Remedyforce – AutomationEdge Integration Setup Using Pull Integration

(AutomationEdge Release 5.6.0)

1 Overview

AutomationEdge is an Automation platform for the digital enterprise**.** It is an Intelligent RPA platform for IT as well as Business Robotic Process Automation.

AutomationEdge Integration Services can work with different ITSM systems, as well as other Target systems. Integration Services can be setup for any external system that can potentially trigger workflows, and handle response results. AutomationEdge UI Integration menu options can be used to setup Integration Services.

This Integration is known as AutomationEdge Pull Integration. Following are the basic operations the Integration system performs,

- Initialization
- Poll for Automation Requests from Target system (Fetch Requests)
- Forward Requests to AE Server
- Send Request Submission Statuses to Target system
- Send Request Response to Target system.

AutomationEdge also supports the following,

- Target system Pushing Requests directly to AutomationEdge known as Push Integration. This is discussed in the following Guide – 'AutomationEdge Remedyforce Push Integration_R5.X.0'.
- Request Response can also be sent directly to Target system using Plugins.

Following is terminology in the Integration System,

- Integration Service: A tomcat-based service that hosts all the integrations for a given tenant.
- Integration: One instance of integration that is configured for a tenant to communicate with one third-party service.
- Integration type: Group of integrations which integrate with the same third-party service. Typically, one integration type maps to one code base.
- Integration (configuration): One instance of integration that is configured for a tenant to communicate with one third-party service.

This document illustrates integration of Remedyforce with AutomationEdge. AutomationEdge Agents or Virtual Engineer's, work seamlessly along with Remedyforce to automate and accelerate incident resolution and fulfillment of service requests.

We will discuss the following in the sections below.

1. Configuration and Setup: AutomationEdge Salesforce App for Remedyforce.
2. AutomationEdge UI Setups.
3. Automatic AutomationEdge Service Request Fulfillment.

2 Prerequisites

Following, are the software applications required.

1. Remedyforce instance: Trial, Sandbox or Production
2. AutomationEdge Application available on Salesforce AppExchange is installed to work with Remedyforce.
3. AutomationEdge Server on cloud/on premise.
   If a customer wishes to AutomationEdge cloud instance for this integration, AutomationEdge Support can provide Tenant details and credentials to login to AutomationEdge Cloud instance. A reference of the Tenant Org Code needs to be provided in the AutomationEdge Salesforce Application Setups.
4. Tenants/Users created for Remedyforce customers should have some workflows corresponding to Service Requests in demo data of Remedyforce. AutomationEdge support should provide the workflows.

3 Remedyforce Setups

3.1 AutomationEdge App installation

AutomationEdge Salesforce Application is available in the AppExchange. Once installed from AppExchange it is visible in the App Launcher.

Read and accept the EULA (Agreement) under AutomationEdge Administration to proceed further to configure AutomationEdge. After EULA acceptance, you can populate the demo by acknowledging the message.

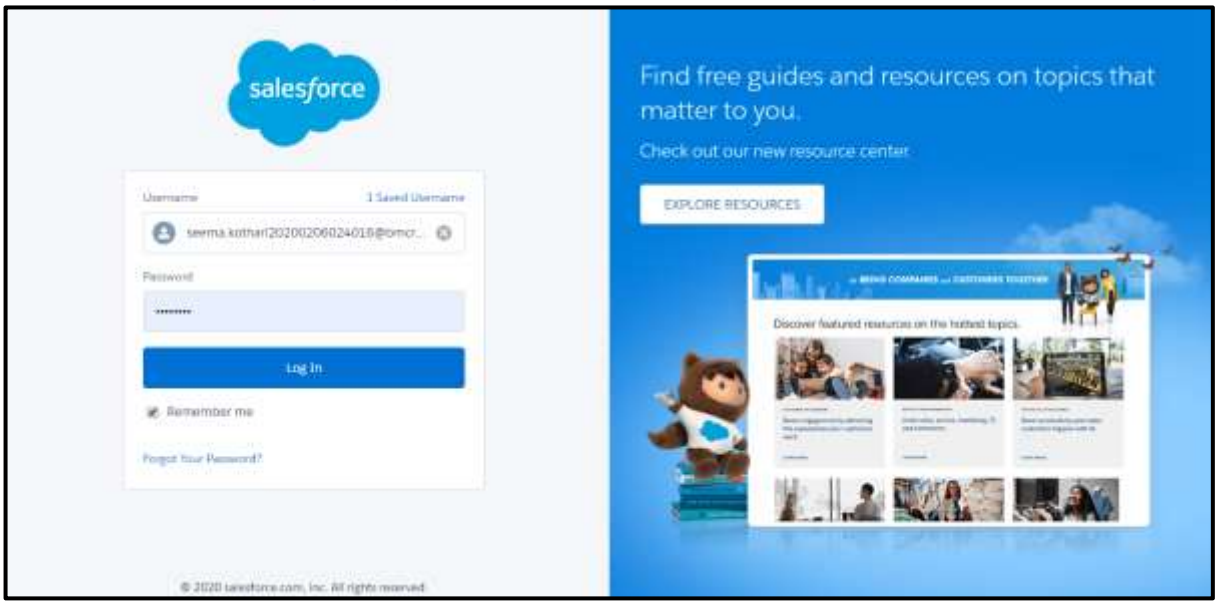
The following setups are to be done on AutomationEdge Administration tab,

- AutomationEdge Config allows addition of new Service Requests but has the sample data as a reference point.
- AutomationEdge Salesforce Application Setup, needs to be configured with the following,
  - AutomationEdge Integration Type
  - AutomationEdge server Tenant Org Code
  - Status Configurations
- AutomationEdge Status for the fulfillment lifecycle of the Service Request.

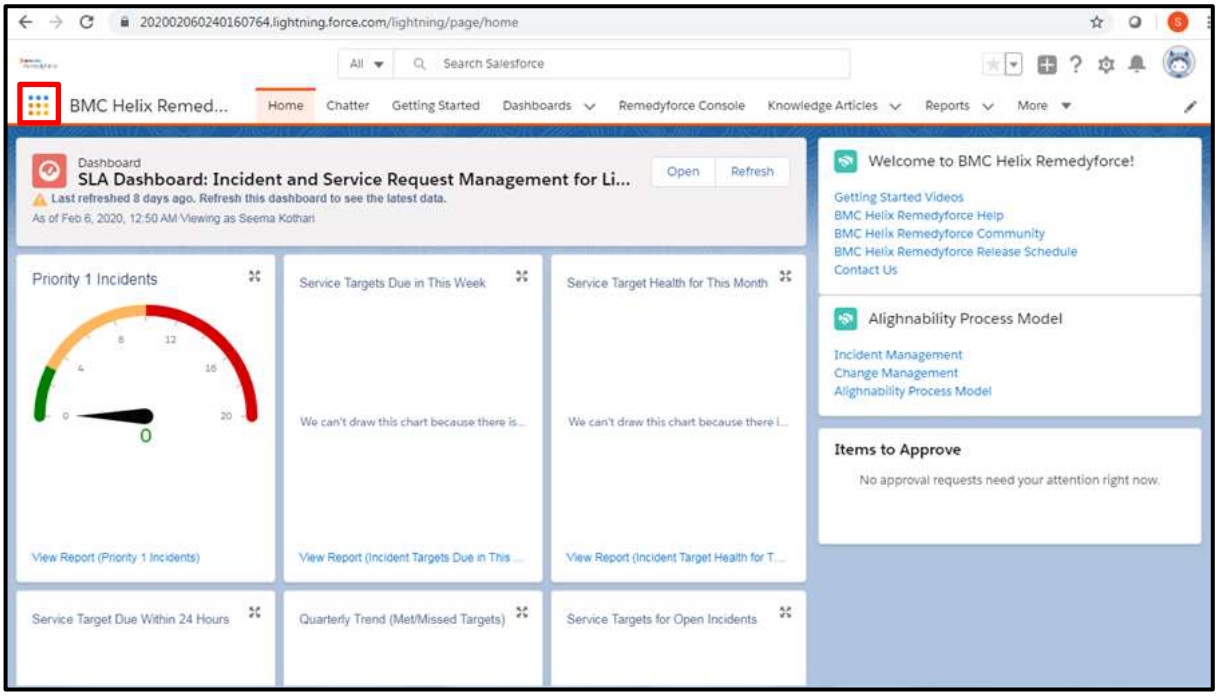
On AutomationEdge side Integration Services need to be setup. To establish the communication of AutomationEdge Server and AutomationEdge App with Remedyforce, Remedyforce Administrator credentials are required, which are stored as a Credential Object on AutomationEdge Server. AutomationEdge UI setups are discussed in the next section.

If you get a trial instance of Remedyforce from BMC, AutomationEdge Salesforce App comes pre-bundled with it. If you are already a Remedyforce customer and don't have AutomationEdge Salesforce App, you can install it from Salesforce App Exchange. Following are the detailed steps to install and upgrade AutomationEdge Salesforce App.

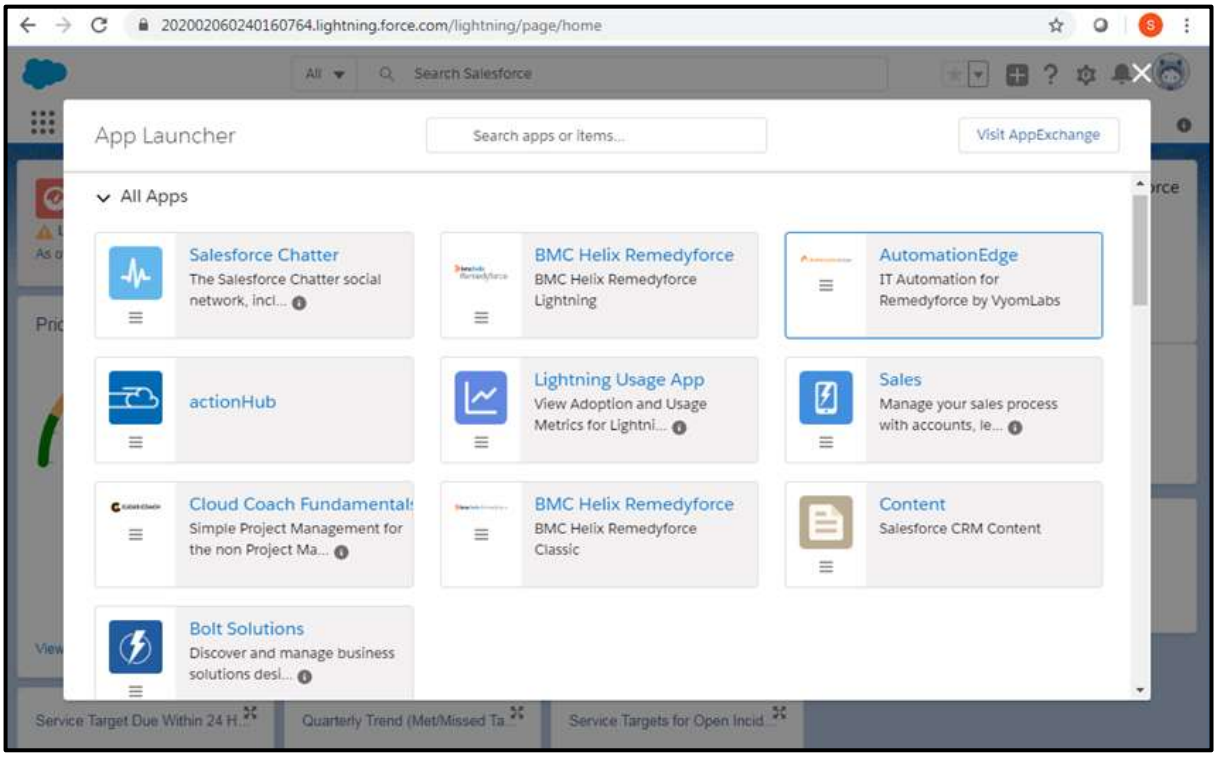
1. Login to your Remedyforce instance using appropriate Salesforce URL. For Sandbox instance: https://test.salesforce.com,
   Production instance: https://login.salesforce.com



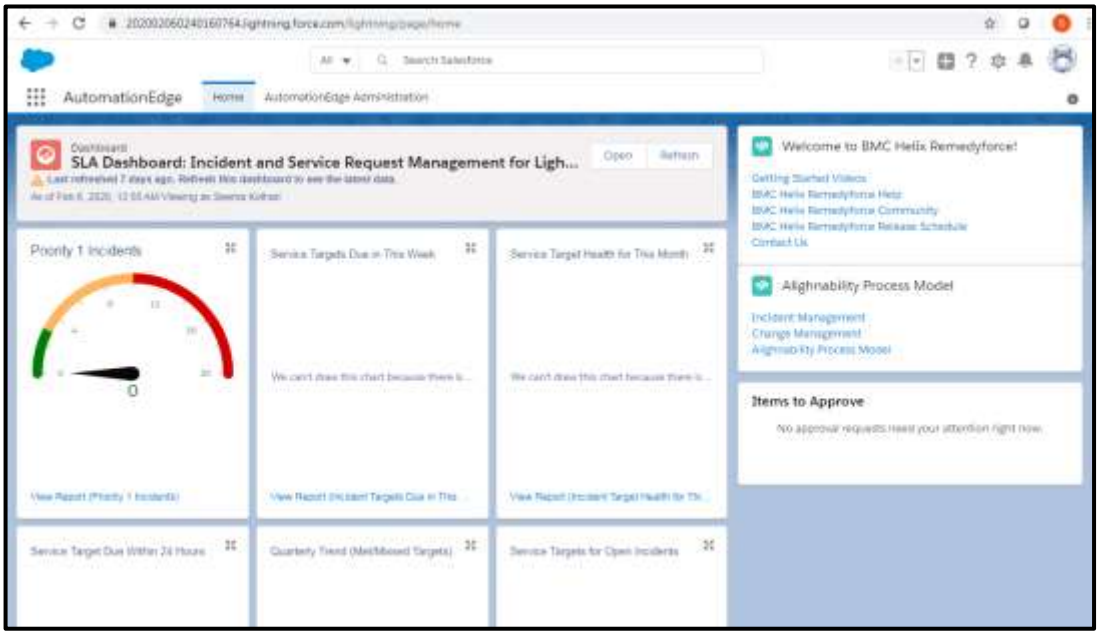
2. Click the icon marked in red below to open the App Launcher.



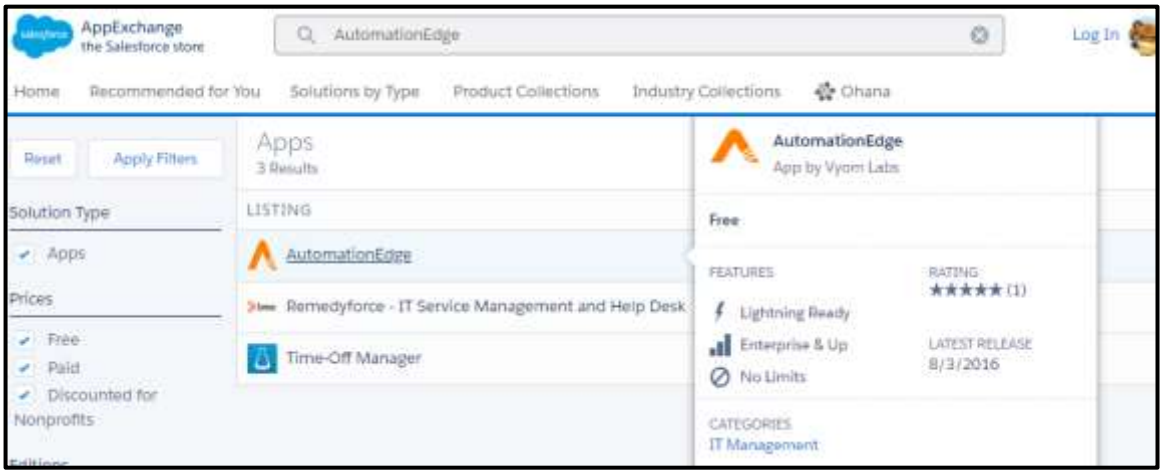
3. Search for AutomationEdge in quick find box. Click AutomationEdge App as seen below in the App Launcher.



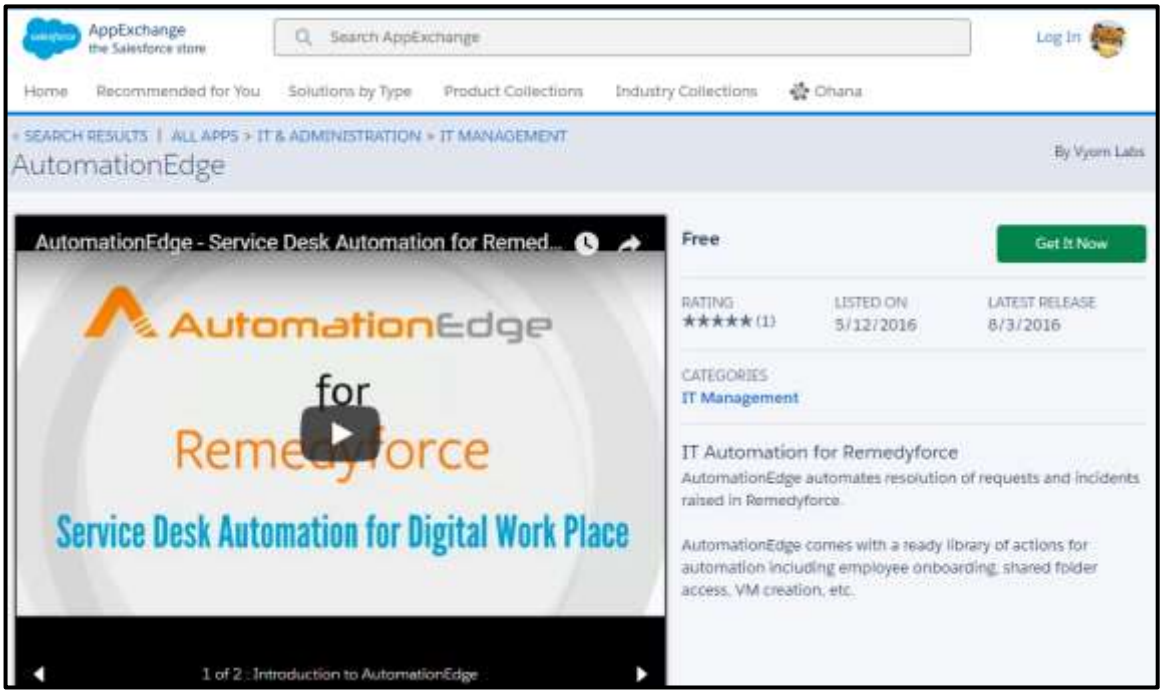
4. You can now see the AutomationEdge App Home page.



5. In case AutomationEdge is not visible in App Launcher search in AppExchange. Search for AutomationEdge in search box and in search result select AutomationEdge.



6. Click on “Get It Now”, A pop will come, click on install in production/ install in sandbox



7. Click on Confirm and Install

3.2 Upgrade AutomationEdge App

1. Follow the link to upgrade post installation
   https://login.salesforce.com/packaging/installPackage.apexp?p0=04t1C000000ODu5

   Note: This upgrade is mandatory. Even though AutomationEdge Salesforce App is pre-bundled with Remedyforce, you need go to this link to upgrade it.

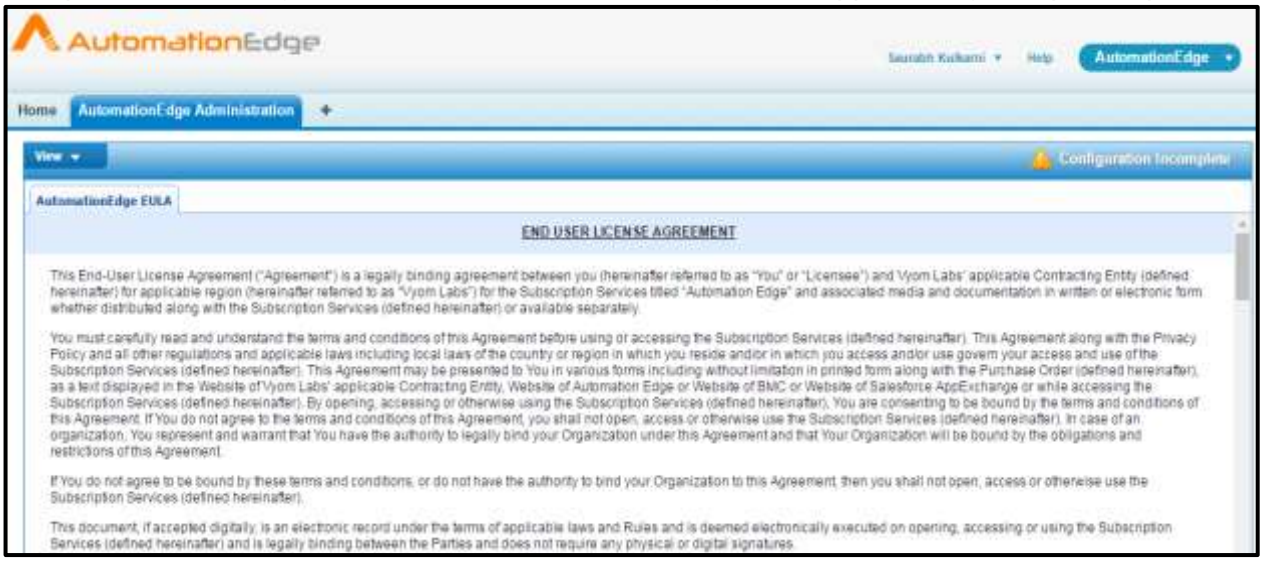
   If AutomationEdge salesforce app is not yet installed this link both installs and upgrades the App.
   https://login.salesforce.com/packaging/installPackage.apexp?p0=04t1C000000ODu5

3.3 Setup AutomationEdge App in Remedyforce

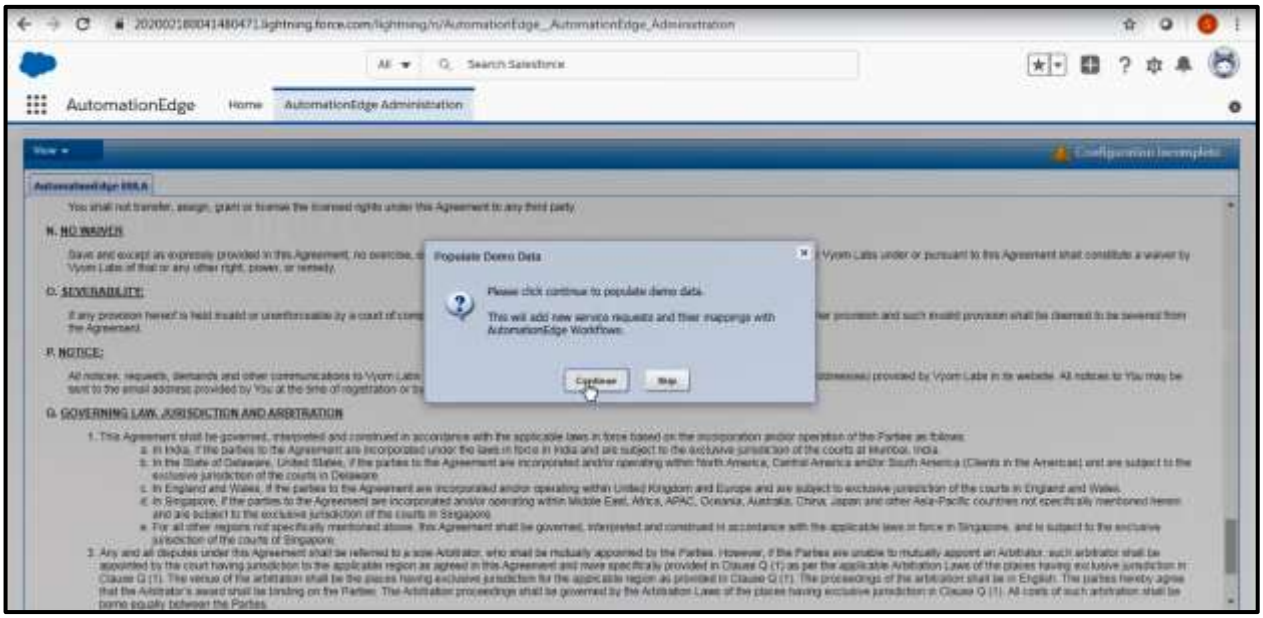
Follow the steps below to setup AutomationEdge Salesforce App for Remedyforce.

1. After installation of AutomationEdge in your Salesforce Org, select AutomationEdge App under application list.

2. Navigate to AutomationEdge Administration tab. If you have AutomationEdge installed through Remedyforce Trial, you will be asked to accept AutomationEdge EULA. Go through EULA and accept to continue. If you have installed AutomationEdge from AppExchange, skip to step 4.

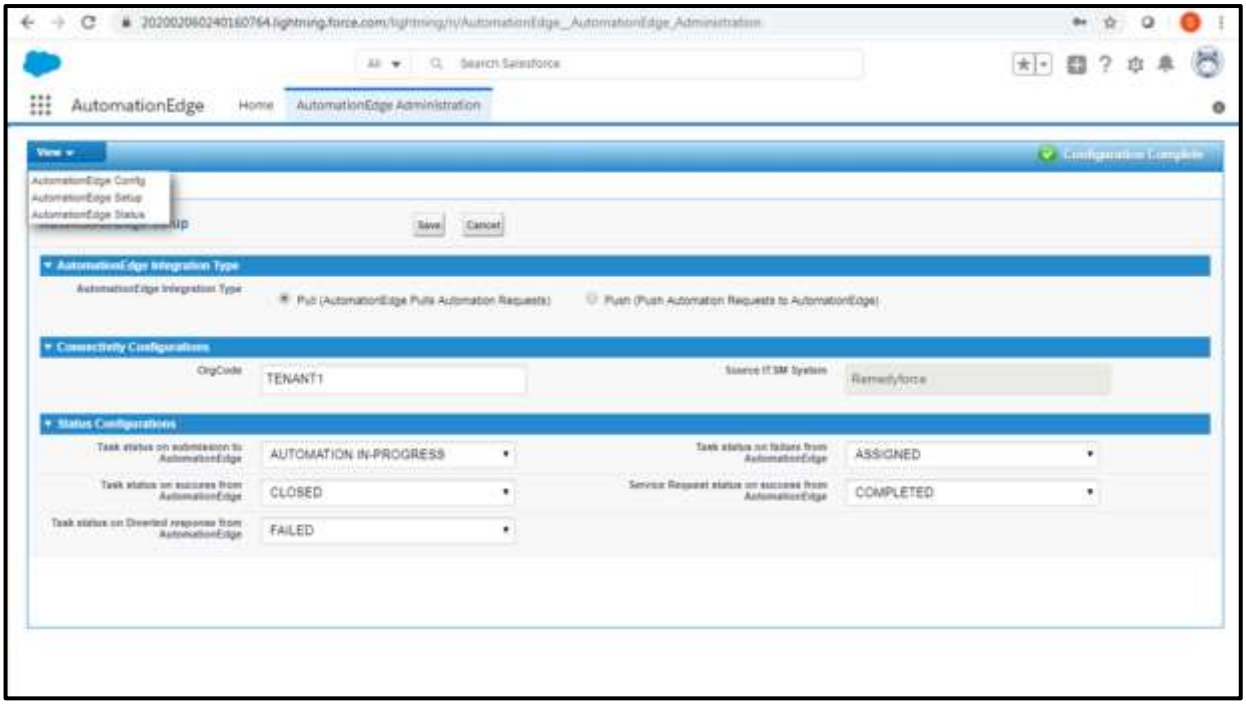


3. After accepting the EULA, a dialog box will appear to Populate Demo Data. Click Continue.

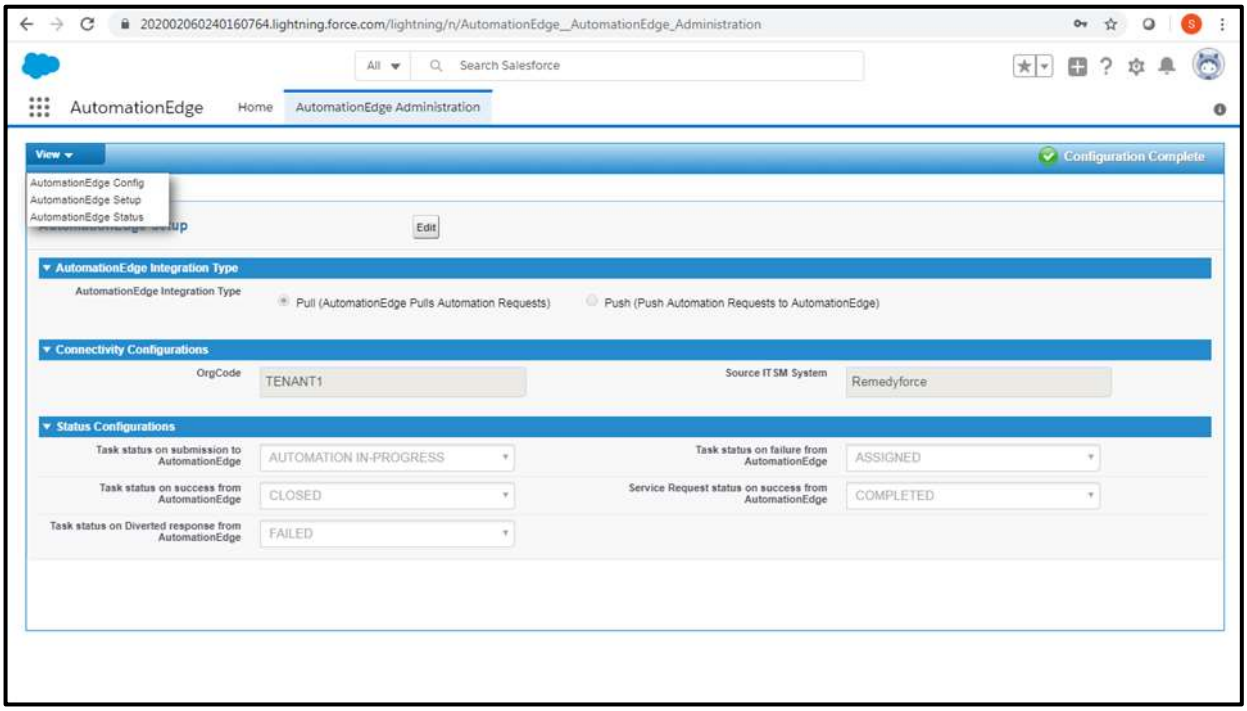


4. Navigate to AutomationEdge Administration tab and select AutomationEdge Setup from View dropdown and click on the Edit button.

5. There are two radio buttons - selection will depend on type of AutomationEdge server you are using for automation.
   Pull (AutomationEdge Pulls Automation Requests): Recommended for on premise AutomationEdge server setup
   Push (Push Automation Requests to AutomationEdge): Recommended for on cloud AutomationEdge server setup
   Fill in the required details under the Connectivity Configurations section. The AutomationEdge Tenant Org Code, is provided by AutomationEdge Support.
   Here, we are selecting “Pull” integration type and connect to AutomationEdge on cloud server https://t3.automationedge.com



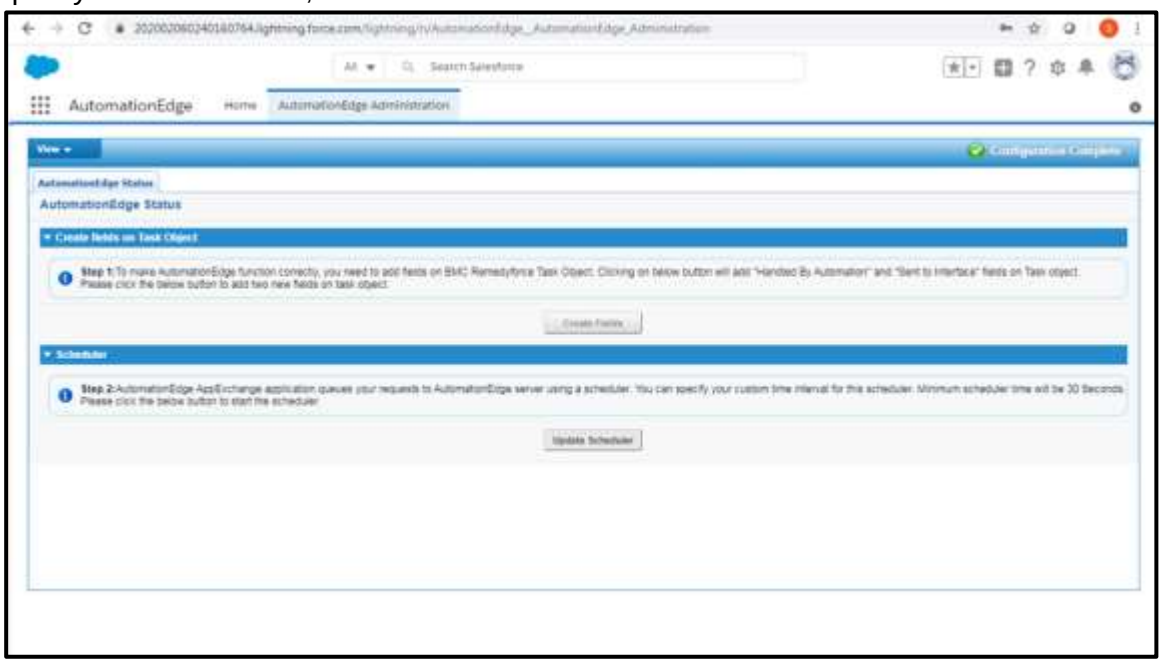
6. Click Save.



7. Under Status Configuration section, provide status which will be set on particular action performed by AutomationEdge. These actions are as follows:
    a. **Task status on submission to AutomationEdge**: Choose a status to set when a task under a service request is submitted to AutomationEdge. (for example: AUTOMATION IN-PROGRESS)

b. **Task status on failure from AutomationEdge**: Choose a status to set when AutomationEdge has failed to fulfill the task under a service request. (for example: FAILED)
c. **Task status on success from AutomationEdge**: Choose a status to set when a task under a service request is successfully completed by AutomationEdge. (for example: CLOSED)
d. **Service Request status on success from AutomationEdge**: Choose a status to set to parent service request when task is successfully completed by AutomationEdge. (for example: COMPLETED)
e. **Task status on Diverted response from AutomationEdge**: Choose a status to set when AutomationEdge has failed to fulfill the task under service request due to business process failure. (for example: WAITING FOR…)

8. Navigate to AutomationEdge Status under View dropdown. This is one-time configuration to activate AutomationEdge application. In this section, Create Remote Site Setting by clicking on the 'Create Remote Site' button. Similarly create 2 fields on the Remedyforce Task object by clicking on the 'Create Fields' button. Click on the 'Start Scheduler' button to start scheduled job, specify the Interval time, minimum 30 seconds.



Note: Remote Site Setting is not applicable in *Pull (AutomationEdge Pulls Automation Requests)* integration type, and hence Create Remote Site option will not be available.

9. Once all the steps are configured, the status on the top right corner will show as 'Configuration Complete'. (Refresh the page if required).

10. There is no need to verify the connection with AutomationEdge from Remedyforce side for Pull integration as we have selected. AutomationEdge polls Remedyforce for new Requests. Remedyforce connection details need to be provided and tested on Automationedge Server as discussed in the next section.

    This completes Integrations setups required on Remedyforce side.

3.4 Whitelisting AutomationEdge Server

There are two ways to Whitelisting AutomationEdge Server on Remedyforce,

1. Whitelisting AutomationEdge Server IP on Remedyforce
2. Appending Security token to Remedyforce password

The two methods are discussed in the sections below,

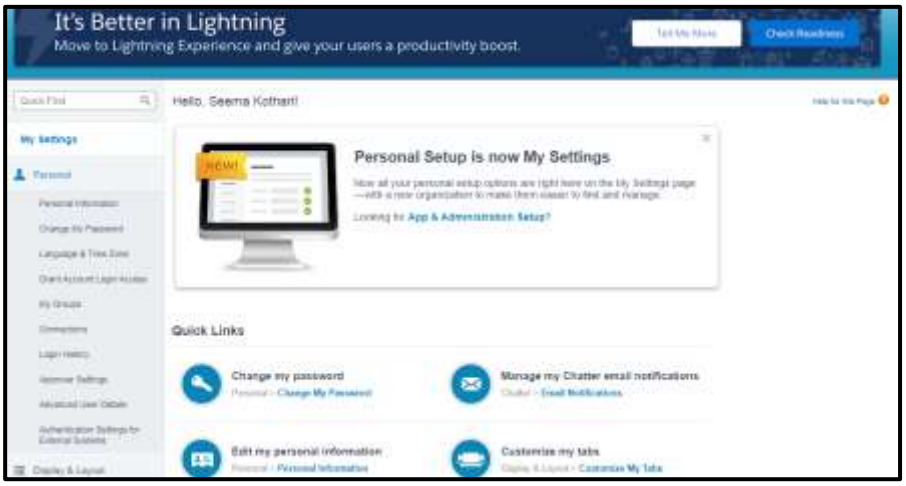
3.4.1 Whitelisting AutomationEdge Server IP on Remedyforce

The following setup is required on Remedyforce instance to whitelist AutomationEdge server IP Address.

1. Click My Settings under you username.

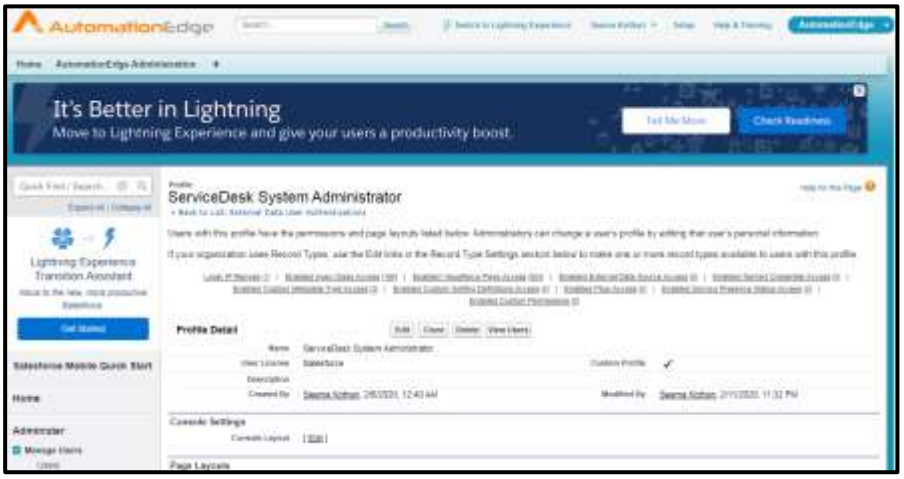
2. Click Personal link.

3. Click Advanced User Details



4. Click Profile

5. Click Login IP ranges.



6. Add IP ranges as required (e.g. 0.0.0.0 and end as 255.255.255.255)

3.4.2 Appending Security token to password

Following are the steps to get the Security token to append to Remedyforce password during login.

1. Click your user name in top right corner of a Remedyforce instance.
2. Select My Settings.
3. Select Personal in left panel.
4. Sixth option is "Reset My Security Token". Click this to generate a Security token. You may append this security token to your password to login to Remedyforce. However, note that this option is not visible if you have already gone for the first option and whitelisted your AutomationEdge Server IP address.

4 AutomationEdge Integration Services

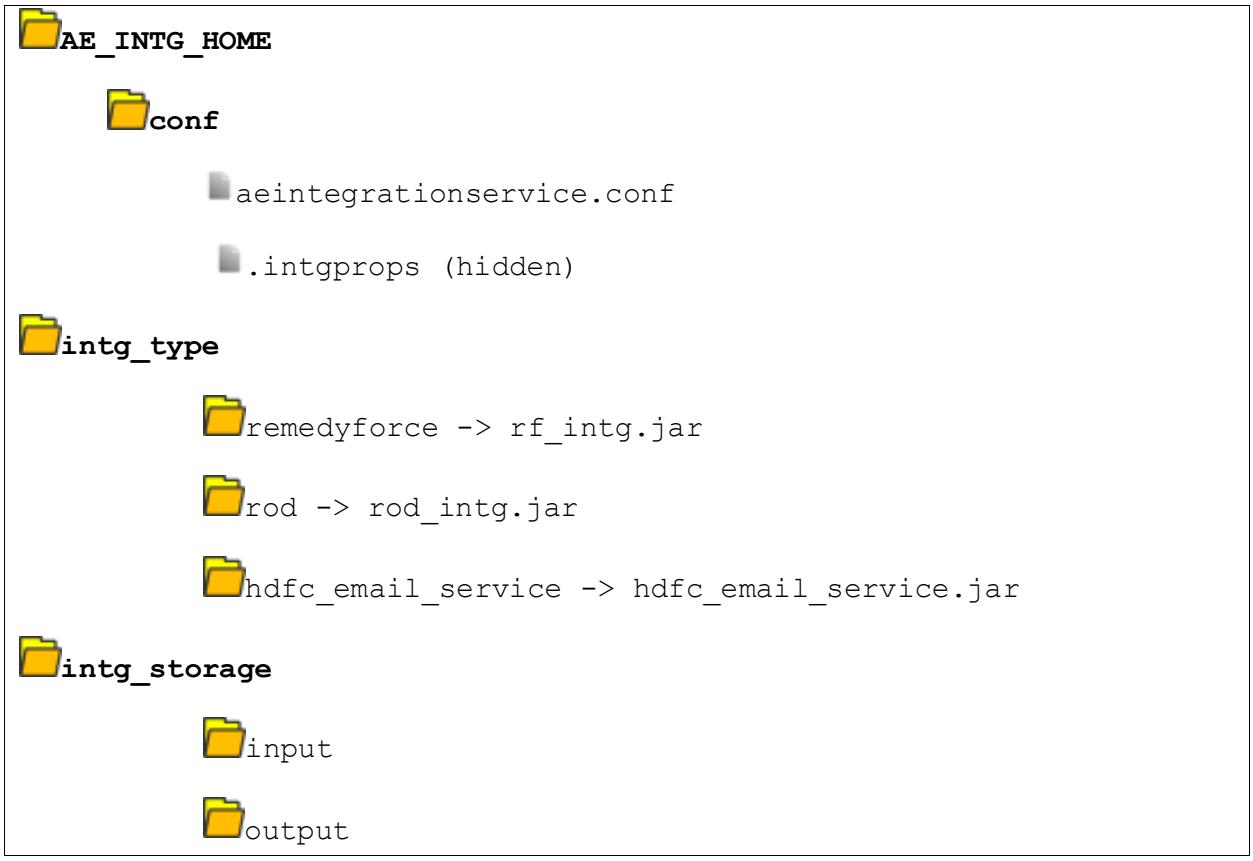
4.1 Integration Services Setup

Before you can start using Integration, Integration setup needs to be done. Following, is the setup for Generic Integration Services,

1. Create AE_INTG_HOME environment variable on a machine where integration service will run
2. Integration Service binaries (WAR file) are available with AutomationEdge Release package. Deploy Integration Service war on AutomationEdge Web Server or another Web Server. Start web service.
3. Once deployed, Integration menu is visible on AutomationEdge UI with System Administrator login. Add an Integration Service. Download Integration Service configuration file `aeintegrationservice.conf`. The file can downloaded from Integration Service listing using the download action. (Refer sections below on how to Add Integration Service and download Integration Service configuration file)
4. Create a `conf` directory under AE_INTG_HOME and place the Integration Service configuration file `aeintegrationservice.conf` in it.

As a part of startup,

- Integration Service creates one hidden file named ".intgprops" inside AE_INTG_HOME/conf directory. It has some properties/information which Integration Service keeps modifying like "Last Sync Time".
- Integration Service also creates a directory for Integration Types with sub directories for each unique integration type. For example, if integration types configured are "Remedyforce", "ROD" and "HDFC Email Service" etc. then following directory structure is created by the integration service.



During Integration service startup, has the following validations are done,

- ✓ If AE_INTG_HOME is created and exists then proceed. Else throw error and stop application.
- ✓ If file aeintegrationservice.conf present then proceed. Else throw error and stop application
- ✓ Get machine username and hostname and validate against the values in conf. If mismatch then throw error and stop application
- ✓ Initialize Proxy if proxy conf file is present under conf directory
- ✓ Connect to server and get configurations and initialize local cache. Subsequent calls from integration service will have this UIK in the request header fetched from local cache.

5 Enable Integration Service for Tenant

When you request for Remedyforce Trial instance Integration Service is enabled for the user's Tenant.

5.1 Integration Service

Integration Service is a Web Server (e.g. tomcat) based service that hosts all the integrations for a given tenant.

5.1.1 Add Integration Service

Following are the steps to create an Integration Service,

1. Navigate to Integration→Services menu.
2. Click the Add New button.

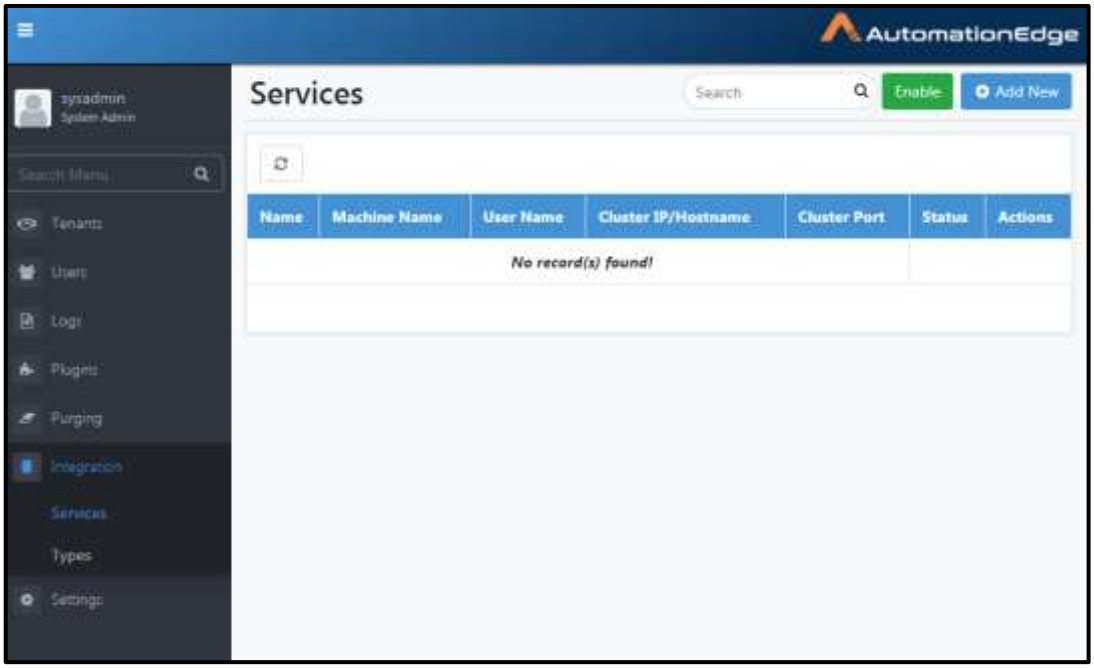


Figure 14f: Add Integration Service

3. A pop up to configure an Integration Service appears. This Integration Service is not assigned to any Tenant to begin with. Once the service is created, you may click Enable button to assign it to Tenants.

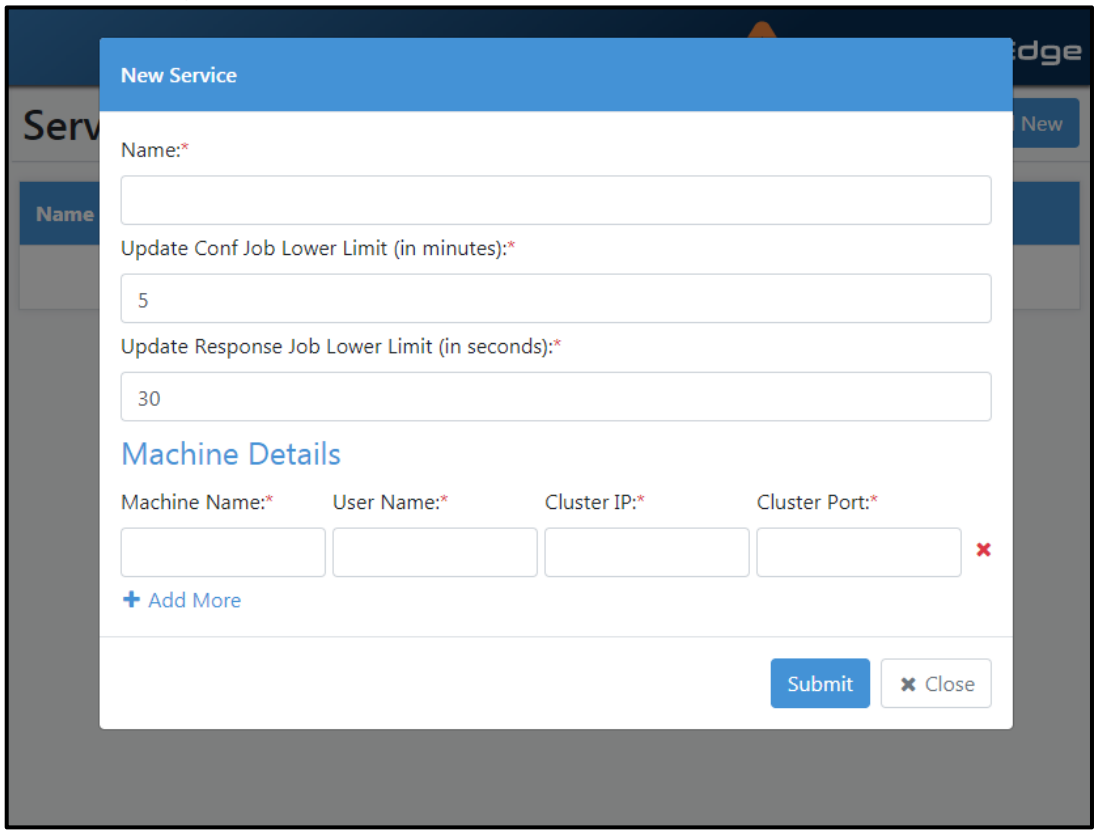


Figure 14g: Integration Service Configuration pop up

4. The table below explains these configuration parameters.

Table 20: Parameters for Integration Service Configuration

Prarameter	**Description**
Name	The name of the new Integration Service to be created.
Update Conf Job Lower Limit (in minutes)	Specify the job schedule in minutes to update the Integration Services configuration file (aeintegrationservice.conf). Integration Service creates a new scheduled job for each Integration Service to check for updated configurations/jars if any on AutomationEdge server. The update message from AE Server, is broadcasted to all cluster node's This job runs every 5 minutes by default if a value is not provided.
Update Response Job Lower Limit (in seconds):	Specify the update Response - job schedule in seconds. Integration Service has one more scheduled jobs

	that run **every 30 seconds for the** list of Integration configurations for each Tenant.
Machine Name	The machine name on which the Integration Service is to be created.
User Name	The User Name on the machine with which the Integration Service runs.
Cluster IP	The machine IP where the service runs (known as Cluster IP in HA setup). High availability is in built in AutomationEdge Integration services. You may configure a cluster of nodes while creating an Integration service on AutomationEdge UI. Integration service HA is in the form of active – passive polling mechanism, which means polling happens from one of the integration service nodes in the cluster. In case active node goes down, then passive node becomes active and polling starts from this node. Note: It is recommended to install integration service on different machine, other than AE. If not, at least the tomcat for integration service should be different from AE Tomcat and the port of integration service should be other than AE cluster ports (i: e 5900 port).
Cluster Port	The machine Port where the service runs (known as Cluster Port in HA setup).

5. Configure an Integration Service as seen below. Click Submit.
6. On Submit the following validations are performed,
    - Name must be unique across all the tenants.
    - No other service is registered with the same combination of machine hostname and machine username
    - Cluster Port must be different other than Server's hazelcast port

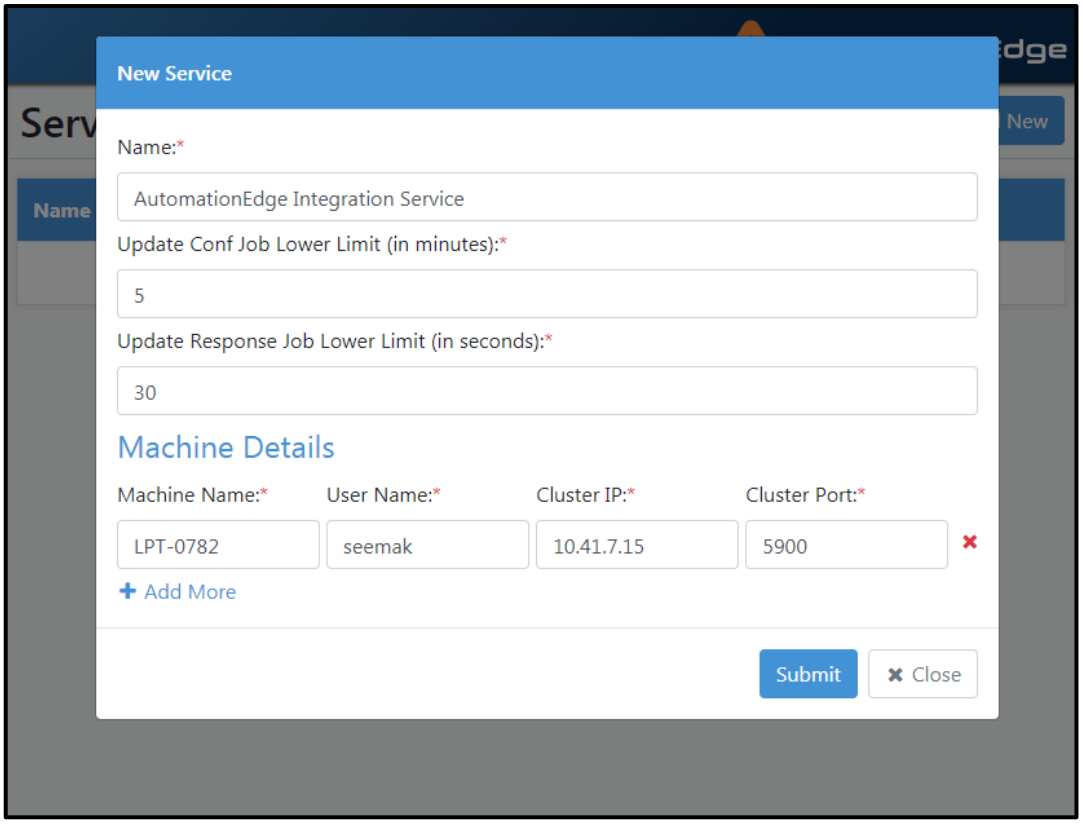


Figure 14h: Integration Service Configuration Details

7. Alternately, you may click Add More for this Integration Service to be created on one or more machines. Click Submit.

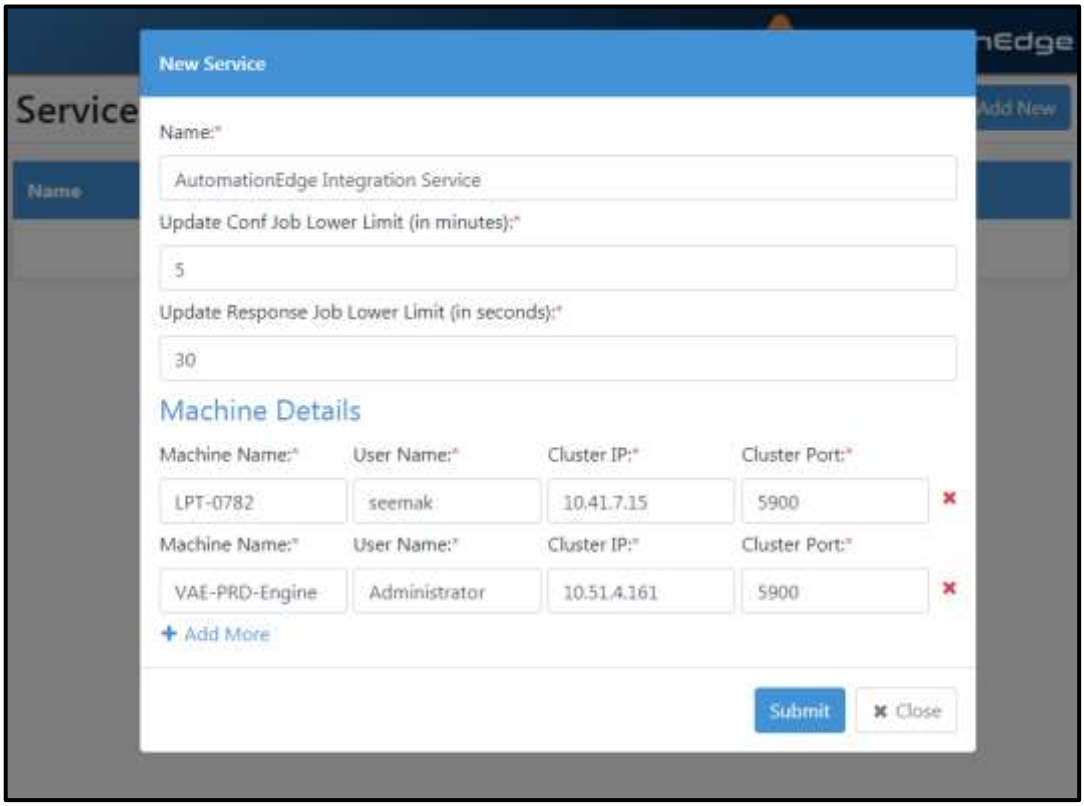


Figure 14i: Integration Service Add More Machine Details

8. Integration Service is registered successfully.

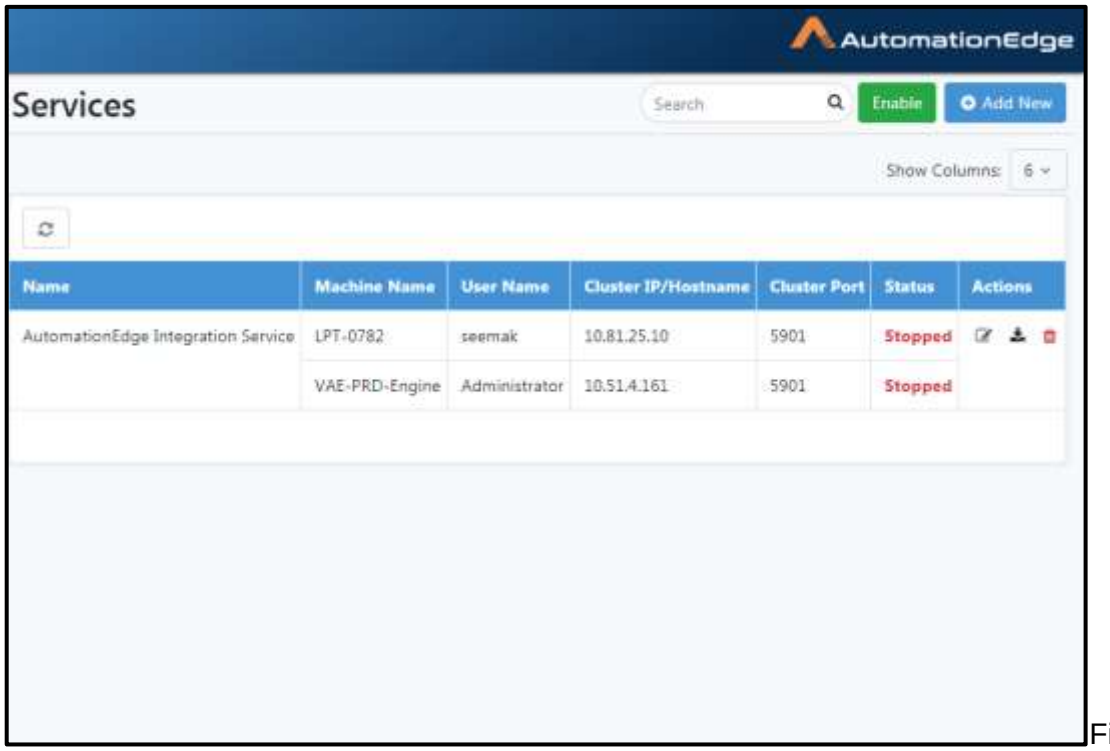


Figure 14j: Integration Service registered successfully

5.1.2 Integration Service: Download configuration file

Tenant Administrators have the option to register integration service and download the integration service configuration. Only one integration service registration is allowed for a Tenant Administrator.

This configuration is saved in the database and it also generates a configuration file named aeintegrationservice.conf. The file should be downloaded and placed in AE_INTG_HOME/conf directory on a machine where integration service runs. The configuration file properties highlighted in Maroon color are not editable.

1. Navigate to Integration→Services
2. Click Download icon in the Actions column next to the service to be downloaded.

3. Notice that aeintegrationservice.conf is downloaded.

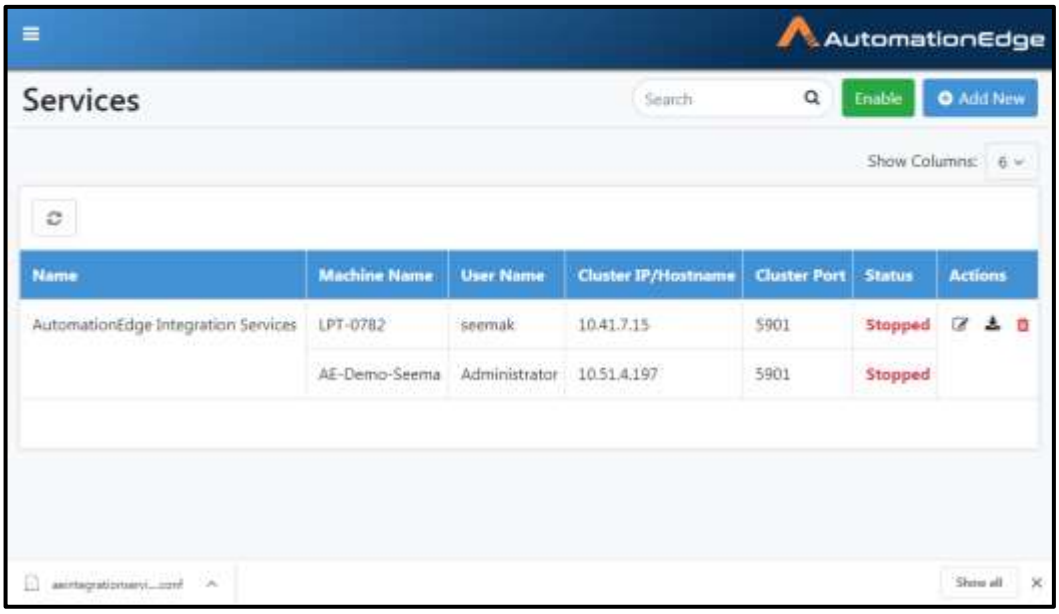


Figure 15d: Download Integration Service Configuration File

4. The contents of the downloaded file are seen in below.


```
{
  "name" : "techedge",
  "uik" :
"YmFkYjE1NzQtOThkMy00MmNmLWEyNTctNTRiZjY1MzA0Mjk5MTU3ODkyMDI3MzEyMg==",
  "tenantOrgCode" : null,
  "aeServerUrl" : "http://localhost:8080",
  "aeServerVersion" : "5.6.0",
  "machineDetails" : [ {
    "hostname" : "LPT-0782",
    "username" : "seemak",
    "clusterIp" : "10.41.7.15",
    "clusterPort" : "5900"
  }, {
    "hostname" : "VAE-PRD-Engine",
    "username" : "Administrator",
    "clusterIp" : "10.51.4.161",
    "clusterPort" : "5900"
  } ],
  "cleanupInputFileStorage" : true,
  "cleanupOutputFileStorage" : true,
  "verification" : "YmIyZTI4ZjhmODQ3ZDUzZTJhMzhhZTI0NTNmY2M2N2U="
}
```


The contents of the integration configuration file aeintegrationservice.conf are listed in the table below,

Table 21: Integration configuration file contents

Contents in Integration configuration file
Unique Identifier Key (UIK) (generated, encrypted)

Tenant OrgCode (if configured by Tenant Administrator)
AE Server URL (internally stamped)
AE Version (internally stamped)
Multiple pairs of following: • Machine Username and Hostname (user provided of the machine where Integration Service will run) • Cluster IP Address (user provided in case of HA) • Cluster Port (user provided in case of HA)
Flag for cleanup of input files
Flag for cleanup of output files
Hash of the contents(in Maroon Color) for verification so that it should not be modified
Conf Update Job Lower Limit (in Minutes) (user provided)
Response Update Job Lower Limit (in Seconds) (user provided)

Note: ***In case of AutomationEdge Cloud Instance you may use an existing Integration Service.***

5.2 Integration Type

Integration type is a Group of integrations which integrate with the same third-party service. Typically, one integration type maps to one code base.

Tenant Administrator has the option to add/update/remove integration types. Integration type name has to be unique across all tenants. Each integration type has its corresponding JAR. Tenant Administrator can configure an Integration Type on the Integration Service configured.

In this guide we will create Remedyforce- Integration Type with Remedyforce REST type integration jar provided with AutomationEdge Release 5.6.0.

5.2.1 Add Integration Type

Following are the steps to create an Integration Type,

1. Navigate to Integration→Types

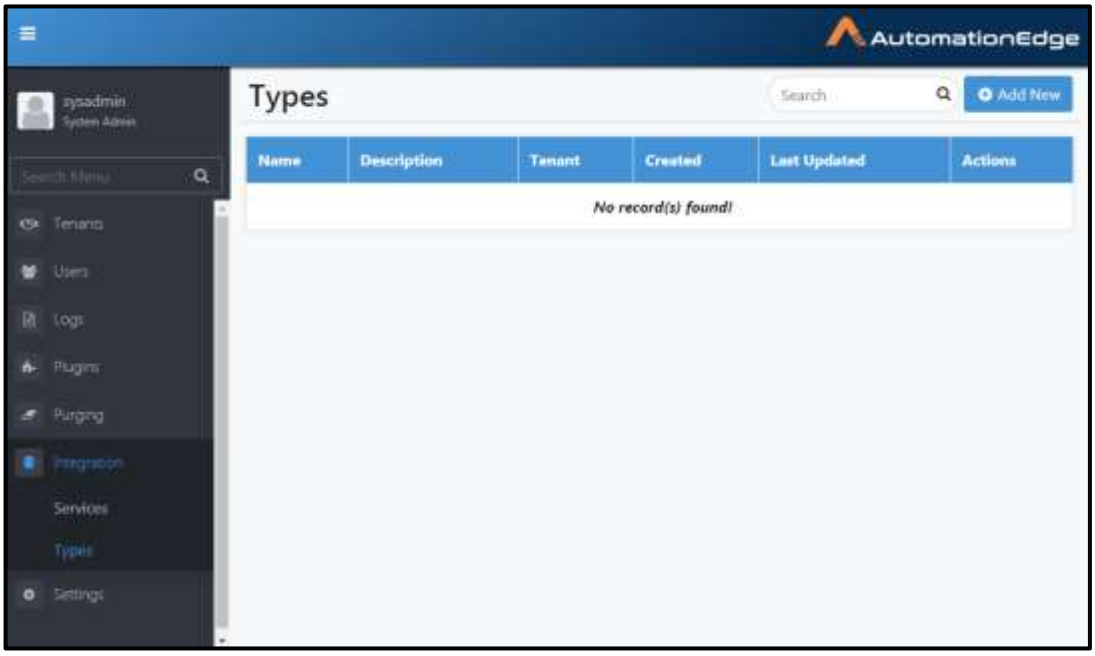


Figure 16a: Add new Integration Type

2. The New Type configuration window opens.

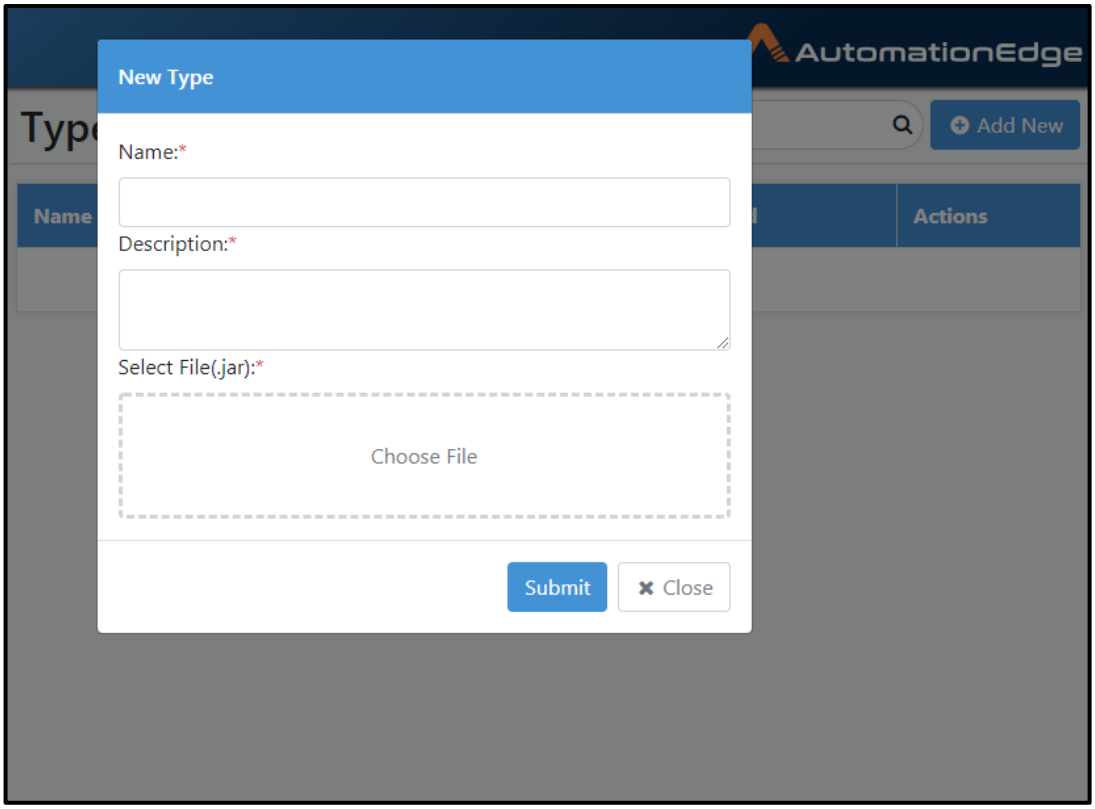


Figure 16b: Integration Type Configuration

3. Provide desired configuration details. Click Submit.

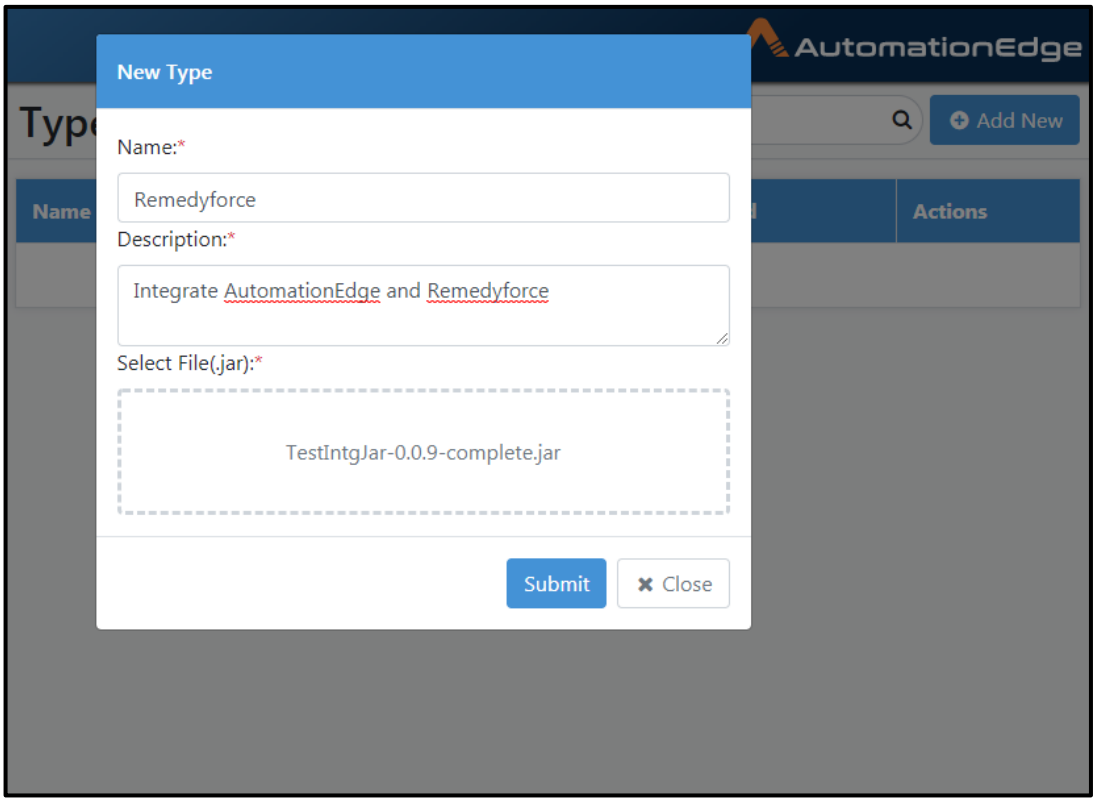


Figure 16c: Integration Type Configuration Details

4. Integration Type created successfully message appears.

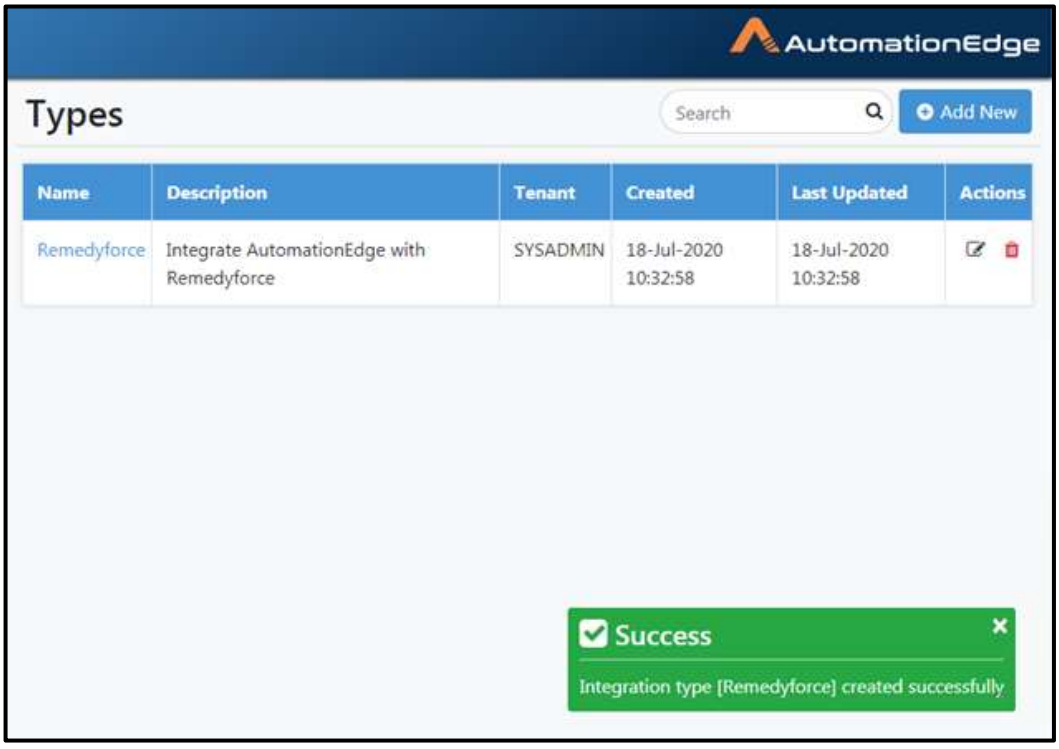


Figure 16d: Integration Type created successfully

Note: ***In case of AutomationEdge Cloud Instance you may use an existing Integration Type or create New Integration Type.***

5.3 Integration Type Configuration

Integration Type configuration is an instance of integration type that is configured for a tenant to communicate with one third-party service. Integration Type menu option is only available to Tenant Administrators.

The following sections discuss the operations for Integration Type configuration.

5.3.1 Add Integration Type Configuration

Following are the steps to Add Integration Type Configuration,

1. Navigate to Integration→Type Configuration

Figure 98c: Add New Integration Type Configuration

2. Provide desired configuration details. Expand Polling Schedule.

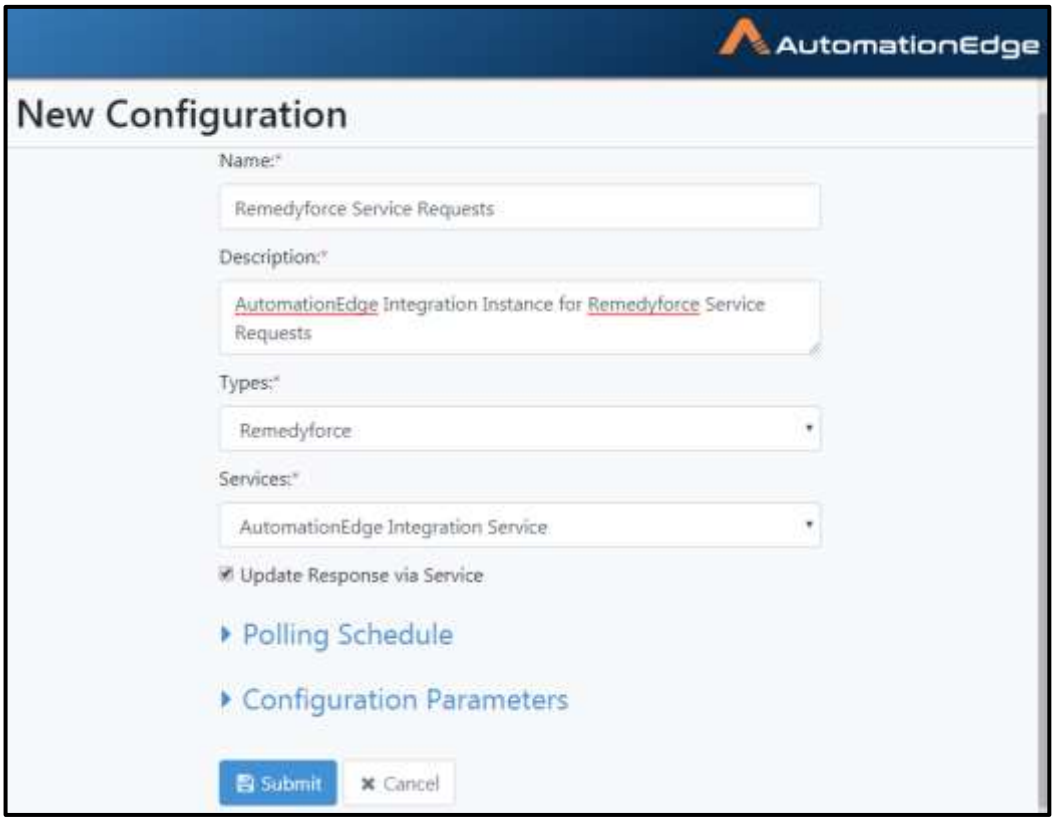


Figure 98d: Configuration Details

3. The Polling Schedule configuration section is visible as below.

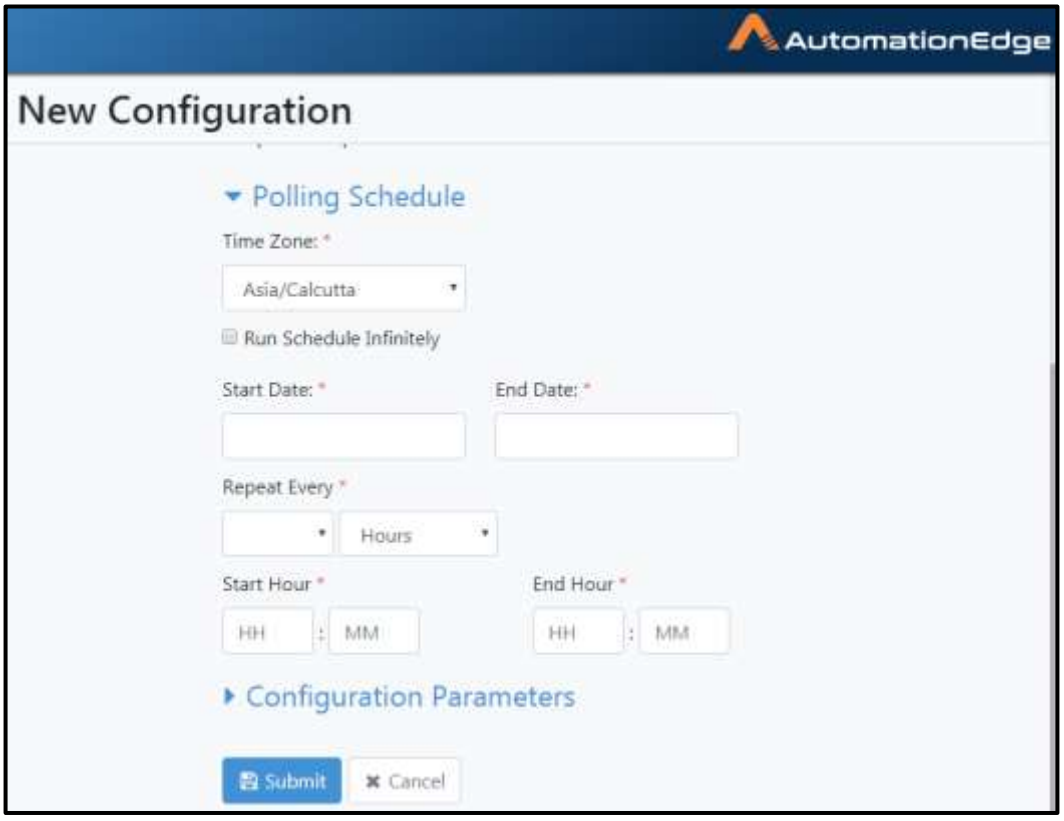


Figure 98e: Polling Schedule form

4. Provide desired Polling Schedule as seen below. Then expand Configuration Parameters section.

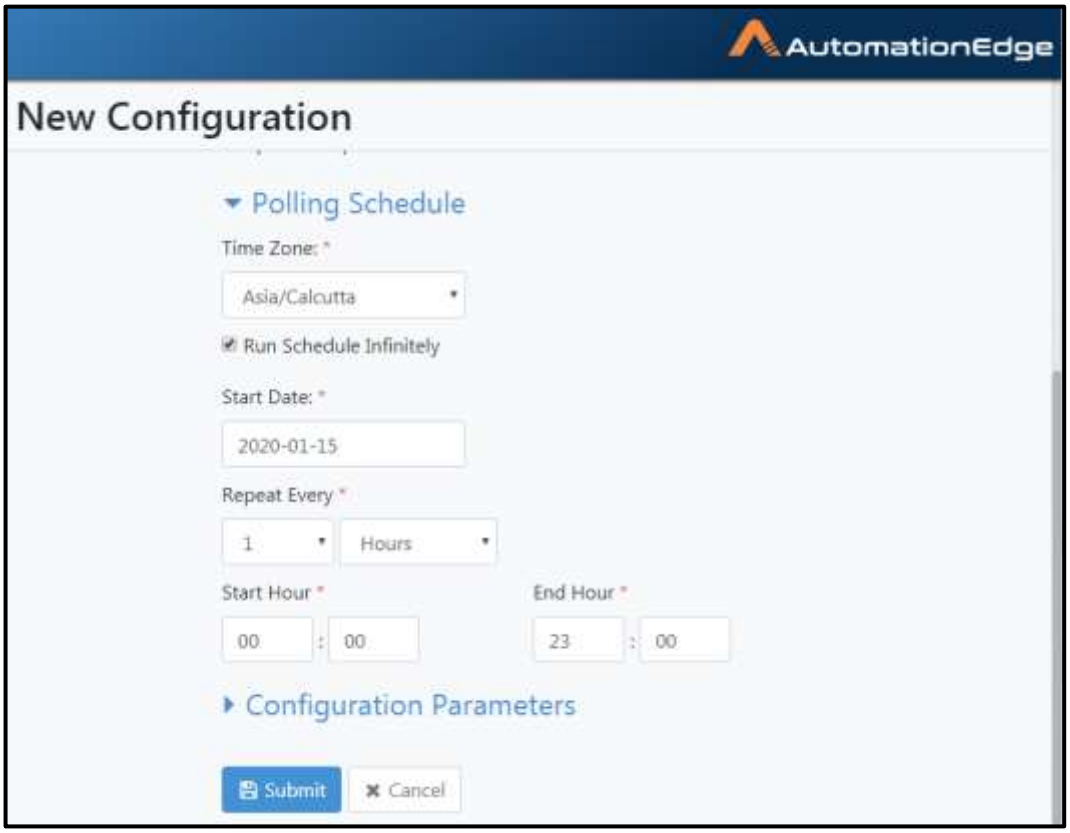


Figure 98f: Polling Schedule details

5. The Configuration Parameters section is visible as below.

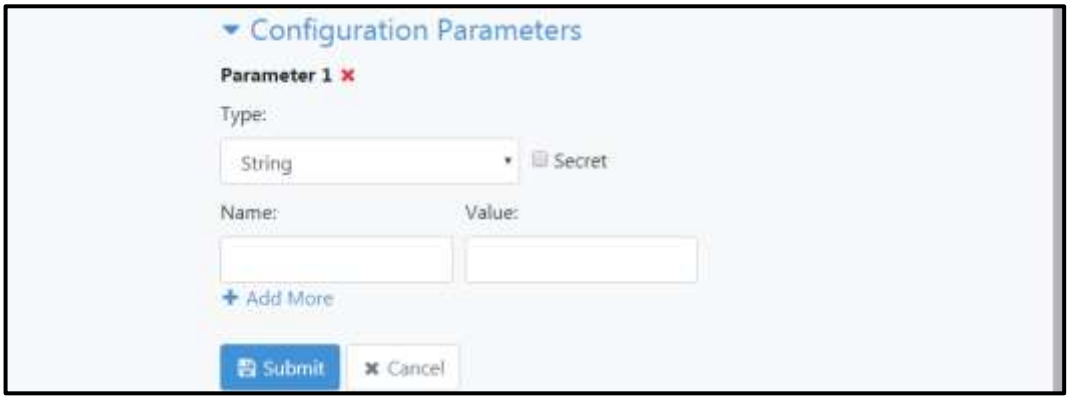


Figure 98g: Configuration parameters form

6. Provide desired Configuration Parameters values. Click Submit.

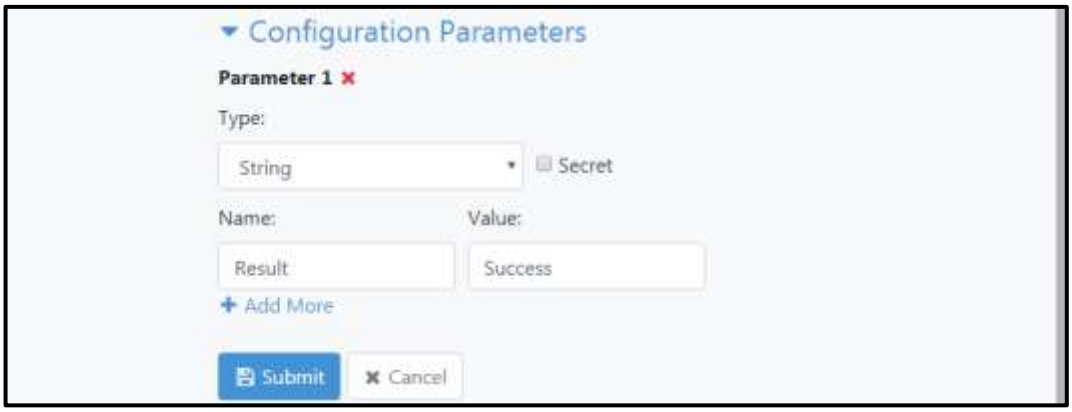


Figure 98h: Configuration Parameters

7. Integration Type Configuration created successfully message appears.

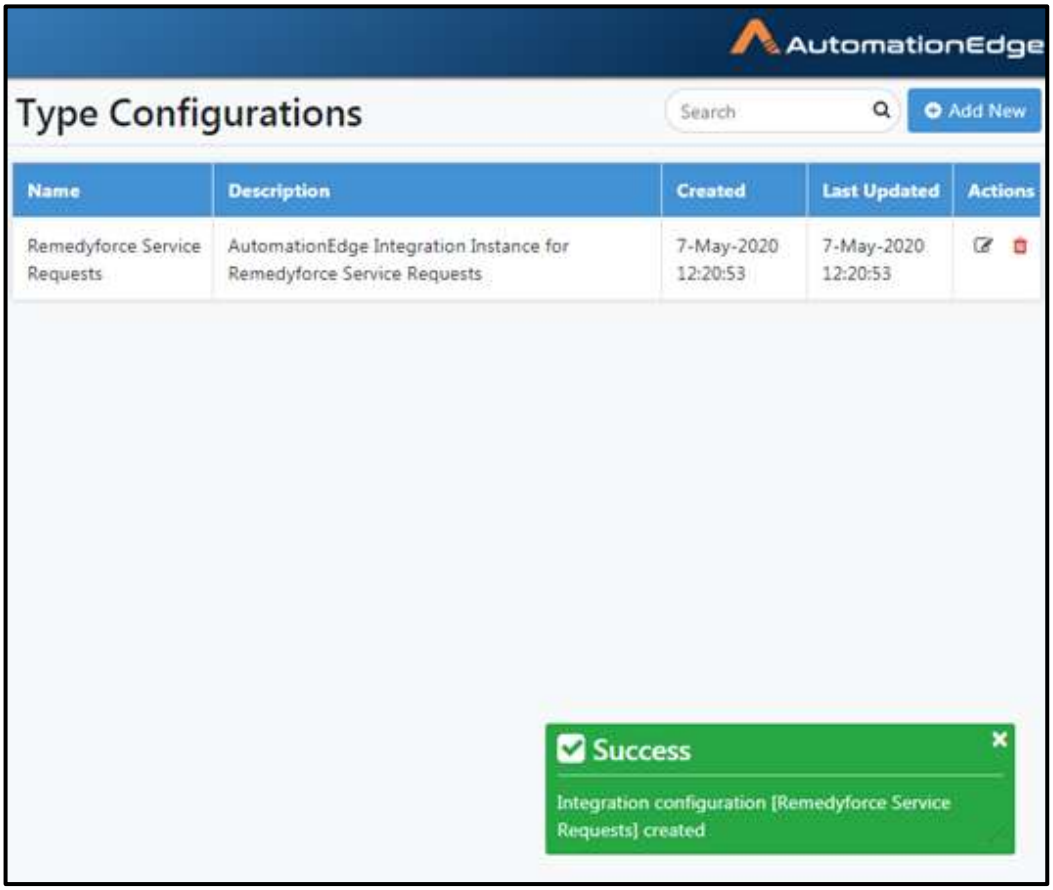


Figure 98i: Integration Type saved successfully

5.4 Import Seed Data Workflows

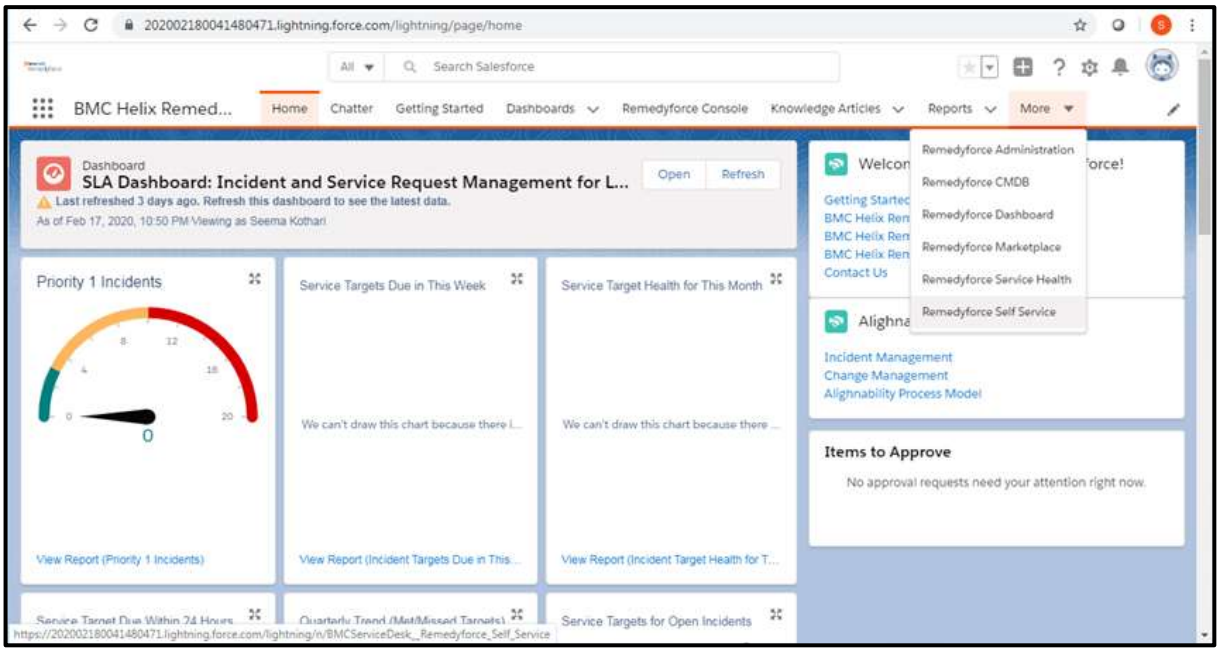
We populated our Remedyforce instance with Seed data. We need to import the corresponding workflows in AutomationEdge from UI. You may obtain the workflows from AutomationEdge Support (support.automationedge.com)

6 Remedyforce Service Request Fulfillment

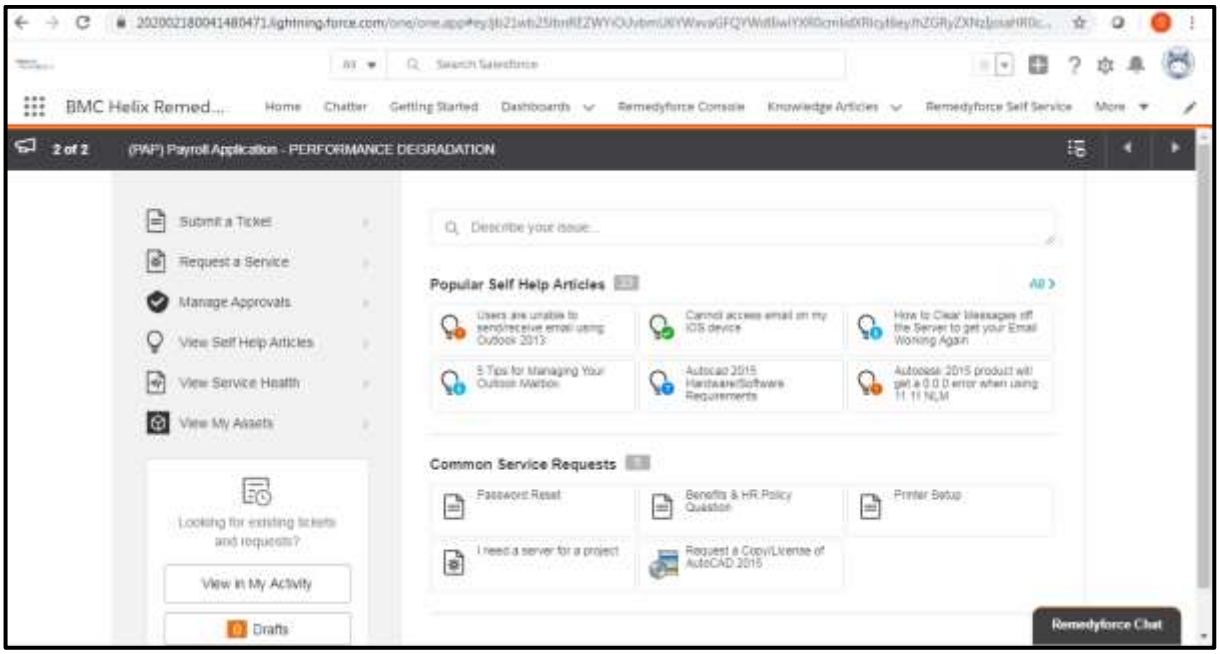
There are three service requests as part of seed data in Remedyforce. In the following sections we shall demonstrate end to end fulfillment of a Service Request.

6.1 Submit Service Requests in Remedyforce

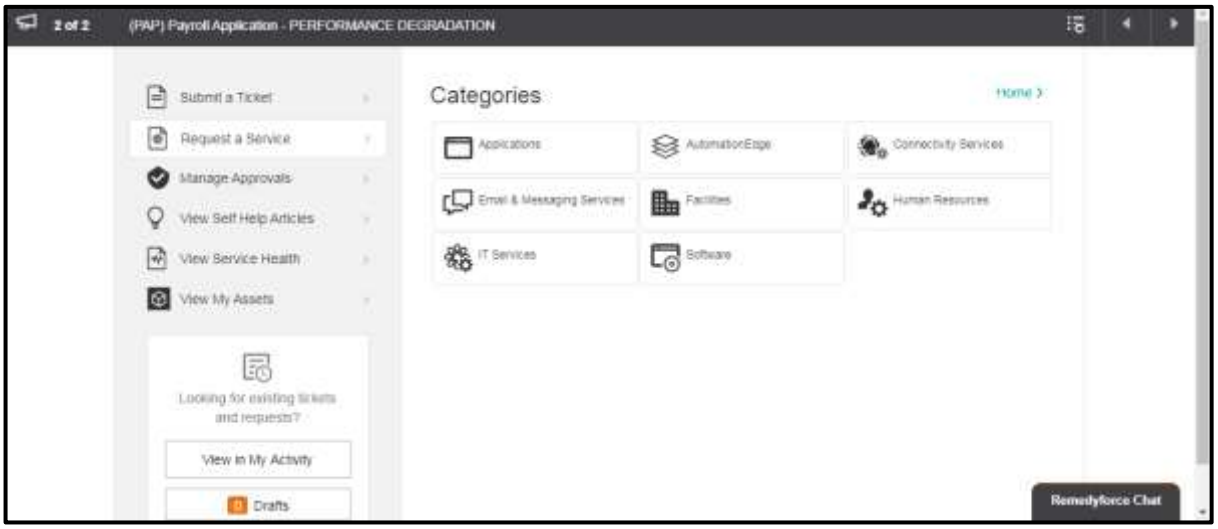
1. Login to BMC Helix Remedyforce.
2. Navigate to More→Remedyforce Self Service.



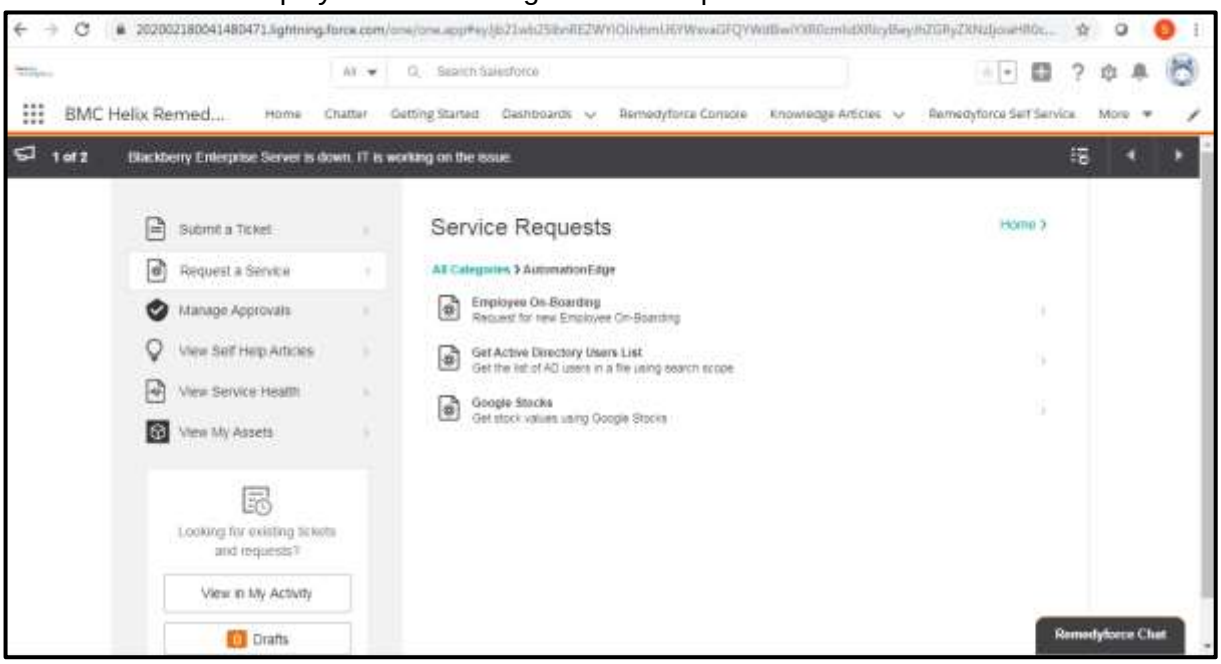
3. Click Request a Service.



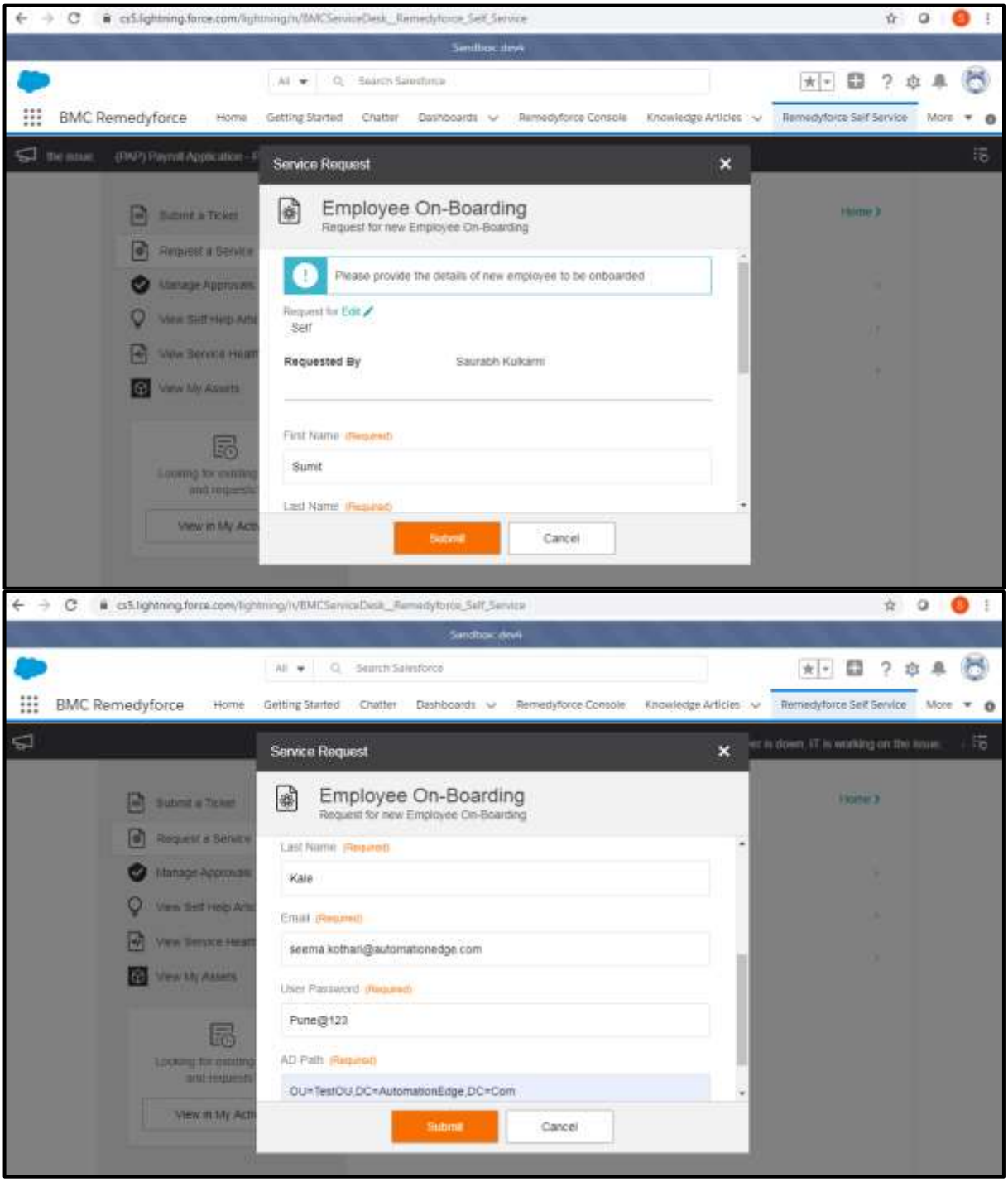
4. Click on AutomationEdge category.



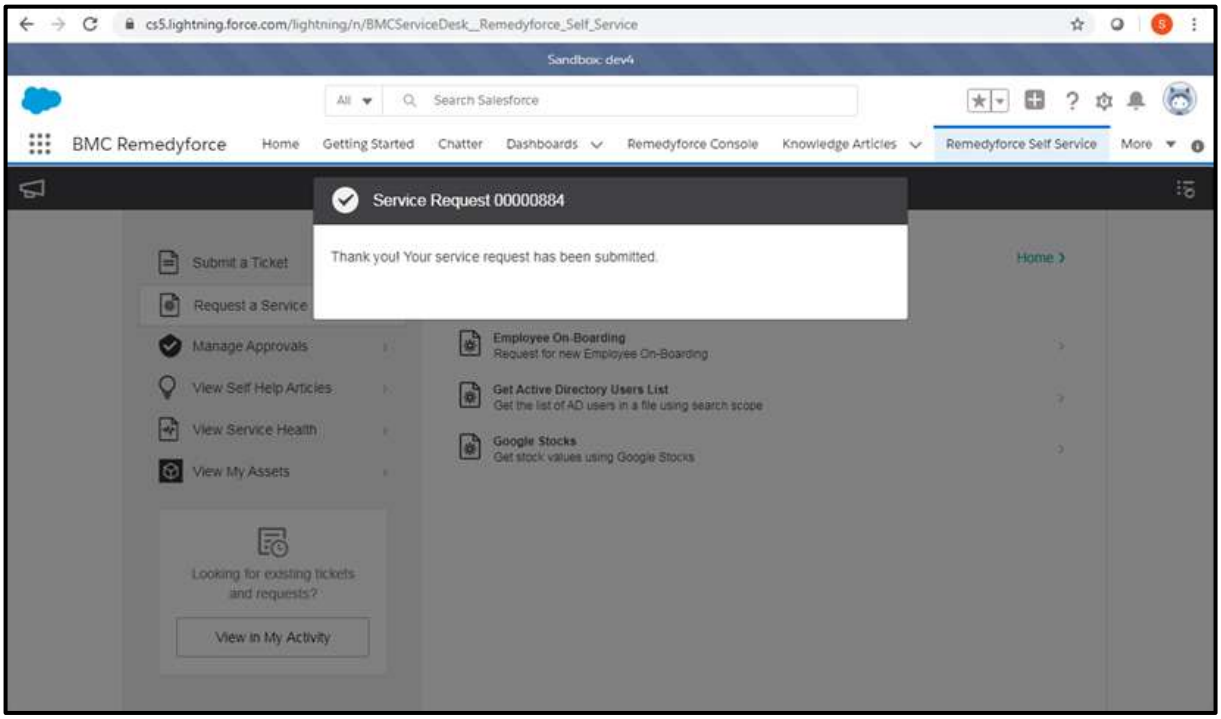
5. We shall execute Employee On-Boarding Service Request.



6. Fill in the Service Request parameters.
7. Service Request parameters may also have input files and output file names.

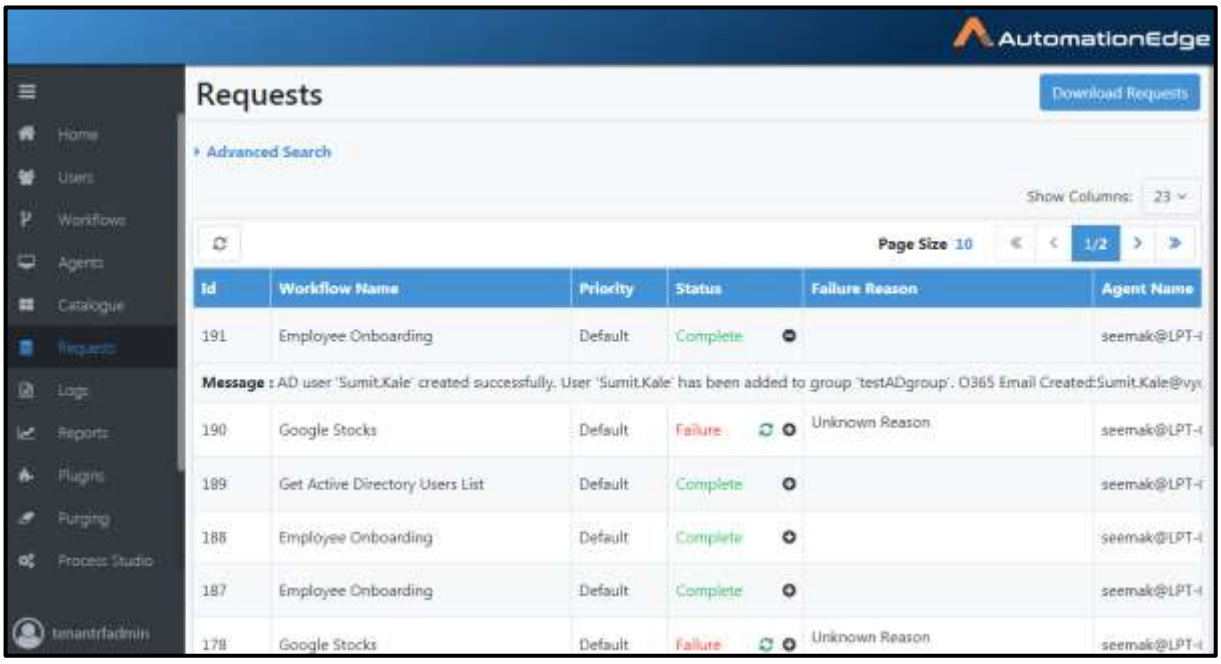


8. Service Requested submitted successfully message appears. Note the Service Request number (00000884 in this case).



6.2 View Fulfillment Workflows in AutomationEdge UI

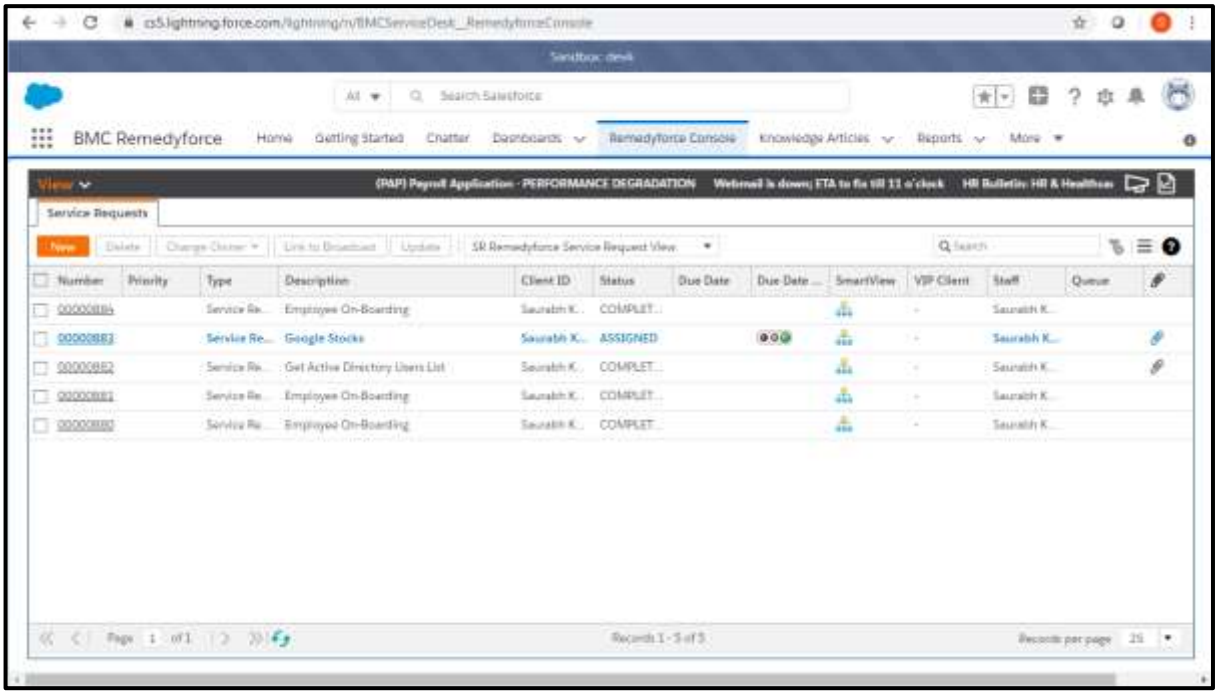
1. Navigate to AutomationEdge UI Requests menu.
2. You can see Employee Onboarding Workflow has successfully completed. AD user has been created successfully and added to AD group. O365 email account has also been created.



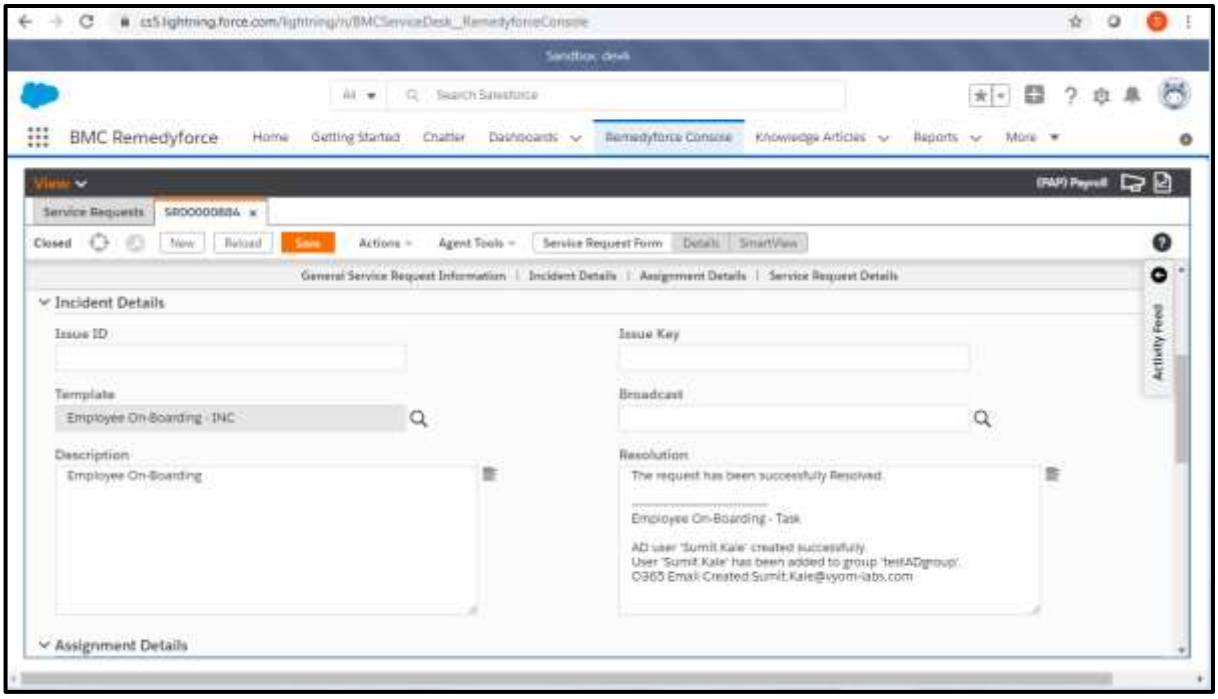
6.3 View Updated Service Request Status

You may view the updated Service Requests.

1. Navigate to Remedyforce console.



2. The Service Request details show that the updated Resolution as seen below.



3. This completes the process of Remedyforce Service Request fulfillment by AutomationEdge.

Contact

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