



Troubleshooting GeoDB Issues

Avi Technical Reference (v20.1)

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This article includes methods to confirm proper operation of and fix issues within the Avi GSLB GeoDB.

Checklist

- Prior to investigating a suspected GeoDB issue, verify that all GSLB sites, GSLB services and the DNS VS are configured and running.
- Ensure the SE group of the DNS VS is configured with sufficient disk and memory. Below appear the minimum recommended values.

• Service Engine Capacity and Limit Settings •

Max Number of Service Engines <small>?</small>	10	Maximum	Memory per Service Engine <small>?</small>	10	GB	vCPU per Service Engine <small>?</small>	2	Disk per Service Engine <small>?</small>	25	GB
		<input checked="" type="checkbox"/> Memory Reserve		<input type="checkbox"/> CPU Reserve						

Host Geo Profile ?

- Once a geo profile has been defined, confirm it has been pushed to the Service Engine. Use the `show virtualservice your-dns-vs-name geodbinternal` command to verify the GeoDB has been applied correctly. Look for results such as below:

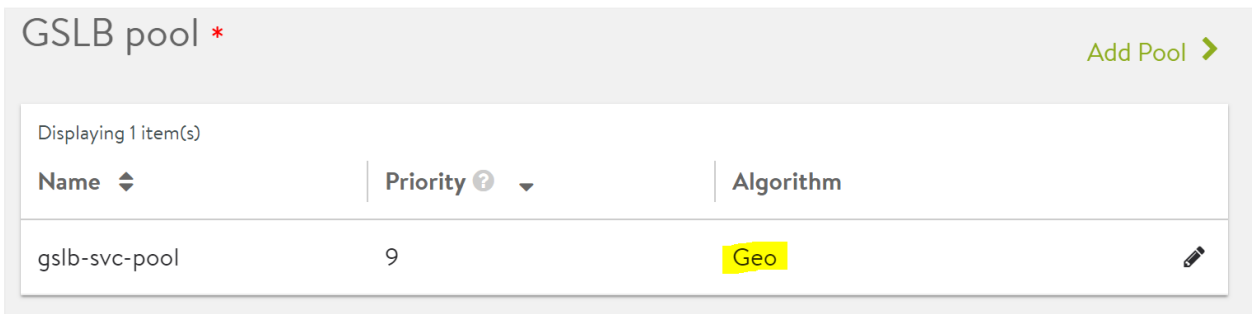
```
[admin:Rajat-Controller-2]: > show virtualservice dns-vs geodbinternal
+-----+-----+
| Field          | Value                                     |
+-----+-----+
| se_uuid        | se-005056b0540b                         |
| uuid           | gslbgeodbprofile-9d79f5d4-e484-4ac1-931f-b788e1b68270 |
| name           | geo-profile                              |
| db_entries[1] |                                           |
|   filename     | AviGeoDb.txt.gz                         |
|   num_entries  | 2944429                                  |
|   num_prefixes | 25177894                                 |
|   num_errors   | 1537                                     |
|   priority     | 2                                         |
+-----+-----+
```

You may otherwise observe error output as below. `FILE_NO_RESOURCES` means there is not enough space on the SEs, as discussed above.

```
[admin:Rajat-Controller-2]: > show virtualservice dns-vs geodbinternal
```

Field	Value
se_uuid	se-005056b06fda
uuid	gslbgeodbprofile-9d79f5d4-e484-4ac1-931f-b788e1b68270
name	geo-profile
db_entries[1]	
filename	AviGeoDb.txt.gz
num_entries	129464
num_prefixes	1003520
num_errors	1
priority	10
error_file	AviGeoDb.txt.gz
error	FILE_NO_RESOURCES

- Verify that a geolocation algorithm is in play where it ought to be. In contemporary releases of Avi Vantage, that could be at the GSLB service level and/or the GSLB pool level. The below Avi UI screenshot shows the geo algorithm is indeed running at the GSLB pool level.



- Verify the geolocation algorithm is able to detect the location of an IP address. To do this, use the following command:
`show virtualservice dns-vs-name geolocationinfo [filter ip|start_ip]`
 The following output confirms a location in California:

```
[admin:Rajat-Controller-2]: > show virtualservice dns-vs geolocationinfo filter ip 8.8.8.8
```

Field	Value
se_uuid	Rajat-se-wvoih:se-005056b0fa6a
proc_id	C0_L4
entries[1]	
ip	8.8.8.8
mask	32
location	
latitude	37.0
longitude	-122.0
name	United States/California/San Francisco
scaled_latitude	127
scaled_longitude	57

The following output confirms a location in India:

```
[admin:Rajat-Controller-2]: > show virtualservice dns-vs geolocationinfo filter ip 106.51.70.96
```

Field	Value
se_uuid	Rajat-se-wvoih:se-005056b0fa6a
proc_id	C1_L4
entries[1]	
ip	106.51.70.96
mask	32
location	
latitude	12.0
longitude	77.0
name	India/Karnataka/Bengaluru
scaled_latitude	102
scaled_longitude	257

Absence of an entry in the below output means either the GeoDB lacks information for the 106.1.2.3 subnet or SE resources are insufficient for the GeoDB to function.

```
[admin:Rajat-Controller-2]: > show virtualservice dns-vs geolocationinfo filter ip 106.1.2.3
```

Field	Value
se_uuid	Rajat-se-fcquj:se-005056b081e1
proc_id	C1_L4

Additional Commands to Facilitate Troubleshooting

- show gslbservice gslb-svc runtime
- show virtualservice dns-vs-name dnstable ? Shows dnstable bound to the DNS virtual service
- show virtualservice dns-vs-name gslbservicedetail filter gs_ref gslb-svc-name ? Shows if a GSLB service is on all SEs and the state of that service

- `show virtualservice dns-vs-name`
`gslbservicedetail`
`gslbservicehmonstat`
`gslbserviceinternal`
`gslbsiteinternal`

The first three of the above options need to be qualified using a filter, as illustrated by the following command:

```
show virtualservice dns-vs-name gslbservicehmonstat filter gs_ref gslb-svc-name
```

The `gslbservicedetail` and `gslbserviceinternal` options also display location information for the GSLB pool member.

Logs to Collect

Especially when seeking help from Avi Networks Support, please collect these logs: * Within the `/var/log/upstart` directory: `glb_mgr.log` and `*portal*.log` * Within the `/opt/avi/log` directory: `glb_mgr.log` and `*portal*.log`

* On the SE where the DNS virtual service is running, collect `se_trace.info`.

Related Articles

- [Geolocation Database](#)
- [Geolocation-based Load Balancing Algorithm for GSLB Members](#)