Aavenir

E Book

# SAP Ariba and ServiceNow Integration




www.aavenir.com contact@aavenir.com

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# Introduction to SAP Ariba and ServiceNow

SAP Ariba is a popular cloud-based ERP solution that lets buyers & suppliers connect and perform business activities on a single platform. Large-scale as well as growth-stage organizations use SAP Ariba for keeping track of activities related to procurement, contract management, sourcing, and more. It connects the entire procurement process from source-to-pay, thereby providing better visibility on the spending patterns[1].

ServiceNow[2] is an integrated cloud solution primarily addressing the ITSM (Information Technology Service Management) field. The platform helps in the automation of ITBM (Information Technology Business Management) and ITOM (Information Technology Operations Management). Organizations leverage the offerings of the ServiceNow platform for:

- Automation of business processes
- Improving transparency and efficiency in the management of internal business workflows
- Creation and management of contracts with vendors, partners, customers, and more; also termed 'Contract Lifecycle Management'[3]

Many organizations leverage the respective advantages offered by SAP Ariba and Service-Now for automating business processes, managing contracts & workflows, and optimizing business functions in finance, procurement, sales, etc. Scenarios that lead to data duplication or in consistencies across the core back-office functions and ITSM should be avoided at all costs.

For harnessing the value potential of investments in SAP Ariba and ServiceNow, organizations should eliminate the 'barriers' that might impact the functioning of the respective business functions. A simplified integration process between SAP Ariba and ServiceNow would help different departments collaborate efficiently for improved IT service delivery.

This whitepaper is a guide on how organizations can manage SAP Ariba integration with ServiceNow; thereby avoid dreadful incidents that could lead to data redundancy, non-compliance, business risks, and more.

1. https://www.ariba.com/about
2. https://www.servicenow.com/
3. https://aavenir.com/servicenow-contract-management-software/

# 'Why' SAP Ariba and ServiceNow Integration?

Digital Workflows are at the heart of digital transformation. Organizations make use of the respective capabilities of SAP Ariba and ServiceNow to efficiently manage and automate processes and workflows for attaining scalability and agility at each departmental level. The key to their efficient usage is ensuring that consistent information is shared when managing 'anything' (e.g. processes, workflows, contracts, etc.).

Automated integration of SAP Ariba and ServiceNow eliminates (or minimizes) the probability of errors that could arise due to time-consuming manual processes. The ServiceNow platform enables integration with third-party applications, data sources, APIs, products, and infrastructure[4] .

Seamless integration with ServiceNow platform is facilitated by ServiceNow Integration Hub platform. It lets developers and process owners integrate business processes in ServiceNow to other external systems (e.g. SAP Ariba) by extending the Flow Designer[5].

## Fast Track Use Cases for Improved Delivery Efficiency

The cross integration of SAP Ariba with ServiceNow provides enterprises the opportunity to make the best out of both these applications. While SAP Ariba is primarily used as a procurement and supply chain collaboration solution, ServiceNow is primarily used as a workflow tool that automates any workflow within the organization.

Though they serve different purposes, there are umpteen scenarios (or use cases) where data available in the ServiceNow instance needs to be accessed in the SAP Ariba instance (and vice-versa). Use cases that involve cross-pollinating data can be better implemented through cross-tool integration, as it results in the prevention of data discrepancies, elimination of human errors, and improving the overall flow of work.

Here are some of the common business use cases where SAP Ariba and ServiceNow can make a huge impact:

- Migrating Purchase Orders (POs) from SAP Ariba to ServiceNow in order for ServiceNow Project Portfolio Management (PPM) to track the spend against the cost plan
- Migrating Purchase Orders (POs) from SAP Ariba to ServiceNow in order for ServiceNow Project Portfolio Management (PPM) to track the spend against the cost plan

4. https://docs.servicenow.com/bundle/paris-platform-administration/page/integrate/concept/c_IntegrateWThirdPartyAppsDataSrces.html
5. https://docs.servicenow.com/bundle/paris-servicenow-platform/page/administer/flow-designer/concept/flow-designer.html

- Synchronizing the supplier data between SAP Ariba and ServiceNow, allowing ServiceNow Vendor Risk Management (VRM) to use the same supplier data from the system of records (SAP Ariba)
- Assuming that the contracts are created in ServiceNow, migrating Contracts from Service-Now to SAP Ariba in order for downstream systems to use that contract data
- Assuming that the contracts are created in SAP Ariba, migrating contracts from SAP Ariba to ServiceNow in order for ServiceNow ITSM, ITAM or GRC modules to use the contract data
- Keeping Vendor Master Data in Sync with SAP Ariba
- Initiating Souring projects on SAP Ariba from ServiceNow for IT purchases
- Sending invoices/payment data to SAP Ariba from ServiceNow

## Deep Dive Into IntegrationHub on ServiceNow

IntegrationHub (IH) is an application on the Now platform that is primarily used for enabling process automation and integration using common protocols such as APIs, Power Shell, etc. The protocol makes it possible to interact with external applications like SAP Ariba in ServiceNow.

Developers and process owners[6] can use IntegrationHub for building integration actions termed as Spokes for executing relevant commands against an external system. In the context of this whitepaper, SAP Ariba is the external system.

IntegrationHub provides two distinct mechanisms through which ServiceNow can connect to external systems (or sources):

- Downloading Pre-built spokes[7] available on the ServiceNow store
- Developing custom integrations using common protocols and packaging spokes into reusable actions that can be further used in the Flow Designer

The pre-built spokes are 'Codeless Connectors' that make integrations super-easy, thereby enabling the extension of end-to-end digital workflows to third-party systems. All of this without code!

6. https://www.servicenow.com/content/dam/servicenow-assets/public/en-us/doc-type/success/quick-answer/process-owner-manager-difference.pdf
7. https://docs.servicenow.com/bundle/paris-servicenow-platform/page/administer/integrationhub/reference/spokes-list.html

As of Paris release, the IntegrationHub provides a pre-built **SAP Ariba Spoke** that is instrumental for performing the following operations:

- Export → Data from SAP Ariba to ServiceNow
- Export → Data from ServiceNow to SAP Ariba

Here are some of the primary advantages of using IntegrationHub for automation of third-party platform integrations:

- Integration of business process with external systems by extending the Flow Designer content
- Simplified visualization of business processes and integrations from a single interface (i.e. ServiceNow Dashboard), as multiple automation capabilities provided by the Now platform are consolidated into a single system of action
- Subject-Matter experts develop and share spokes with flow designers, thereby promoting business process automation

## Spokes in ServiceNow

A spoke in ServiceNow is a scoped application that includes the Flow Designer or Integration Hub actions (or sub flows)[8]. IntegrationHub is akin to a central repository that lets developers and process designers download spokes for popular applications (across a range of categories) that can be integrated with the ServiceNow platform.

Developers and process designers can tune (or reuse) the spoke logic to align with their application requirements. The baselines spokes are available for usage on the IntegrationHub. Additional spokes can be downloaded from ServiceNow Store[9] or developers can create spokes tailor-made for their application.

Before downloading any scope, it is essential to check its comparability with the ServiceNow instance. For example – SAP Ariba Spoke is only compatible with the Paris release of ServiceNow. The exhaustive list of IntegrationHub available spokes is available here.

8. https://developer.servicenow.com/dev.do#!/learn/learning-plans/orlando/servicenow_application_developer/app_store_learnv2_rest_orlando_integrationhub_spokes
9. https://store.servicenow.com/sn_appstore_store.do

## SAP Ariba Spoke – The 'Bridge' Between SAP Ariba and SeviceNow

In one of the earlier sections titled 'Fast track Use Cases for improved Delivery Efficiency', we outlined few of the many business use cases where developers and process designers might require access to data residing in both SAP Ariba as well as ServiceNow.

This is normally the case when organizations use SAP Ariba as a back-end to store system of records. Master Data resides in SAP Ariba whereas ServiceNow is used as a 'Transactional System'.

Listed below is the commonly used SAP Ariba Master Data:

- **Vendor Master** - Store supplier related information in SAP ERP system.
- **Material Master** - Store product and component related information that the organization is procuring in SAP ERP system.
- **Customer Master** - Store customer related information in SAP ERP system.
- **Purchase Order (PO)** - Store purchase orders that have to be processed by the appropriate department.
- **Bill Of Material (BOM)** - Store the list of materials required for producing a finished product.

Thus, **SAP Ariba** acts as the repository of **'Master Data' (or System of Records)** and **ServiceNow** acts as a **'Transactional System'**. Take the case of Aavenir, a Source-to-Pay (S2P) solution provider on ServiceNow platform. Enterprises use Aavenir for a wide range of tasks e.g. creating contracts for suppliers, complying with the contractual obligations, processing invoices and many more. For example, the task of processing invoices requires fetching relevant data (or information) from Aavenir (which is built on ServiceNow) as well as SAP Ariba. This is where SAP Ariba spoke for ServiceNow can act as a bridge between the two parties.

### Business Case 1 : Creating and Managing Supplier Contracts

Contract plays a vital role in kick-starting new relationship with a supplier. For an IT contract where you are procuring a cloud infrastructure[10], SLA's (Service License Agreements) like uptime, server response time, closest server location, etc. should be negotiated and agreed upon with the vendor. The contract tracking mechanism must be decided by the IT team, the effect of which is applicable till the end of the contract and consequent obligations management.

10. https://aavenir.com/mastering-it-contracts-management-tips-to-optimize-it-vendor-management-using-servicenow/

However, Aavenir (which is used for creating and managing supplier contracts) would require access to the Master Data (i.e. supplier information) that is residing in SAP Ariba. Exporting the list of suppliers from SAP Ariba and importing it in ServiceNow 'company table' provides Aavenir (or ServiceNow) access to master data of 'suppliers'.

Aavenir can use the list of suppliers for a wide range of tasks - creating contracts, processing supplier invoices, and more.

## Business Case 2: Automating Accounts Payable Invoice Processing

Irrespective of the scale of the organization, invoices are normally processed by the organization's accounts payable department. The data on the invoice, including the supplier information, has to be validated before the invoice can be sent for processing.

Automation of Accounts Payable (AP) results in improved information accuracy, more visibility into the performance of the AP department, along with various other benefits[11]. As a part of the invoicing process, Purchase Order (PO) data has to be validated against the data in the Invoice. In scenarios where SAP Ariba is used for the creation and management of POs, the invoice approval process can only proceed if the PO data is available in ServiceNow.

To achieve excellence in the process of invoice capture and workflow for AP, SAP Ariba spoke can be used for importing the Purchase Order data from SAP Ariba into Aavenir (or ServiceNow).

## Business Case 3: Managing & Tracking Supplier Contractual Obligations

Contractual Obligations are duties that all the parties involved in a contract (i.e. the promisor, the promisee, and an optional third-party beneficiary) are legally responsible to act upon in the contract agreement. Obligations are stated requirements - bound commitments concerning regulatory and contractual directives[12].

Contractual Obligation compliance tracking helps in minimizing the risks associated with non-compliance of contractual obligations, continuous tracking of the status related to contract obligation, and more. A major challenge in identifying Contract Obligation is the fragmentation of data used in devising the contract across different IT systems (e.g. ERP, CRM, etc.).

11. https://aavenir.com/6-reasons-to-consider-automating-accounts-payable-invoice-processing/
12. https://aavenir.com/contracts-obligations-compliance-tracking-management/

To ensure that the Contractual Data across IT systems are in sync, data has to be in sync across those systems. Let's take a scenario where Aavenir (or ServiceNow) is used for creating Contracts. The Contract Metadata serves as the key for accessing the contract exposure and risk, contract compliance management, search, as well as reporting.

For this, the Contract created using Aavenir should be pushed back to the other IT system (i.e. SAP Ariba), so that it can execute the tasks related to the SAP Ariba Downstream Process. If SAP Ariba is used for creating a PO, the contract data present in Aavenir (or ServiceNow) should be imported to SAP Ariba using the SAP Ariba Spoke. As Aavenir is responsible for executing the Contract, the Metadata (e.g. price, contract start and end data, etc.) in the Contract is a part of the Contract Table.

Once the Contract is electronically signed, the signed Contract copy should be pushed back to SAP Ariba for it to perform Downstream Processing.

## SAP Ariba Spoke Architecture

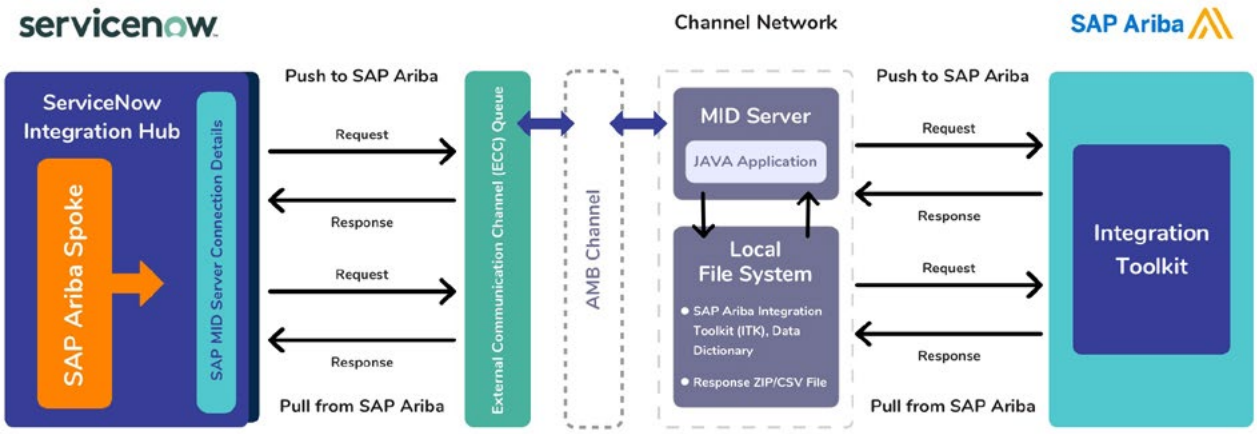



Figure 1 SAP Ariba and ServiceNow Integration

There are two broad categories of tasks – ITK (Integration Tool Kit[13] ) tasks and Web Services (WS). The export ITK is based on the MID-Server configuration.

13. https://help.sap.com/viewer/d066a90ef618101499ccd55dc3c29025/2003/en-US

## How to Install SAP Ariba Spoke on ServiceNow?

By installing the SAP Ariba Spoke in ServiceNow, enterprises can make the best out of both the platforms. SAP Ariba Spoke helps in managing buyer suppliers and sourcing suppliers in SAP Ariba instance from the ServiceNow instance.

**Important** – SAP Ariba Spoke is available in ServiceNow Paris release. Accessing the SAP AribaSpoke requires the IntegrationHub subscription package; further details are available in the Request IntegrationHub section on ServiceNow website.

### Spoke Dependencies

For partner instances, one can directly install the spoke from the ServiceNow plugins list. For production instances, it'd require purchasing a license, and then installing the spoke from the ServiceNow store.

The following plugins have to be pre-installed before the SAP Ariba Spoke can be installed in the ServiceNow instance:

| Plugins | Description |
|---|---|
| ServiceNow IntegrationHub Action Step - REST [com.glide.hub.action_step.rest] | Enables the REST action step in Flow Designer. |
| ServiceNow IntegrationHub Action Step – SOAP [com.glide.hub.action_step.soap] | Enables the SOAP action step in Flow Designer. |
| Complex Object [com.glide.cobject] | Exposes JavaScript APIs that lets developers and process owner's work with tables using scripts[14]. |

14. https://docs.servicenow.com/bundle/paris-application-development/page/script/general-scripting/reference/r_GlideClassOverview.html

| Plugins | Description |
|---|---|
| ServiceNow Flow Designer - Dynamic Inputs [com.glide.hub.dynamic_inputs] | It helps to dynamically display and assign values to the inputs during the flow design[15]. |
| Flow Designer Action Step - Script on MID [com.glide.hub.action_step.script_mid] | Provides action steps that use the Management, Instrumentation, and Discovery (MID) Server. |
| Utility Actions spoke | Provides actions like Add File to Zip, Append to File, Append to Delimited File, etc. for automating tasks when events occur in the ServiceNow Instance[16]. |

The ServiceNow IntegrationHub Runtime [com.glide.hub.integration.runtime][17] that was earlier necessary for installing the Core Flow Designer functionality was deprecated in the Orlando release of ServiceNow. Few of the plugins mentioned above are available as licensable features and might require appropriate licenses[18], when used outside the Spoke implementation. Further details about Spoke Requirements are available on the Spoke Requirements section on ServiceNow website

## Spoke Actions

The goal of the SAP Ariba Spoke is to provide baseline actions for performing CRUD (Create, Read, Update, and Delete) operations for automating SAP Ariba tasks when events occur in the ServiceNow instance. Shown below is the available list of actions:

15. https://docs.servicenow.com/bundle/paris-servicenow-platform/page/administer/flow-designer/concept/dynamic-inputs.html
16. https://docs.servicenow.com/bundle/paris-servicenow-platform/page/administer/integrationhub-store-spokes/concept/utilityact-spoke.html
17. https://docs.servicenow.com/bundle/orlando-release-notes/page/administer/plugins/reference/plugin-changes.html
18. https://docs.servicenow.com/bundle/paris-servicenow-platform/page/administer/integrationhub-store-spokes/concept/sap-ariba-spoke.html

| Categories | Action |
|---|---|
| SAP Ariba ITK Export | • Retrieve Invoices<br>• Retrieve Contracts<br>• Retrieve Purchase Orders (POs)<br>• Retrieve Vendor |
| SAP Ariba ITK Import | • Import Supplier Organizations |
| SAP Ariba SOAP Web Services (WS)[19] | • Create Suppliers<br>• Create Sourcing project<br>• Update Sourcing Project |

Here is the list of supported APIs by the SAP Ariba application:

- **REST API** - In the REST architecture, web services are considered as 'Resources' and all services can be identified by their URLs (GET or POST).
- **SOAP API** - SOAP service provides a standard way of structuring XML and helps with web service communication over HTTP (or HTTPS).

Further insights on Spoke Actions are available on the ServiceNow website here

## Spoke Modules

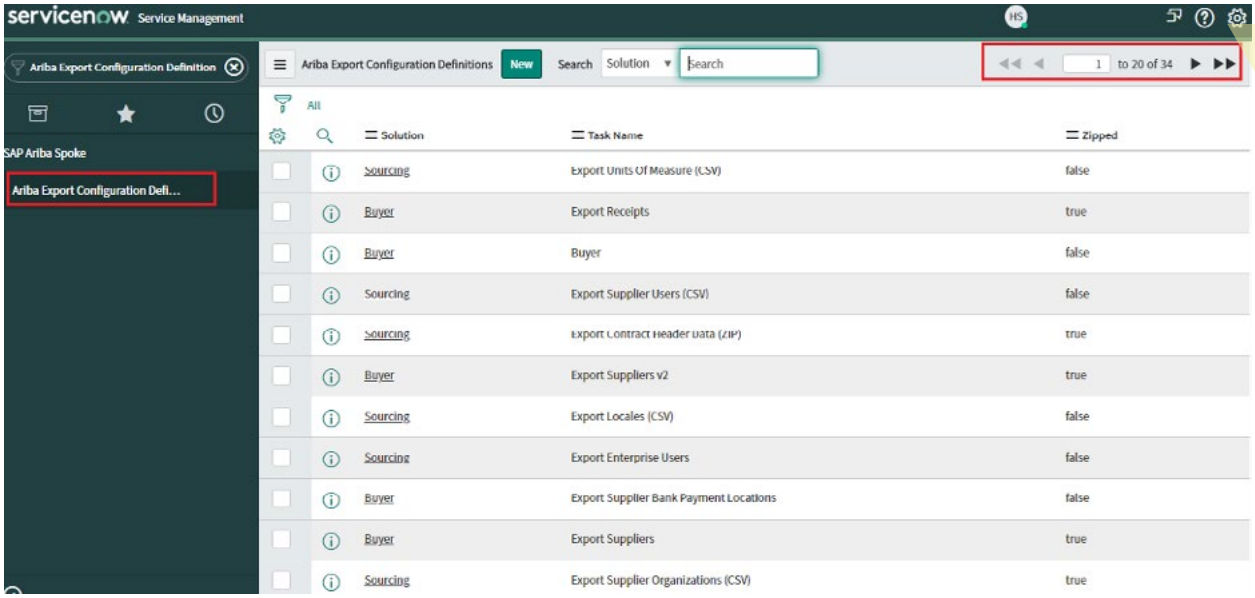
The SAP Ariba Spoke adds the SAP Ariba Spoke application to your ServiceNow instance and adds the following modules:

- **Ariba Export Configuration Definition**

This displays the list of available export configurations. By default, 34 export configurations are available with the Spoke. You can modify the existing configurations or create new export configurations based on your requirements.

19. https://help.sap.com/viewer/eb12a8256a244b86be23c9b4e4e751da/cloud/en-US/7c8c9c0871ea10148d70a6618e525f48.html

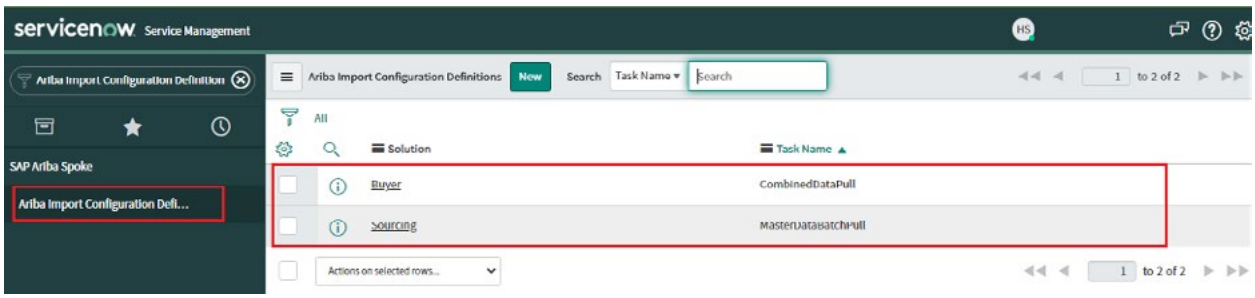
Data Stored in ***sn_sap_ariba_spoke_ariba_file_definition table***




- **Ariba Import Configuration Definition**

This displays the list of available import configurations. By default, two import configurations are available with the Spoke.

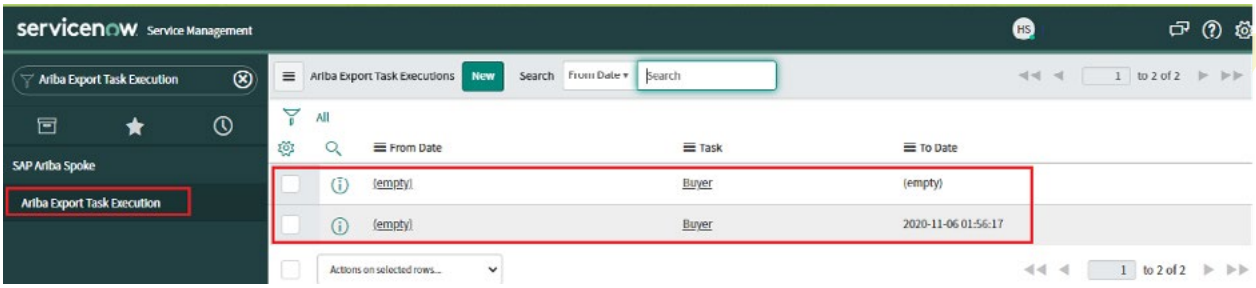
Data Stored *in* ***sn_sap_ariba_spoke_ariba_import_configuration_definition table***




- **Ariba Export Task Execution**

This displays the list of CSV files generated when data from the SAP Ariba instance is exported to the ServiceNow instance.

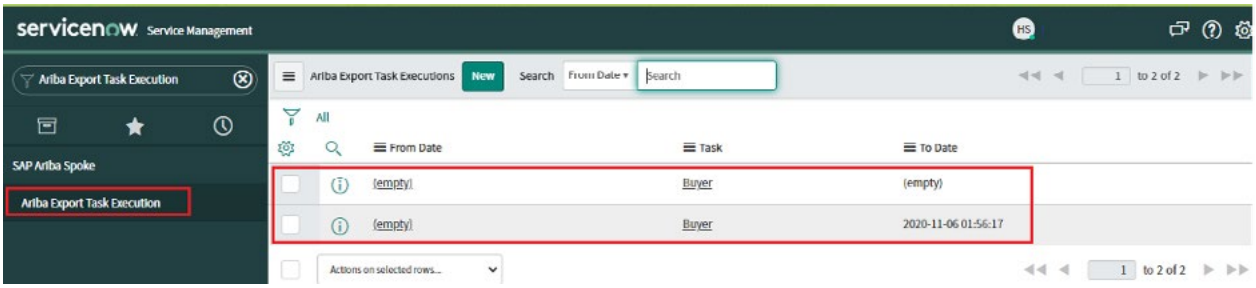
Data Stored in ***sn_sap_ariba_spoke_ariba_task_execution table***




- **Supplier IDs Buyer**

The records for buyer suppliers have to be created by the Admin here. This module displays the information about the buyer suppliers.

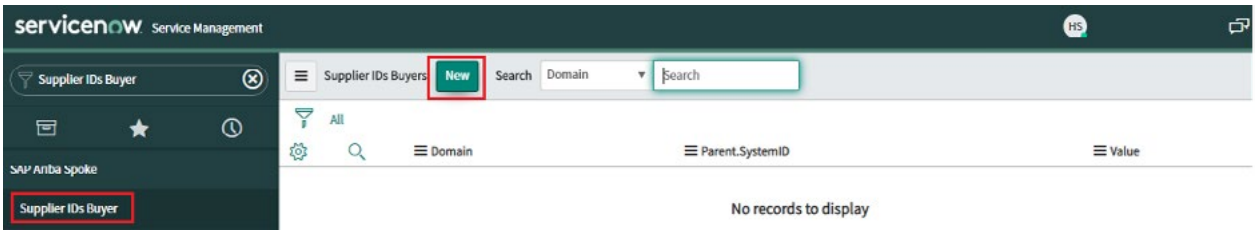
Data Stored in ***sn_sap_ariba_spoke_supplier_ids_buyer table***




- **Supplier IDs Sourcing**

The records for sourcing suppliers have to be created by the Admin here. This module displays the information about the sourcing suppliers.

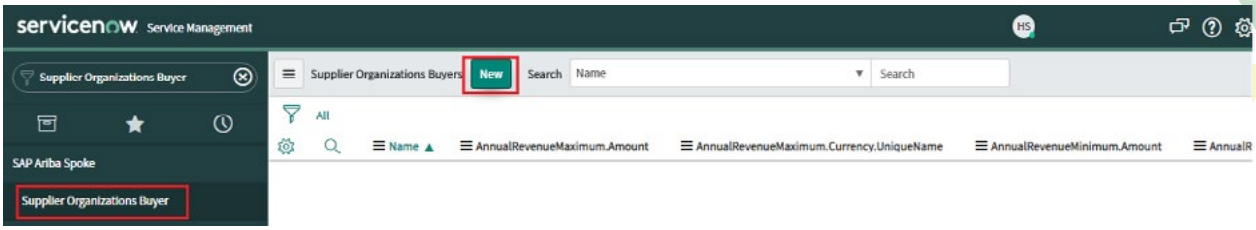
Data Stored in ***sn_sap_ariba_spoke_supplier_ids table***

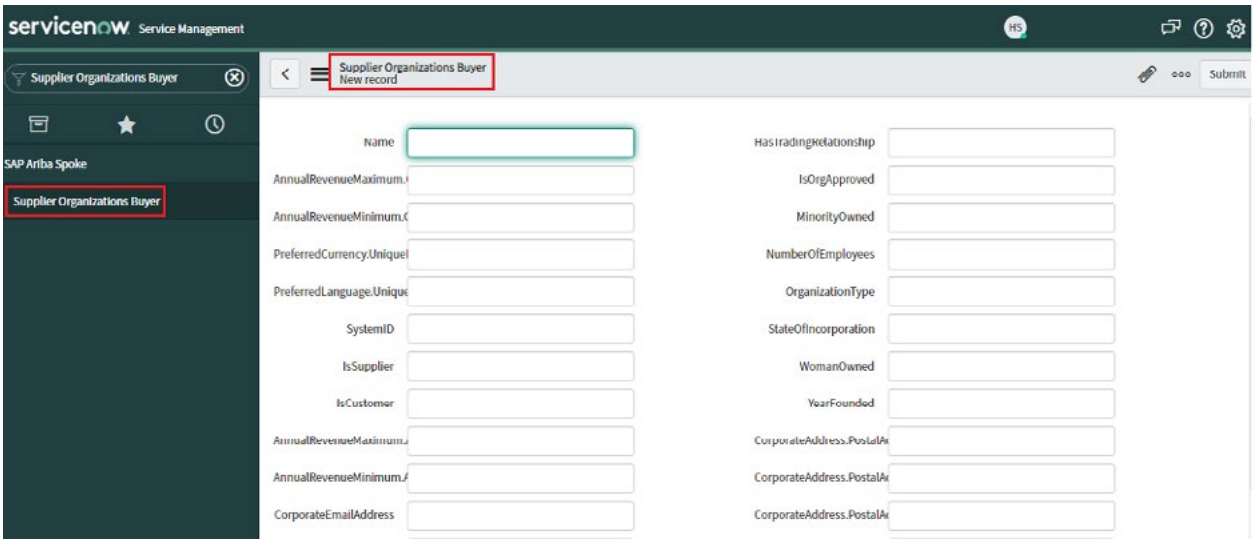



- **Supplier Organizations Buyer**

The Admin creates records for buyer supplier organizations here. This option displays information of the buyer supplier organizations.

Data Stored in ***sn_sap_ariba_spoke_supplier_organizations table***

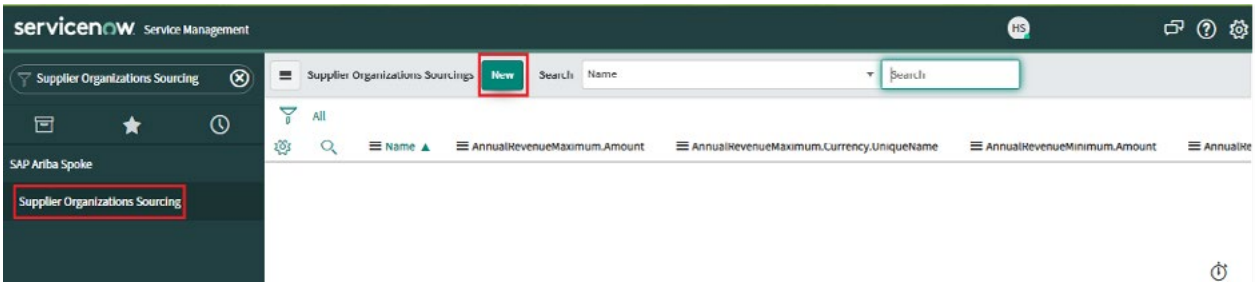


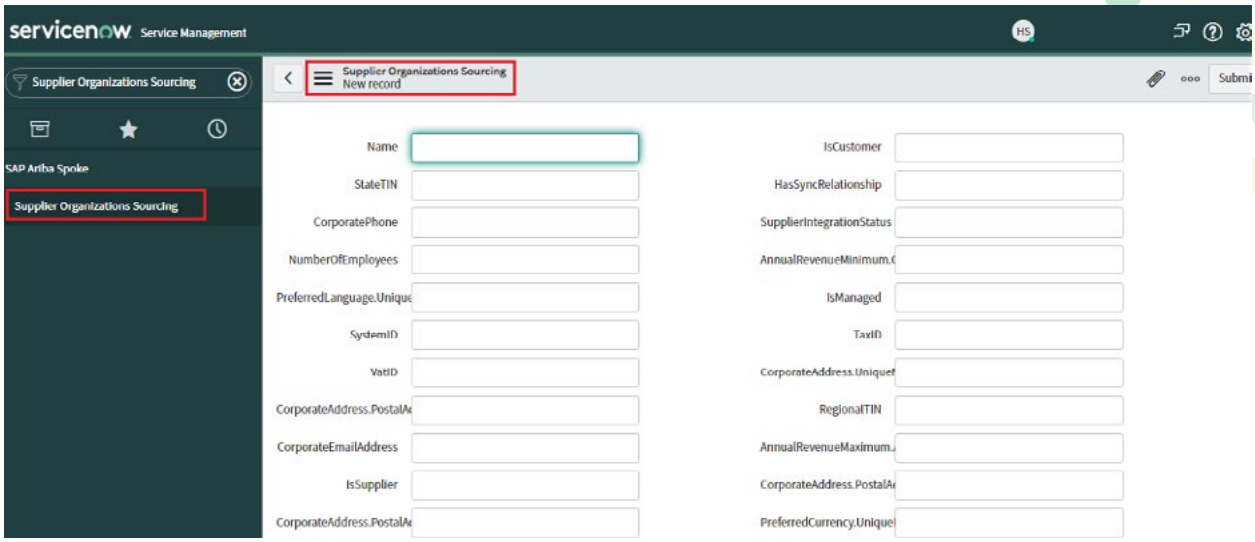




- **Supplier Organizations Sourcing**

The Admin creates records for sourcing supplier organizations here. This option displays information of the sourcing supplier organizations.

Data Stored in ***sn_sap_ariba_spoke_import_supplier_organizations_csv table***






## How to Setup SAP Ariba Endpoint and Credentials?

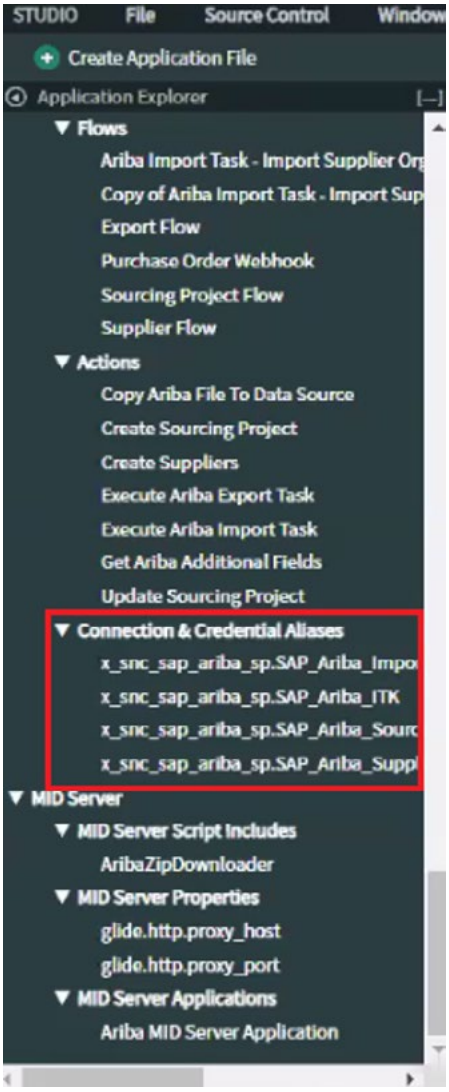
With the installation of the SAP Ariba Spoke, you would be required to set up the SAP Ariba Endpoint and credentials for the SAP Ariba instance that you wish to connect to.

IntegrationHub uses Aliases for managing connection and credential information. The primary advantage of Aliases is that the user no longer has to configure multiple credentials and connection information profiles, especially when multiple environments are involved.

Connection and Credential Alias available with the SAP Ariba Spoke are:

- SAP_Ariba_Import
- SAP_Ariba_ITK
- SAP_Ariba_Sourcing
- SAP_Ariba_Suppliers

Here is the snapshot that shows the Connection & Credential Aliases:

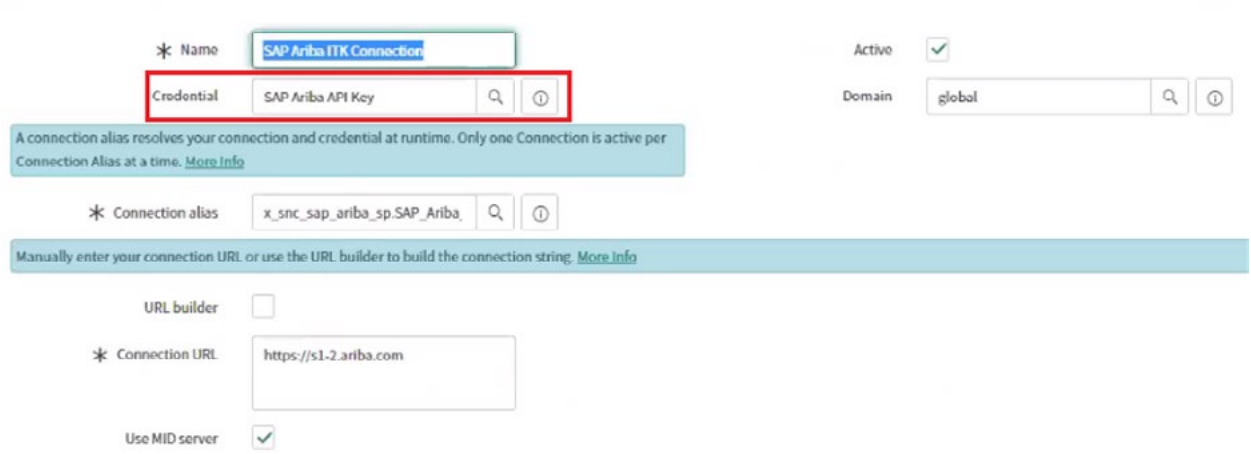


Shown below are the steps for creating a Shared Secret (or API Key) for ITK Tasks:

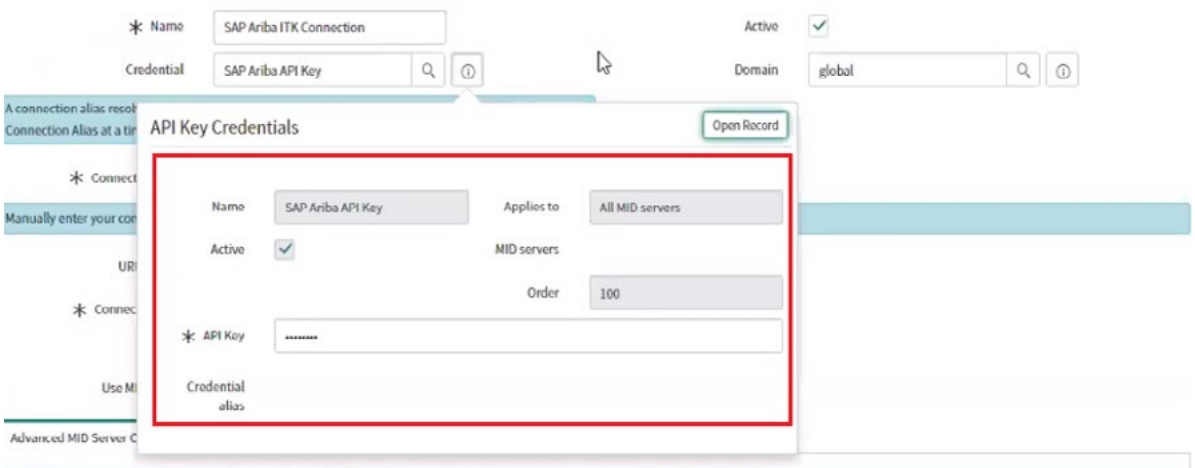
1. **Enable ITK (Integration Tool Kit) by creating a shared secret. You can create two shared secrets: one for the Buyer and one of the Supplier but you have to provide the same shared secret:**

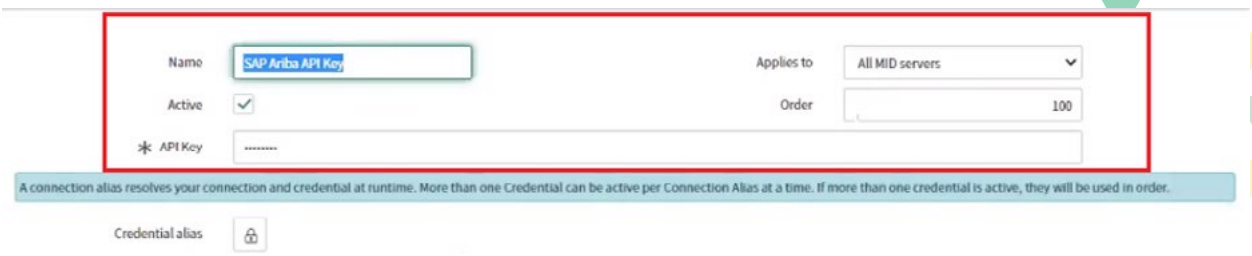
   - For creating a shared secret for Sourcing, navigate to Administration in your SAP Ariba solution
   - For creating a shared secret for Supplier, navigate to Core Administration in your SAP Ariba solution

Shown below is a sample connection alias (or Credential) for an Export ITK Task:

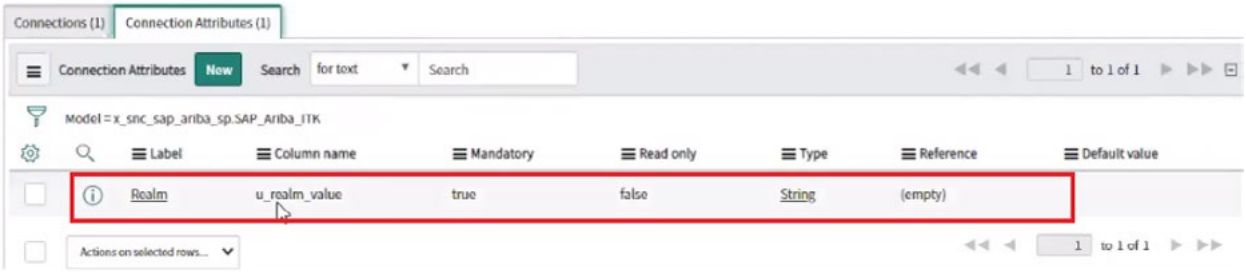



Clicking on the I (or Information) button besides the 'Credential' opens up the window for configuring the Shared Secret

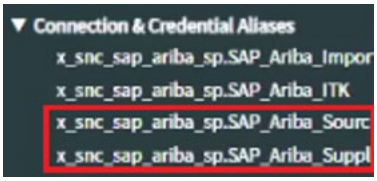




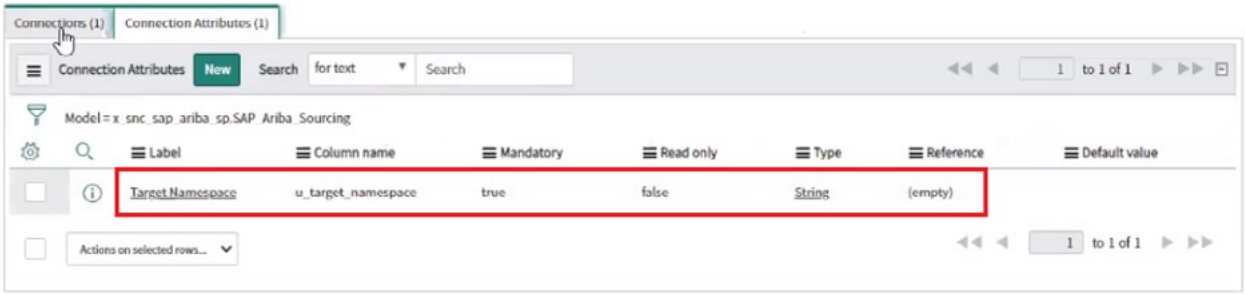

Shared Secret is the API Key which is the parameter used in the authentication of the ITK along with the URL dependent on the realm (which is shown below). Realm is like a tenant i.e. you would have different realm(s) for different customer(s).



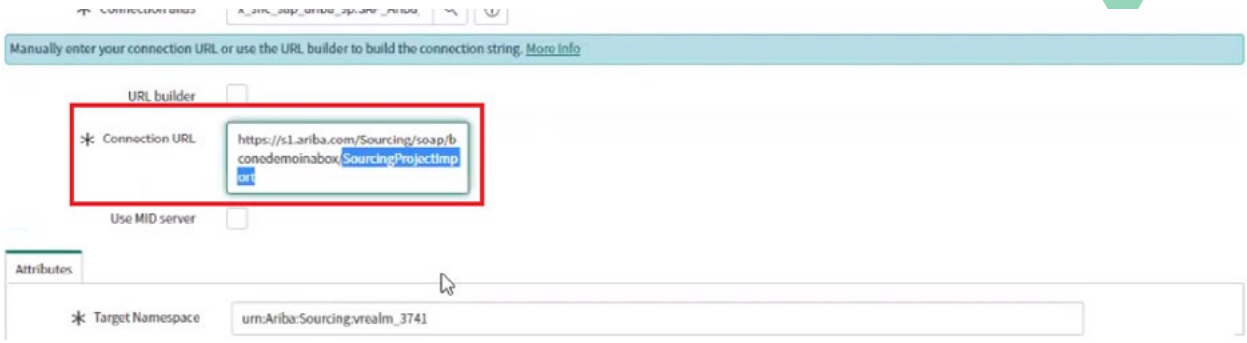

2. For **SOAP-based tasks**, separate 'connection and credential aliases' have to be created for Sourcing and Suppliers



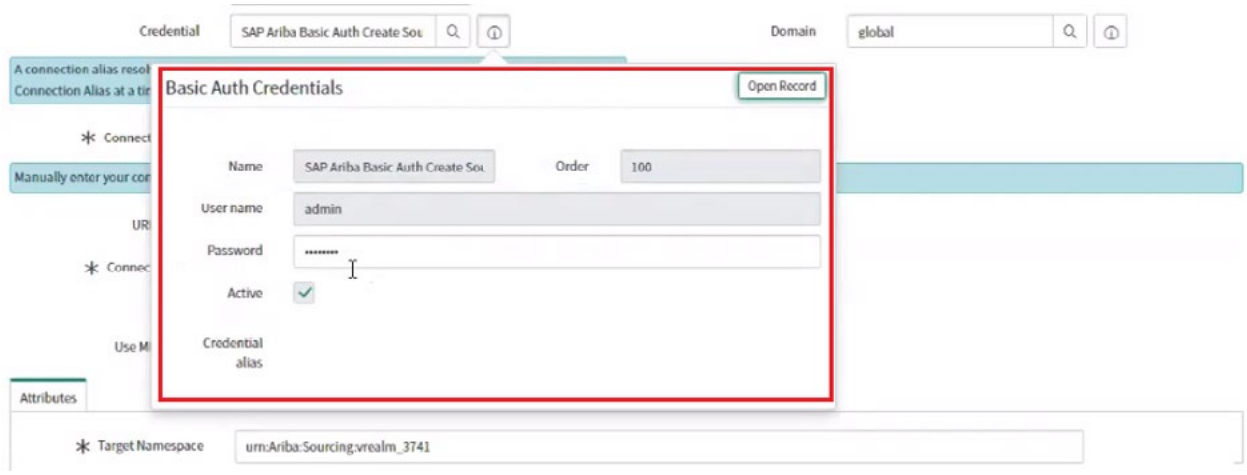

Target Namespace is passed as a 'Connection Attribute' to the SOAP step and is used in the Action Step (i.e. com.glide.hub.action_step.soap). Sourcing and Buyer has separate Target NameSpace.



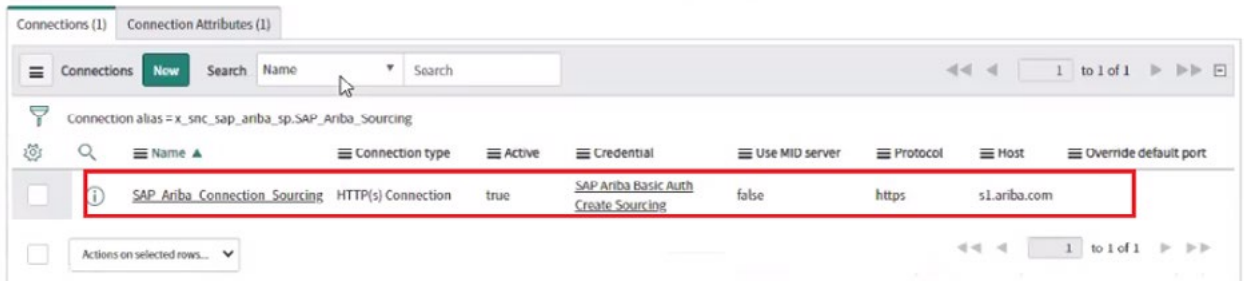

As seen below, the target NameSpace (i.e. SourcingProjectImport) is passed in the Connection URL.




For Credential, you can use the Basic Auth Credentials.




Like Sourcing, the same set of steps can be repeated for creating 'Connection and Credential Aliases' for Supplier.



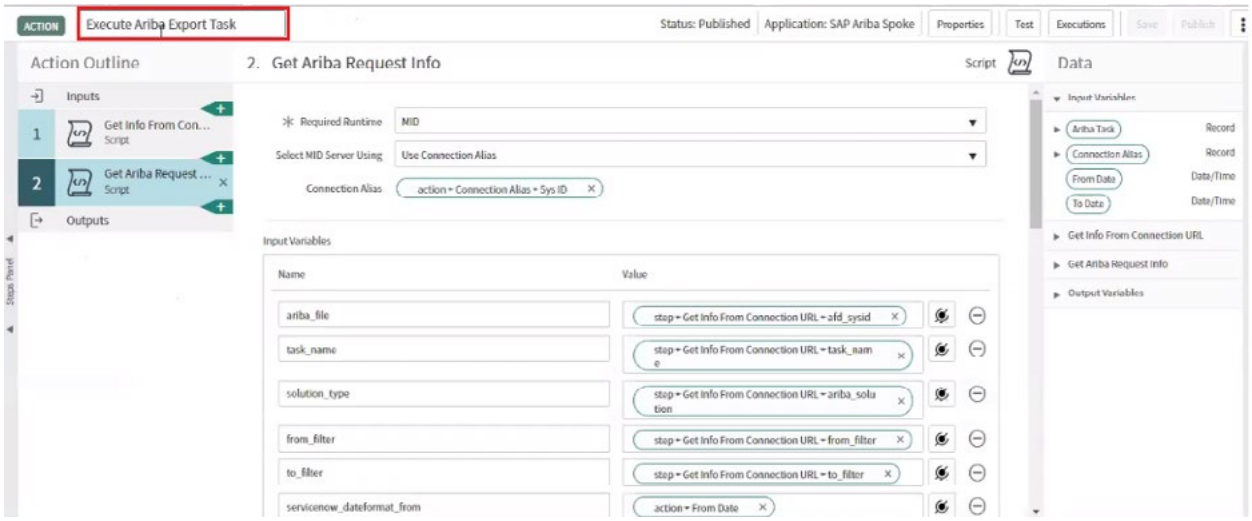

Like Sourcing, you can use Basic Auth credentials also for Supplier.

# How to Perform ITK Export Task on SAP Ariba?

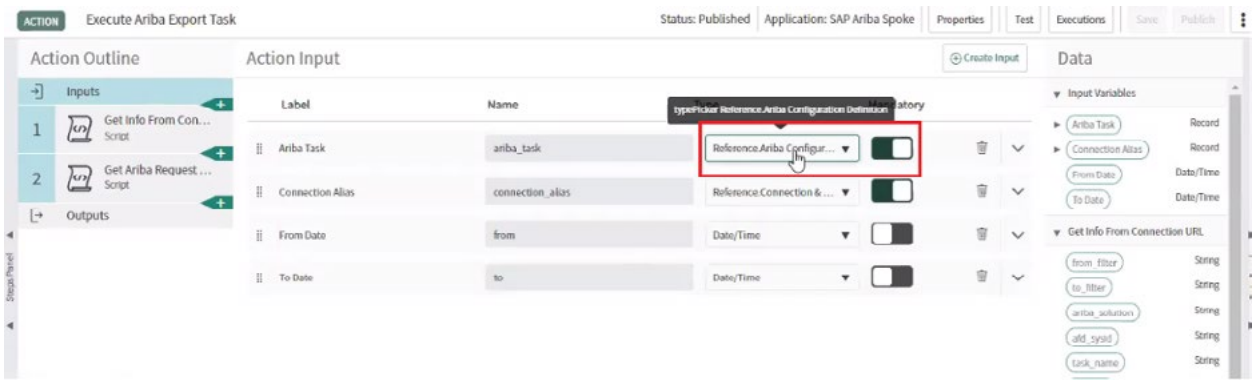
After the appropriate endpoint(s) and credentials are setup, the user can create a Flow in ServiceNow and use tasks offered by SAP Ariba Spoke in the Action for performing corresponding data export task on SAP Ariba.

Here are the steps for executing Ariba Export Task:

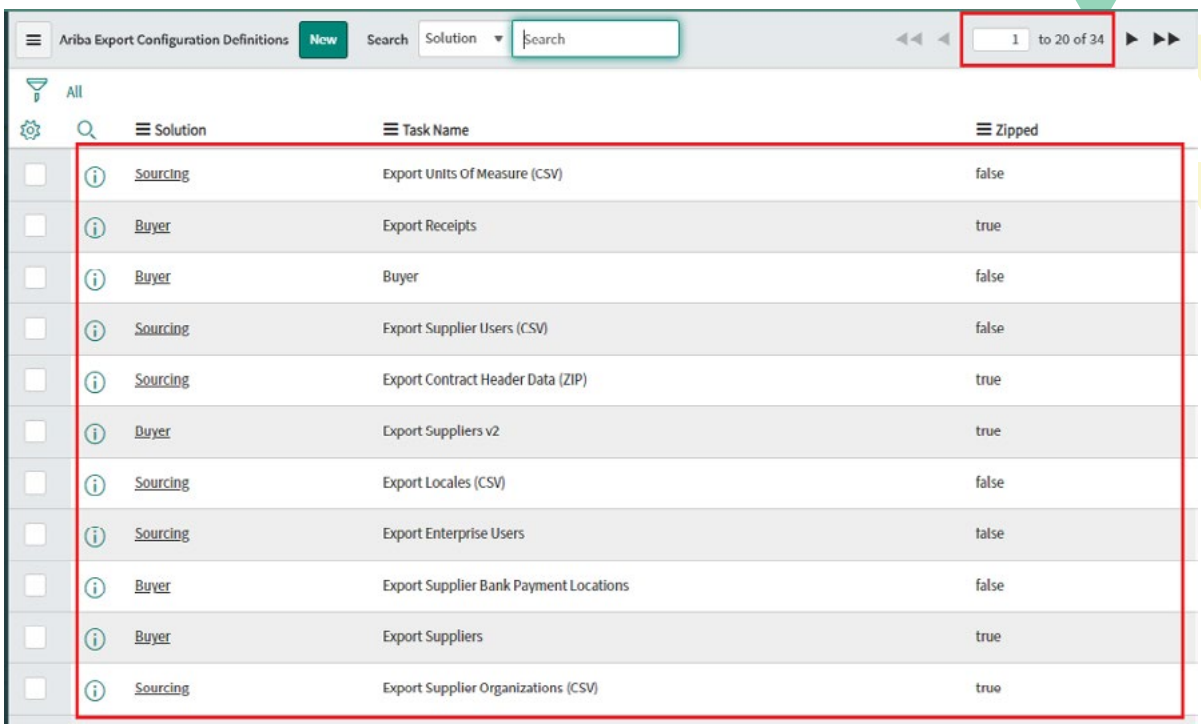
1. Shown below is the ITK-based Ariba Export Task




2. In the Input, the Reference Table is used. The Table stores the list of export tasks (or configurations) available with the Spoke




By default, the Spoke provides 34 export configurations and you can select from the available configurations

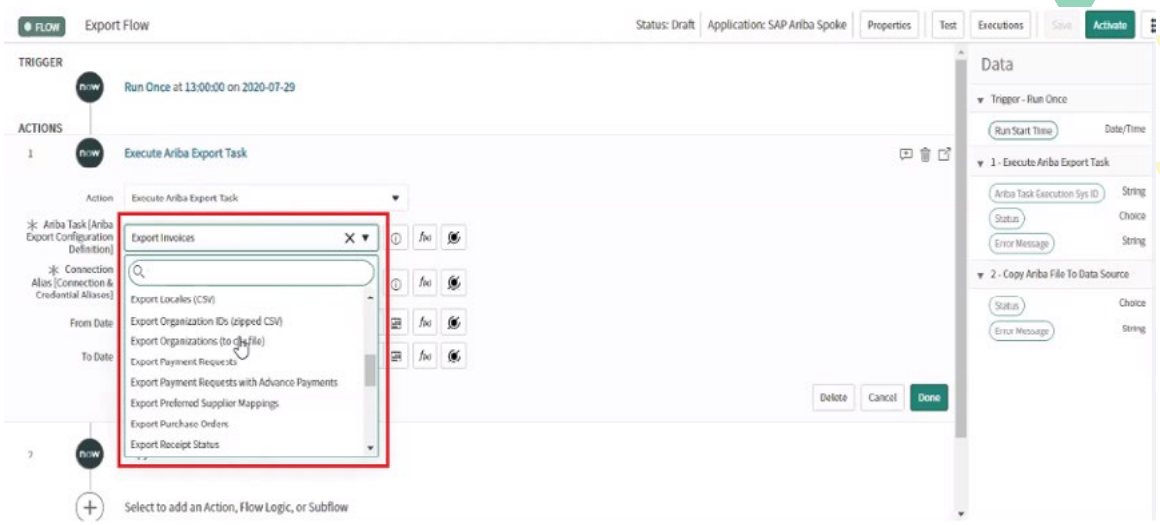



3. For Action '**Ariba Export Task**', the following inputs have to be provided:

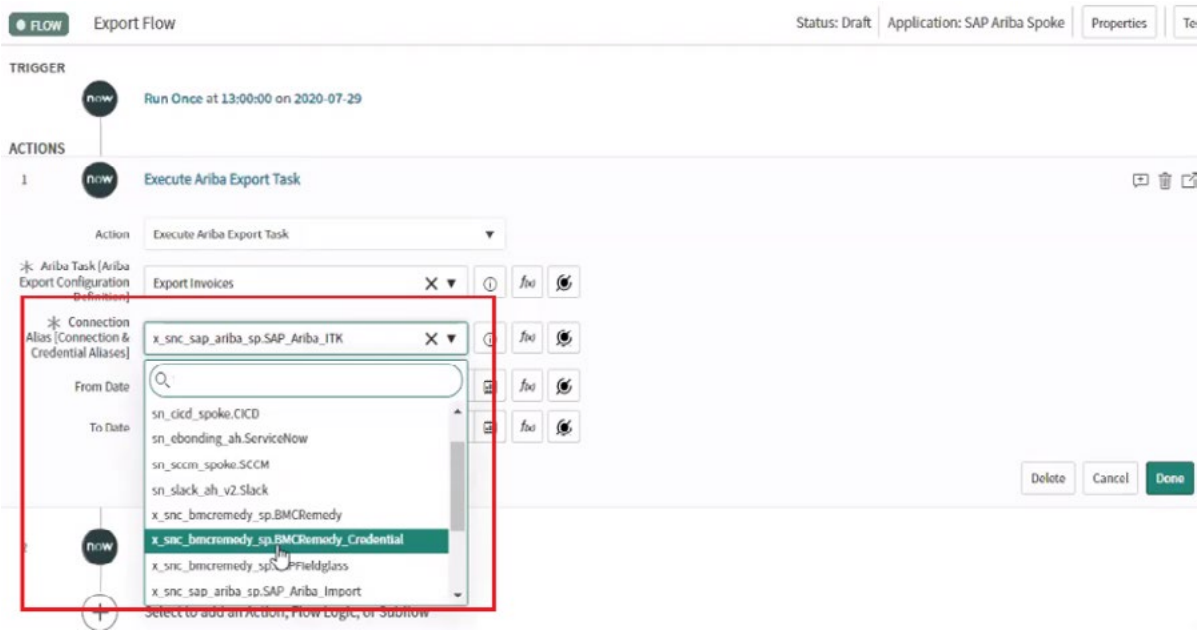
- **Action** – Export Task that needs to be executed. You can select 'Execute Ariba Export Task'.



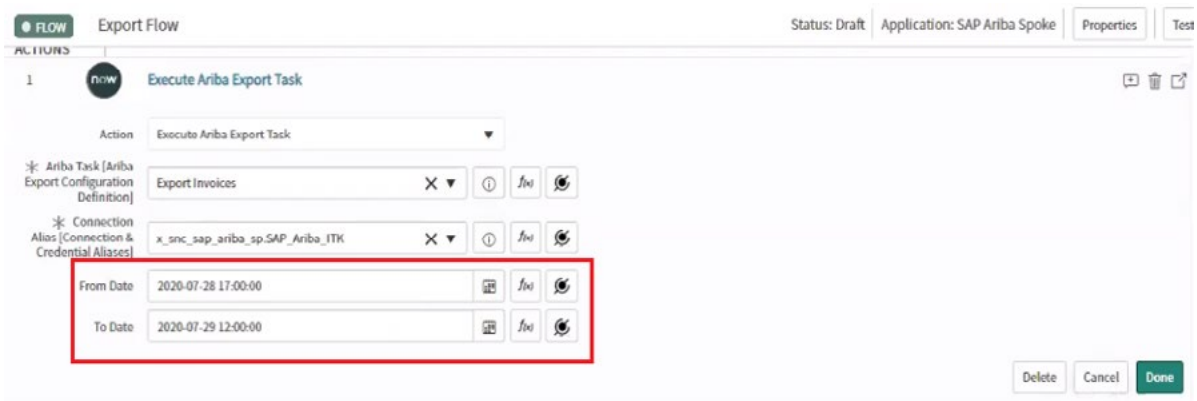

- **Ariba Task [Ariba Export Configuration Definition] -** Select from the available Ariba export Configurations. By default, you an choose from 34 export configurations.



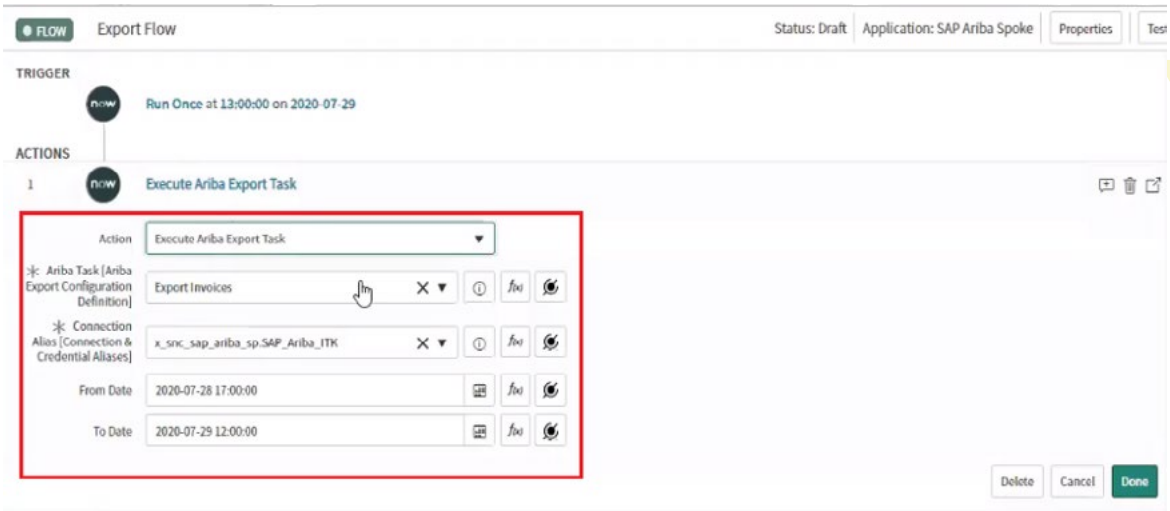

- **Connection Alias [Connection & Credential Aliases] -** Choose the appropriate connection alias for executing the Export Task on the desired SAP Ariba instance.




- **From Date [Optional]** - Choose the 'From' date, also called Start date.
- **To Date [Optional]** - Choose the 'To' date, also called End date.

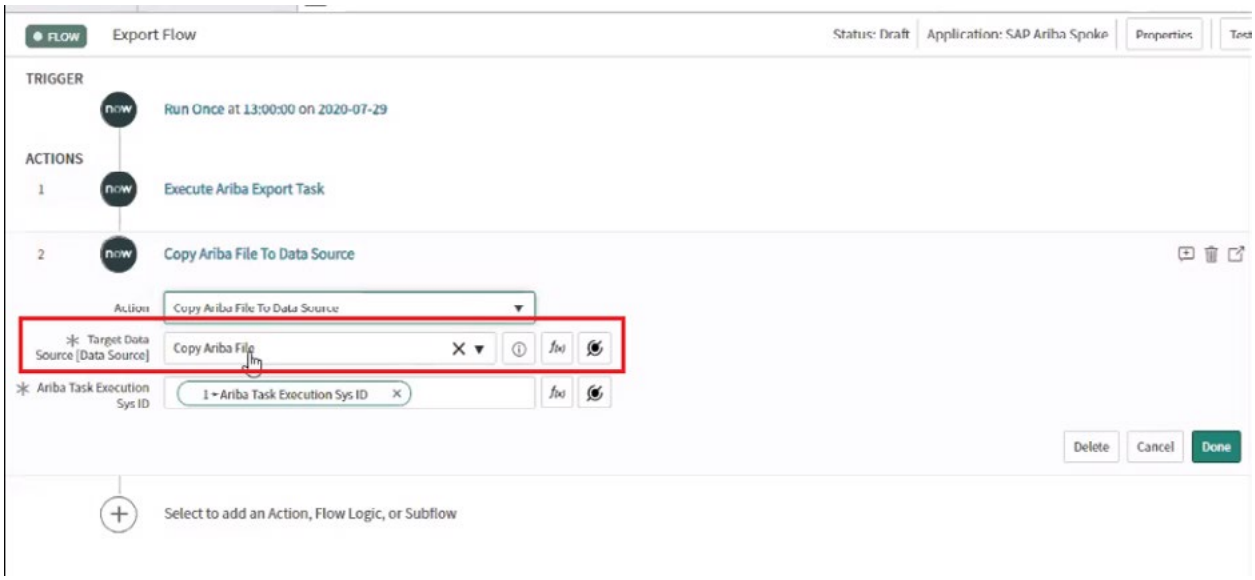


Shown below is the gist of fields that can be selected for the 'Execute Ariba Export Task'.

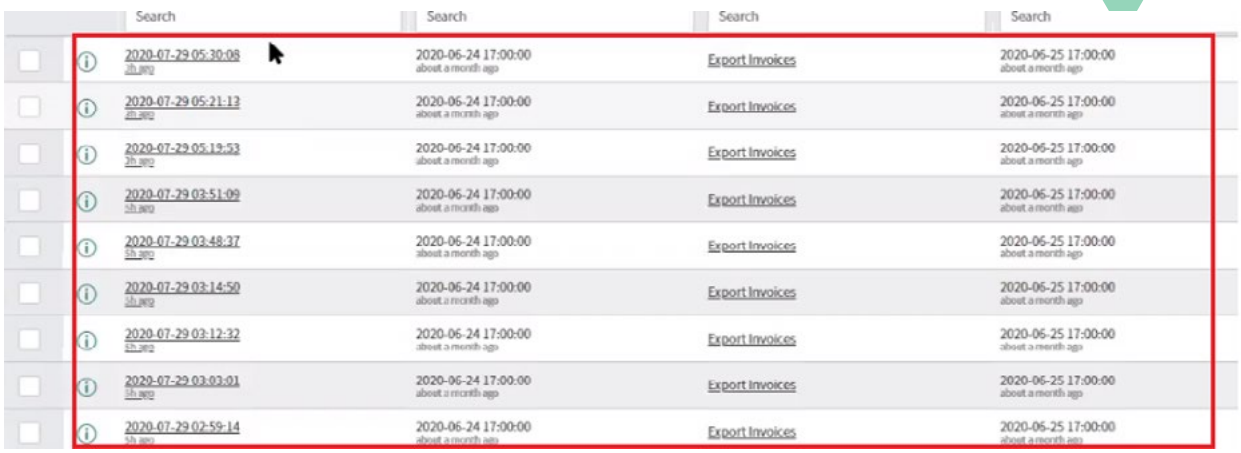



4. Action – **'Copy Ariba File to Data Source'**: Executing the Ariba Export task gets the data copied to a data source in ServiceNow, using which the users can create an 'Import Set' on the ServiceNow instance. This is necessary for copying the data from the data source to the desired table.

**Import** : Sets table acts like a Staging Area for records imported from the data source. Further information about Import Sets is available here.

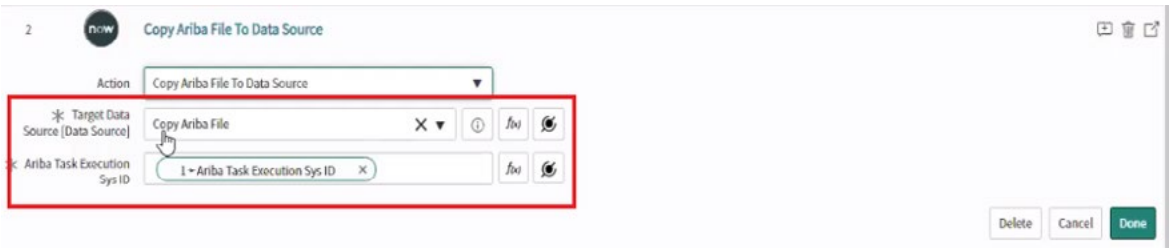



The response of Ariba Export tasks is stored in a table named 'Ariba Export Task Execution' and the table contains the corresponding CSV files

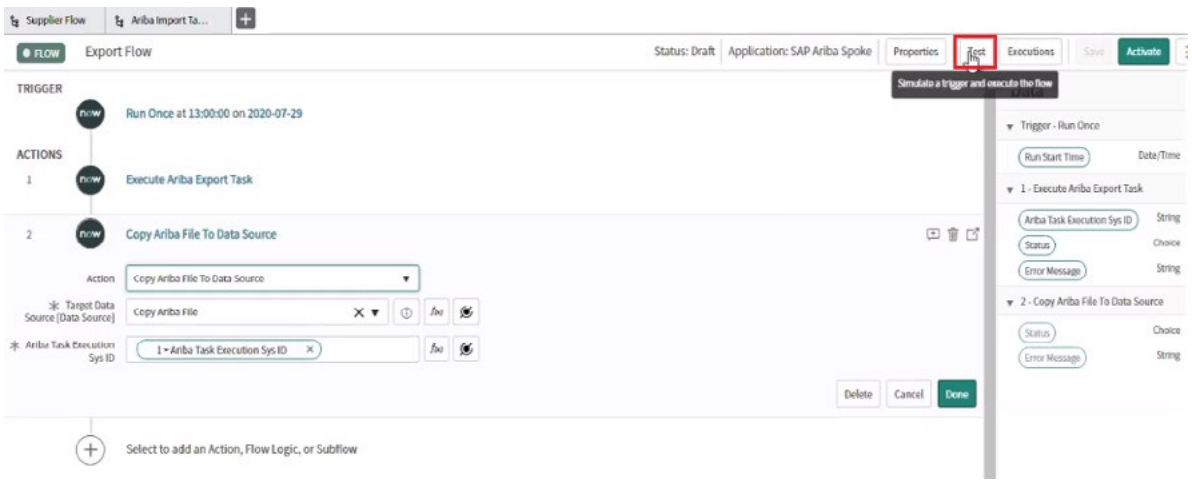


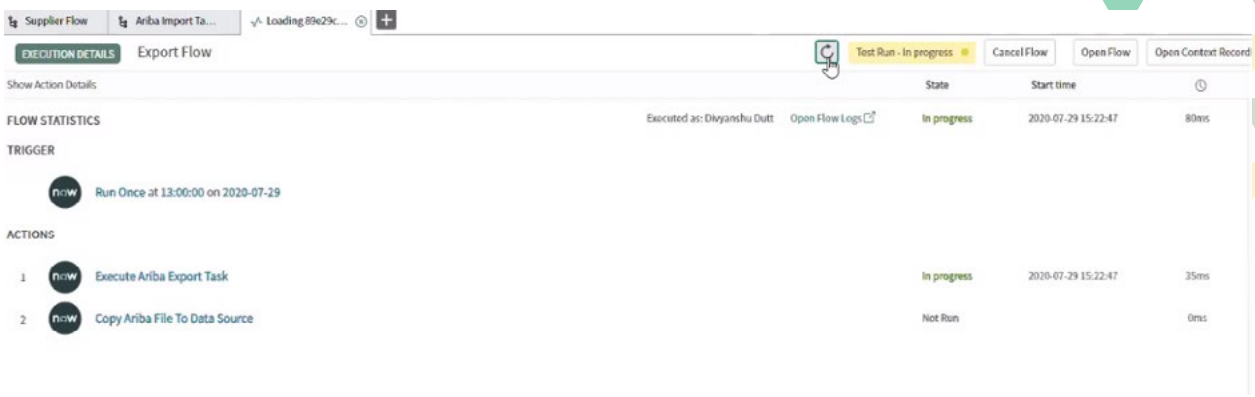

As the Export Task is ITK-based, the response coming through the MID Server is stored in a Data Source. Management, Instrumentation, and Discovery (MID) Server is a Java application that runs as a service in Windows or a daemon in Unix. MID Server in ServiceNow initiates all the communications with the ServiceNow instance. Please refer [MID Server connection aliases] for further information on MID Server configuration.

For copying the Ariba file to Data Source, the user needs to provide 'Target Data Source' and Sys ID of the Ariba execution task. Every aspect of execution is captured based on the input parameters provided in the 'Export Flow'.

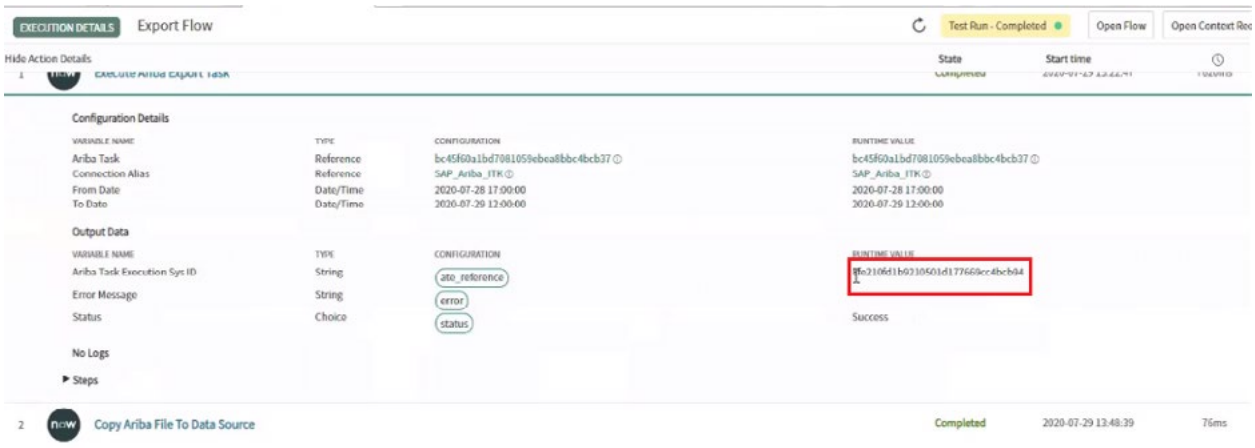



5. With this, all the necessary actions to execute the 'Ariba Export Task' are provided Click on 'Test' to execute the Export Task






6. On completion of the Export Task, the user would be able to see the Sys ID of the task




7. The records from the execution table are copied to the Data Source




With the completion of the steps mentioned above, the data on the SAP Ariba instance is successfully exported to the ServiceNow instance.

## How to Trigger the Ariba Export Flow at Scheduled Intervals?

SAP Ariba Spoke provides the following provisions for triggering the Task Scheduler at scheduled intervals:

- **Ariba Export Task Scheduler:** Scheduled Script for the Ariba Export Task. For viewing the scheduled script, enter sysauto_script_list.do in Filter Navigator and search for 'Ariba Export Task Scheduler'.
- **sn_sap_ariba_spoke.ariba.export.task.schedule:** System property that indicates the number of days. Records that are older than the specified duration will be purged. The Script uses this value for purging records that have not been copied to Data Source.

  For viewing the System Property, go to System Properties → All Properties and search for sn_sap_ariba_spoke.ariba.export.task.scheduler

There are scenarios where the user would want to trigger the Action Flow once certain conditions are met. In ServiceNow, these conditions are termed as '**trigger conditions**'. Record Triggers are used for starting the flow based on the status of a particular record i.e. the particular record is up*dated/created/created or updated*.

| Trigger | Description |
|---|---|
| Created | Action flow is started when a record is Created in a particular table. |
| Updated | Action flow is started when an existing record is Updated in a particular table. |
| Updated or Created | Action flow is started when a new record is Created or an existing record is Updated in a particular table. |

For Updated and (Updated or Created) trigger conditions, the following options are available:

- **For each unique change:** Trigger the flow for a 'unique' update/creation (depending on the trigger type) to a non-system field even when the flow is currently running.
- **For every update:** Trigger the flow every time the specified record is updated.
- **Once:** Trigger the flow 'only once' for the life of the record.
- **Only if not currently running:** Trigger the flow for every unique change, only if the flow is not currently running.

Apart from Record Triggers; the other Flow Trigger types are Application Triggers[20], Inbound Email Triggers[21], and Date Triggers. Date Triggers are specifically useful for starting a flow after a particular Date & Time or repeatedly at scheduled intervals. Here are the different options available with Date Triggers:

| Trigger | Description |
|---|---|
| Daily | Trigger a flow at a specified Time everyday. |
| Updated | Weekly Trigger a flow at a specified Time every week. |
| Monthly | Trigger a flow at a specified Time every month. |
| Run Once | Trigger a flow at 'only once' at a specified Time |
| Repeat | Trigger a flow at regular intervals defined by the user. |

20. https://docs.servicenow.com/bundle/paris-servicenow-platform/page/administer/flow-designer/reference/flow-triggers.html#d1206258e353
21. https://docs.servicenow.com/bundle/paris-servicenow-platform/page/administer/flow-designer/reference/flow-triggers.html#d1206258e463

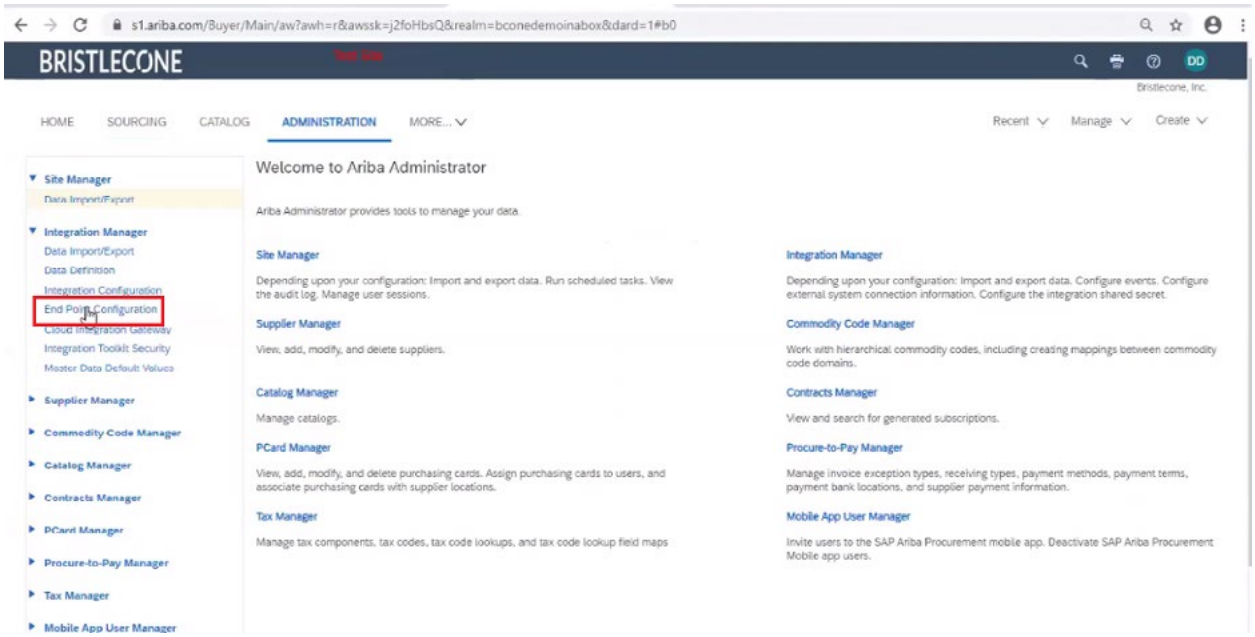
# How to use WebHook for Exporting PO Data from SAP Ariba to ServiceNow?

Apart from file-based ITK Export, SAP Ariba Spoke also provides a webhook (or web callback or HTTP Push APIs) based mechanism for providing the ServiceNow instance with real-time information from the SAP Ariba instance.

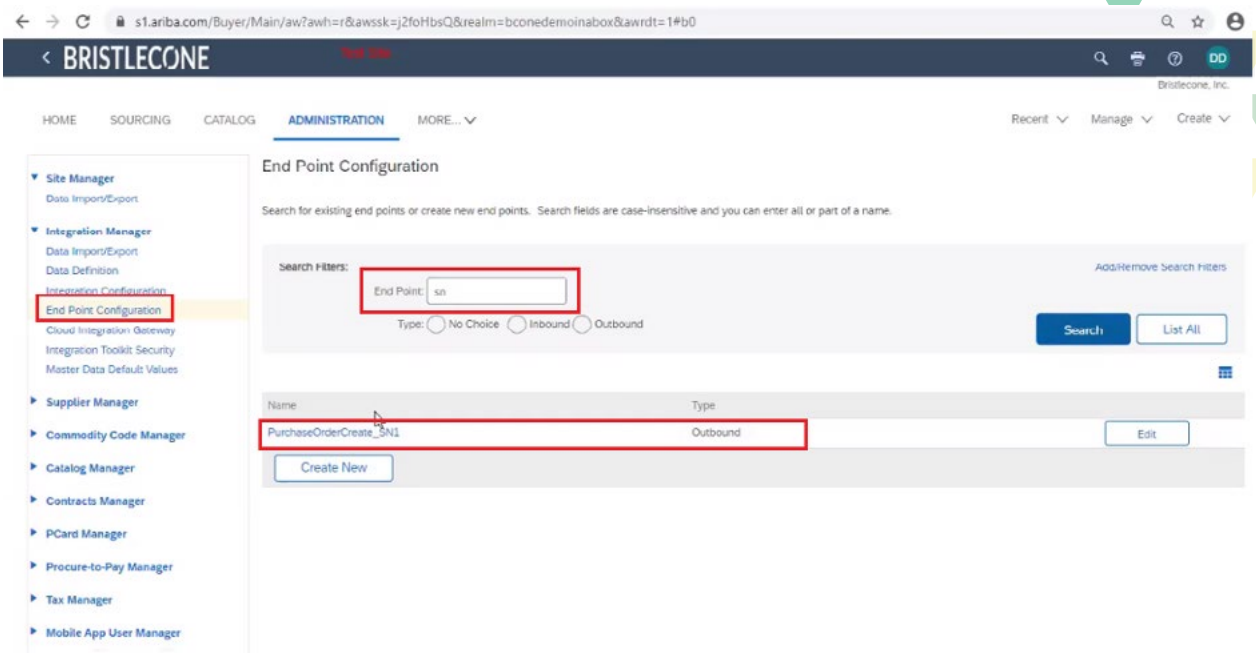
For that, the user would need to create a REST Service Listener on the ServiceNow instance, which listens to the 'PO Change Event' from SAP Ariba. It will accept the payloads and perform the appropriate data transformation along with loading the data in the corresponding ServiceNow tables.

Here are the steps to be followed for exporting PO data from SAP Ariba to ServiceNow using web-hook:

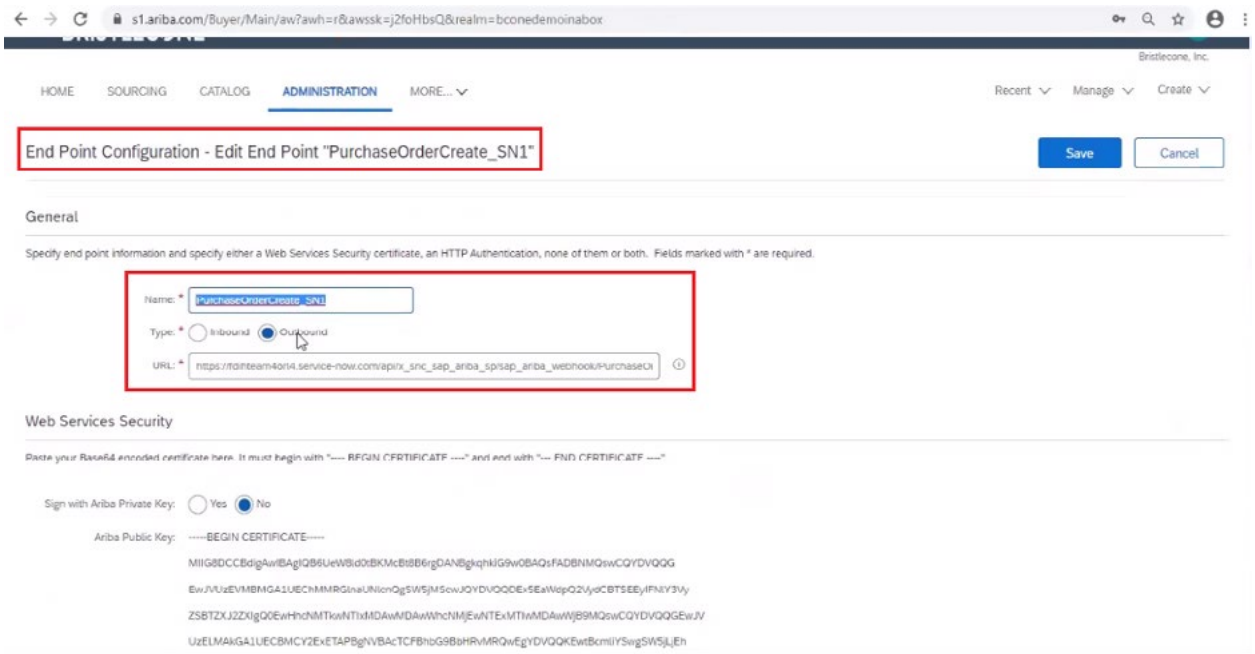
1. **On SAP Ariba:** Create an Endpoint in SAP Ariba by navigating to Integration Manager → End Point Configuration.



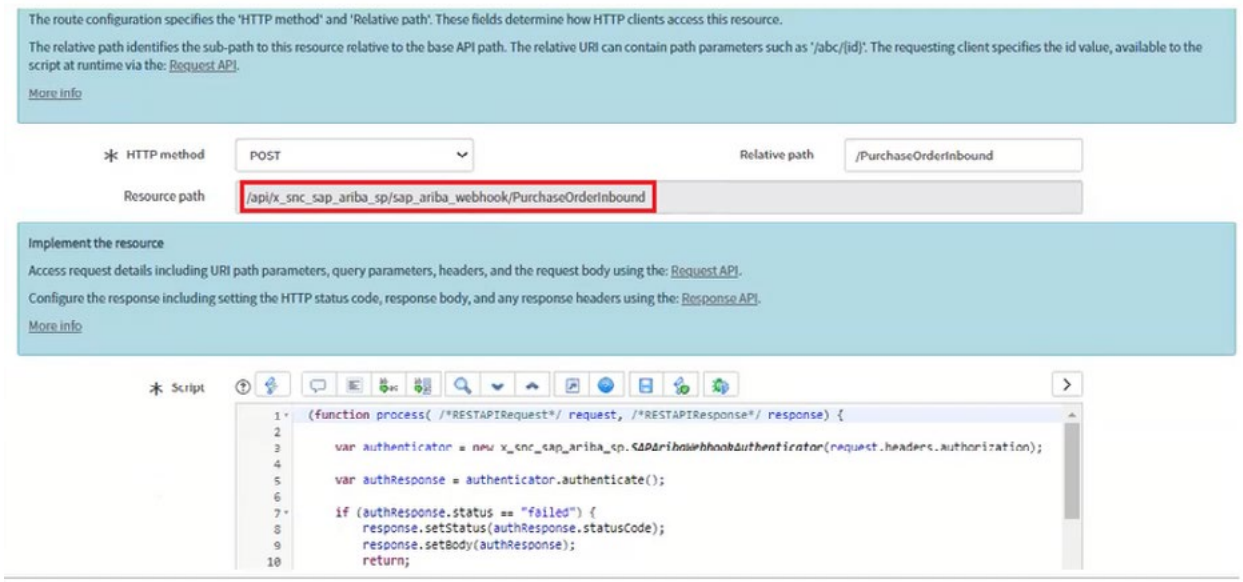

2. **On SAP Ariba:** For demonstration, we have created a new Endpoint named PurchaseOrderCreate_SN1' of 'Outbound' type. A new Endpoint can be created by clicking on the 'Create New' button.



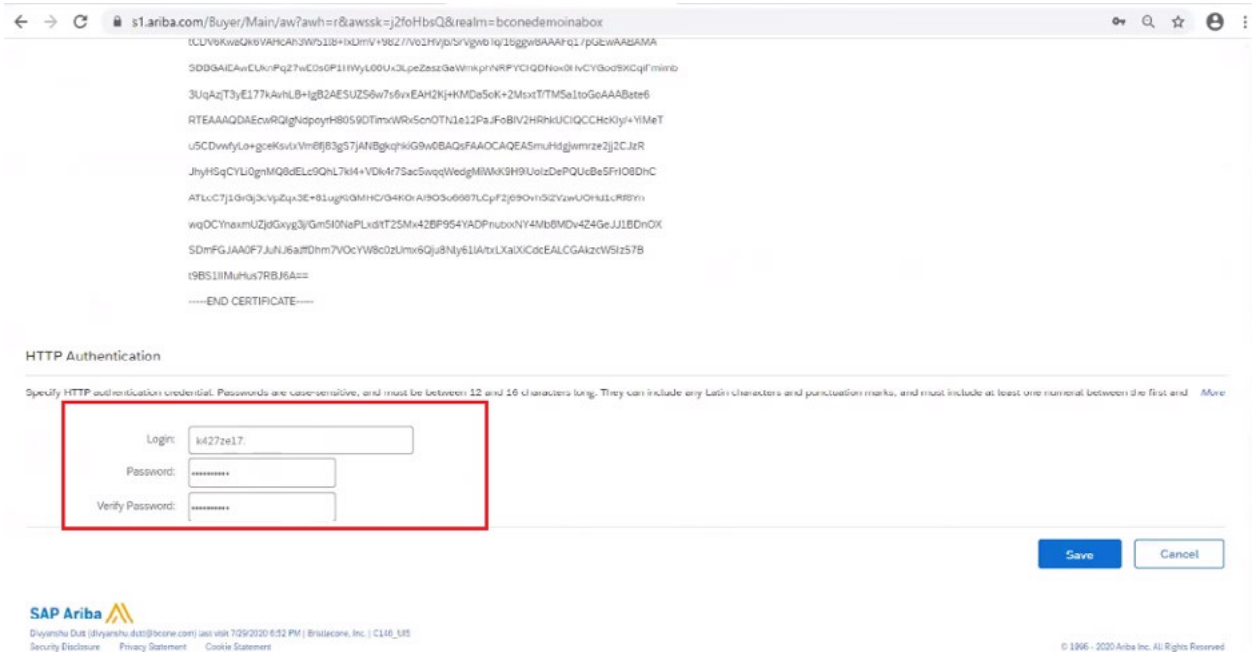

3. **On SAP Ariba:** The URL field in the Endpoint should contain the combination of 'Target URL Instance of ServiceNow' followed by the 'Resource URI path'.



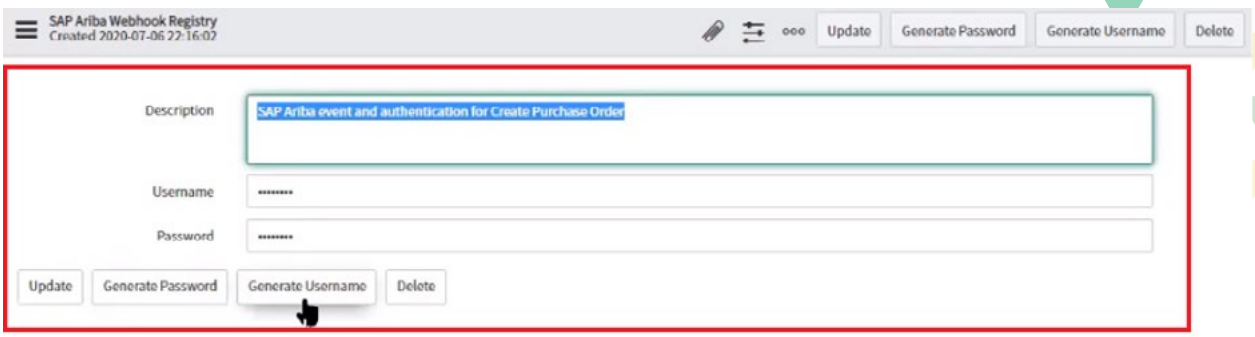

4. **On ServiceNow:** The URI path that is programmed in Endpoint configuration in SAP Ariba should be used in the creation of 'Scripted REST Resource' on ServiceNow.



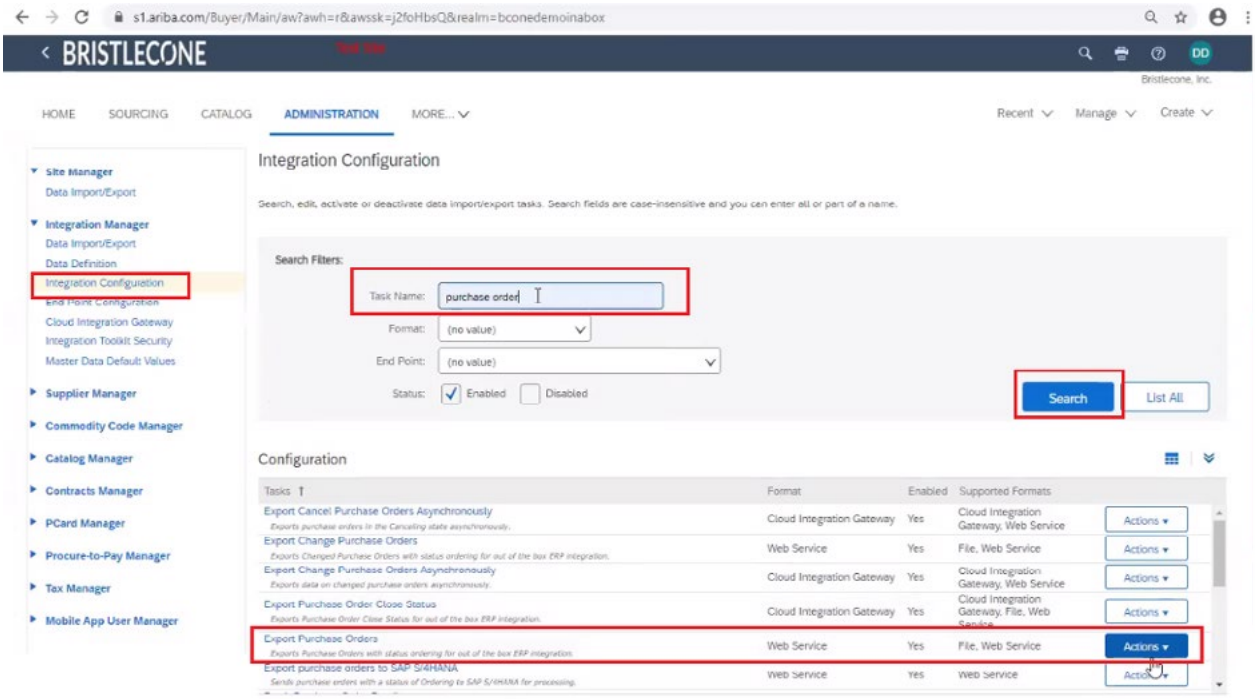

5. **On SAP Ariba:** HTTP authentication mechanism is used when accessing the Endpoint. The same settings should be configured in the ServiceNow instance as well.



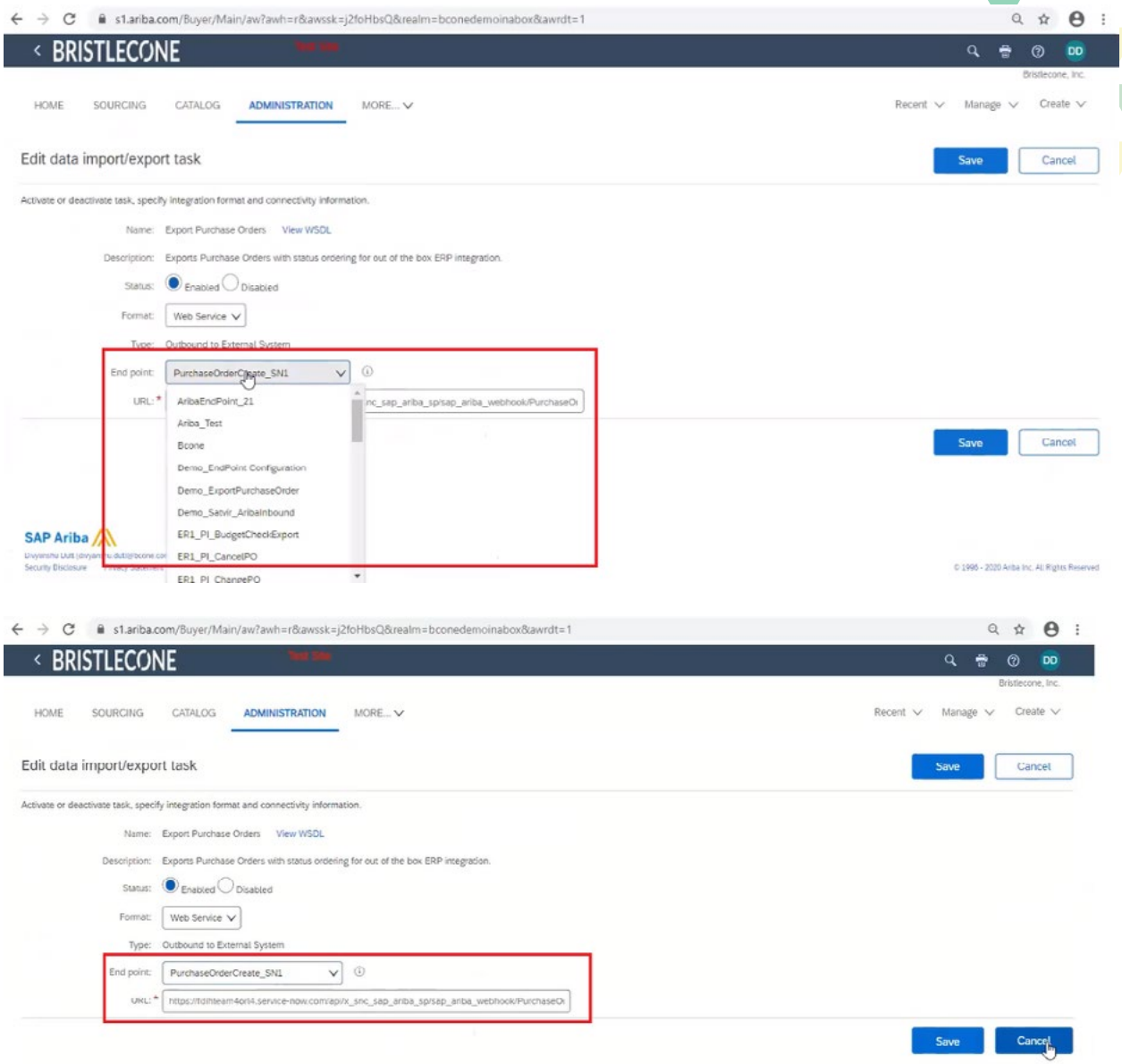

**On ServiceNow:** The HTTP configuration used in Endpoint creation in SAP Ariba is also used in ServiceNow. The HTTP configuration is configured in a table named 'SAP Ariba Webhook Registry' in ServiceNow.



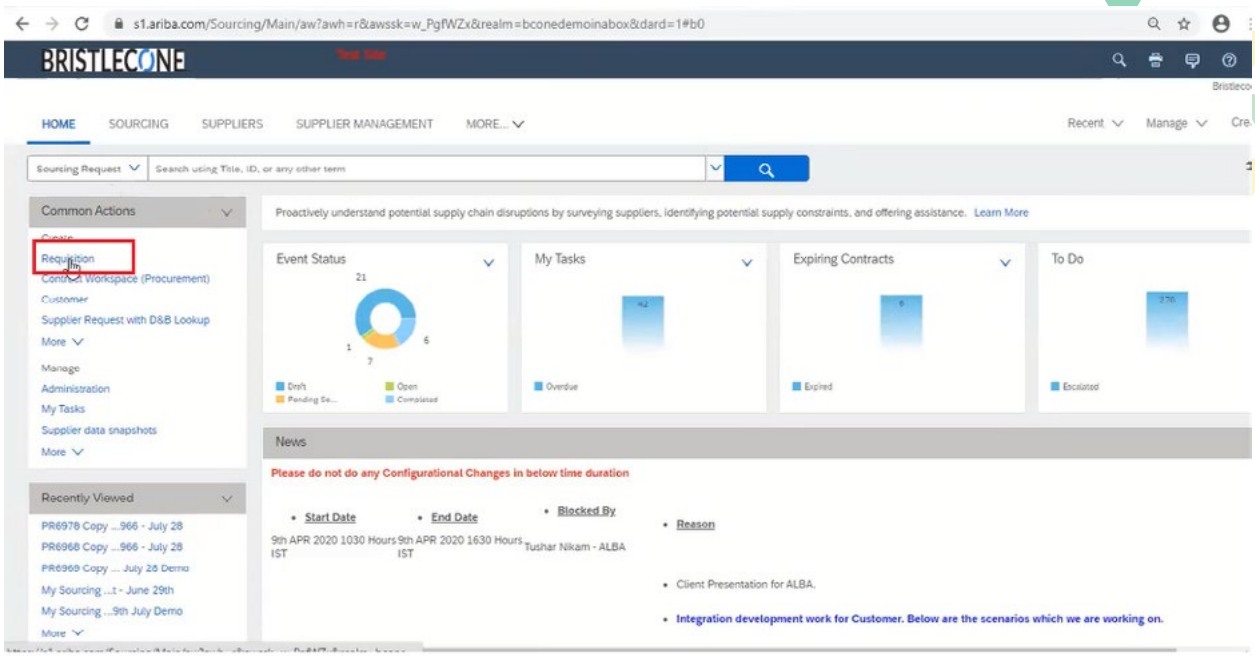

6. **On SAP Ariba:** With all the requisite configurations complete, create a new 'Purchase Order' (PO) by navigating to Integration Configuration Task Name → (as Purchase Order). Configure the event as 'Export Purchase Orders' and click on 'Edit' for choosing the appropriate Endpoint and target URL.



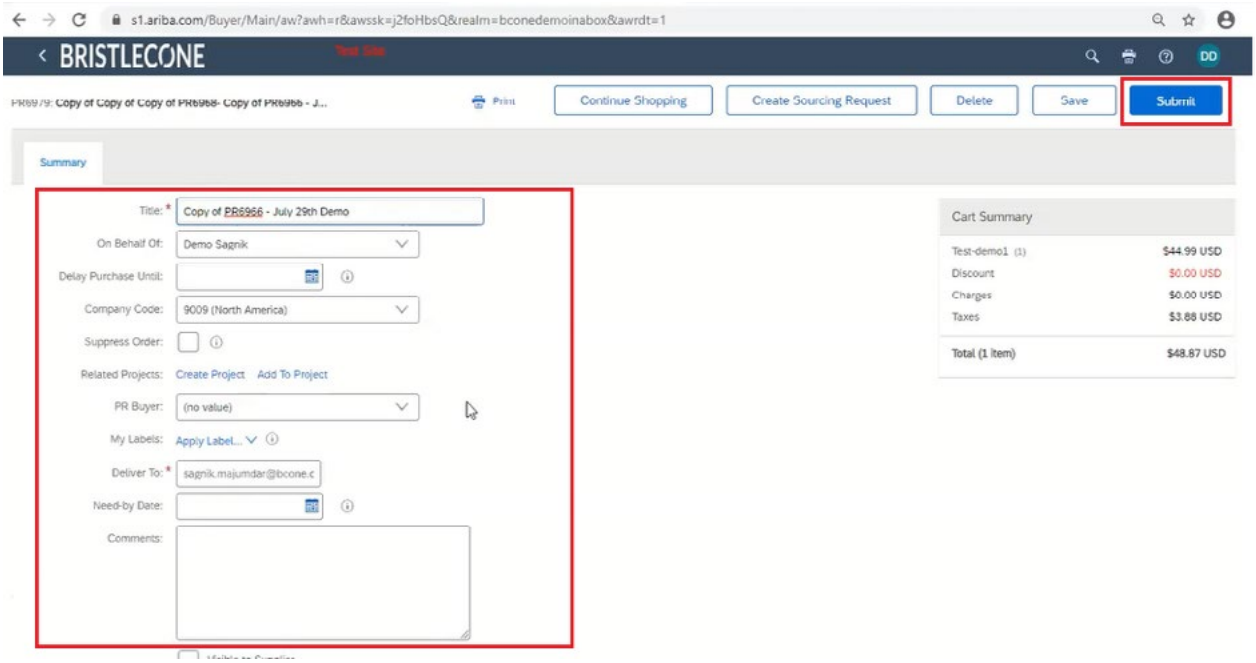

7. **On SAP Ariba:** Click on 'Edit' in 'Export Purchase Orders' for choosing the appropriate Endpoint and target URL. Select the Endpoint which you have created in Step - 2 (i.e. PurchaseOrderCreate_SN1). As the URL was programmed with the Endpoint, choosing the Endpoint will show up the programmed URL. Click on 'Save' to apply the changes.

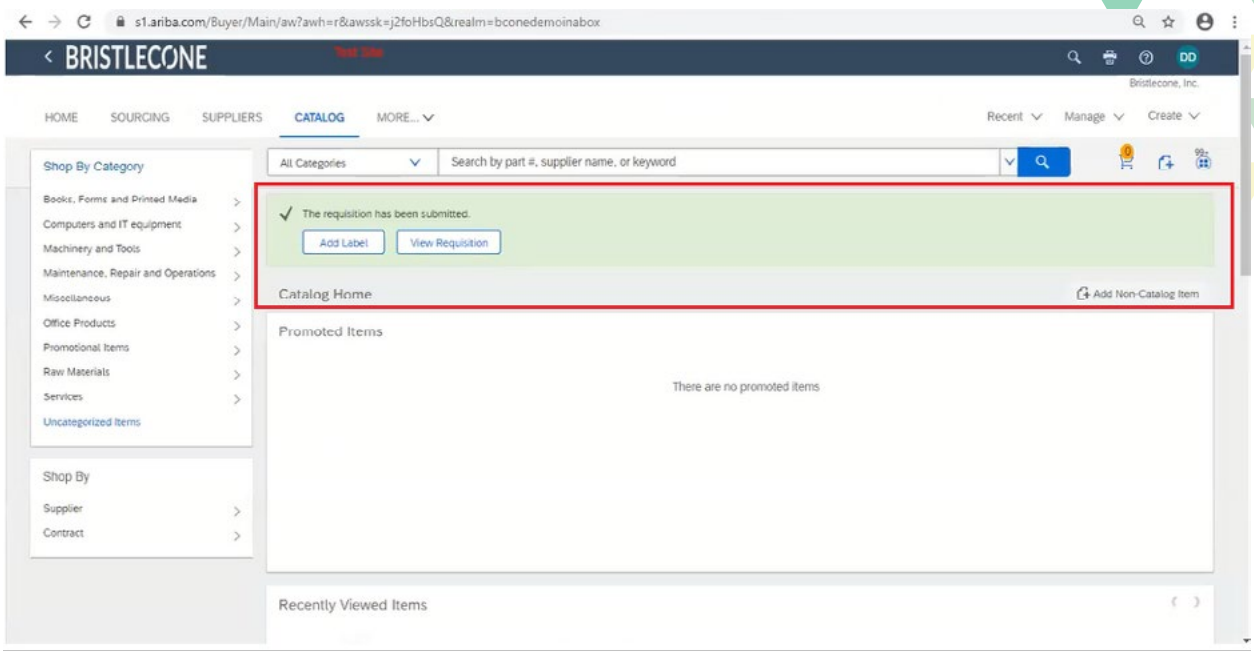



8. **On SAP Ariba:** Create a Requisition request (or PR) by navigating to Common → Actions Requisition.

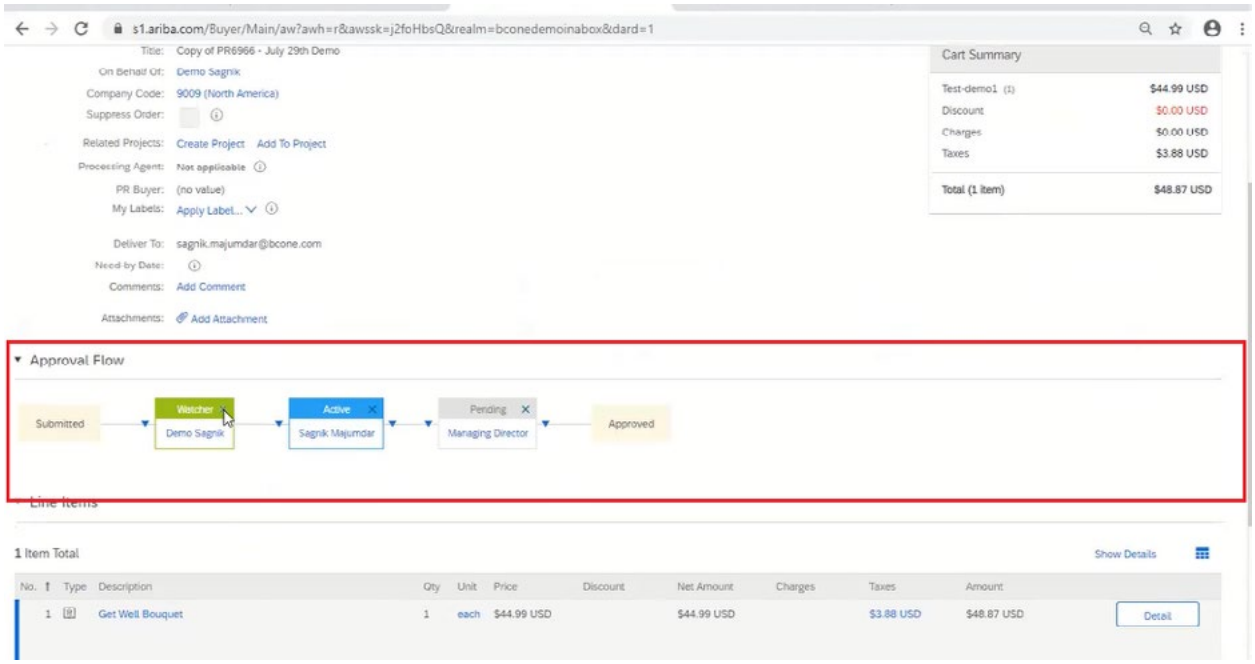



9. **On SAP Ariba:** Enter the necessary details in the Requisition request or copy the existing PR to create a new one.

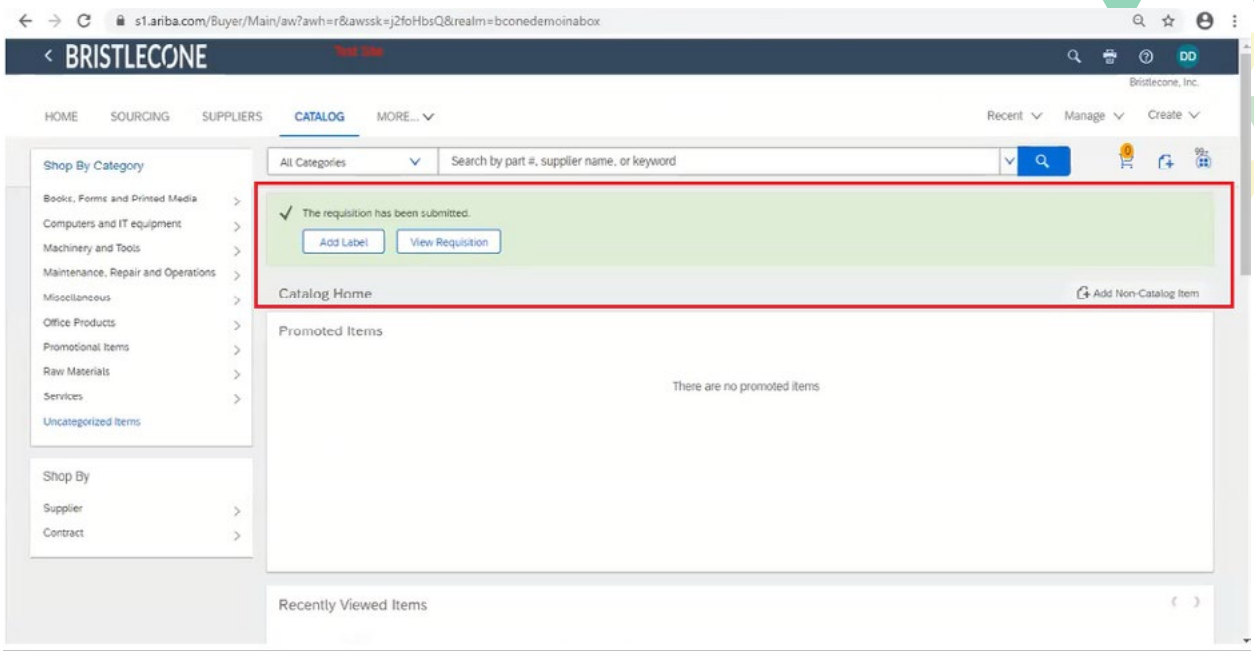




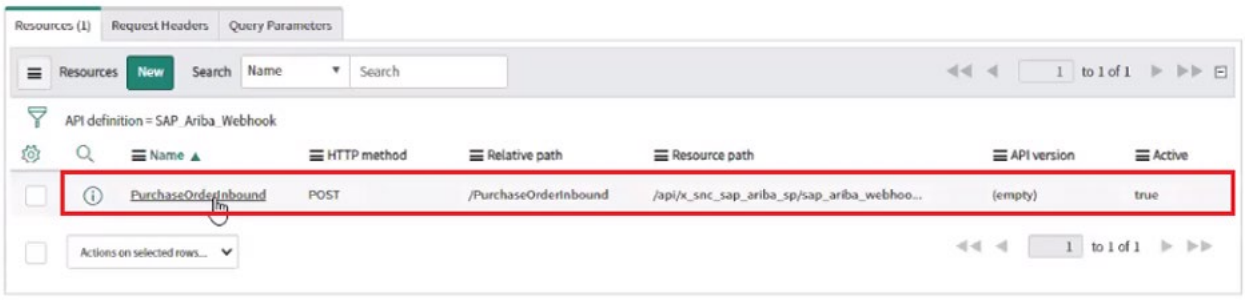

**10. On SAP Ariba:** The PR request also shows the 'Approval Chain'. Add the necessary approvers to the PR.



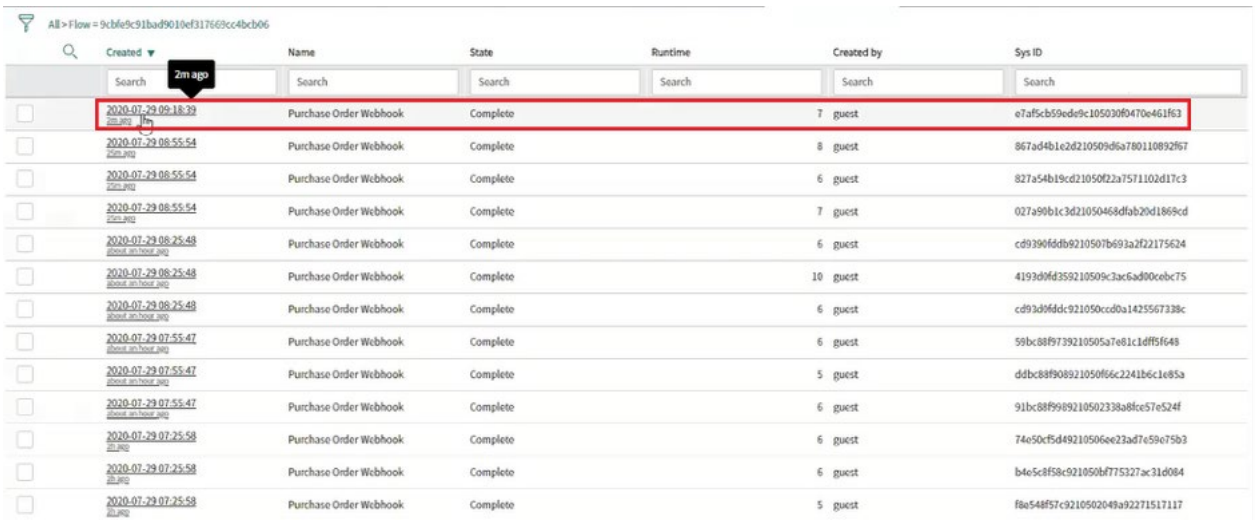

11. Once all the details for PR creation are entered, the user would see the message 'The requisition has been submitted'.



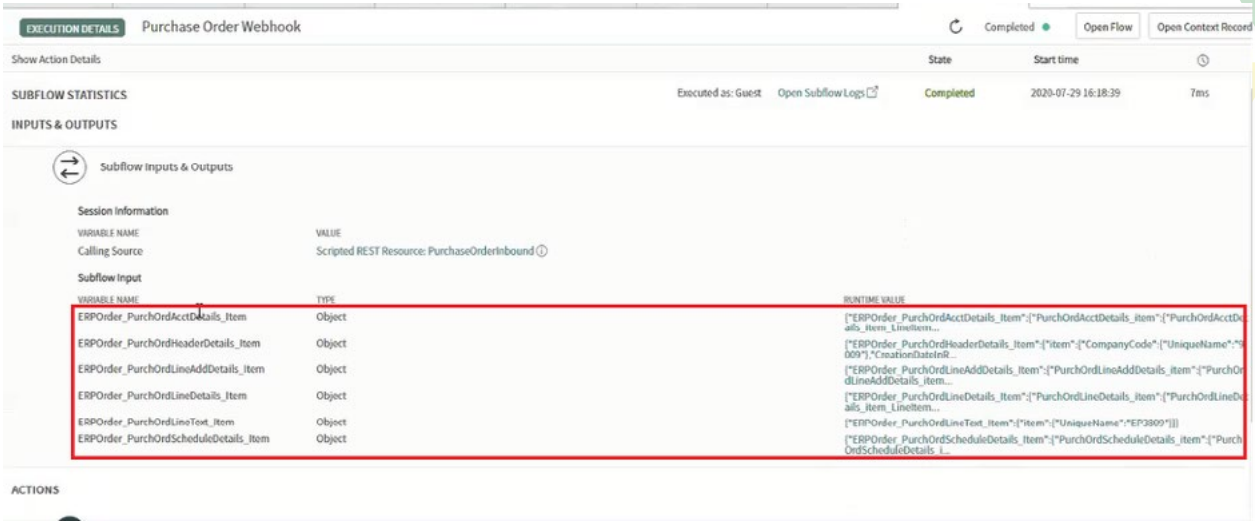

12. **On ServiceNow:** Create a webhook by navigating to 'Scripted REST → APIs 'SAP Ariba Webhook'. Choose the HTTP method as POST and enter the correct resource URI path. We have named the webhook as 'PurchaseOrderInbound'.



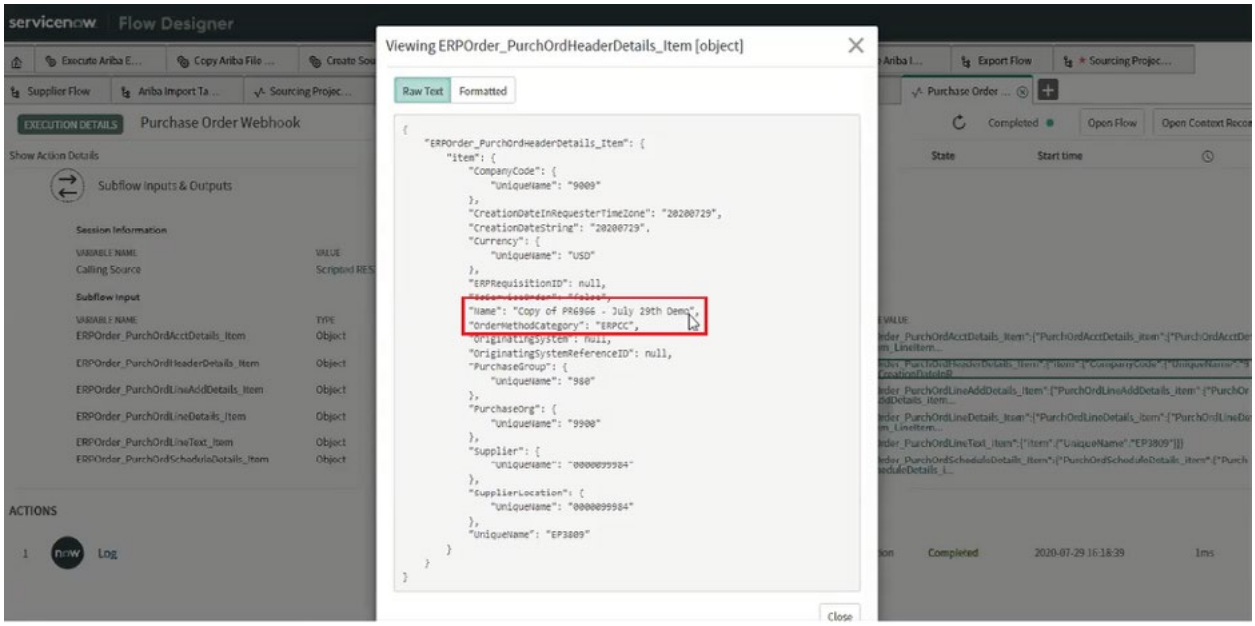

13. **On ServiceNow:** Use the webhook for getting the PO related data from SAP Ariba to Service-Now. After execution, the user would see the generated PO object (as seen below).



**14. On ServiceNow:** In total six objects are created.




Clicking on any object will show the RAW text (in JSON format) contained in the corresponding object.




**15. Execution Complete:** With this, we have successfully exported PO related data from SAP Ariba to ServiceNow using webhook.

## Abbreviations

| | |
|---|---|
| BOM | Bill Of Material |
| CRUD | Create, Read, Update, and Delete |
| ERP | Enterprise Resource Management |
| ITBM | Information Technology Business Management |
| ITK | Integration Tool Kit |
| ITOM | Information Technology Operations Management |
| MID | Management, Instrumentation, and Discovery |
| PO | Purchase Order |
| REST | Representational State Transfer |
| SOAP | Simple Object Access Protocol |

## About **Aavenir**

Aavenir offers the futuristic source-to-pay solutions built natively on ServiceNow. Aavenir S2P solutions including Aavenir Contractflow, Aavenir Obligationflow, Aavenir Invoiceflow, and Aavenir RFPflow provide new transformative capabilities to increase productivity, reduce cost and drive business value. Aavenir solutions streamlines procurement, legal, and accounts payable work processes and provides latest technology-enabled (AI, ML and NLP) features that eliminate manual work, accelerate cycle time, reduce dependency, and offers smart suggestions based on historical data.

Source to Pay Solutions on ServiceNow

Contractflow Obligationflow Invoiceflow RFPflow

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