Callback User's Guide

Set up URS Strategy for Queuing

5/6/2025

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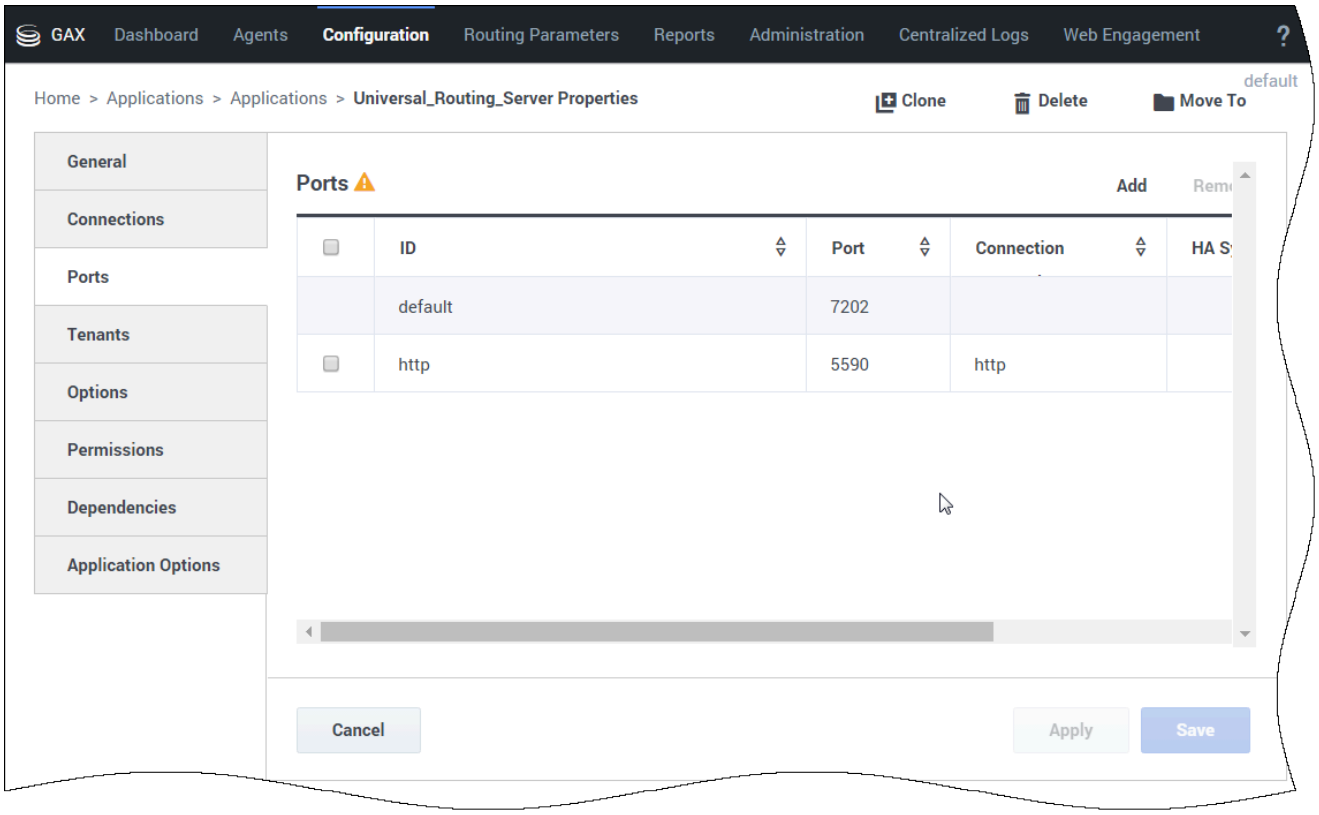
Enable HTTP Interfaces in URS

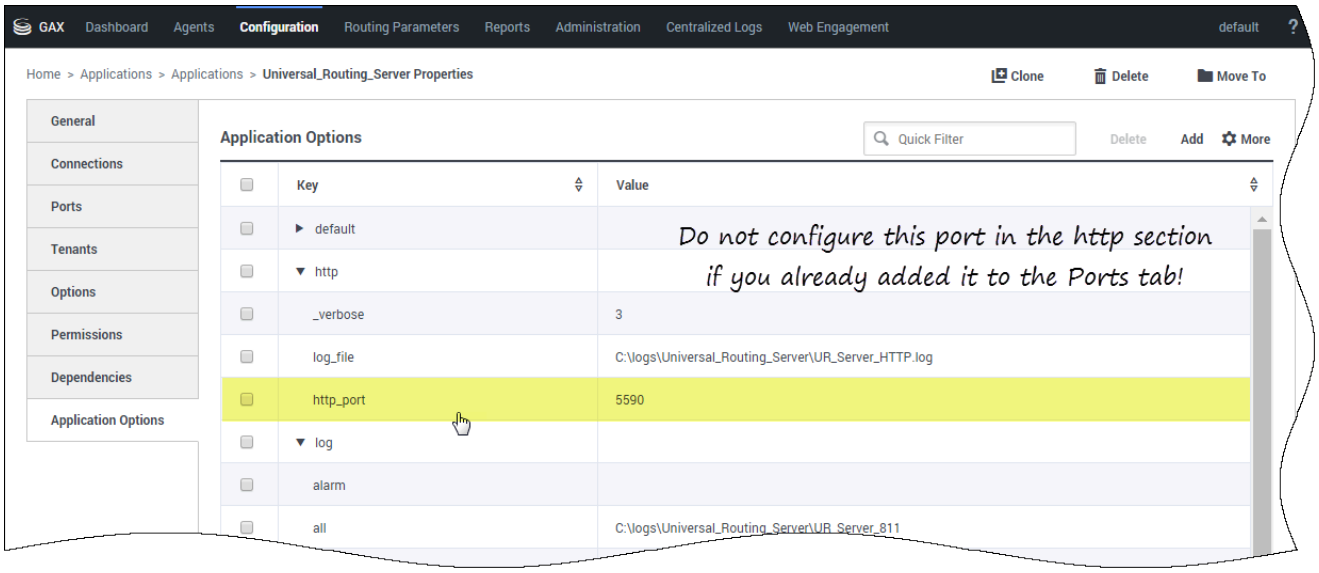
Create a Listening HTTP Port in URS

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.



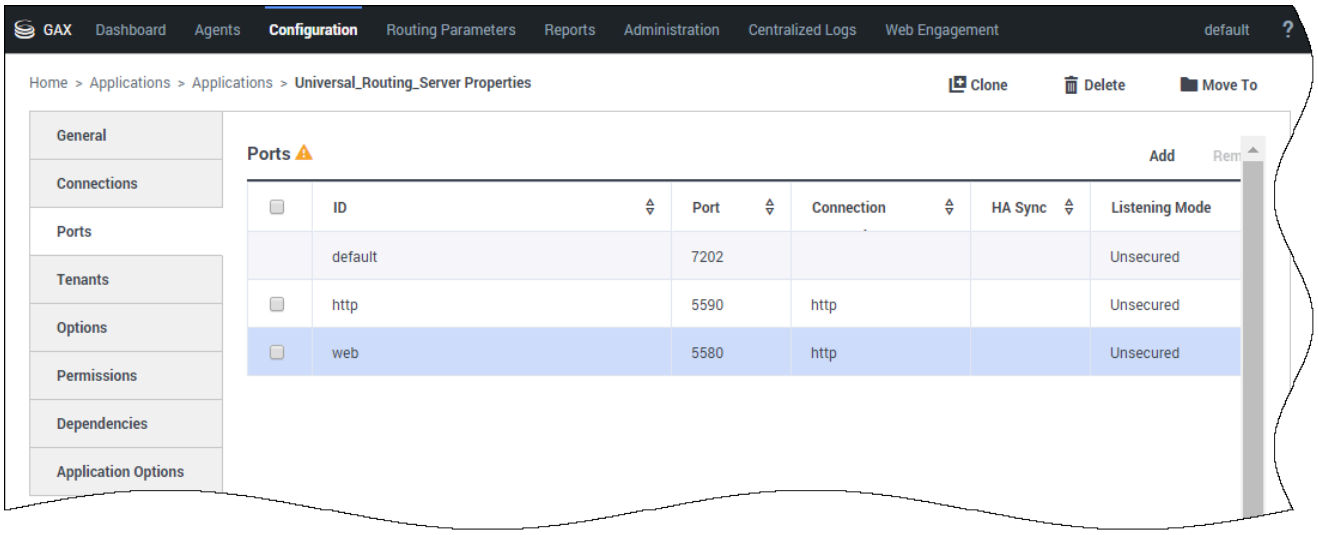
You can also do this by creating the `http_port` option in the `http` section of your **Application Options** tab.

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

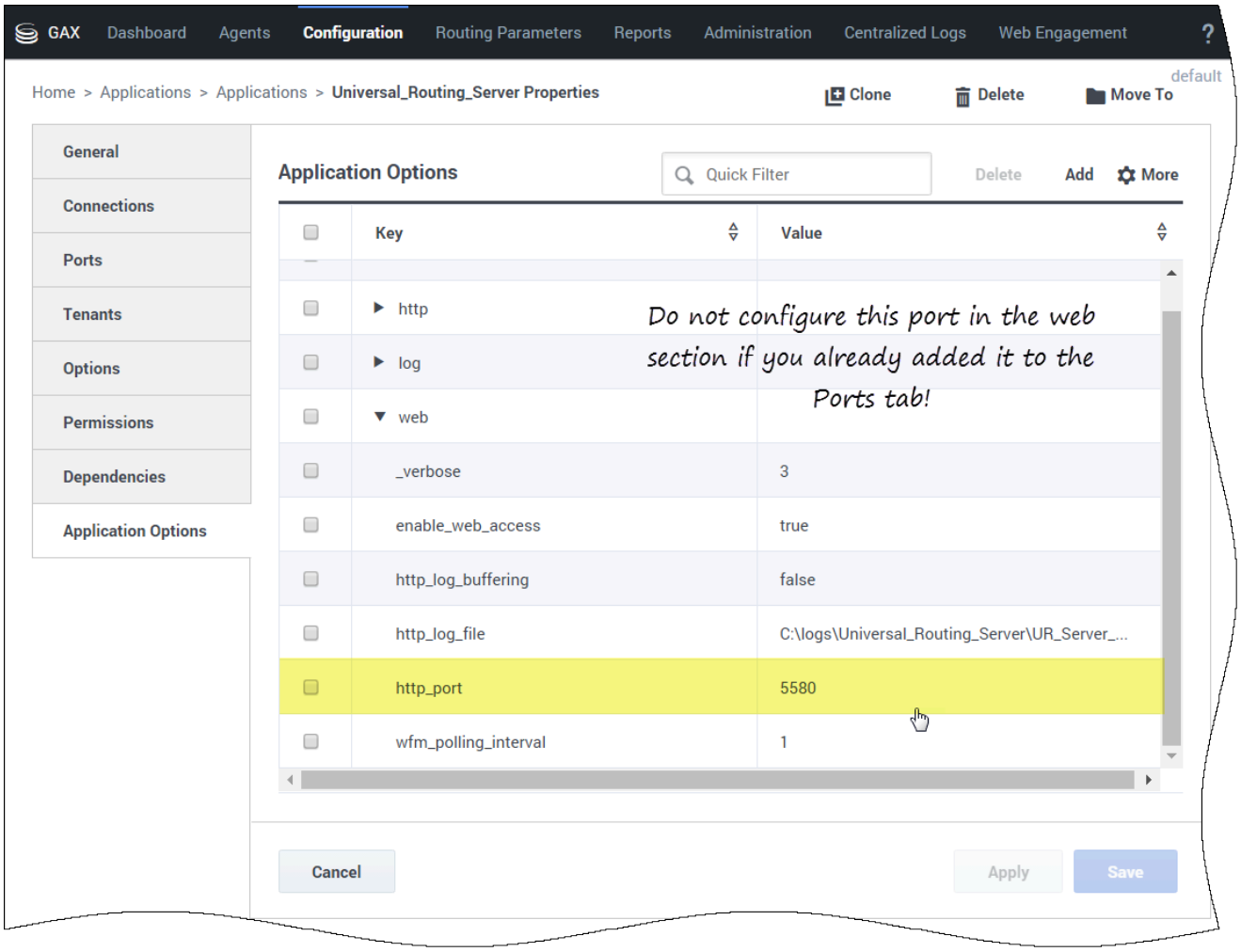
Enable Web HTTP Replies in URS

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.



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



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)

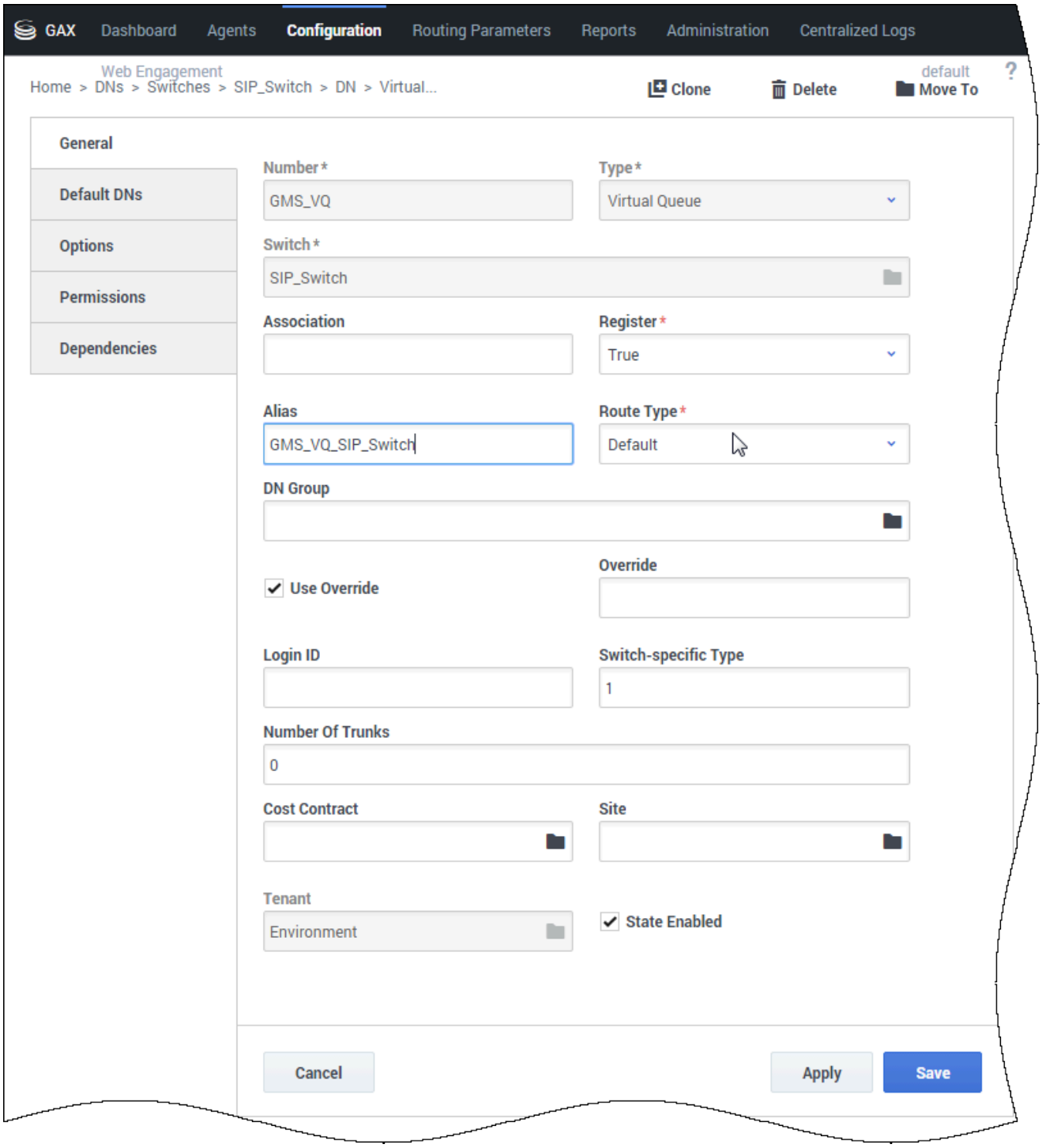
> **Warning**
> This HTTP port needs to be created in one place only.

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 the 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.

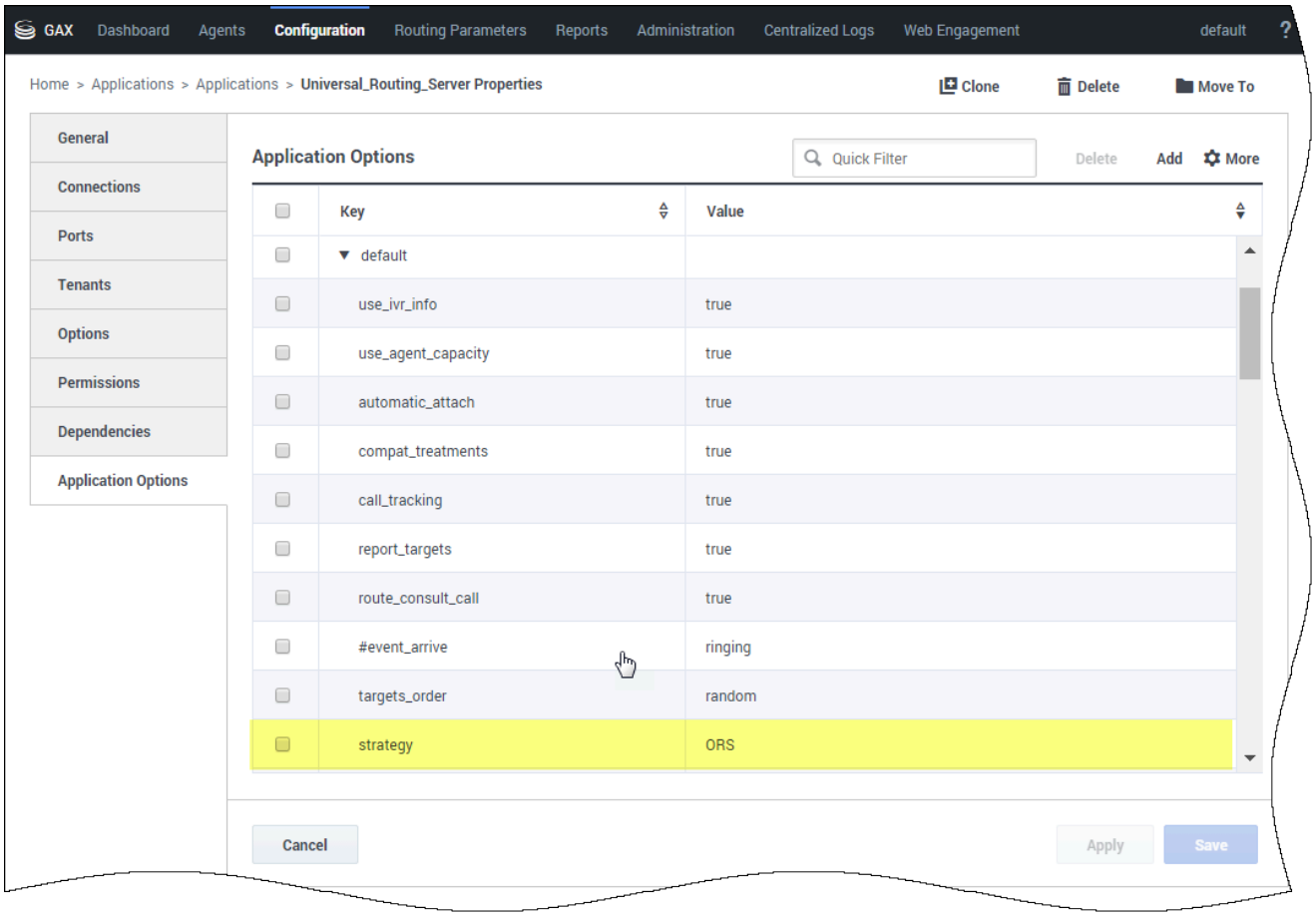
Create a dedicated Virtual Queue



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

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 15) 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 before queuing the interaction for the next target. You can also expand to the next target if clear = false.

> **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"
    }
]
```

Use of EWT_VQ_TARGET in the WaitForTarget IRD Strategy

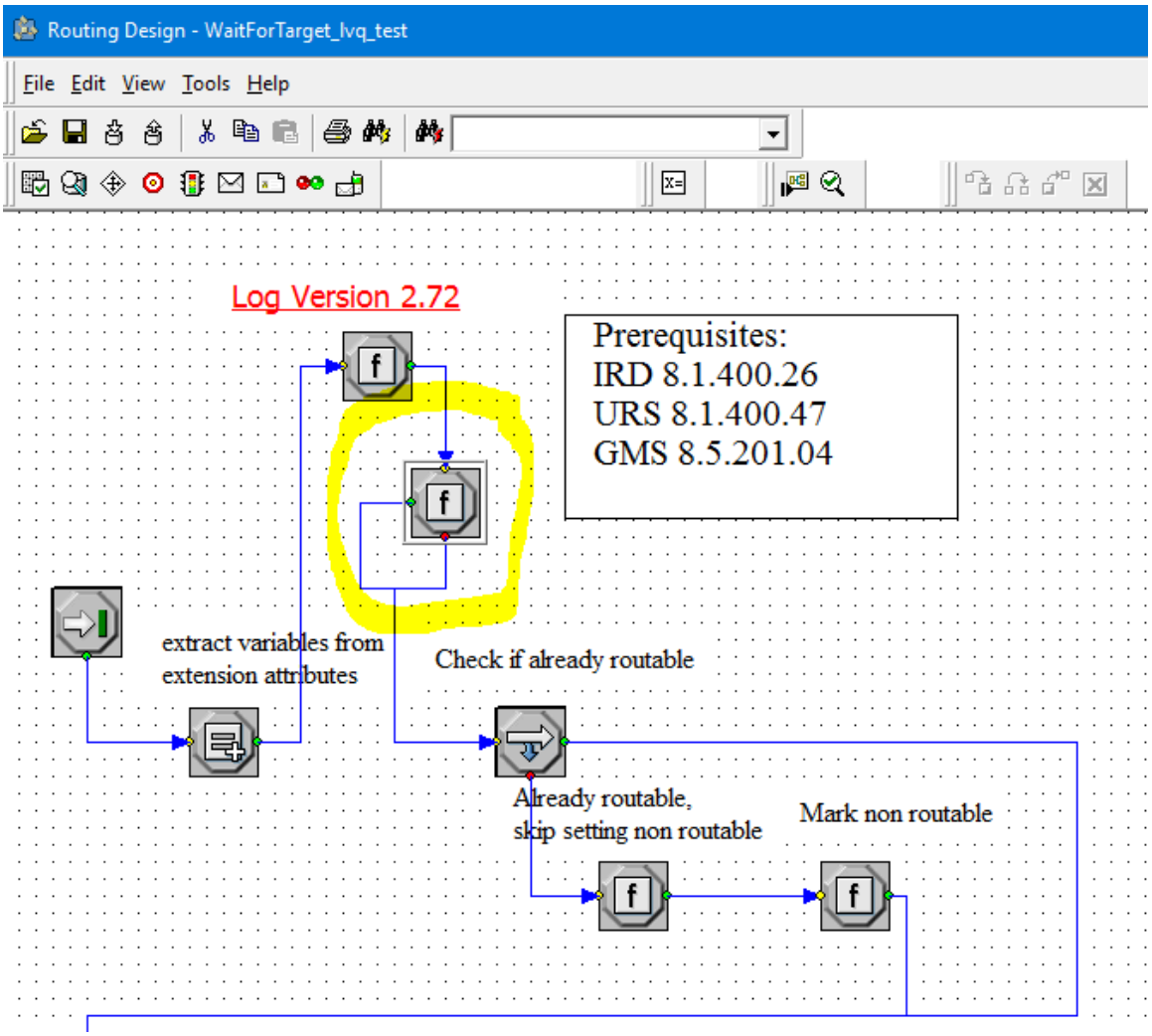
In Estimated Wait Time scenarios, you can use the _EWT_VQ_TARGET variable to peg a non-configured Virtual Queue (VQ) to access the URS LVQ function for this VQ from your inbound routing application.

The **_EWT_VQ_TARGET** parameter is a copy of the _urs_ewt_virtual_queue that you can configure in this purpose.

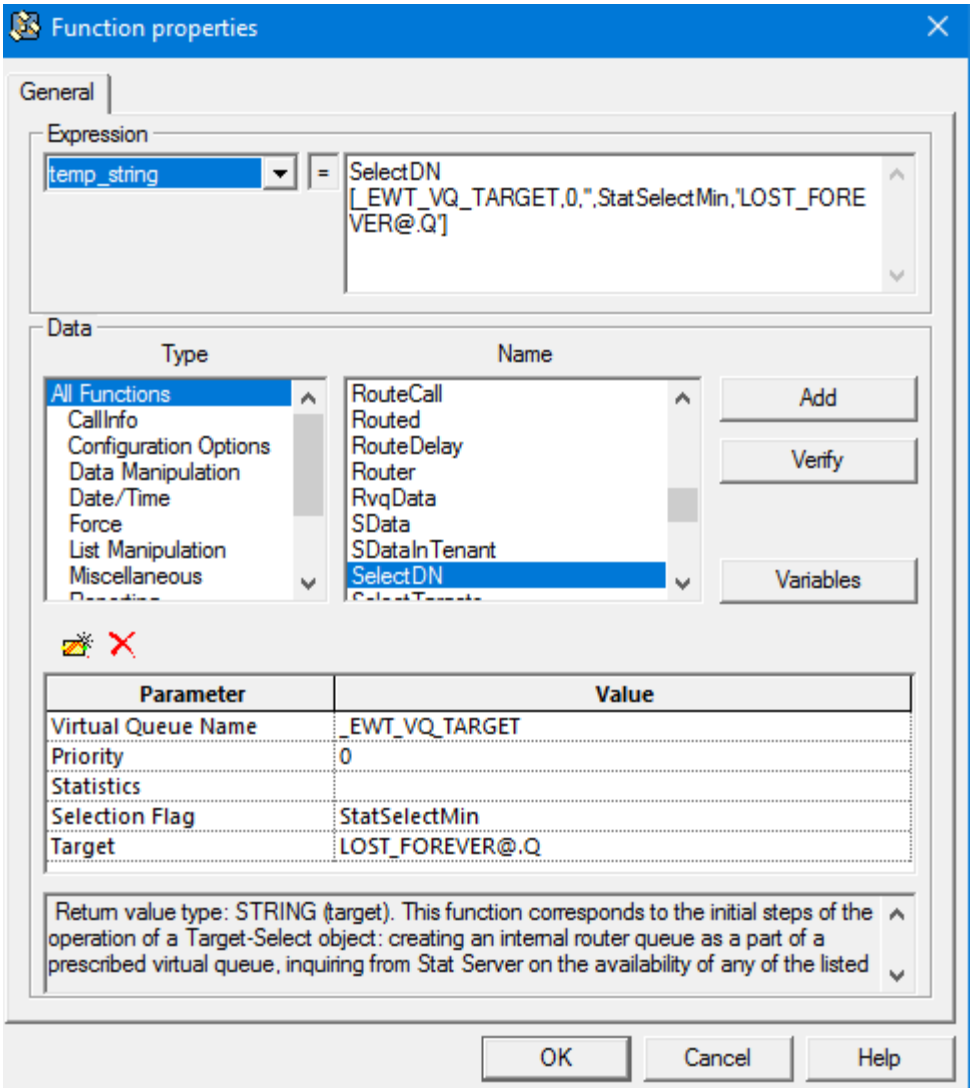
> ### Important
> Since the VQ is not configured, it is internal to URS, no `EventQueued` or `EventDiverted` events will be issued.

To peg the VQ, proceed to the following changes:

1. Configure the _urs_ewt_virtual_queue option with a non-configured virtual queue name.
2. Download the GMS Callback WaitForTarget strategy available in the URS Strategies for Download section below.
3. Open Interaction Routing Designer (IRD), select the **Routing Design** / **Strategies** tab, then load and compile the GMS Callback WaitForTarget strategy.
4. Add a function block to the `WaitForTarget` workflow as following:



5. Edit the function block:
   - Under Select expression, enter a new expression name.
   - Under Data > Name, select **SelectDN**.
   - In the parameters' table, configure:
     - Virtual Queue Name = _EWT_VQ_TARGET
     - Priority = 0
     - SelectionFlag = StatSelectMin
     - Target = LOSTFOREVER@.Q
       Note: In this example, L0ST_F0REVER is the name of the non-configured VQ.



- Save and compile the block. The **WaitForTarget** block is now available and ready in the **Strategies** tab.

Of course, if you do not use the block, it does not affect the existing WaitForTarget strategy.

Important

- These changes can be lost when you upgrade GMS to a newer version. You will have to redo the steps above if you install a new version of the URS WaitForTarget strategy.
- You can also rename your modified URS strategy and use the _urs_prioritization_strategy callback service option to select your URS strategy name instead of using the WaitForTarget default one.

EWT Usage

This configuration ensures that you can use the `lvq` URS HTTP request using the `connid` parameter of your callback as `max` to get the URS calculation results for the Estimated Waiting Time and the position in the Virtual Queue.

```
curl -v http://<URS_host>:<URS_http_port>/urs/call/max/lvq?<parameters>
```

To get detailed information about this query, check the following URL:
http://<URS_host>:<URS_http_port>/urs/help/call/lvq

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
8.5.200.09 and higher	GMS_URS_Strategy_85200_v2.64.1.zip	1. Download and unzip the `zip` file containing the URS strategies. 2. Open Interaction Routing Designer (IRD). 3. Import the strategy **WaitForTarget.zcf,** and subroutine **SetRouteDelay.zcf,** using *File > Import From File* on the respective tabs. 4. Open the strategy and subroutine. 5. Compile and save.
8.5.207.05 and higher	GMS_URS_Strategy_85200_v2.66.zip	
8.5.208.09 and higher	GMS_URS_Strategy_85208_v2.72.zip	
8.5.230.06 and higher	GMS_URS_Strategy_85230_v2.73.zip	

- 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

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.