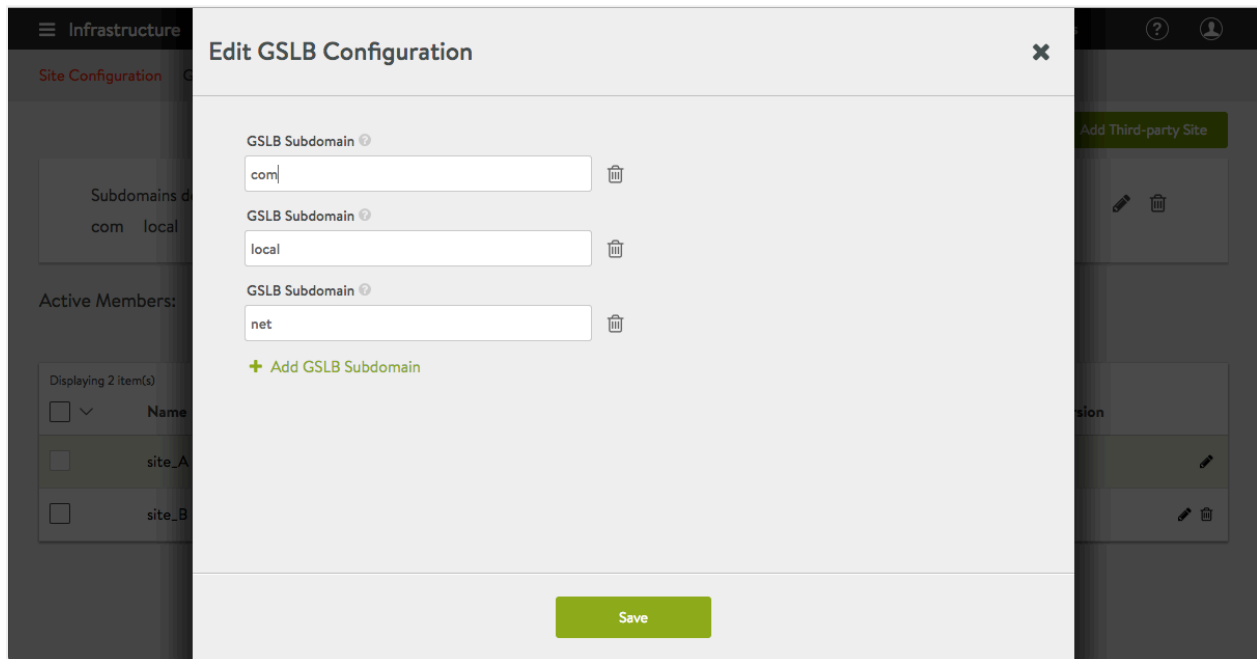


Figure 6. Defining GSLB subdomains

Edit GSLB Site ✕

Name* ⓘ **Active Member** ⓘ

Username* ⓘ **Password** ⓘ

IP Address* ⓘ **Port*** ⓘ

[+ Add IP Address](#)

Advanced Settings

Client Group IP Address Type ⓘ **Health Monitor Proxy** ⓘ [+ Health Monitor Proxy](#)

[+ Add Group IP Address](#)

Geo Location Source ⓘ

Figure 7. Editing GSLB site_A

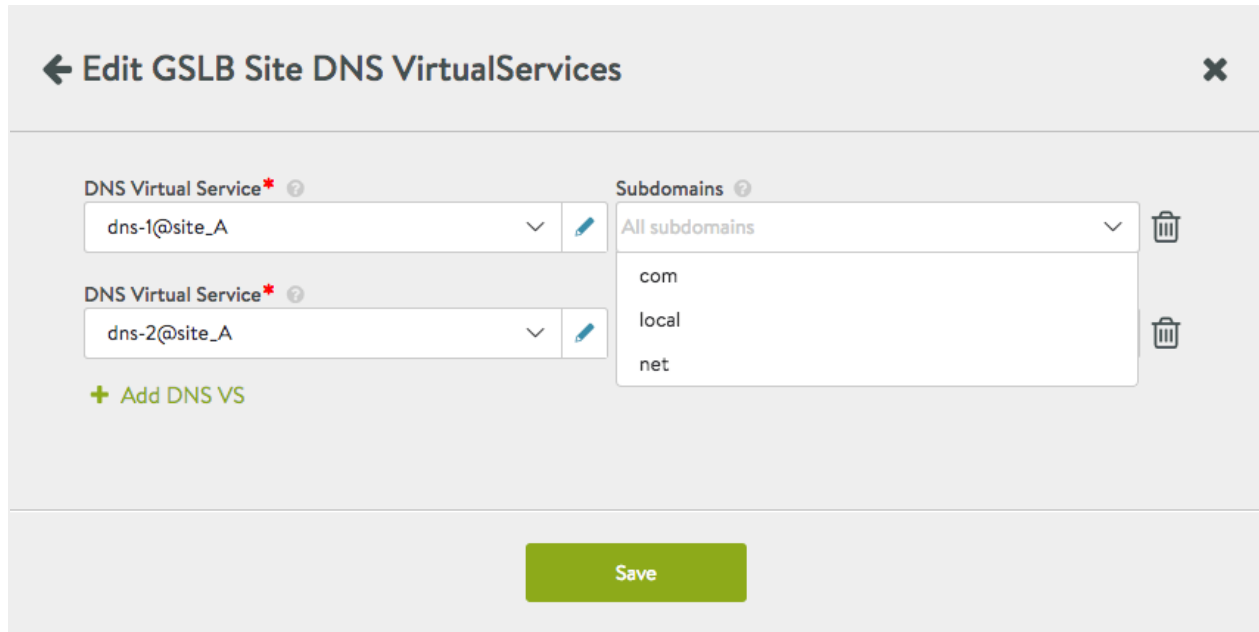


Figure 8. Subdomain selection pulldown

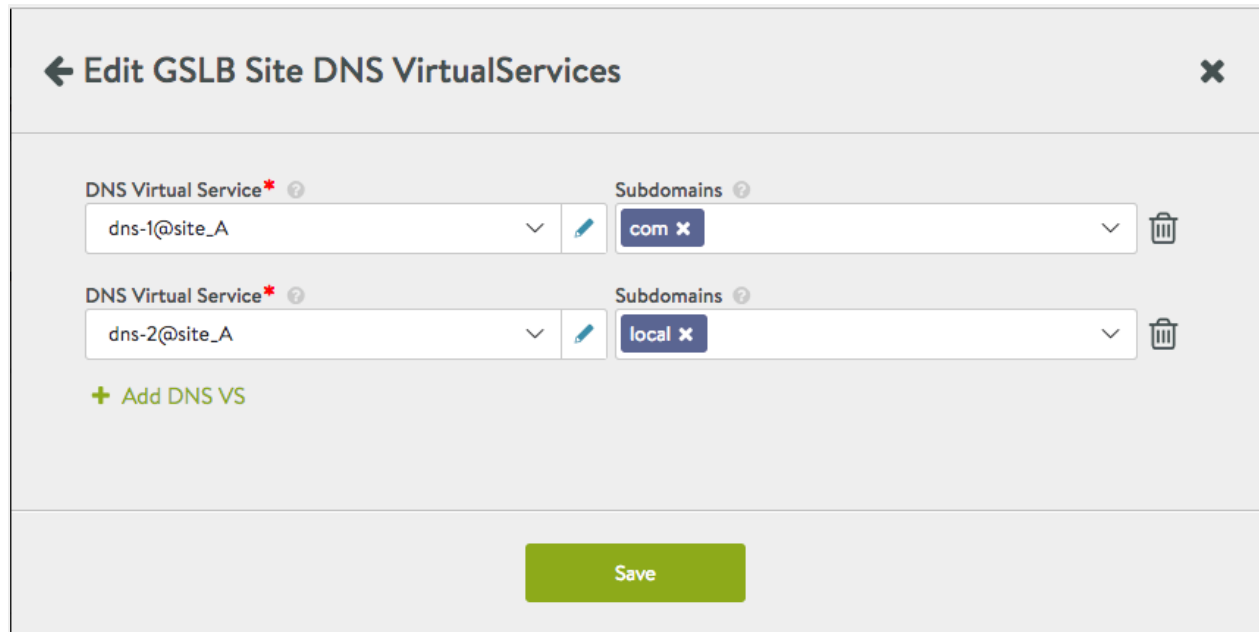


Figure 9. Assigning subdomains to the DNS virtual services

← Edit GSLB Site DNS VirtualServices ×

DNS Virtual Service* ?	Subdomains ?	✕
<input type="text" value="dns-1@site_B"/>	<input type="text" value="com"/>	✕
DNS Virtual Service* ?	Subdomains ?	✕
<input type="text" value="dns-2@site_B"/>	<input type="text" value="net"/>	✕

[+ Add DNS VS](#)

[Save](#)

Figure 10. Assigning subdomains to site B's DNS virtual services