RingCentral for ServiceNow

Powered by Tenfold

Admin Guide for configuring ServiceNow integration

Powered by tenfold

RingCentral

Contents

Introduction

Audience

This document is intended for RingCentral customers interested in using Tenfold in a ServiceNow environment. Those who will perform the procedures described in this guide should have a basic level of familiarity with ServiceNow APIs, ServiceNow administration, general networking, and Tenfold.

Goals

The goal of this document is to provide knowledge, reference, and procedural information necessary to understand a proposed ServiceNow/Tenfold integration. This document is NOT intended as a specific system or network design document. If further clarification is needed, please contact RingCentral support at support.ringcentral.com or call 1-888-528-7464.

Customer Responsibilities

You are responsible for supplying the physical and/or IP connections to ServiceNow and LAN, and for obtaining and loading any licensing required by ServiceNow. You are also responsible for configuring ServiceNow to support the Tenfold integration.

Terminology

To ensure a common frame of reference, this guide uses the following terms in conjunction with this ServiceNow integration:

- **Plugin:** Plugins are software components that provide specific features and functionalities within a ServiceNow instance, usually provided by ServiceNow itself. For more details on ServiceNow plugins, see ServiceNow plugins.
- **App:** Just like plugins, ServiceNow apps extend a given CRM instance with features and functionalities. Apps are usually developed by third-party companies like Tenfold, and installed from the ServiceNow Store. Tenfold ServiceNow apps should not be confused with Embedded Client.
- **Tenfold Embedded UI:** Refers to the Tenfold embedded UI for ServiceNow.
- **Tenfold Platform:** Refers to the Tenfold backend components (such as API, processor, and other microservices).
- **Tenfold Dashboard:** A cloud-based administrative and user dashboard.

Integration Overview

The Tenfold App for ServiceNow is installed from the ServiceNow app store into the customer instance. It adds not only the necessary roles and fields used by the Tenfold integration but also the necessary tables and endpoints used.

During installation, the customer will install the Tenfold App aligned to the customer use case. For example:

- Tenfold for ServiceNow ITSM
- Tenfold for ServiceNow CSM
- Tenfold for ServiceNow ITSM + CSM

Requirements

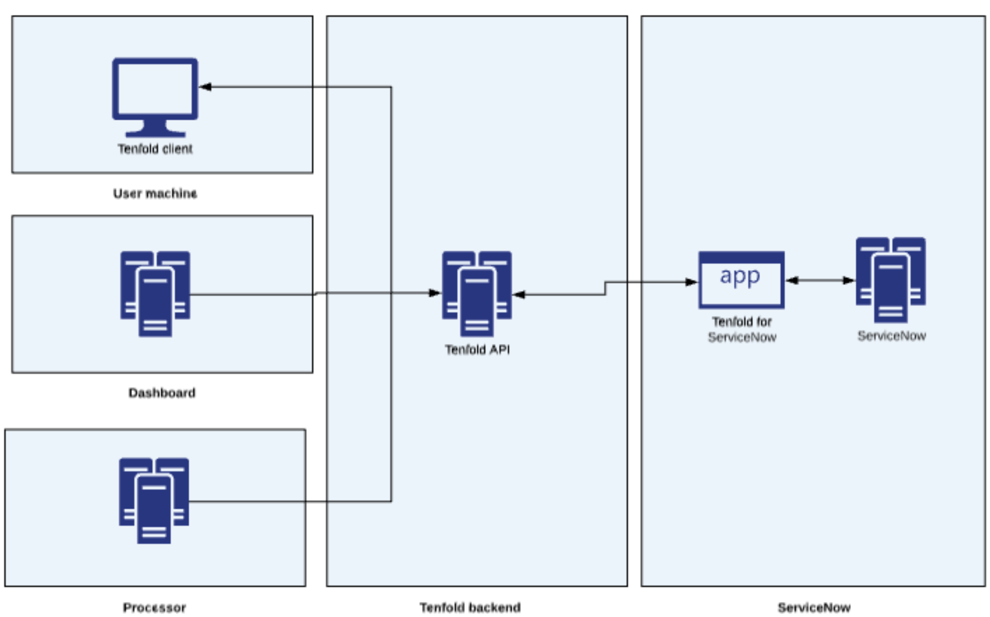
Connection requirements

- ServiceNow instance accessible by Tenfold Cloud via port 443
- Dedicated Service Account (i.e. API User)

Version requirements

Tenfold supports N-2 versions of ServiceNow where N is the latest release.

Architectural overview



Dependencies

The integration with ServiceNow depends on the following ServiceNow plugins:

Openframe

Enables support for phone calls and CTI integration (support for click to dial, embedded clients, etc) inside of ServiceNow. This plugin is mandatory. For more details on OpenFrame, see Computer telephony integration (CTI).

ITSM

The IT Service Management plugin adds support to several modules in ServiceNow, including support for Incident management. The requirement for this plugin depends on the customer use cases and if Incident support is not required, it doesn't need to be installed. For more details on ITSM, see IT Service Management (ITSM).

CSM

The Custom Service Management plugin adds support to several modules in ServiceNow, including support for Cases and Contacts. Case is a module similar to Incidents (from ITSM), whereas Contacts is similar to Users. The requirement for this plugin depends on the customer use cases. For more details on CSM, see Customer Service Management (CSM)

Advisories

- When configuring choice type fields to be used within the Dispositions feature, ensure that you have configured the field in ServiceNow to have a default value. If a default value is not set, calls may not log to ServiceNow correctly.
- The state of an interaction record changes automatically based on call events.
    - If the interaction is created while the call ringing, the state is set to New.
    - If the interaction is created or updated while the call is connected, the state is set to Work In Progress.
    - If the interaction is created or updated after the call is disconnected, the state is set to Closed Complete.
- Automatically popping an interaction record results in a new browser tab opening.

Tenfold apps for ServiceNow

Overview

The Tenfold App for ServiceNow is a ServiceNow app that is installed from the ServiceNow Store into the customer instance. It adds not only the necessary roles and fields used by the Tenfold integration but also the necessary tables and endpoints used. Each app consists of a common core app plus a branded wrapper.

The core app is the app that installs all fields, tables, and roles used by the integration. **It is not meant to be installed directly**. The core apps can be thought of as a library. The branded wrapper, in turn, adds the branded portion of the integration like the embedded support page, application registry, etc (see app components below for more details) and depends on the relevant core app. The core apps are:

- CTI Connector for CSM + ITSM - core app with support to both CSM and ITSM
- CTI Connector for CSM - core app with support to CSM only
- CTI Connector for ITSM - core app with support to ITSM only

The branded wrappers are meant to be installed from the store and, while installing them, ServiceNow identifies the dependency on one of the core apps and prompt users to install them as well. The Branded wrappers for Tenfold are:

- Tenfold for CSM + ITSM - branded wrapper for CTI Connector for CSM + ITSM
- Tenfold for CSM - branded wrapper for CTI Connector for CSM
- Tenfold for ITSM - branded wrapper for CTI Connector for ITSM

Reading/Writing data to ServiceNow

Due to ServiceNow requirements, third-party companies cannot write data directly into customer instances. Instead, ServiceNow uses the concept of staging tables. Data is written to them, and internally ServiceNow applies mappings to write data to the correct tables. This is true for all write operations, such as creating records, logging phone calls, updating entities, etc., but does not apply to read operations (such as fetching users, for example). Reading can occur directly from the relevant tables.

Data schema

ServiceNow tables and fields

Table name	Description
Case (sn_customerservice_case)	Table for storing cases associated with contacts
Contact (customer_contact)	Table for storing contacts (extends from sys_user)
Customer Task (sn_customerservice_task)	CSM module for Tasks (extends from task)
Incident Task (incident_task)	ITSM module for Tasks (extends from task)
Incident (incident)	Table for storing incidents associated with users
Phone Call (sn_openframe_phone_log)	Table for storing phone calls
Task (task)	Table for storing tasks
User (sys_user)	Table for storing users

Below is the list of custom fields added by the app and their respective tables:

Field name	Table	Description
Additional Phone 1 (APP_PREFIX_additional_phone_1)	User (sys_user)	Additional phone field for user
Additional Phone 2 (APP_PREFIX_additional_phone_2)	User (sys_user)	Additional phone field for user

Additional Phone 3 (APP_PREFIX_additional_phone_3)	User (sys_user)	Additional phone field for user
Call Purpose (APP_PREFIX_call_category)	Phone Call (sn_openframe_phone_log)	Disposition to store call purpose
Caller (APP_PREFIX_caller_sys_id)	Task (task)	Field to store the caller associated with a follow up task
Caller (APP_PREFIX_caller_sys_id)	Phone Call (sn_openframe_phone_log)	Field to store the caller associated with a phone call
Description (APP_PREFIX_description)	Phone Call (sn_openframe_phone_log)	Field to store call notes
Owner (APP_PREFIX_created_by_sys_id)	User (sys_user)	Owner of the user
Owner (APP_PREFIX_created_by_sys_id)	Task (sys_user)	Owner of the task

In addition to the custom fields listed above, it's important to note that Tenfold also creates tables and fields to implement the staging tables previously mentioned. For each of the ServiceNow tables used, there's an equivalent staging table and a mapping that copies data from the staging table to the actual ServiceNow table. In this way, the fields in the staging tables all map to the ones in the standard ServiceNow tables. The APP_PREFIX string mentioned above refers to the unique prefix of each individual app (covered in the App scopes section).

Custom views

While it's possible to fully customize all forms and views in ServiceNow, the app installs a custom view for the phone call entity that already includes the custom fields Tenfold uses. To switch to this view or to further customize the phone call (or other) views, see Customize views in ServiceNow.

App scopes

To avoid conflicts between each installed app, ServiceNow gives each app a unique prefix that precedes each field, table, or custom entity created by the app. The relevant prefixes are:

App	App scope
Tenfold for ServiceNow (legacy app)	x_93331_tenfold_sn
Tenfold for CSM + ITSM	x_calli_cti_connec
Tenfold for CSM	x_calli_cti_csm
Tenfold for ITSM	x_calli_cti_itsm

Roles and permissions

Everything in ServiceNow requires some sort of role. Access to the Tenfold apps for ServiceNow is no different. Each app creates its own custom role, and the integration user used to authenticate against ServiceNow and allow data to flow between Tenfold and ServiceNow needs to have such a role. They are:

App	App scope
Tenfold for ServiceNow (legacy app)	x_93331_tenfold_sn.user
Tenfold for CSM + ITSM	x_calli_cti_connec.user
Tenfold for CSM	x_calli_cti_csm.user
Tenfold for ITSM	x_calli_cti_itsm.user

Agents who use the embedded application require an additional role (`sn_openframe_user`), otherwise, they do not have access to the Tenfold UI. See this question for details.

Authentication with ServiceNow

Authentication with ServiceNow happens through an OAuth client installed on the ServiceNow instance along with the app. Each OAuth client of each individual app has a unique ID and this ID is very important when connecting to ServiceNow as it is used to identify what type of app Tenfold is integrating with. It's also important to integrate via a user with the correct permissions when connecting to ServiceNow through the OAuth client; otherwise, the Tenfold backend will not be allowed to read/write data to ServiceNow. For instructions on how to authenticate against ServiceNow, see the Installation section.

Install and connect to Tenfold

NOTE: If you have not already done so, install the OpenFrame plugin. For more information, see Install plugins for ServiceNow.

Install the Tenfold app for ServiceNow in a customer instance

Customer instances should install the app from the ServiceNow Store. The first step is to select the correct app:

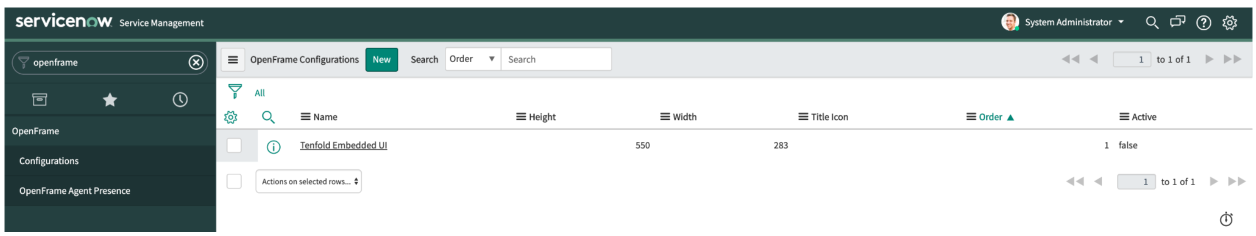
App name	Description
Tenfold for ServiceNow	Legacy Tenfold app. Is currently under the deprecation process and will be replaced by the other apps below. Should only be used until the three new apps are in the review process by ServiceNow. For customers already using it, a migration process will be necessary
Tenfold for CSM + ITSM	New app for customers that require support to both ITSM and CSM modules
Tenfold for CSM	New app for customers that require support to CSM modules only
Tenfold for ITSM	New app for customers that require support to ITSM modules only

For more information about the different Tenfold apps, refer to [Tenfold apps for ServiceNow](#).

Enable the Tenfold app within ServiceNow

The embedded client for ServiceNow is not active by default when the Tenfold for ServiceNow apps are installed. To enable the embedded client:

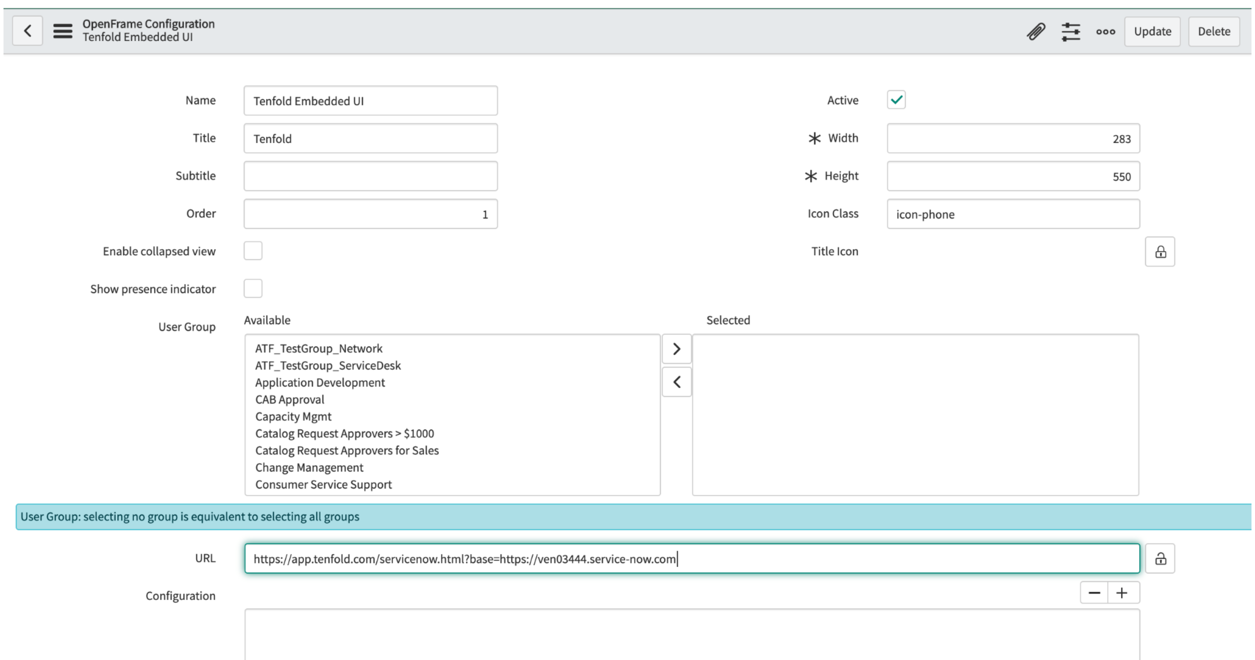
1. Install OpenFrame if you have not already done so. You may also need to install the Customer Service module.
   For more information on installing plugins, see [Install plugins for ServiceNow](#).
2. In the Navigation filter, search for “openframe”. Click Configurations in your filter results, then click **New** next to OpenFrame Configurations.



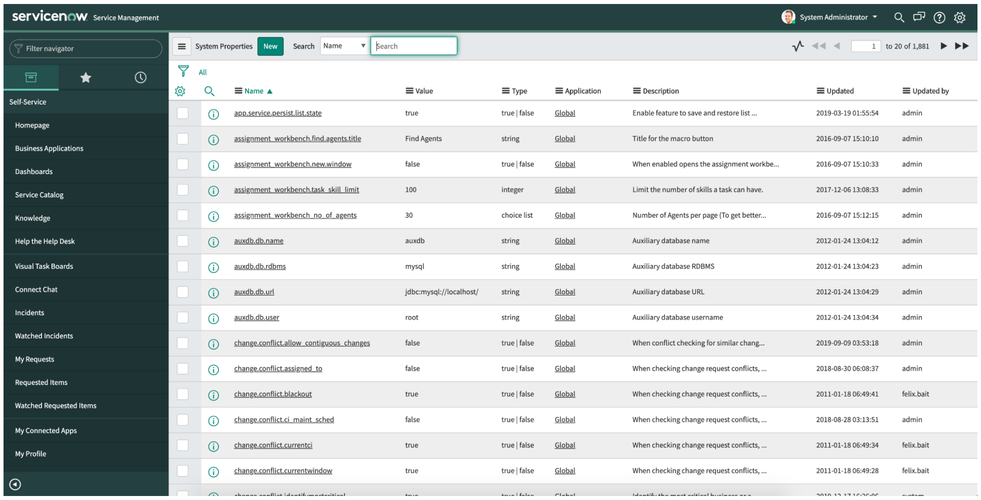
3. Provide values for Name, Title, Width, Height, and URL. Recommended values are below:

Title	Description
Name	Tenfold Embedded UI
Title	Tenfold
Active	Check the box
Width	283
Height	550
Icon Class	icon-phone
Order	1

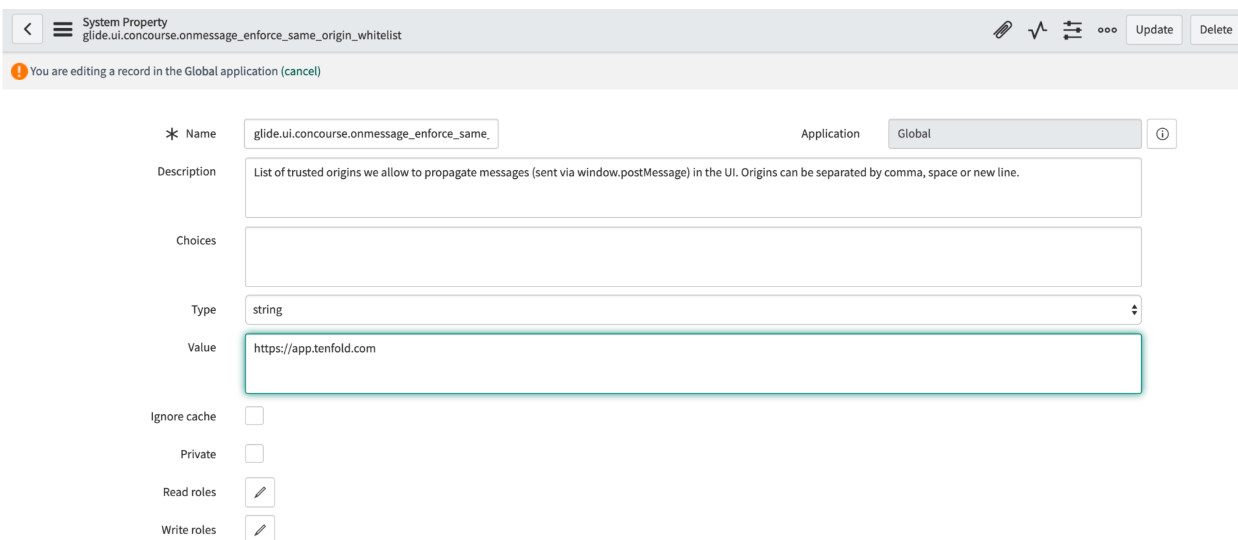
URL	The URL value is: https://app.tenfold.com/servicenow.html?base=YOUR_INSTANCE_HOST If your service now instance is, for example, https://ven03444.service-now.com, then the URL for your embedded client is: https://app.tenfold.com/servicenow.html?base=https://ven03444.service-now.com



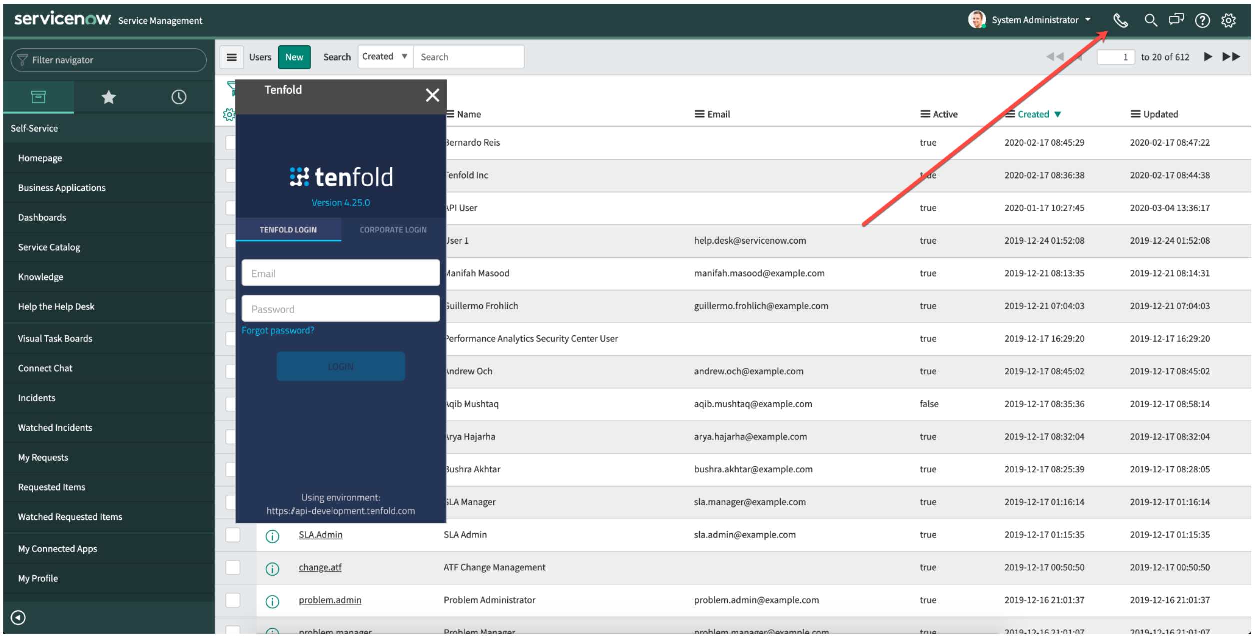
4. In the Filter navigator type "sys_properties.list" and press **Enter**.



5. Search for the property glide.ui.concourse.onmessage_enforce_same_origin_whitelist.
6. Edit this property and add "https://app.tenfold.com" to the values.



7. Refresh the screen and you should see a phone icon. Click it and you should see the embedded client.



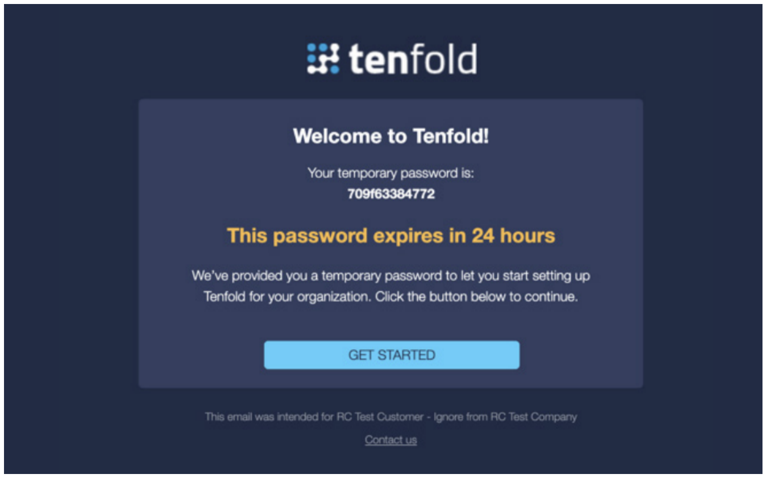
NOTE: You may need to clear your browser cache if the Tenfold UI does not display after completing this step.

Connect to a Tenfold organization

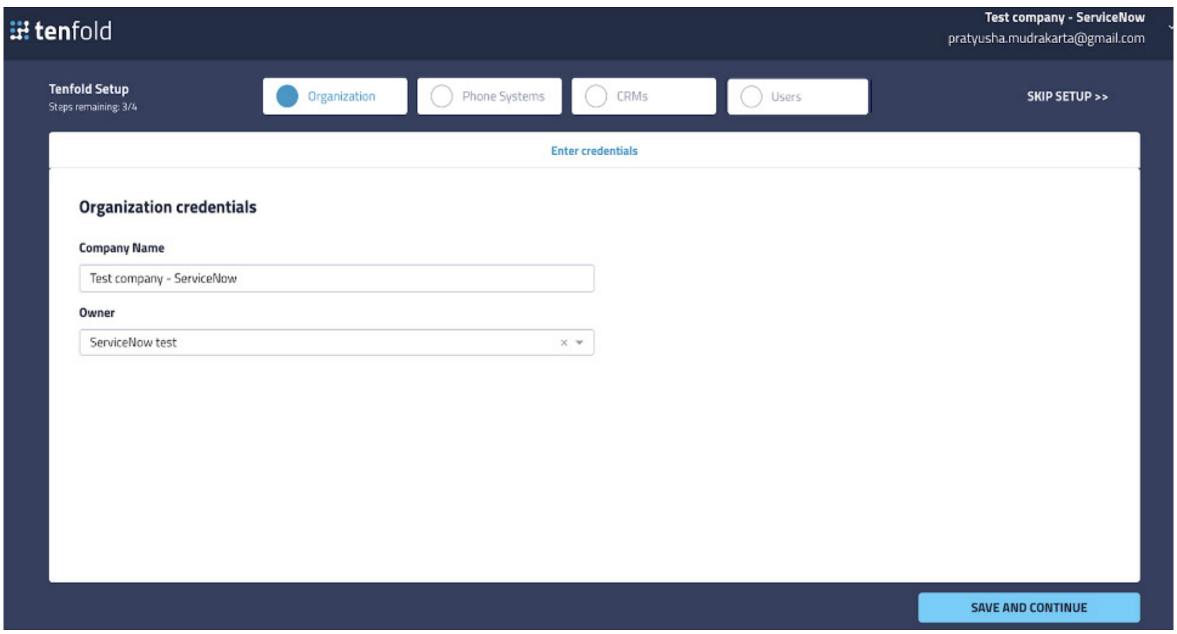
The following section describes the steps for connecting RingCentral and Tenfold Cloud with ServiceNow.

New customers of the integration are taken through an onboarding wizard where CRM admins of the company can follow a step-by-step procedure to establish and test the connection with their CRM, Tenfold, and RingCentral. It only takes a few minutes.

1. After requesting the Tenfold integration in the RingCentral App Gallery, check your email for instructions on how to create your Tenfold account.

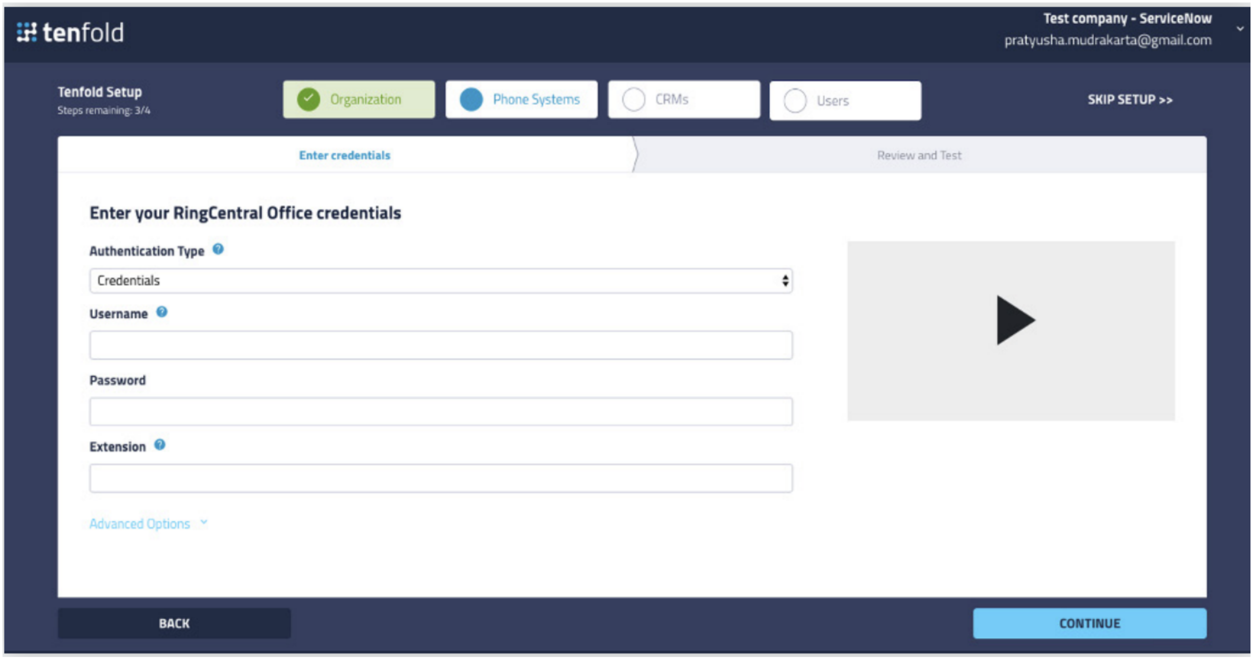


2. Accept the invite, set your password, and set your organization details.

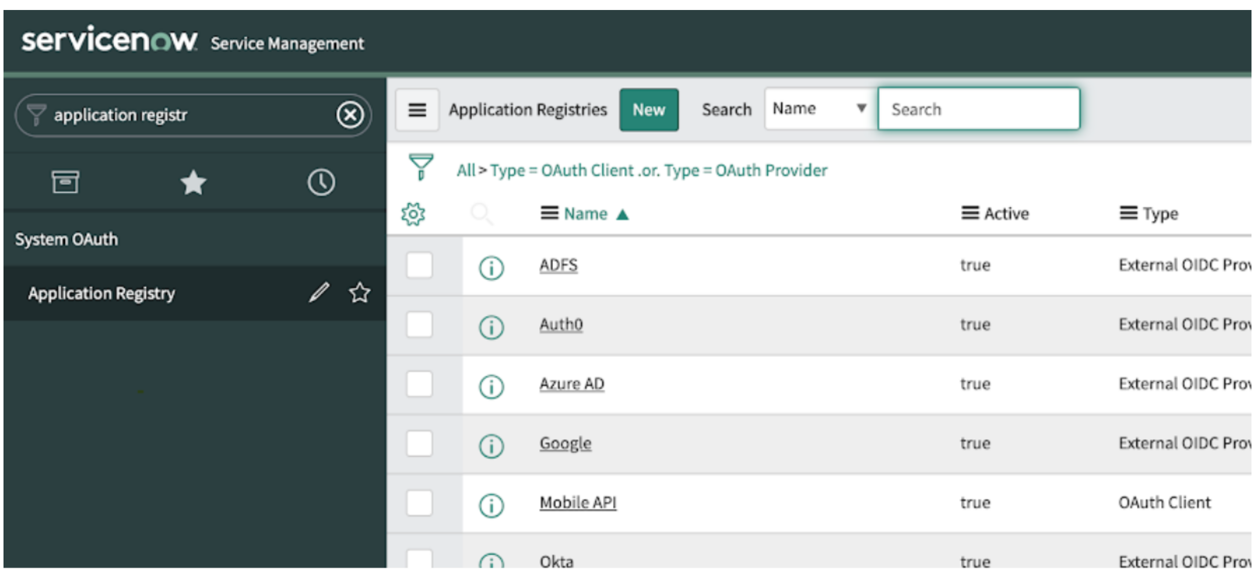


3. Under Authentication Type, select **OAuth**. Then, under **Select Your Environment**, select your company's RingCentral production or sandbox environment to be connected to Tenfold. This step allows the CRM users who are provisioned to a Tenfold account to have a RingCentral phone number assigned to them.

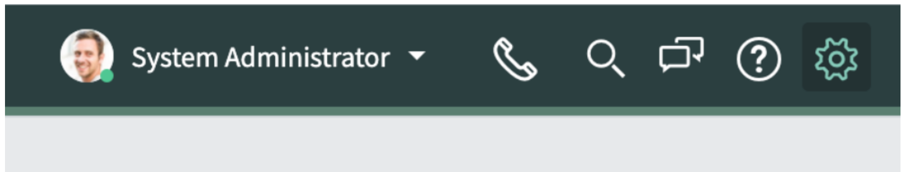
   Note: You can always reach this page by logging in to the Tenfold dashboard on a browser. Click **Company Settings**, then click **Phone Systems** from the menu



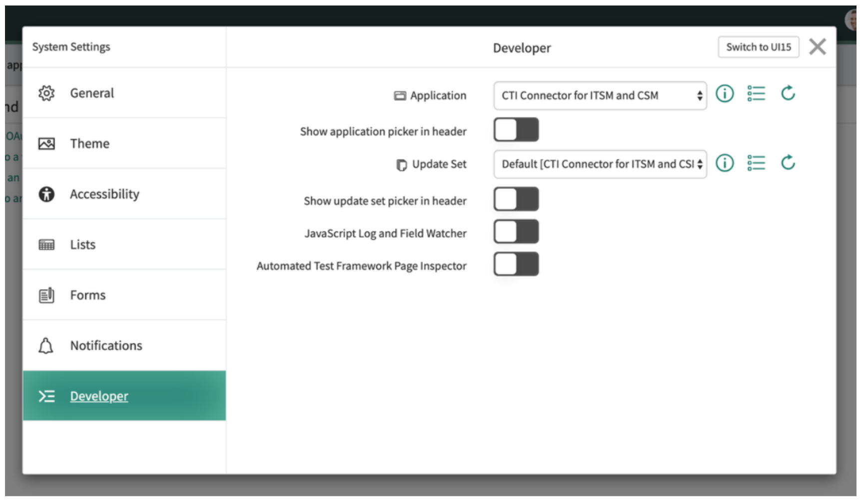
4. In the ServiceNow instance, go to Application registry (**make sure the Tenfold app for ServiceNow is installed first**):



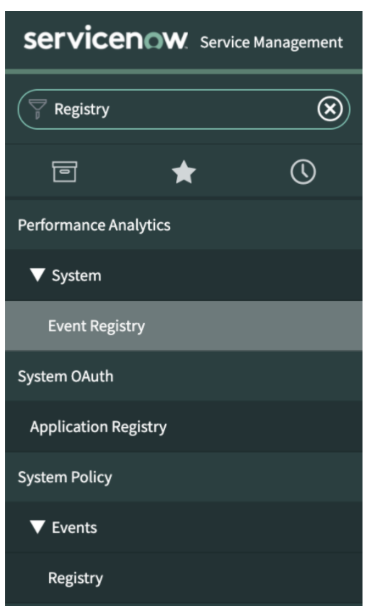
5. Create an OAuth client:
    a. Make sure the application that should be related to the OAuth Client is selected by following these steps:
        i. Click the gear icon at the top right corner.



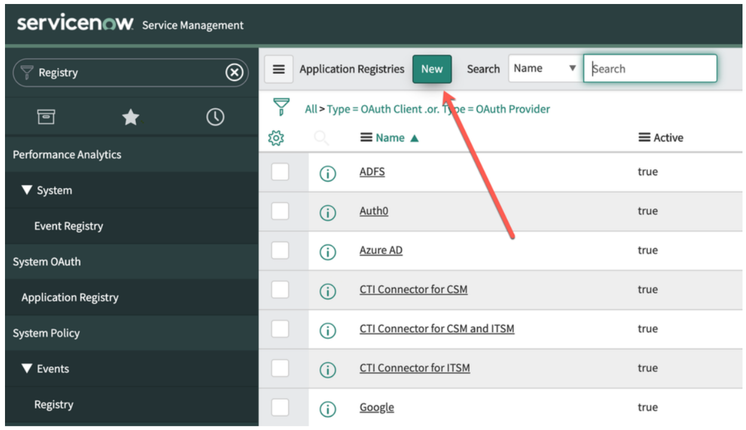
ii. Click the Developer tab and make sure the correct application is selected in the "Application" dropdown



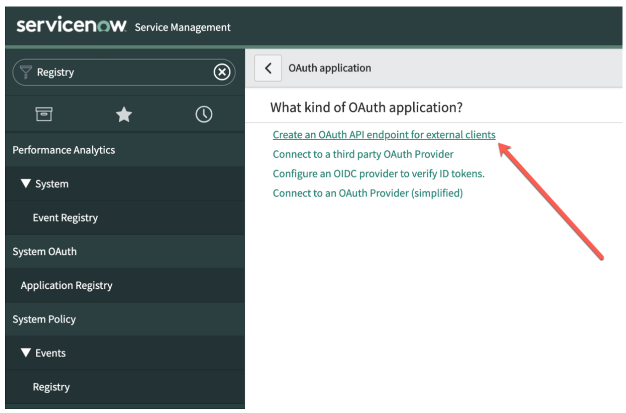
iii. In the navigation filter, type "Application Registry."



iv. Click **New**.



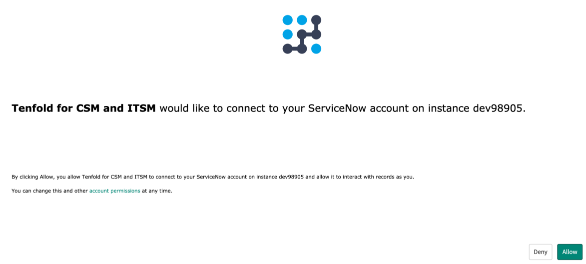
v. Click **Create an OAuth API endpoint for external clients**.



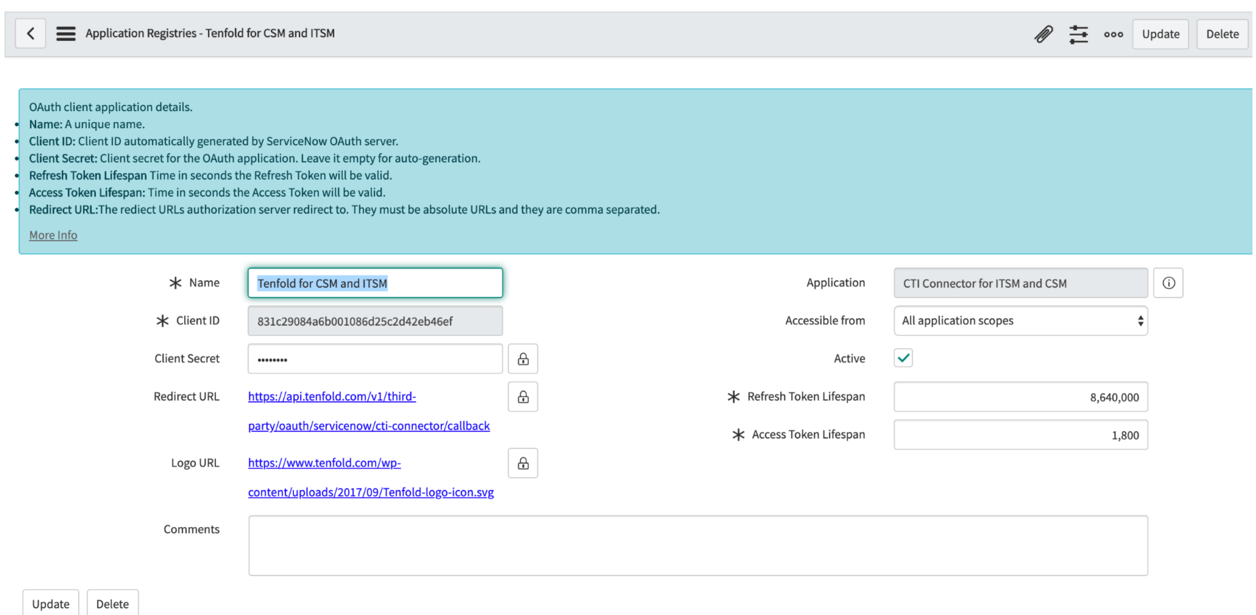
vi. Complete the fields as follows:

Title	Description
Name	Enter a value such as “Tenfold for ServiceNow."
ClientID	Auto-generated
Client Secret	Can be manually provided or left empty. If left empty, ServiceNow will generate a random password when the form is saved.
Redirect URL	must follow this template: {API_URL}/v1/third-party/oauth/servicenow/cti-connector/callback, where API_URL is the production URL for the API. For Tenfold, the API_URL is https://api.tenfold.com.

	Example: https://api.tenfold.com/v1/third-party/oauth/servicenow/cti-connector/callback
Logo URL	Not Required; can be any image. That image is used in the authorization screen as in this example:

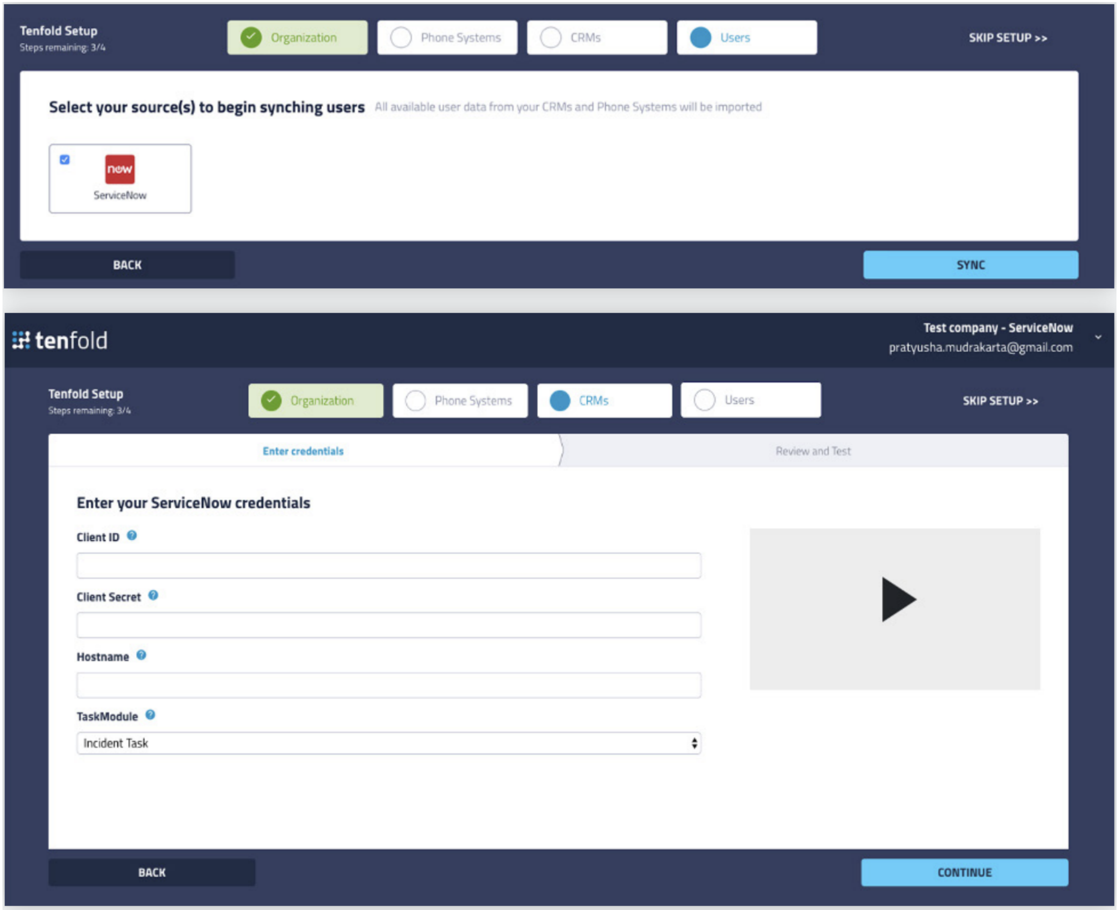


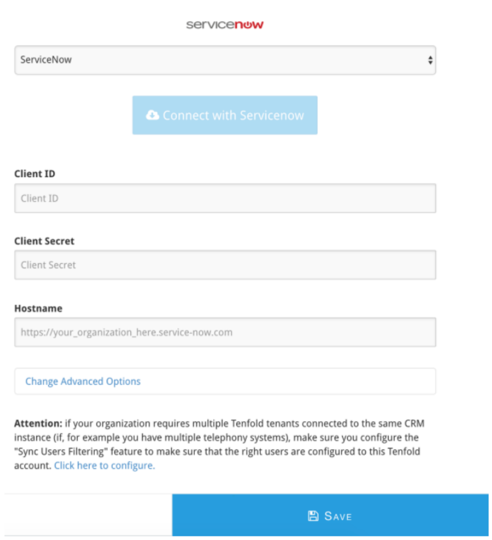
6. Select the OAuth client (in this case Tenfold for CSM and ITSM):



7. Write down the client ID and client secret (click the lock icon to see the client secret). This information will be input into Tenfold Dashboard.

8. Navigate to [Tenfold dashboard]() or installation wizard > Company Settings > CRM.



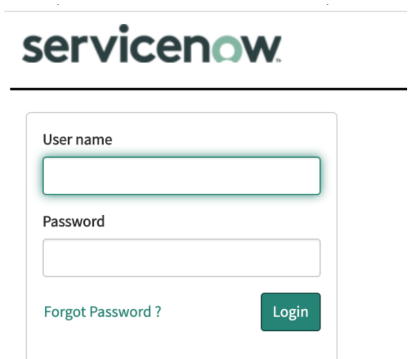


9. Fill the form with the Client ID, client secret captured 3. Additionally, provide the host name for your ServiceNow instance and then click Save.

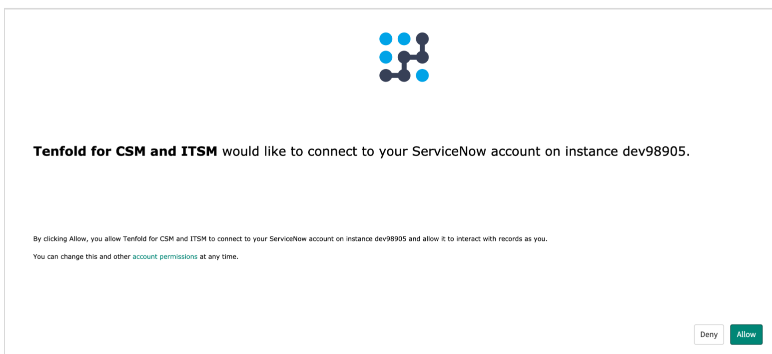
10. Click Connect with ServiceNow. This takes you to ServiceNow to allow the OAuth client.

11. If you are not currently authenticated to ServiceNow, you will be asked to do so.

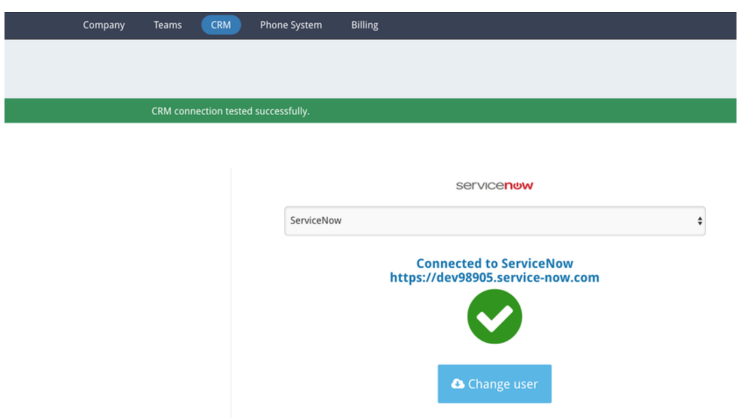
   b. Log in when prompted.



   c. Click **Allow**.



   d. You will be taken back to the Tenfold dashboard. The success message shown below displays if authentication succeeded



Sync users

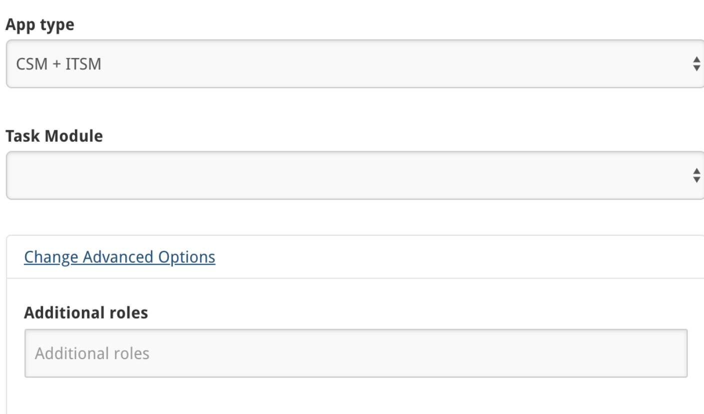
The Tenfold Dashboard can sync users with the customer CRM. What that means is that we will pull users from the customer CRM, compare with the users existing in our database and do the following three operations:

- Create users that exist in the CRM and not in Tenfold
- Update Tenfold users that match users from the CRM
- Remove users that exist in Tenfold but not from the CRM

ServiceNow stores customers and agents in the same table (called Users [sys_user]. Contacts, added by the CSM plugin, extend sys_user). For this reason, Tenfold filters users by role when synchronizing with Tenfold Dashboard. The following roles are the defaults which Tenfold uses to synchronize:

- itil - Role added by the ITSM plugin
- sn_customerservice_agent - Role added by the CSM plugin

Customers can provide custom roles they might use to identify their agents through the Additional Roles field inside the advanced CRM settings:



To provide additional roles, the customer must provide a comma-separated string:

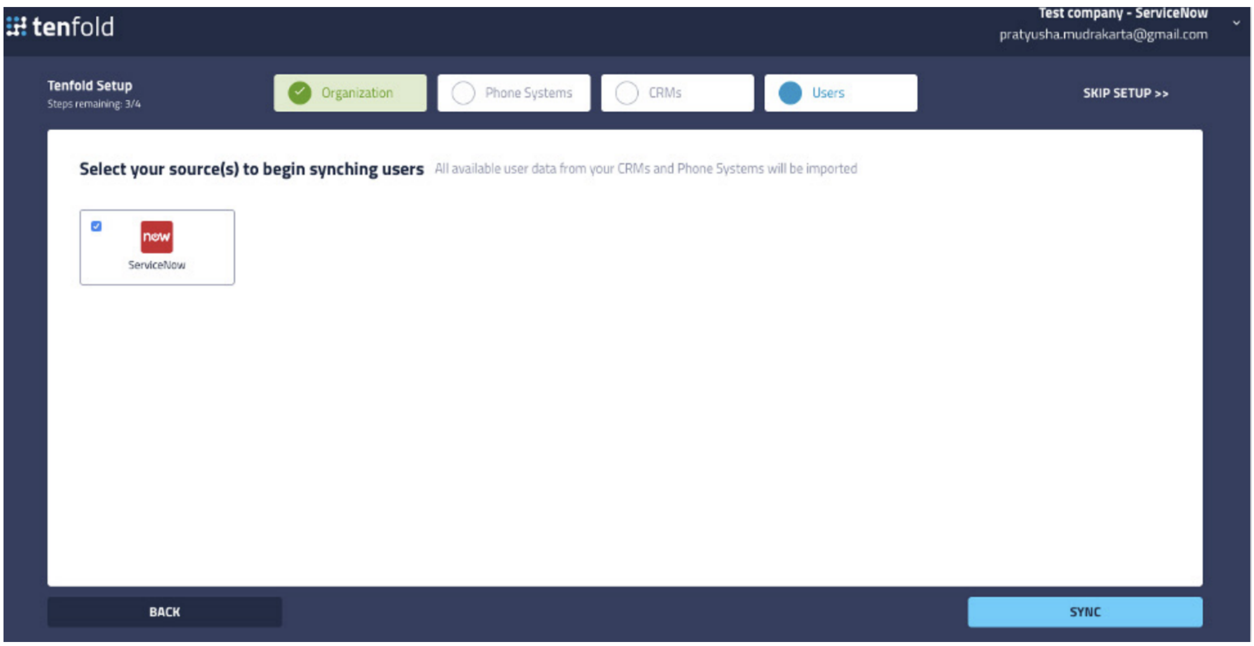
role_1,role_2,role_3

The net of this is that Tenfold queries the CRM for users who have

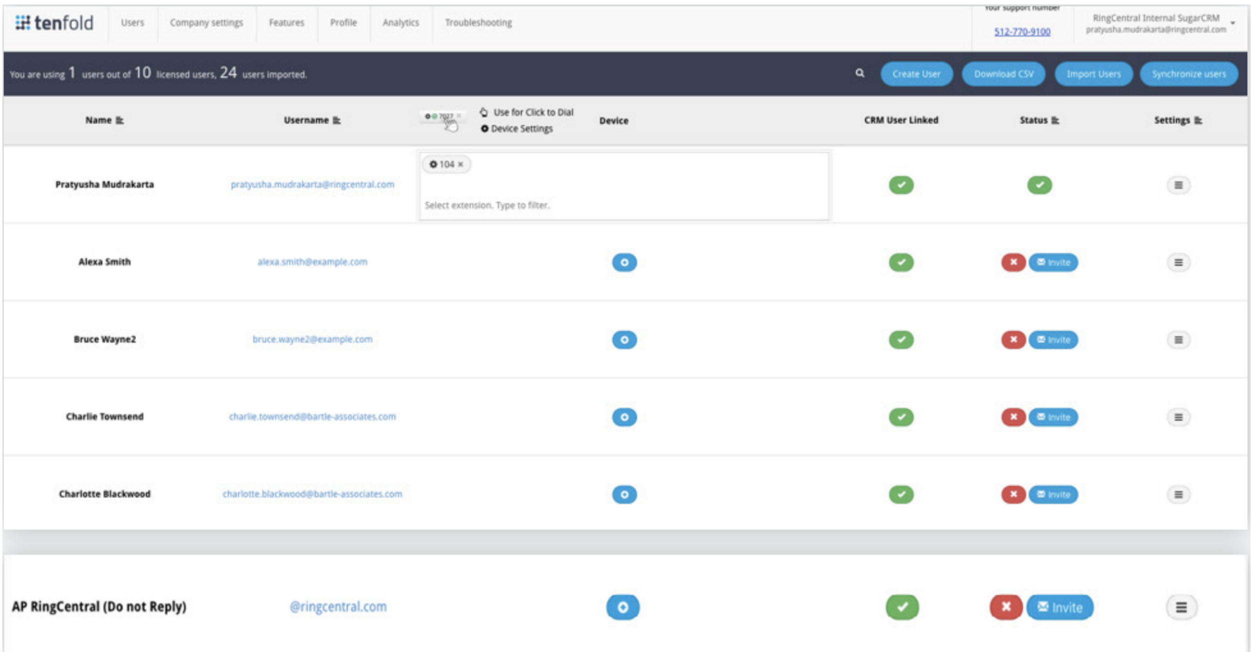
- the itil role (if ITSM is installed) **OR**
- the sn_customerservice_agent (if CSM is installed) **OR**
- have one of the custom roles (if provided)

Next, Click on **Sync** in the installation wizard or Tenfold dashboard. The users list and dashboard will be updated with the CRM users linked to their phone extensions

Note: RingCentral extensions are auto-assigned based on fuzzy match between the users' first and last names in the CRM or RingCentral



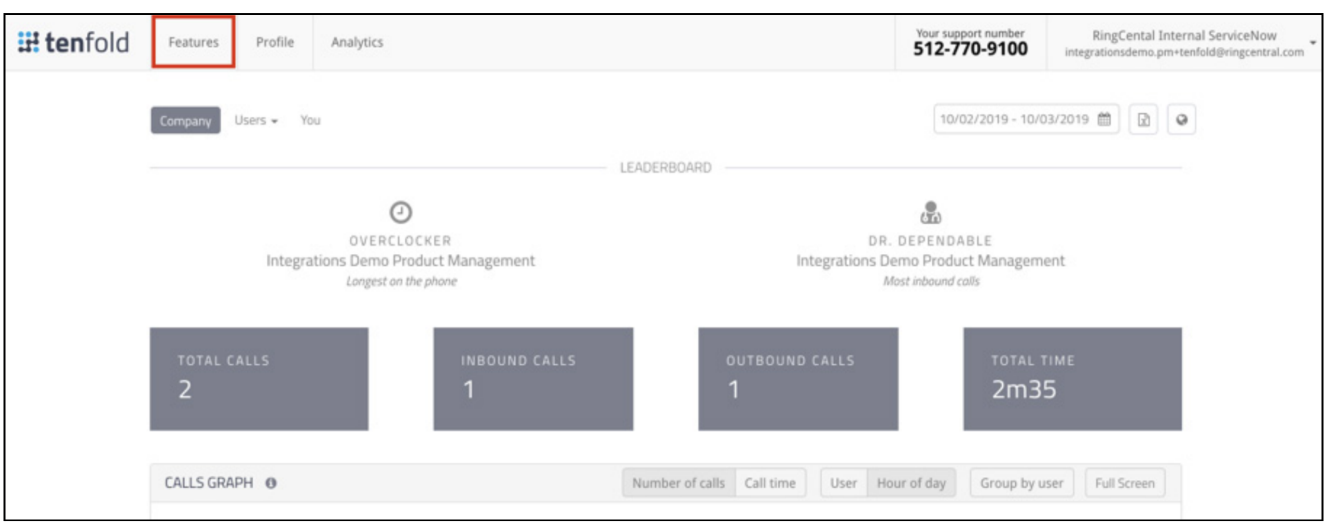
6. Next, you will be taken to the Tenfold dashboard. Click **Invite** under the Status column to invite the users who are going to be using the integration
   Note: If the phone extensions are not auto-assigned, click the "+" icon and manually assign the corresponding phone extension to the user.



Feature Setup

Setting up features will allow you to better utilize what Tenfold has to offer.

1. To enable and update features, log in to your Tenfold dashboard.
2. In the top left, click on **Features**.
3. Here you will be able to adjust the individual user features such as click-to-dial, enable/disable SSO, and more



Perform additional tasks

Links to additional procedures you may need to perform after completing the installation:

- Customize views in ServiceNow
- Enable the phone calls list for a user in ServiceNow
- Find the CRM id for a given ServiceNow entity (user, contact, phone call)
- Install plugins for ServiceNow

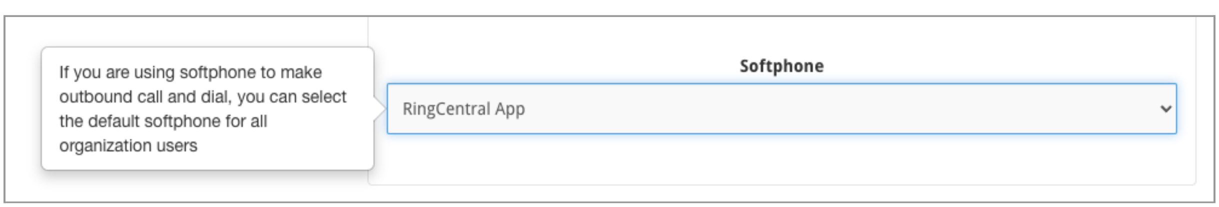
Using Tenfold with RingCentral

Note: For the following features, users need to install the RingCentral app or the RingCentral phone app. For call logging and notes, users need to install the Tenfold Chrome extension

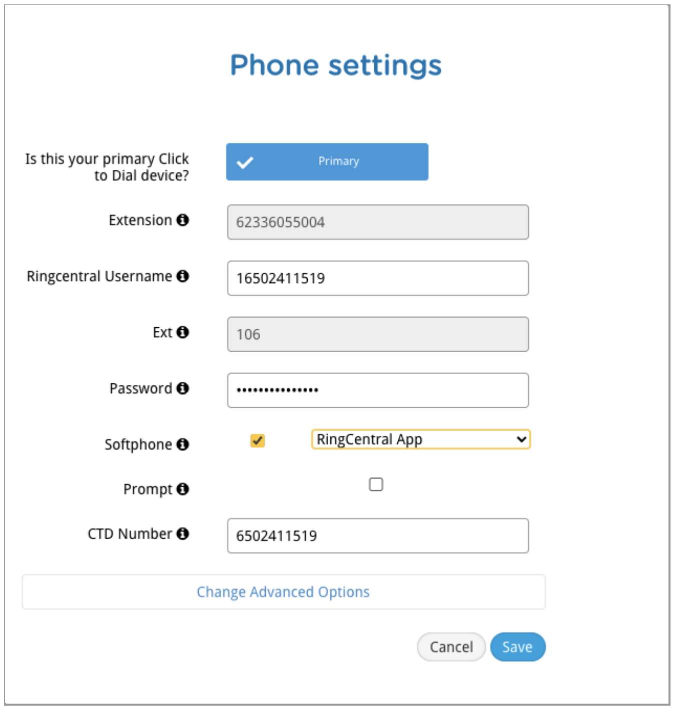
1. **Call Controls** to give users the option of managing controls such as Answer, Mute, Keypad, Hold, Record, Transfer, Hangup, and more directly from within the RingCentral app. Some call controls are also available on the Tenfold UI for easy access.
2. **Inbound Calling** automatically captures inbound calls in CRM whether or not a user interacts with the Tenfold UI or the RingCentral app.
3. **Outbound Calling** allows users to place a call through the RingCentral app. The appropriate record is then matched in the Tenfold UI. All calls will reflect in call history, both in the Tenfold and RingCentral apps.
4. **Softphone selection** allows users to select a default calling app for outbound and inbound calls. Make sure to select the softphone checkbox and select RingCentral app or RingCentral Phone app and click Save to confirm the change.

   Important notes:

   a. Softphone selection can be set at an admin level for the whole organization from the Tenfold dashboard -> Company settings -> Phone System -> Change Advanced Options.



b. If you have a physical desk phone or another primary device other than your RingCentral app or RingCentral Phone app, please disable the Softphone checkbox and click Save.



Furthermore

To make phone service integration possible, Tenfold doesn't utilize any extra connections except for connections to the ServiceNow instance provided during configuration (using REST API) and the PBX system. This also means that there are no ServiceNow UI changes performed during installation.

Testing the Configuration

To make sure that the ServiceNow instance of your organization and PBX system are working properly, just visit “Company Setting -> CRM” and “Company Settings -> Phone System” pages from within the organization’s dashboard. Once you’ve entered those pages, the health check is performed and the current integration status will be available on the top of the page.

Demo Data

Any record data in ServiceNow (user, contact, task, incident, etc.) will be available in the Tenfold dashboard when the phone system and ServiceNow instance are correctly configured. No additional configurations required.

Please contact RingCentral support at support.ringcentral.com or call 1-888-528-7464