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# Callback User's Guide

Set up URS Strategy for Queuing

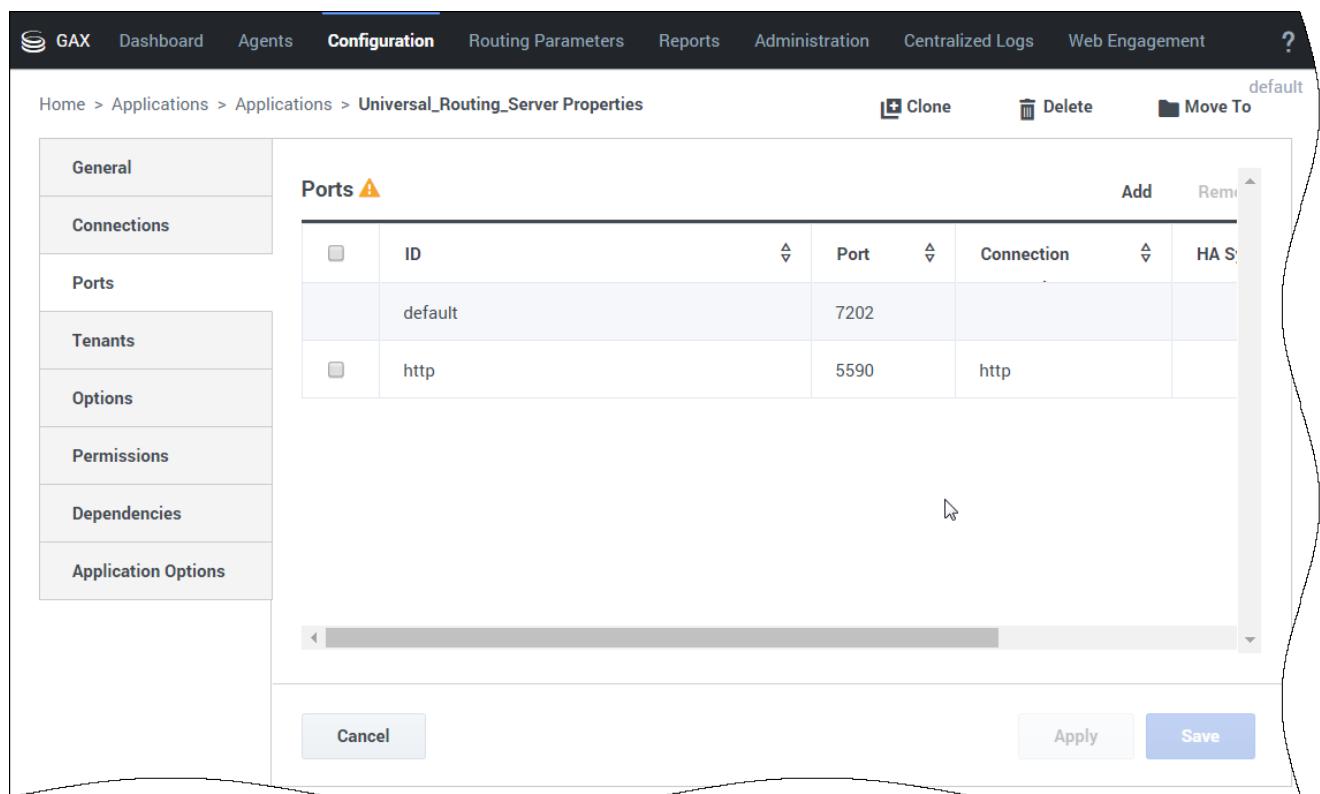
12/20/2025

# Set up URS Strategy for Queuing

## Enable HTTP Interfaces in URS

### Create a Listening HTTP Port in URS

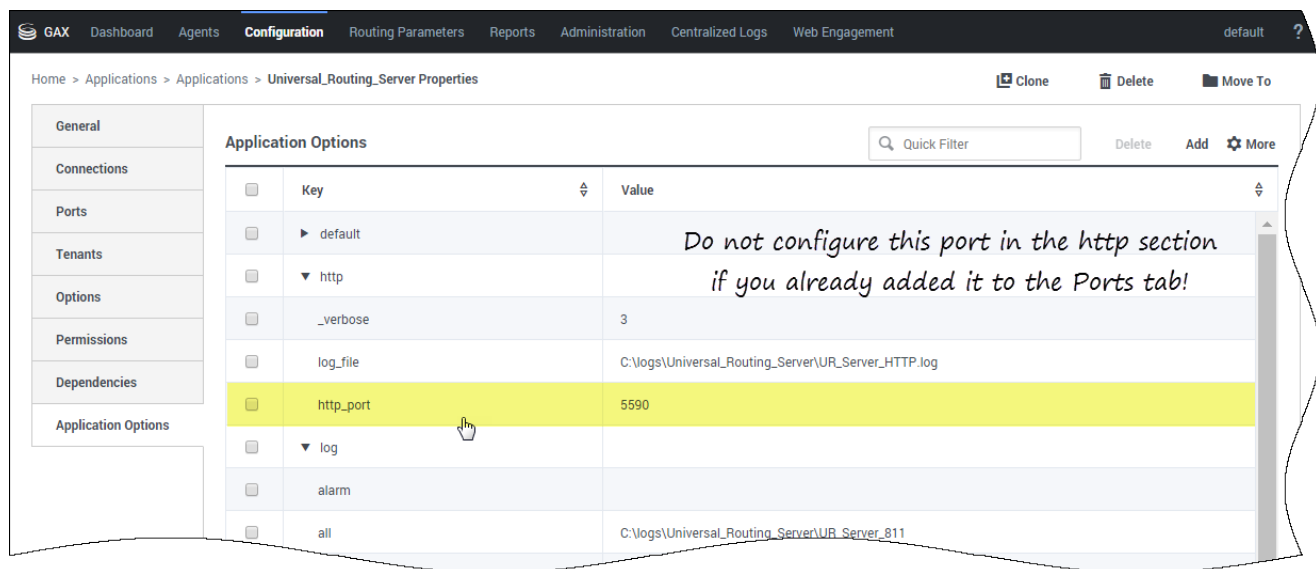
URS will listen on this port for incoming HTTP requests. Basically, this steps turns URS into an HTTP server.



In Genesys Administrator Extension, edit your URS application.

Add an HTTP listening port with a port ID http in the **Ports** tab. Make a note of this port number as you will need it later when configuring GMS and ORS-based services.

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You can also do this by creating the `http_port` option in the `http` section of your **Application Options** tab.

### Warning

This HTTP port needs to be created in one place only.

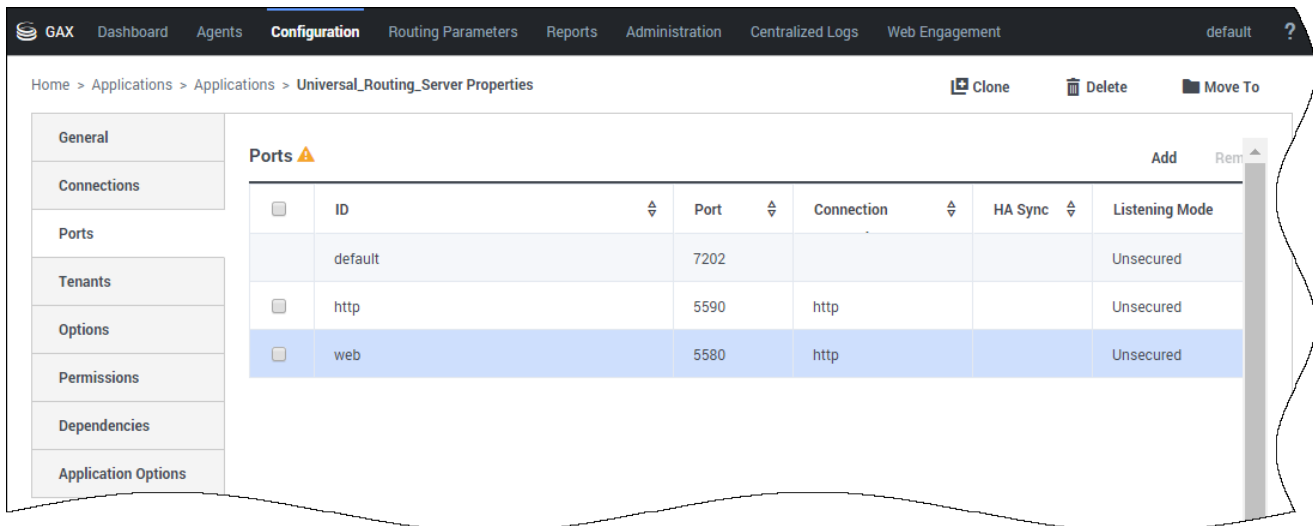
## Enable Web HTTP Replies in URS

URS uses the `httpbridge` module to send target information back to GMS. To make this possible, create a web HTTP port that will be used to reply. URS will be able to perform external HTTP requests, for example, to submit `timetodial` events to GMS, and so on.

### Important

The listening **http** port created in the previous section and the **web** port defined below **MUST** have different values.

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The screenshot shows the Genesys Administrator Extension Configuration page for the Universal\_Routing\_Server Properties. The left sidebar contains a menu with the following items: General, Connections, Ports, Tenants, Options, Permissions, Dependencies, and Application Options. The main content area is titled "Ports" and includes an "Add" button and a "Remove" button. A table lists the configured ports:

| ID      | Port | Connection | HA Sync | Listening Mode |
|---------|------|------------|---------|----------------|
| default | 7202 |            |         | Unsecured      |
| http    | 5590 | http       |         | Unsecured      |
| web     | 5580 | http       |         | Unsecured      |

In Genesys Administrator Extension, edit your URS application. Add an HTTP port with a port ID web in the **Ports** tab.

The screenshot shows the GAX Configuration interface for the 'Universal\_Routing\_Server Properties' dialog. The 'Application Options' tab is selected, showing a table of configuration options. The 'http\_port' option is highlighted in yellow, and a hand cursor is pointing to it. A handwritten note is overlaid on the table, stating: 'Do not configure this port in the web section if you already added it to the Ports tab!'.

| Key                  | Value                                          |
|----------------------|------------------------------------------------|
| http                 |                                                |
| log                  |                                                |
| web                  |                                                |
| _verbose             | 3                                              |
| enable_web_access    | true                                           |
| http_log_buffering   | false                                          |
| http_log_file        | C:\logs\Universal_Routing_Server\UR_Server_... |
| http_port            | 5580                                           |
| wfm_polling_interval | 1                                              |

You can also do this by creating the `http_port` option in the **web** section of your **Application Options** tab.

- `http_port` = 5580 (or some other port, used internally)

### Warning

This HTTP port needs to be created in one place only.

## Configure URS Delay Strategies

You must deploy URS delay strategies. This step is required because when a service request is received by GMS, the request is sent to ORS for execution. ORS then sends a request to URS to create a virtual interaction and to place it in the specified virtual queue. When an agent is available, URS sends an asynchronous response containing the selected target information to GMS, via a URL specified at the time of creation of the virtual interaction. For samples, you will create a new virtual queue in which to place the interactions, however, for a real-world scenario, the virtual queue must be selected appropriately.

To deploy URS delay strategies, open Genesys Administrator Extension.

## Create a dedicated Virtual Queue

The screenshot shows the GAX Configuration interface for creating a Virtual Queue. The breadcrumb navigation is: Home > DNS > Switches > SIP\_Switch > DN > Virtual... The page has a top navigation bar with links: GAX, Dashboard, Agents, Configuration (active), Routing Parameters, Reports, Administration, and Centralized Logs. On the right, there are buttons for Clone, Delete, and Move To (default), along with a help icon. A left sidebar contains a menu with: General (selected), Default DNSs, Options, Permissions, and Dependencies. The main form area contains the following fields and controls:

- Number \***: Text input with value "GMS\_VQ".
- Type \***: Dropdown menu with value "Virtual Queue".
- Switch \***: Folder selection dropdown with value "SIP\_Switch".
- Association**: Empty text input field.
- Register \***: Dropdown menu with value "True".
- Alias**: Text input with value "GMS\_VQ\_SIP\_Switch".
- Route Type \***: Dropdown menu with value "Default".
- DN Group**: Empty folder selection dropdown.
- Use Override**: Checked checkbox.
- Override**: Empty text input field.
- Login ID**: Empty text input field.
- Switch-specific Type**: Text input with value "1".
- Number Of Trunks**: Text input with value "0".
- Cost Contract**: Empty folder selection dropdown.
- Site**: Empty folder selection dropdown.
- Tenant**: Folder selection dropdown with value "Environment".
- State Enabled**: Checked checkbox.

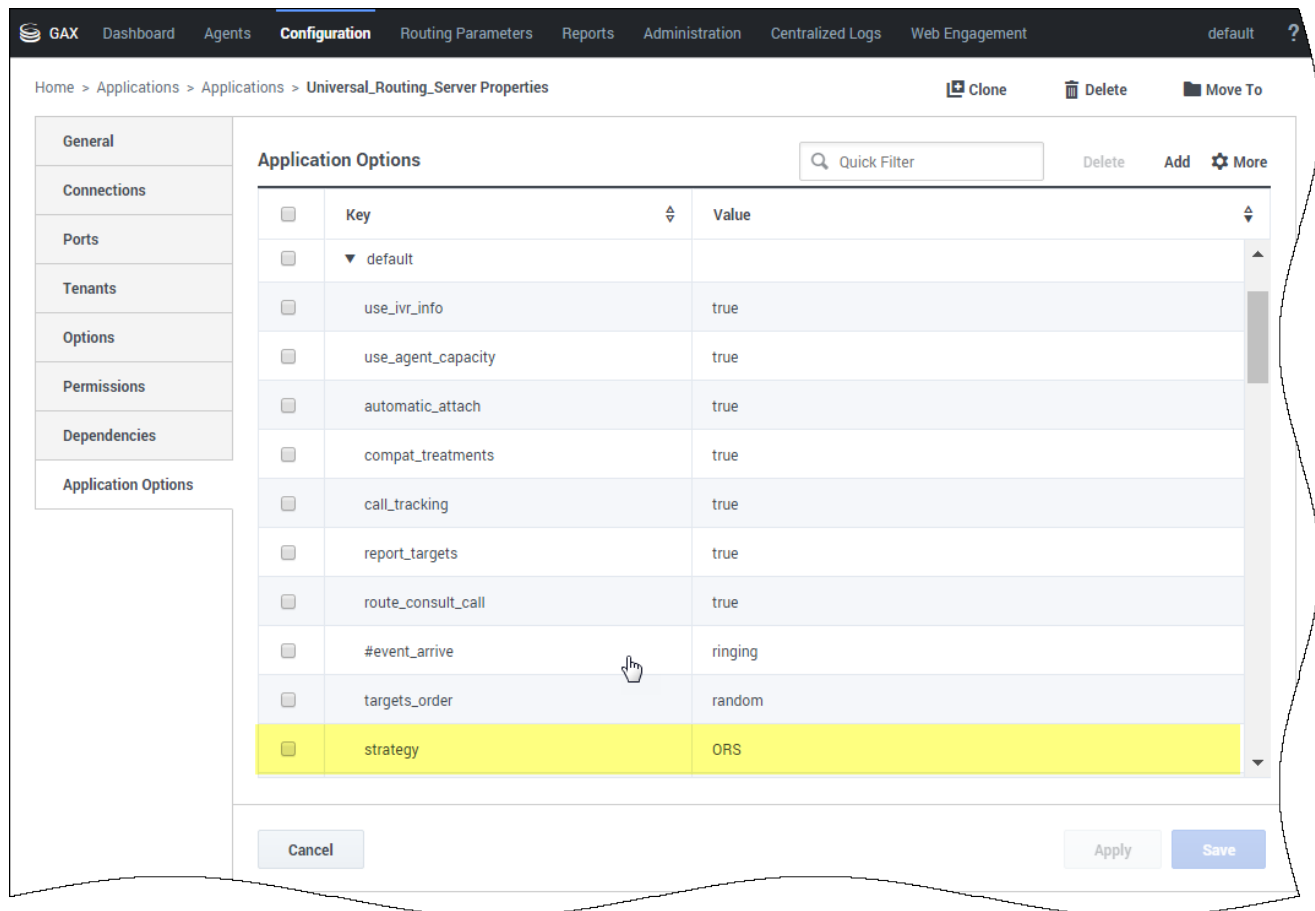
At the bottom of the form are three buttons: Cancel, Apply, and Save.

Navigate to 'Switching > DNS > Switches > SIP\_Switch > DN > Virtual Queue' and create a virtual queue GMS\_VQ. Save and configure the alias GMS\_VQ\_SIP\_Switch. You will need this alias when you

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will configure the `_urs_virtual_queue` option of your Callback service.

Enable ORS to pull interactions and URS to receive routing requests.



Edit the Universal Routing Server Application and select the **Options** tab. Enable ORS to pull interactions by setting the `strategy` option to ORS in the default section.

Now, you can download the URS Strategies and import them into IRD. See the download section below to manage the downloadable files.

## Configure Multiple Targets

The option `_target` in the URS Queuing section of your callback service allows you to configure one or

more URS targets (as detailed in the option's description).

To configure multiple targets, you must create a JSON array of targets (maximum 5) and for each target, you provide a statistic condition that the system will check. This condition specifies when to switch to the next target. If the condition is not matched, the interaction will be queued. Otherwise, the system will test the condition of the next target, as detailed in the diagram below.



The condition is defined by the parameters `stat_to_check`, `stat_operator` (`<` or `>`) and `stat_value`.

For example, if you set:

```

{
  "target": "GMS_AG_Kilfoil@Stat_Server.GA",
  "timeout": "15",
  "clear": false,
  "stat_to_check": "StatAgentsAvailable",
  "stat_operator": "<",
  "stat_value": "1"
}

```

- The system will change to the next target in the list if `StatAgentsAvailable < 1` (no agent is available).
- The system will queue the interaction to the target `GMS_AG_Kilfoil@Stat_Server.GA` only if `StatAgentsAvailable >= 1` (which means that at least one agent is available). If the duration specified in the target timeout has passed, and if the agent is not selected, then the statistic condition for the next target is checked prior to queuing the interaction for the next target. You can also expand to the next target if `clear = true`.

### Important

If you do not set a condition by using `stat_to_check`, `stat_operator`, and `stat_value`, then the tested condition is set by default to `no` logged in agents. That means that the interaction is queued to a target only if at least one agent belonging to the target is logged in.

The `stat_to_check` property can be set to any of the values supported by the `Statistics` parameter passed to the `IRD` function `SData(Target, Statistics)`, unless `target` is a skill expression. If `target` is a skill expression, you must choose one of the following values:

- `RStatAgentsReadyvoice`—agents ready for voice media.
- `RStatAgentsReady`—agents ready for any media.
- `RStatAgentsTotal`—agents logged in.

The JSON code below is a sample of value for the `_target` option and includes 5 different targets.

```
[
  {
    "target": "GMS_AG_Kilfoil@Stat_Server.GA",
    "timeout": "15",
    "clear": false,
    "stat_to_check": "StatAgentsAvailable",
    "stat_operator": "<",
    "stat_value": "1"
  },
  {
    "target": "GMS_AG_Milburn@Stat_Server.GA",
    "timeout": "10",
    "clear": false,
    "stat_to_check": "StatAgentsAvailable",
    "stat_operator": "<",
    "stat_value": "1"
  },
  {
    "target": "GMS_AG_Monique@Stat_Server.GA",
    "timeout": "30",
    "clear": false,
    "stat_to_check": "StatAgentsAvailable",
    "stat_operator": "<",
    "stat_value": "1"
  },
  {
    "target": "GMS_AG_Oladipo@Stat_Server.GA",
    "timeout": "15",
    "clear": false,
    "stat_to_check": "StatAgentsAvailable",
    "stat_operator": "<",
    "stat_value": "1"
  },
  {
    "target": "GMS_AG_Sippola@Stat_Server.GA",
    "timeout": "15",
    "clear": false,
    "stat_to_check": "StatAgentsAvailable",
    "stat_operator": "<"
  }
]
```

```

    "stat_value": "1"
  }
]

```

## URS Strategies for Download

### Important

When you upgrade GMS, you need to import the Callback Template from your GMS installation directory. Start the Service Management UI, upload the <GMS Installation Directory>/service\_templates/callback.zip file, and restart ORS.

| GMS version                       | ZIP                                                                                                                                                           | Instructions                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8.5.004.xx and earlier            | <a href="#">GMS_URS_Strategy.zip</a>                                                                                                                          | <ol style="list-style-type: none"> <li>1. Download and unzip the zip file containing the URS strategies.</li> <li>2. Open Interaction Routing Designer (IRD).</li> <li>3. Import the strategy <b>WaitForTarget.zcf</b>, and subroutine <b>SetRouteDelay.zcf</b>, using <i>File &gt; Import From File</i> on the respective tabs.</li> <li>4. Open the strategy and subroutine.</li> <li>5. Compile and save.</li> </ol> |
| between 8.5.005.xx and 8.5.101.10 | <a href="#">GMS_URS_Strategy_85005.zip</a>                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                         |
| between 8.5.101.10 and 8.5.107.19 | <a href="#">GMS_URS_Strategy_85010_v2.3.zip</a>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 8.5.108.02 and higher             | <a href="#">GMS_URS_Strategy_85108_v2.4.zip</a>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 8.5.109.08 and higher             | <a href="#">GMS_URS_Strategy_85109_v2.58.zip</a>                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 8.5.114.09 and higher             | <a href="#">GMS_URS_Strategy_85114_v2.63.1.zip</a><br><a href="#">GMS_URS_Strategy_852000_v2.64.1.zip</a><br><a href="#">GMS_URS_Strategy_85200_v2.66.zip</a> |                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 8.5.2 and higher                  | See <a href="#">URS Strategies in 8.5.2</a>                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                         |

- Starting in 8.5.109.08, the URS Dial Success Rate is set to 85% when new callbacks are created to improve the callback performance.
- Starting in 2.64.1, the DialOutSuccessRate function of the WaitForTarget strategy is no longer invoked to allow the enhanced VCB algorithm within Universal Routing Server to work properly. If your application requires the legacy VCB algorithm to work, change the strategy to invoke the DialOutSuccessRate function as in earlier versions of the strategy.

### Important

You do not need to load the strategy in ORS because ORS will request it when needed. See the [Interaction Routing Designer help file](#) for information about using IRD.

## Additional Deployment Steps for GMS 8.5.005.xx and Higher

### Prerequisites:

If you are upgrading Callback from GMS 8.5.004.xx and earlier, make sure that you have the following components and versions installed:

- Interaction Routing Designer (IRD) 8.1.400.26
- Universal Routing Server (URS) 8.1.400.39

### Deployment Changes

1. Uninstall your existing IRD.
2. Install IRD 8.1.400.26.
3. Delete the existing `WaitForTarget` strategy.
4. Delete the existing `SetRouteDelay` subroutine.
5. Download the strategies for GMS versions 8.5.114.09 and higher.
6. Import into IRD.
7. Compile both strategy and subroutine.
8. Uninstall your existing URS.
9. Install URS 8.1.400.39.

### Important

Do not skip step 7. This step is mandatory to ensure that the strategy and subroutine are properly saved and loaded into IRD.