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Genesys Mobile Services Deployment Guide

Configure URS Load Balancing

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Configure URS Load Balancing

Introduced in 8.5.107

URS provides Genesys Mobile Engagement with the data used to calculate Estimated Wait Time and submit Callback interactions at the appropriate time. If you have configured a URS backup, or more than one URS instance, you need to set up load balancing features.

Prerequisites

- URS version 8.5.400.12+

Supported URS Load Balancing Features

Genesys Mobile Services (GMS) supports the following load balancing features:

- Ability to configure a list of service URLs to access a given list of nodes.
- **Linear** (default) hunt strategy where requests are always delivered to the first available node in the list.
- **Circular** hunt strategy where requests are delivered in a round-robin fashion to the list of nodes/URLs. Starting in 8.5.107, the Circular strategy automatically takes into account URS and URS backups if the URS is specified in the GMS Connections tab.
- Ability to configure a linear hunt strategy or a circular hunt strategy in the service configuration. The default hunt mode is **linear**.

How to set up GMS connections to URS?

Genesys recommends that you add a list of URS primary servers to the **Connections** tab in case GMS should fall back to other nodes on failure.

GMS will automatically find the URS backup servers and add them to the load balancing strategy; however, when failing on one node, GMS will try the next URS node in the list, regardless if it is a primary or a backup server.

This default hunt strategy is **linear**. To modify this strategy, edit the `_urs_lb_strategy` option in the **urs** section.

When to Disable URS Load-Balancing?

If the URS is too old—check the [Prerequisites](#), you can use the `enable_urs_loadbalancer` option to disable load-balancing in the [reporting](#) section.

If you upgraded to 8.5.107:

- You should set `enable_urs_loadbalancer` to `true` even if you were not using URS load balancing previously;
- Set this option to `false` only if you need to deactivate load balancing.

More URS Load Balancing Settings

The following settings can be defined at the cluster or node level in the `urs` section of your GMS application. You cannot supersede these settings at the service level:

- `max_urs_idle_connection_time`
- `urs_loadbalancer_refresh_rate`

Configure URS Request Attempts

In a circular URS load balancing strategy, the `max_urs_request_attempts` option provides you with the ability to select the next URS Server in the list of URS Servers defined for the service when the request to the first URS fails.

For example, if you set the value of `max_urs_request_attempts` to 1, the first URS Server in the list will be used only one time, and in case of URS failure, the request will fail. If you set the value to 3, the first URS Server in the list will be used and if the request fails, the next URS Server in the list will be used, and so on, until the third server. After the third server fails to respond, the request returns a failure. A linear URS load balancing strategy follows the same process with the `max_urs_request_attempts` option for retry on failure.

Advanced Setup Scenarios for URS Connections

Starting in 8.5.107, for any advanced setup, the default URS Load Balancing strategy is **linear** and **enabled** by default.

Important

Unless you have specific needs, using the **Connections** tab to add GMS connections to URS should cover most use cases.

Overwrite General Server Settings

To define a list of URS primary servers at the GMS application level, you can set a list of URS URLs in the **reporting** section by using the `_urs_url` option.

- You need to provide URS primary servers only, not their backup. In 8.5.107, GMS will automatically find URS backup servers and add them to the Load Balancing strategy.
- To modify the strategy mechanism related to this list, edit the `_urs_lb_strategy` option of the **urs** section.
- This configuration applies to the application's services by default.

Overwrite Settings per Service

To overwrite URS settings at the service level, you can use the **Mobile Engagement User Interface** to set a comma-separated list of URS URLs in the `_urs_url` option of your service.

- By default, starting in 8.5.107, the load balancing strategy is **linear**.
- The `_urs_url` option is not available in all services.
- You cannot modify the strategy per service.

How to Manage URS Settings in a Cluster

If you define an application cluster for your GMS applications and if you wish to have specific URS settings, you can edit your service configuration through Configuration Manager, Genesys Administrator, or Genesys Administrator Extension instead of using the **Mobile Engagement UI**.

- If you define your load balancing properties for your service in this cluster configuration, these service options apply to all of the GMS nodes.
- If you modify these service options in one of the GMS nodes, the new options apply to this given node and cluster options are superseded in this node.

This mechanism lets you define common service options for your cluster, with the possibility to fine-tune the service options in one or more GMS nodes.

1. Open your application's configuration and select the **Options** tab. Edit your `service.<service_name>` section.
2. Click **Create New Section/Option**.
3. Enter `_urs_url` for the Option Name, and then enter the list of URLs, separated with commas, for the Option Value. Click **OK**.
 - By default, starting in 8.5.107, the load balancing strategy is **linear**.