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GENESYS™

Salesforce Object Routing Server

Printed Help

Abstract

This document contains the application help for Salesforce Object Routing Server.

For the latest version of this document, see the PureConnect Documentation Library at: http://help.genesys.com/cic.

Table of Contents

Release notes for the Salesforce Object Routing Server

This article describes all Salesforce Object Routing Server releases.

Version	Release Date	Description
1.0.4	24-April-2020	The Salesforce Object Routing Server integrates Salesforce with Customer Interaction Center (CIC). The Salesforce Object Routing Server is a Node.js service using the official version of the Salesforce Comet D client APIs. It replaces the Salesforce Object Routing Connector and eliminates the need for the PureCloud Bridge Server. **Notice**: Genesys will not support the PureCloud Bridge Server after January 1, 2021. To use the new Salesforce Object Routing Server, customers must use CIC 2018 R4 or a later release.

How the Salesforce Object Routing Server works with Salesforce

Salesforce receives incoming messages of various media types (chat, email, web form), creates cases for them, and routes the cases to queues. These queues are large undifferentiated buckets of cases. The cases sit in these queues until an agent processes them.

The Salesforce Object Routing Server optimizes this process by placing email cases (Email-to-Case) in differentiated buckets (workgroups) to which you assign agents. The Salesforce Object Routing Server accomplishes this optimization by routing interactions through the CIC server. This routing allows the Salesforce Object Routing Server to take advantage of CIC's ACD engine and its intelligent queuing capability.

Note: The Salesforce Object Routing Server only supports using a single CIC server with a single Salesforce organization. However, you can set up a second CIC server for switchover support.

To create an interaction and route it to a case:

- The case associated with the interaction must appear in a queue specified on the Interaction Routing Queues tab.
- The case must be new or updated.
- For updated cases, one of the following must occur:
  - The case owner changed.
  - The case queue changed to a queue specified on the Interaction Routing Queues tab.
  - Someone other than the case owner added a comment.
  - An email response is received for the case.

To route the interactions to the CIC server, the Salesforce Object Routing Server uses Salesforce's native triggers, custom objects, and PushTopics in a managed package. The Salesforce Object Routing Server listens to queues in Salesforce for new or updated cases, and routes any incoming messages from that queue to the named workgroup in CIC. A message then pops up in the Salesforce interface for an agent in this particular workgroup.

The Salesforce Object Routing Server can route messages with designated required skills (for example, language or product knowledge). Agents in the workgroup who have the skills then receive these messages.

Note: Because the solution uses an email message as a container, the agent must respond to the case using the screen pop, not the email interaction form.

Concepts for the Salesforce Object Routing Server

The following sections explain key concepts for the Salesforce Object Routing Server (SORS).

Email interaction form

With the Salesforce Object Routing Server, case information is converted to a CIC email interaction for ACD routing. Typically, when an agent selects an email interaction in Salesforce, an email interaction form dialog appears on the agent's screen.

The Salesforce Object Routing Server creates a screen pop for the Salesforce case and automatically suppresses the email interaction form. This behavior does not affect other email interactions created outside the Salesforce Object Routing Server.

PushTopic

A PushTopic is a Salesforce object that notifies listeners, such as the Salesforce Object Routing Server, about changes to an object.

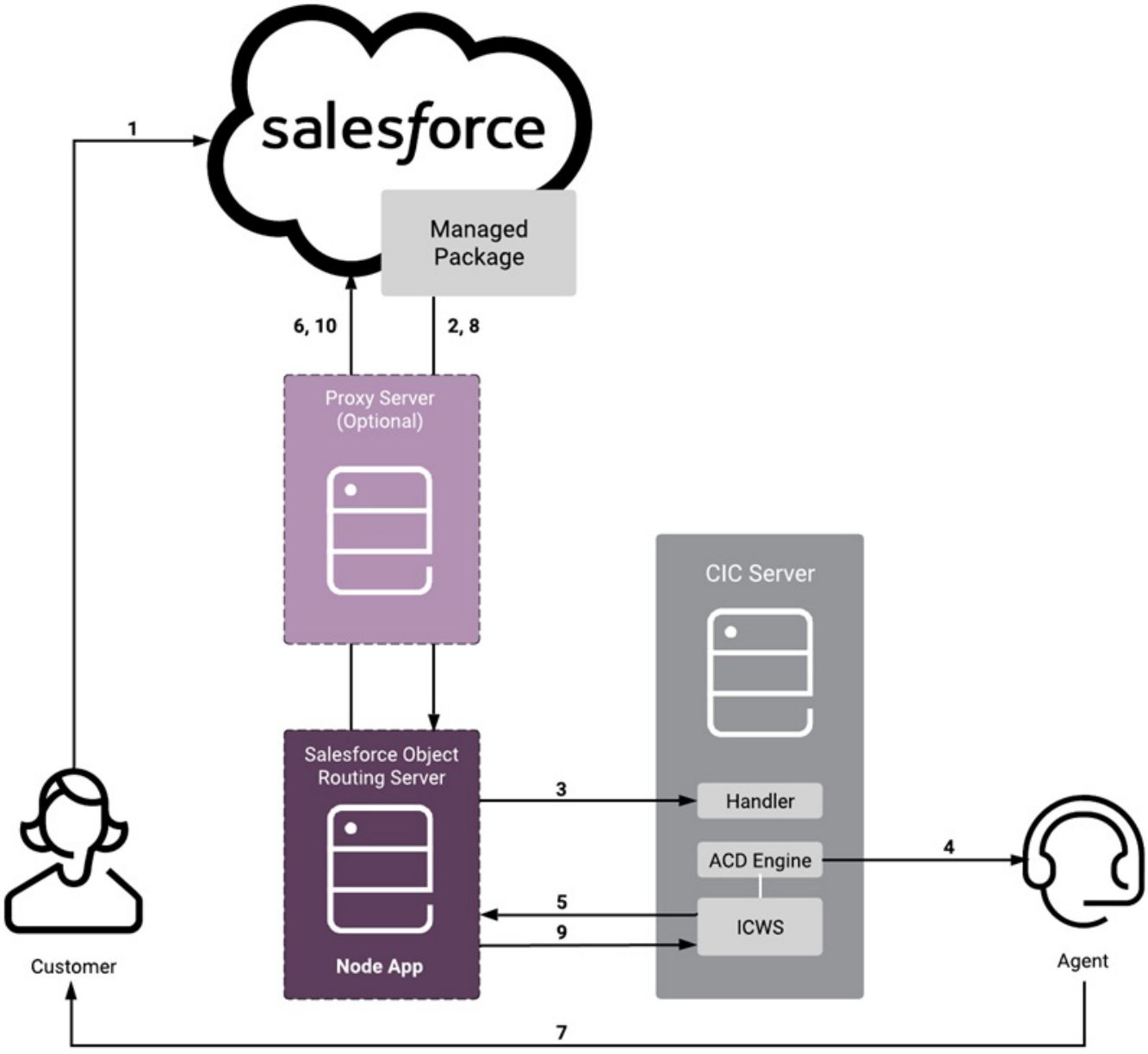
Trigger and custom object

In Salesforce, once a case has been created, a trigger (event) is fired. A trigger listens for the creation of a case. After the trigger learns that a new case has been created, the trigger pulls certain data from the email and pushes it into a custom object (table).

Note: Currently, the trigger for the Salesforce Object Routing Server can only create and update a custom object; the trigger cannot delete an object.

Workflow for the Salesforce Object Routing Server

The following is a common workflow using the Salesforce Object Routing Server. The Salesforce Object Routing Server is a Node.js application which uses the IC Web Services API to create an interaction through a custom handler.



Workflow for the Salesforce Object Routing Server

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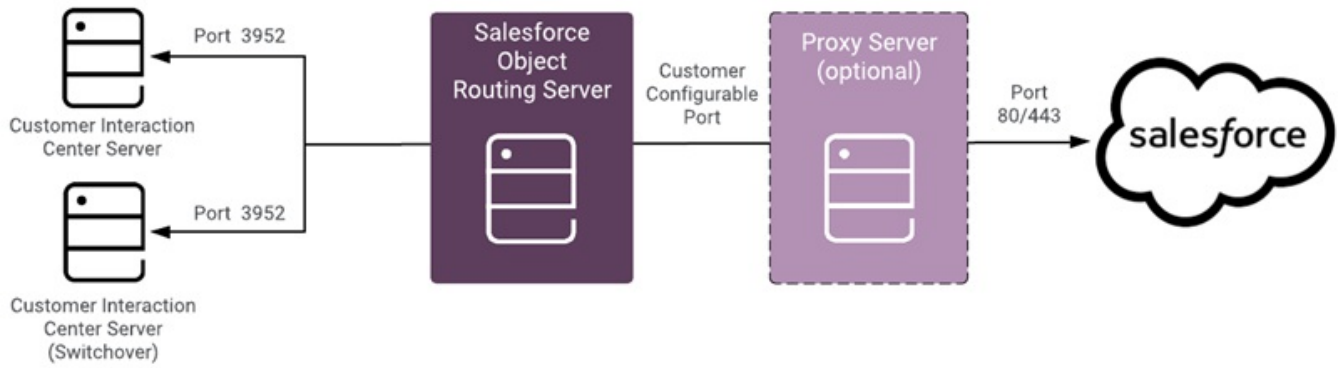
1. A customer sends an email.
   a. Salesforce receives the email and creates a case.
   b. The managed package detects the newly added case. If the case is in one of the monitored Salesforce queues, the managed package adds the case to a routing table.
2. The managed package alerts the Salesforce Object Routing Server of the new entry in the routing table. The managed package forwards information about the case, the CIC workgroup to which the case is assigned, and the skills for the interaction.
3. The Salesforce Object Routing Server raises a custom notification, which fires a handler on the CIC server. The handler creates the email interaction and assigns it to the CIC workgroup.
4. The ACD engine routes this email interaction to an agent who is using a Salesforce integration. The integration screen pops the case in the agent's browser.
5. ICWS notifies the Salesforce Object Routing Server that an interaction was successfully created.
6. The Salesforce Object Routing Server marks the entry in the routing table in Salesforce as processed.
7. The agent replies to the customer within Salesforce.
8. The managed package adds the updated case to the routing table and alerts the Salesforce Object Routing Server of the new entry in the routing table. The managed package forwards information about the case, the CIC workgroup that the case is assigned to, and the skills for the interaction.
9. The Salesforce Object Routing Server detects the reply and tells ICWS to disconnect the interaction.
10. The Salesforce Object Routing Server marks the entry in the routing table in Salesforce as processed.

Networking components of the Salesforce Object Routing Server for CIC

The following diagram shows the ports needed for outbound access from the Salesforce Object Routing Server to CIC and Salesforce.



Networking components of the Salesforce Object Routing Server

Requirements for the Salesforce Object Routing Server

Platform requirements

The Salesforce Object Routing Server supports only Windows servers. (Windows Server 2016).

CIC requirements

- a running Customer Interaction Center (CIC) server

  Note: The Salesforce Object Routing Server requires a CIC server 2018 R4 or later.

- a user with rights to:
  - View, Modify, Monitor, and Search for all Workgroup Queues
  - View, Modify, Monitor, and Search for all Station Queues
  - View, Modify, Monitor, and Search for all Line Queues
  - View, Modify, Monitor, and Search for all User Queues
  - View access for all Workgroups

  Note: Standard CIC agents do not need special permissions to use the Salesforce Object Routing Server.

Salesforce requirements

- Email-to-Case enabled in your Salesforce organization

  Note: Under Build in Salesforce, select **Customize** > **Cases** > **Email-to-Case**.

- a user with administrator rights in Salesforce who:
  - can access the cases that the queue owns
  - use the API
  - has appropriate access to PushTopics
- agents need:
  - access to cases
  - to be members in a queue
  - a Salesforce integration client (PureConnect for Salesforce)

Note: Salesforce agents can use the standard (default) user profile in Salesforce.

License Requirements for the Salesforce Object Routing Server

For premise customers to take the benefit of email-to case routing using the SORS app, the license required is:

- Salesforce Object routing server (PK-510-4.0-SORS)

For Subscription and Subscription-Concurrent customers, the email to case feature is bundled with following licenses respectively:

- Salesforce.com Packaged Integration Add-on – SUB (CS-012-NV-SFIA-SUB)
- Salesforce.com Packaged Integration Add-on Concurrent – SUB (CS-012-NV-SFIA-C-SUB)

Note: Existing premise customers with Salesforce Object Routing Connector (PK-510-4.0-SORB) can use the SORS app without need of buying new licenses.

Set up the Salesforce Object Routing Server

Salesforce-side items

1. Install the managed package.
2. Install the Interactions Routing Queues tab.
3. Add queues to monitor.
4. Add skills-based routing (optional).

CIC-side items

1. Download and install the Salesforce Object Routing Server.
2. Authentication.
3. Configure redundancy for a switchover environment.

Install the managed package for the Salesforce Object Routing Server

The managed package contains all the information needed for the Salesforce Object Routing Server: the trigger, the custom object created from the trigger, and the PushTopic.

Download the managed package from Salesforce for a production environment or a test environment. Follow the on-screen instructions for installation.

Install the Interaction Routing Queues tab for the Salesforce Object Routing Server

The Interaction Routing Queues tab allows you to tell the trigger which Salesforce queue names to monitor.

Note: To create an interaction from a case and route it to a queue, the case must go to a Salesforce queue specified on the Interaction Routing Queues page.

To add the Interaction Routing Queues tab:

1. In the left side navigation pane, under Build, select **Create** > **Tabs**.
2. In the Custom Object Tabs section, click **New**.
3. In the Object drop-down menu, select **Interaction Routing Queues**.
4. In the Tab Style drop-down menu, select any style.
5. In the Description text box, enter **Configure which queues to monitor for events**.

   The following steps assume the use of the default settings. Change the standard Salesforce configuration options before clicking **Next** or **Save**.
6. Click **Next**.
7. Click **Next**.
8. Click **Save**.

   Once installed, a tab for the Interaction Routing Queues page appears in the top navigation bar in Salesforce.

Add queues to monitor for the Salesforce Object Routing Server

After you have installed the Interaction Routing Queues tab, map Salesforce queue names to CIC workgroup names. To map names, add Salesforce queue names and CIC workgroup names to the Interaction Routing Queues tab. The Salesforce Object Routing Server monitors these Salesforce queues for cases and then routes the cases to these CIC workgroups.

Note: When using two Salesforce organizations, each organization must use different queue names in Salesforce and different workgroup names in CIC. Also, CIC workgroup members cannot belong to both organizations.

To add Salesforce queue names and CIC workgroup names in Salesforce:

1. Click **Interaction Routing Queues**.
2. Click **New**.
3. In the Salesforce Queue Name text box, add the name of an existing Salesforce queue. The name of the queue input in the Salesforce Queue Name text box must match the name of an existing queue in Salesforce. The matching is case-sensitive.
4. In the CIC Workgroup Name text box, add the name of an existing CIC workgroup.

   The name of the workgroup input in the CIC Workgroup Name text box must match the name of an existing workgroup in CIC. The matching is case-sensitive.

   Note: Configure this CIC workgroup as an ACD workgroup. This configuration ensures cases are routed based on certain criteria such as the agents' availability or skills. Also, configure the workgroup so that members in the workgroup are able to accept email interactions.
5. Leave the QueueID text box blank.

   The QueueID text box automatically populates with the ID of the Salesforce Queue Name when you click Save.
6. Click **Save**.

Add skills-based routing for the Salesforce Object Routing Server

The Salesforce Object Routing Server can route messages with designated required skills (for example, language or product knowledge). Agents in the workgroup who have the skills then receive these messages.

Note: Interactions route to agents with the designated skill regardless of proficiency or desire to use.

To set up skills-based routing:

1. Ensure that at a minimum your managed package is version 1.7.
2. Ensure that your handler is the latest version.
3. Check that the skills you want to use to route messages are set and assigned to users in Interaction Administrator.
4. Set the custom case field (ObjectRouting__Skills__c) in Salesforce during case creation. You can set the custom case field through the Salesforce API, through a before insert Salesforce trigger, or through other means. When setting field values:
   - Match the skill names used in Interaction Administrator.
   - Do not begin names with spaces.
   - Separate multiple skills with semicolons. Do not use the pipe | delimiter.
   - Limit skill names (including semicolons) to a total of 255 characters.

Download and install the Salesforce Object Routing Server

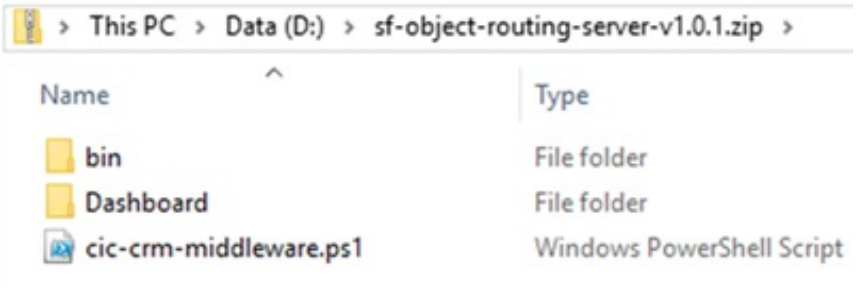
Setup Process

SORS is released as a compressed zip file that contains an application bin directory (bin), a dashboard directory containing a webpage file (.html), and a PowerShell script file (.ps)

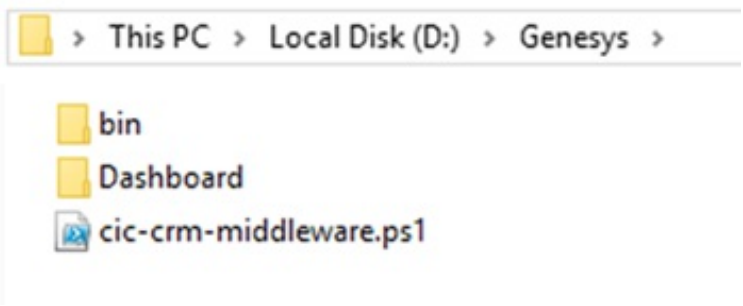
The PowerShell script installs the required modules such as node.js, node.js package manager (npm), and PM2.

Download the SORS zip file

1. Go to the Utilities and Downloads page, https://my.inin.com/products/cic/Pages/Utilities-Downloads.aspx.
2. Click the **Salesforce Object Routing Server** link.
3. SF Object Routing Server.zip automatically downloads.



4. Extract the SORS zip file. Keep all the content in a directory named as tenant/organization name. Folder structure should be like this example where "Genesys" is the tenant/organization name.



Run service with PowerShell script

The PM2 node package runs the service through a PowerShell script.

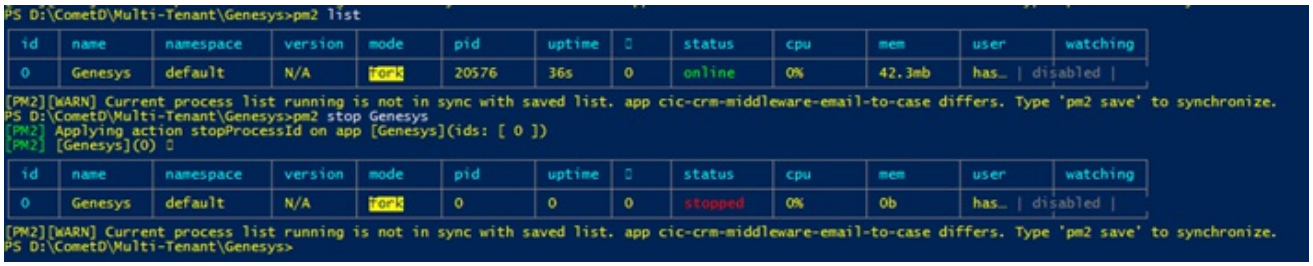
1. Open the PowerShell terminal with administrator privilege. Go to the extracted directory/folder. Run the following command.

```
& cic-crm-middleware.ps1
```

   This command checks all the prerequisites (nodejs, npm, pm2, and others) and installs them automatically, if necessary.
2. PM2 starts the node server in the background process. If you want to see the status of the node server, run the following command:

```
pm2 list
```

   This command displays all the running processes in the background along with the status.



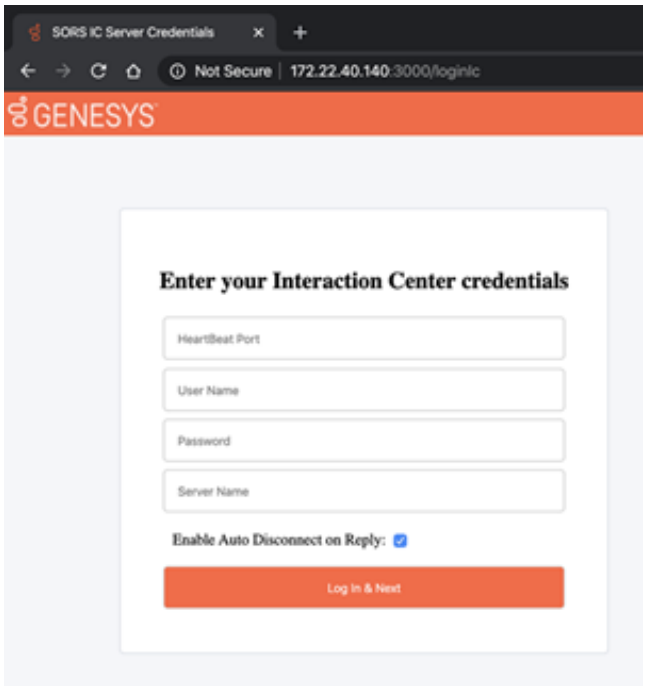
Authentication

To implement the email to case feature, you must log on to the IC server and Salesforce. Log on using the webpage at any time. After you successfully log on to both the IC server and Salesforce, your credentials are saved in a file. These credentials are used from then on. To change the credentials, use these webpages.

1. Log on to the IC server using http://{Server_IP}:{Server_Port}/loginIc.

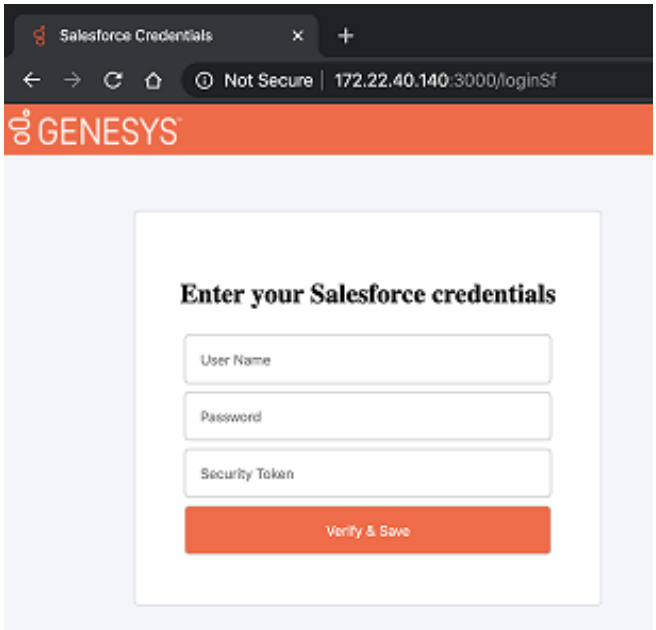
   Server_IP is the IP address of http server and Server_Port is http port number of SORS instance. (Example http://172.22.40.140:3000/loginIc, Server_IP = 172.22.40.140, Server_Port = 3000).

HeartBeat Port is the port number for listening to the node service status. You use this port number while configuring the Salesforce Object Routing Server Status Dashboard. The dynamic HTTP port number is visible on dashboard after first-time configuration.



2. After you successfully log on to the IC server, you are redirected to the Salesforce logon page http://{Server_IP}:{Server_Port}/loginSf.

   Server_IP is the IP address of http server and Server_Port is http port number of SORS instance. (Example http://172.22.40.140:3000/loginSf, Server_IP = 172.22.40.140, Server_Port = 3000).



Note: After a successful logon to IC and Salesforce, your credentials are saved in this file: [InstalledPath]/secureData/encryptData.json. The IC and Salesforce passwords are encrypted.

Configure Redundancy for a Switchover Event

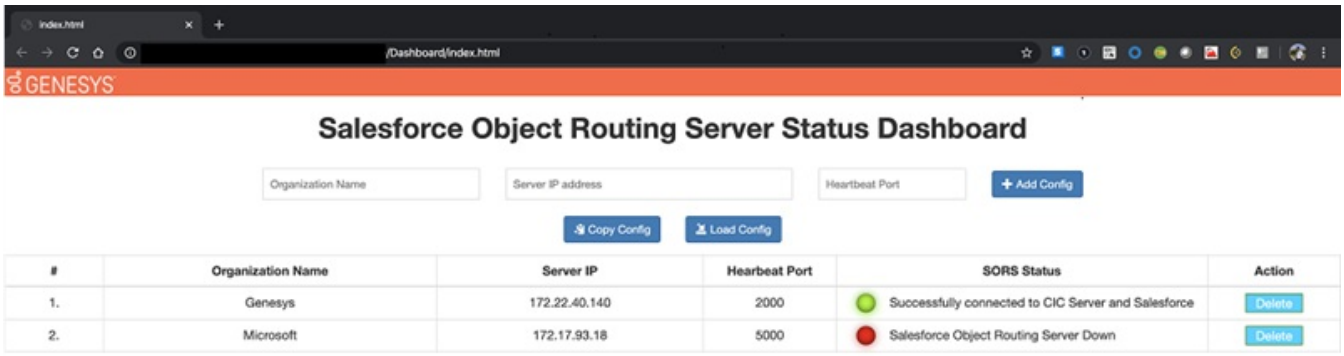
The Salesforce Object Routing Server does not reroute lost interactions after a switchover event. This functionality is achieved through Interaction Recovery Service (IRS) and must be in place for email interactions. To enable IRS for email interactions, see Recovery of email interactions in the Automated Switchover Technical Reference.

Troubleshooting the Salesforce Object Routing Server

Salesforce Object Routing Server Status Dashboard

The dashboard webpage enables you to monitor the Instance status of Salesforce object routing servers (SORS) running for different tenants. You can configure this dashboard to monitor SORS status for multiple tenants. The Heartbeat port should be the port number configured at the logon page for the SORS instance. This dashboard features the copy of the currently configured table and saves it in a plain text file. Administrators can set up the configuration in a particular JSON format text file. A green circle indicates a running server; a red circle indicates a stopped server.

The dashboard webpage file location is "[InstalledPath]/Dashboard/index.html".



Running behind proxy server

The service automatically detects the Windows proxy server settings configured in Windows server and send each request through proxy server. SORS instance should be restarted if proxy server configurations are changed in the Windows server.

Windows Event Logs

SORS instance will generate several Windows event logs for few scenarios related to connection success, failure and reconnection with Salesforce and IC server. Customers and PCC environment monitoring applications can use these Windows event logs. Some of the event data messages include:

- Successfully connected to Primary CIC server
- Logged in successfully to Salesforce
- Error:503: Connecting to alternate CIC Server
- Failed to connect to IC server
- Re-logging to Salesforce

Logs

The Logs path is based on the Windows environment variable ININ_TRACE_ROOT. If ININ_TRACE_ROOT is not defined, the default path would be "[InstalledPath]/logs/application-%DATE%.log". The logs are created on daily basis and older logs are removed based on elapsed days

General Notes

If the SORS instance process is terminated or killed, pm2 automatically starts the SORS instance. All the CIC server workgroups with the ACD email routing flag set to True will subscribe after the successful connection to the Primary IC server. The Salesforce Object Routing Server supports Off-Host Session Manager and Switchover environments.

When the SORS instance starts, it logs in to the CIC server and Salesforce. Then it scans the Salesforce object routing table for un-routed Salesforce case objects and processes the unrouted cases.

Email interactions stop routing

Problem

Push Notifications for the Salesforce Console do not work after deploying the Salesforce Console app in the target org or in a refreshed sandbox.

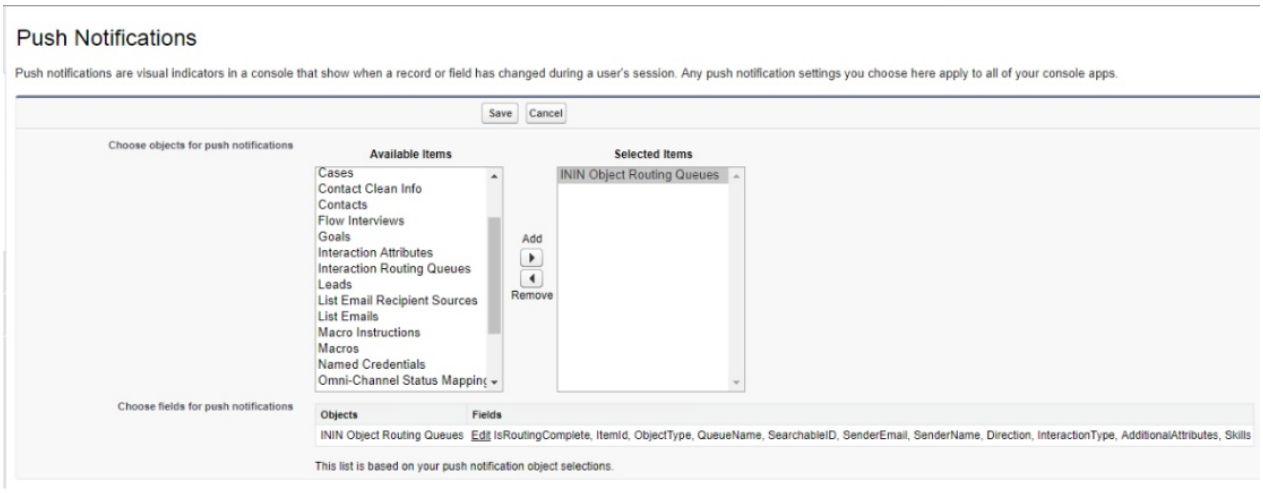
Causes

Emails stop routing after sandbox refresh because Push Notification Objects and Fields in Console configuration are not copied when deploying a Console app or when refreshing a sandbox. No notification means that the connector never hears about the new salesforce objects.

Solution

You can recreate the Push Notifications by following these steps:

1. From **Setup**, enter **Apps** in the Quick Find box, then select **Apps**.
2. Select the name of a Console App.
3. Select **Select objects and fields for notifications** next to Choose Push Notifications.
4. In the Push Notifications page, click **Edit**.
5. In the **Choose objects for push notifications list**, select **ININ Object Routing Queues**.
6. In the **Choose fields for push notifications** section, select **Edit**.
7. Add all Available Items to the **Selected Items** list and click **OK**.
8. In the Push Notifications page, click **Save**.



Change Log

Date	Changes
24-April-2020	First release of SORS help.
24-April-2020	Added Note to License Requirements in the Requirements topic.