Xanadu Service Exchange

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Service Exchange

ServiceNow® Service Exchange connects multiple ServiceNow instances to provide seamless support and service experiences across the ecosystem, from enterprise customers to suppliers and system integrators. Service Exchange provides a frictionless experience that makes it easy to collaborate and process requests while giving users the convenience of working in their own ServiceNow instance.

Watch this short video for an introduction to the Service Exchange application.

https://player.vimeo.com/video/973114049?badge=0&autopause=0&player_id=0&app_id=58479

Get started

Service Exchange for Providers	Service Exchange for Consumers	Service Exchange Knowledge Base
Learn about the new Service Exchange application for providers	Learn about the new Service Exchange application for consumers	Review the Service Exchange knowledge base articles.

Exploring Service Exchange

Learn about the benefits of Service Exchange, the key capabilities, and the applications.

This section includes the following:

- Learn about Service Exchange
- Service Exchange Authorized Users and personas
- Remote catalogs in Service Exchange
- Using remote choice fields to directly access provider data
- Using remote tasks to fulfill consumer requests
- Service Exchange Provider Tasks
- Transform data with the Service Exchange transform framework

Learn about Service Exchange

Service Exchange helps consumers, providers, and partners connect their ServiceNow instances to securely build business workflows across the ServiceNow ecosystem.

Whether you are a provider or a consumer, learn how you can establish an integration between your instances with Service Exchange. This integration makes it easy for providers to receive and fulfill service requests in their own instances, and much more. Learn how you can use Service Exchange to connect buying, support, and service processes.

- Enterprise users can now easily collaborate with their service providers and partners through bi-directional workflows, providing them with visibility and a seamless experience.
- Service Exchange enables faster onboarding and provides quick service catalog refreshes to subscribers.
- The seamless registration process eliminates slow and expensive integrations with enterprise customers and partners.

Key capabilities

The main capabilities of Service Exchange include:

- Onboarding: Quickly onboard consumers and partners that use ServiceNow with a simple registration process and avoid slow, costly custom integrations.
- Authorized Users: Manage and control access at the Remote Catalog item level to meet security and compliance requirements.
- Remote Catalog: Update subscriber service catalogs in minutes as new items are introduced.
- Remote Choice: Ensure up-to-date field options in subscriber remote catalogs by retrieving real-time data from the provider's ServiceNow instance.
- Remote Task: Reduce swivel-chairing and increase automation with seamless multi-party and multi-instance workflows across the ServiceNow ecosystem.
- Provider Tasks: Enable all providers of services using Service Exchange to be transparent and collaborative with their consumers who use ServiceNow by syncing relevant tasks like cases, to consumers as Provider Tasks.
- Transform Framework: Transform inbound and outbound remote task data for easy process transformation between ServiceNow instances.

Service Exchange applications

The following table lists the features of the Service Exchange for Providers and the Service Exchange for Consumers applications.

Service Exchange applications

Application	Features
Service Exchange for Providers	• Author and publish remote catalogs from your instance for consumers to generate service requests that can be fulfilled in your instance. • Bidirectionally integrate your tasks with your consumer's tasks. • Send incidents and cases to your consumer's ServiceNow instance via Provider Task with no setup needed.
Service Exchange for Consumers	• Incorporate Remote Catalog items entitled to you from your provider into your local catalog and send the requests generated back to your provider for fulfillment.

Service Exchange applications (continued)

Application	Features
	• Bidirectionally integrate your tasks with your provider's tasks. • Receive proactive tasks from providers for transparency and collaboration.

Service Exchange Authorized Users and personas

The Authorized Users feature enables a provider to categorize remote catalog items by user personas so that only authorized users with these personas can access the catalog items. It also allows consumer admins to associate these personas to users in their instances to allow access.

When a provider and a consumer initially register the Service Exchange application, the active contacts on the consumer's account in the provider's ServiceNow instance are automatically added to the Authorized Users table and synced with the consumer's ServiceNow instance.

Enables the provider to subdivide services by user personas giving the consumers an easy way to define access in their instance to the provider's services. By using the Authorized Users feature, you can identify the specific users between the provider and consumer instances to manage the consumer requests for the provider's services. You can then assign personas to the authorized users so that you can control the access to remote catalog items.

- Both providers and consumers can create Authorized Users.
- The providers manage the approval state for an Authorized User. By default, the approval state is set **Approved**.
- Consumers manage the active state for an Authorized User.
- Providers can set the maximum number of authorized users for each connection. This requires all consumers to maintain a list of active authorized users of less than or equal to the limit set by the provider. If the value is not set, consumers can have as many active authorized users as they want.

To learn more, see Add an authorized user.

Remote catalogs in Service Exchange

As an application developer for the provider, you can create a remote catalog item containing the services for your consumers. After you create a remote catalog item, an administrator in the consumer's instance can assign it to their catalogs and categories, and then activate it, just like any other catalog item.

Example:

For example, let's say that you have multiple SD-WAN product offerings: Gold, Silver, and Bronze. Your remote catalog contains 20 services that are associated with the SD-WAN products.

- The Gold product offering gives your consumer rights to all 20 services.
- The Silver product offering gives your consumer rights to 15 of the 20 services.
- The Bronze product offering gives your consumer rights to only 10 of the 20 services.

You can package all 20 of those services in a single catalog. The consumers for each product offering only have rights to the services to which they are entitled.

To learn more, see Create remote catalogs in Service Exchange for providers.

Using remote choice fields to directly access provider data

Remote choice fields provide your consumers direct access to your (provider) data in real time while they submit a remote catalog item from their instance.

Remote choice fields enable consumers to view the choice list for a catalog reference field directly from the provider's instance. They provide the following advantages:

- Removes the need to replicate foundation data.
- Reduces the cost and maintenance of integrations.

You can control the data that your consumers access by defining a remote choice field. To learn more, see Create remote choice definitions in Service Exchange for Providers.

Using remote tasks to fulfill consumer requests

Learn how you, as a provider, can resolve and fulfill multiple consumer tasks, such as incidents, cases, and service requests, by using remote tasks. Also as a consumer, you can assign the incidents to multiple providers for resolution.

Remote tasks enable you to assign and synchronize the task's data on separate instances so that you can quickly fulfill the service requests from your consumers. Some examples of the consumer requests are as follows:

1. Request help for issues that your consumers are having with your services.
2. Request for service changes to the services that your consumers have purchased.
3. Request to assign the existing tasks to you so that you can support your consumer's issues.

How a remote task works

As a provider, you must first create and publish the remote task definitions that your consumers can use for creating a remote task. You entitle these definitions to your consumers who can adjust the mappings and field data rules or simply activate the definition. Your consumers can apply a trigger on the definition or manually create a remote task for you, the provider, based on an active definition.

For more information, see Create remote task definitions in Service Exchange for Providers.

The remote task feature includes a Remote Task table, which is an extension of the Task table in the ServiceNow AI Platform. With remote tasks, you can enable bidirectional linking of workflows between multiple ServiceNow instances.

For example, an incident on a consumer instance must be assigned to a provider's instance as a case. The Remote Task record in each instance facilitates the bidirectional flow of the task's data between the case and the incident.

Service Exchange Provider Tasks

Enable all providers using Service Exchange to be transparent and collaborative with their consumers who use ServiceNow.

Provider tasks represent work that is being performed in a provider's ServiceNow instance and monitored in a consumer's instance. By using Provider Tasks, consumers can collaborate with all of their providers without the need for any additional configuration to their instances.

Transform data with the Service Exchange transform framework

Use the Transform Framework to integrate tasks between two ServiceNow instances to transform remote task data in the Service Exchange application.

As a provider, you can use the Transform Framework to transform your inbound and outbound data (such as incidents, cases, and service requests) of the remote tasks between your ServiceNow instance and your consumer's instance. To learn what a remote task is, see Using remote tasks to fulfill consumer requests.

While using the Service Exchange for Providers application, you and your consumer can exchange the remote task data through tables and fields. The Transform Framework helps you to convert the data between those tables and fields so that you and your consumer can easily communicate with each other while resolving the incidents, cases, and consumer requests. Transforms can be created once and used across all remote task definitions.

You can use the following transform types in the Transform Framework for your remote tasks:

- **Simple**: Select the simple transform option to use the predefined values of the inbound and outbound fields for your remote tasks. For example, by using this transform type, you're converting the Open state of an incident in the provider's ServiceNow® instance to the In Progress state in the consumer's ServiceNow instance.
- **Advanced**: Use an advanced transform where you run a script to determine the inbound and outbound data values for your remote tasks. For example, use this transform type to convert an incoming sys_id into a correlated sys_id for a reference field.
- **Virtual Inbound**: Use this to transform or set a value for an Inbound Virtual field. This option uses a script to transform the data and adds a mandatory Inbound Field field.
- **Virtual Outbound**: Use this to transform or set a value for an Outbound Virtual field. This option uses a script to transform the data and adds a mandatory Outbound Field field.
- **Global**: Use the global transform option to create a default transform definition that can be applied to all consumer accounts.

Note:
A matching company or account specific transform overrides the Global transform option.

To learn how to create a transform, see Create a transform in Service Exchange.

Service Exchange configuration revisions

As a provider, you can update the configurations of remote record producers, remote task definitions, foundation data sync offerings, and create new versions that can be entitled to consumers.

You can deploy new versions of entitlements with updated functionality to compatible consumers without impacting consumers who haven't upgraded their Service Exchange applications. You can upgrade your Service Exchange applications to adopt new features even if your consumers haven't upgraded to the latest version.

You can create multiple configuration revisions, but only the latest published revision is active and available as a new entitlement. Your consumers can either choose to activate the new entitlement or continue to use the older revision until it's archived or retired. If the consumers want to use the new revision, they must upgrade their Service Exchange application to the same version that is running on the provider's instance. Once the new revision is activated on the consumer's instance, the earlier revision is longer available and moves to an inactive state.

You can create configuration revisions for the following:

- Remote record producers
- Remote task definitions

See Create configuration revisions for details.

Service Exchange mismatched version support

Providers and consumers using different versions of the Service Exchange applications can exchange and synchronize data between their ServiceNow instances.

- Providers can upgrade their Service Exchange application and deploy new capabilities without interrupting services to consumers who haven’t upgraded to their application.
- Consumers who haven’t upgraded can use existing entitlements from their provider but can’t request new entitlements unless they upgrade to the latest version.

The following is an example scenario:

- The provider and consumer are using Service Exchange for Providers 1.0 and Service Exchange for Consumers 1.0. The provider has created some configurations (such as remote task definitions, remote record producers, or foundation data sync offerings) and the consumer is using these entitlements.
- The provider decides to upgrade to Service Exchange for Providers 2.0 but the consumer is still using the older version. In this case, the consumer can continue to use the entitlements created using the older version of Service Exchange and sync data with the provider.
- To use the latest configuration revisions (created with the upgraded application), the consumer must upgrade to a version that is compatible with the provider.

For details on a supporting feature, see Service Exchange configuration revisions.

Service Exchange for Providers

Use the Service Exchange for Providers application to create and publish catalogs of services, receive, and fulfill requests generated from consumers, and establish integrations with consumer instances.

As a provider, you can:

- Author and publish remote service catalogs for your consumers on their instances.
- Integrate your instance with your consumer's instance.
- Receive and fulfill service requests on your instance from your consumer's ServiceNow instance.

Getting started

Explore	Configure

Learn about the features and capabilities of Service Exchange.

As a provider, plan and configure your implementation.

Administer

Learn how to onboard consumers, create catalogs, and fulfill service requests.

Service Exchange reference

Get details about domain separation and installed components.

Installing and configuring Service Exchange for Providers

To set up and configure the Service Exchange for Providers application, follow these steps.

Note:
Service Exchange 2.x.x that is being released with the Xanadu release does not support migration of the Service Exchange (Legacy) versions. If you are using a Service Exchange (Legacy) version, before you upgrade to the Xanadu release, you must follow instructions in the Service Exchange for Providers (Legacy) - Migration Utility (KB1499823) to migrate your configuration data.

Pre-installation checks

Check glide.servlet.uri property: Ensure that the `glide.servlet.uri` property in the Glide instance is set to the correct instance URL. An issue can occur when an instance is cloned from production, but still refers to the production URL for the `glide.servlet.uri` property.

Setting up Service Exchange for Providers

Task	Link
Install the Service Exchange for Providers application.	See Install Service Exchange for Providers.
Upgrade from version 1.x.x of Service Exchange for Providers if required.	See Upgrade Guide - Service Exchange for Providers and Consumers application (v2.x.x release - KB1700387).
Migrate from Service Exchange legacy version if required.	See Migrate from Service Exchange (legacy). **Note:** This feature is supported only for Service Exchange 1.x.x versions.

Setting up Service Exchange for Providers (continued)

Task	Link
Set up a new provider record.	See Set up a Service Exchange provider record.
Assign Service Exchange roles for providers.	See User roles for providers.
Create catalog personas.	See Create catalog personas.
Create remote choice definitions.	See Create remote choice definitions in Service Exchange for Providers
Create remote catalog items.	See Create remote catalogs in Service Exchange for providers.
Create remote task definitions.	See Create remote task definitions in Service Exchange for Providers.
Create transforms.	See Create a transform in Service Exchange.
Update Authorized Users settings.	See Update settings for Authorized Users.

Install Service Exchange for Providers

If you have an admin role, you can install the Service Exchange for Providers (sn_sb_pro) application. The application includes the demo data and installations that are related to ServiceNow® Store applications and plugins.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see Get entitlement for a ServiceNow product or application.

Role required: admin

About this task

The following plugins are automatically installed with the Service Exchange for Providers application:

- sn_req_criteria
- sn_sb
- sn_sb_rps
- sn_transport
- com.glide.hub.process.sync
- com.snc.ihub_spoke_util_pack

Apart from these, several components including roles, business rules, tables, and flows are also installed. For more information about the components that are installed with this application, see Components installed with Service Exchange for Providers.

Procedure

1. Navigate to **All** > **System Applications** > **All Available Applications** > **All**.
2. Find the Service Exchange for Providers application (sn_sb_pro) by using the filter criteria and search bar.

You can search for the application by its name or ID. If you can't find the application, you might have to request it from the ServiceNow Store.

Visit the ServiceNow Store website to view all the available apps and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the ServiceNow Store version history release notes.

3. In the application installation dialog, review the application dependencies.

   This listing indicates, for each dependent plugin and application if it's being installed, is already installed, or must be installed. If any plugins or applications must be installed, you must install them before you can install Service Exchange for Providers.

4. If demo data is available and you want to install it, click **Load demo data**.
   Demo data contains the sample records that describe the application features for common use cases. Load demo data when you first install the application on a development or test instance. If you don't load the demo data during installation, it's unavailable to load later.
5. Select **Install**.

Migrate from Service Exchange (legacy)

This section describes the process to migrate from the Service Exchange (legacy) version.

To migrate from the legacy version, follow the steps listed in Service Exchange for Providers (Legacy) - Migration Utility (KB1499823).

Set up a Service Exchange provider record

Set up a new provider record to establish a unique identifier for the Service Exchange for Providers (sn_sb_pro) application.

Before you begin

- Role required: admin, sn_sb.admin
- This version of Service Exchange requires a global script that must be installed before you set up the Service Exchange for Providers application. Follow instructions in KB1225292 on the Now Support instance to install the script.

About this task

This one-time setup task must be completed from your ServiceNow instance.

Procedure

1. Navigate to **All** > `Service Exchange` **Provider** > **Provider**.
2. Enter a name for the provider.
   This can contain only alphanumeric characters and dashes. Names that include spaces or special characters result in an error.
3. Click **Submit**.

User roles for providers

Learn about the roles, skills, and tasks for the different users in the Service Exchange for Providers application.

A user role is a pre-configured role in the application that is made up of multiple granular roles. The user roles are designed to correspond to the common job titles for managers, analysts, and service owners in an IT organization. If you want your users and groups to have more access than a role permits, you can add more granular roles to your users and groups. If you want to limit the access for specific users and groups at the task level, you can remove the granular roles. You can also build custom roles and access controls (ACLs) to suit your needs.

User roles

Persona	Skills	Tasks	Roles
Developer	• Is a certified ServiceNow administrator • Is a certified ServiceNow application developer	• Creates provider connection records. • Creates and maintains remote task definitions and transforms. • Creates and maintains Workflow Studio flows to determine the request fulfillment processes. • Creates and maintains remote record producers.	• admin • sn_sb.admin **Note:** If the user does not have the admin role, the catalog admin role is required to modify and publish Remote Record Producers.
Administrator	Is a certified ServiceNow system administrator	• Completes the Service Exchange registration requests. • Assists the consumer's system administrator as needed. • Publishes remote catalogs to the consumer's instance. • Publishes remote task definitions to the consumer's instance. • Troubleshoots Service Exchange transport payloads.	• admin • sn_sb.admin • sn_transport.admin

User roles (continued)

Persona	Skills	Tasks	Roles
Provider Fulfiller	Has agent skills	• Resolves consumer questions and issues. • Engages in network operations when needed.	• *itil • sn_sb.requestor • *sn_customerservice_agent • *incident_read • *problem_read • *change_read
Consumer Requestor	End user	Makes requests from the Remote Catalog	sn_sb.requestor

Assign roles to groups for Service Exchange

Assign roles to control the actions that are available for each user. In ServiceNow, you assign roles by group rather than by individual user. When the job descriptions of users change, their roles are automatically updated.

Before you begin
Role required: admin

Procedure

1. Navigate to **All** > **User Administration** > **Groups**.
2. Click the group that you want to assign the role to.
3. In the Roles related list, click **Edit**.
4. Add the roles to the group.
5. Click **Save**.

Create catalog personas

Create catalog user personas to control the catalog items that consumers can access on their instance.

Before you begin
Role required: admin, sn_sb.admin

About this task
You can assign personas to Remote Record Producers (RRPs). Personas are associated with a Remote Record Producer, and an Entitlement is generated for that record producer and synced with the consumer instance. An Entitlement is generated for all personas on the consumer's instance. Finally, personas can be related to Authorized Users to access the Remote Record Producers.

Procedure

1. Navigate to **All** > `Service Exchange` **Provider** > **Administration** > **Catalog Personas**.
2. Click **New**.

3. Enter a name and description for the catalog persona.
4. Click **Submit**.

Create remote choice definitions in Service Exchange for Providers

As a provider, define remote choice fields that allow consumers to retrieve choice data from their instances in real time.

Before you begin

- Role required for creating a Remote Choice Definition: security_admin
- Role required for creating Remote Choice fields: admin

Procedure

1. Elevate your role to security_admin.
2. Navigate to **All** > `Service Exchange` **Provider** > **Administration** > **Remote Choice Definitions**.
3. Click **New**.
4. On the form, fill in the fields.

Remote Choice Definitions form

Field	Description
Table	Name of the table that's available to your consumers to query for while they are selecting a catalog item on their service portal.
Name	Auto-assigned name that can be changed by an user with the `security_admin` role.
GlideRecordSecure	When this option is selected, all queries for this table follow the access control list (ACL) restrictions. When this option isn't selected: ◦ Queries for this table ignore all ACL restrictions. ◦ Reference qualifier conditions must be specified for each remote choice variable to limit data access.
AccountSecure	When this option is selected, all queries for this table limit the results that are based on the querying service account's **Company** field and the table's **Company** or **Account** field. **Note:** This flag is available only on the tables with references to the company or account where the field is named account, u_account, company, or u_company.

Field	Description
Short description	Additional information about the table.
Filter	Filter conditions that define the base conditions on the table.

5. Click **Save**.
6. Navigate to `Service Exchange` **Providers** > **Administration** > **Remote Catalog Items**.
7. Select a remote record producer and click **Edit**.
8. In the Variables related list, click **New**.
9. On the form, fill in the fields.

Remote Choice Variable form

Field	Description
Record producer table	Auto-selected table that appears when you select the field. This table can be selected manually if it isn't mapped to a field.
Type	Reference type.
Remote choice enabled	Option that you can select for a remote choice.
Catalog item	Name of the remote record producer.
Question	Questions that appear in a catalog record on your consumer's service portal.
Type Specifications	○ **Remote choice reference** that includes the remote choice definition that you use for consumer queries for this variable. ○ **Remote choice display** field that includes the primary data value that appears to your consumers in their querying results. ○ **Remote choice additional info** field that includes the secondary data value that appears to your consumers in their querying results. ○ **Reference qualifier condition** that includes the filter options that you define to limit the data that is returned by the definition.

10. Click **Submit**.

Result
A remote choice variable is created.

Create remote catalogs in Service Exchange for providers

As a provider, you can create remote catalogs to automate the task fulfillment process for your consumers.

By using remote catalogs, providers can maintain the development of shared catalogs on their instances and provide consumers with native catalog items in their instances.

The process for providers to create a remote catalog is as follows:

1. Create a remote record producer in a remote catalog. See Create remote record producers in a remote catalog in Service Exchange for Providers.
2. Create variables for remote record producers. See Create variables for remote record producers in Service Exchange for Providers.
3. Associate flows to the record producers.

Remote record producers in Service Exchange

Remote record producers in Service Exchange for Providers are service requests published in consumer instances. They enable your consumer to request provider services through their service catalog.

Overview of record producers

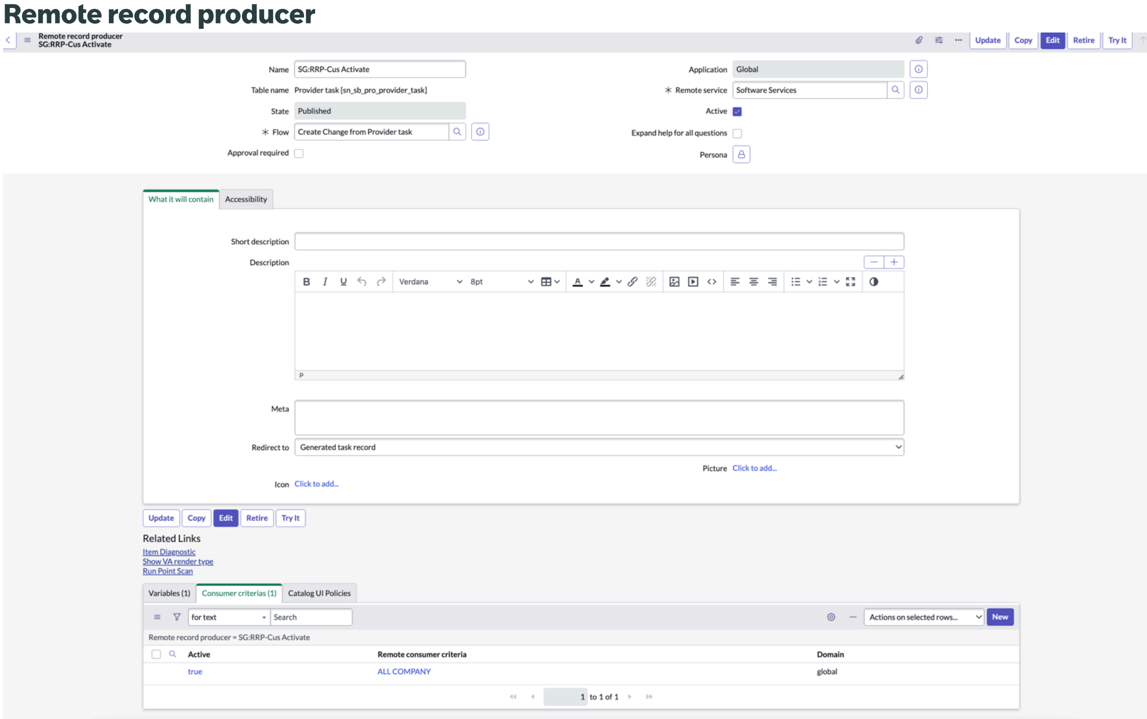
Remote record producers contain the variables that determine the information that a consumer can or must provide to submit a request. When a remote record producer is submitted from the consumer's service catalog, it generates a Provider Task record on the provider's instance and triggers a Create Case, Create Incident, or Create Change Request fulfillment task.

As the task moves through the fulfillment flow in the provider's instance, updates are visible in both the provider and the consumer's ServiceNow instances.

The remote record producer table is an extension of the sc_cat_item_producer table and uses the sn_sb_pro_remote_request table.

The following example shows a sample form that you use when you create a remote record producer.

Remote record producer



Create remote record producers in a remote catalog in Service Exchange for Providers

Create remote record producers as part of creating a Remote Catalog in Service Exchange for Providers.

Before you begin

- Ensure that the catalog scope is set to Global.
- Role required: admin, sn_sb.admin

Note:
Users without the admin role must be granted a catalog admin role to modify and publish remote record producers.

Procedure

1. Navigate to **All** > `Service Exchange` **Provider** > **Administration** > **Remote Catalog Items**.
2. Click **New**.
3. On the form, fill in the fields.

Remote Record Producer New Record form

Field	Description
Name	Name of the remote record producer.
Application	This is a read only field and is set by default based on the application scope.
State	Shows the status of the remote record producer. When you create a remote record producer, this field is set to the **Draft** state. **Note:** This field is automatically updated when you Publish, Archive, or Retire a remote record producer.
Table name	Table name is Provider Task. This is a read only field.
Flow	Choose one of the default Service Exchange flows provided or create your own flow if required.
Active	This is a read only field and is enabled based on the Publish, Retire, Archive, or Delete actions.
Persona	Catalog personas that you want to assign to this record producer.
Compatibility	This field is populated by default. It shows the Service Exchange version that is being used by the provider. If the consumer is using a compatible Service Exchange version, data can be synced between the provider and consumer instances. But if the consumer is not using a compatible version, any new

Field	Description
	entitlements cannot be activated until the corresponding Service Exchange version is upgraded.
Short Description	Short description for the record producer.
Description	Detailed description for the record producer.

4. Click the link next to the Icon field to attach a picture.
5. Click the link next to the Picture field to attach a picture.

   Note:
   You can also delete the picture if it is no longer required.

6. Click **Submit**.
7. Add at least one variable.
   See Create variables for remote record producers in Service Exchange for Providers.
8. Add a consumer criteria.
9. Click **Publish** to publish the remote record producer and make it available in the provider and consumer instances.

What to do next

You can create multiple configuration revisions of this published remote record producer. For details on how to create a configuration revision, see Create configuration revisions. You can also perform the following operations:

- Archive a configuration revision: See Archive a configuration revision
- Copy a configuration revision: See Copy a configuration revision.
- Retire a configuration: Retire a configuration.
- Delete a configuration: See Delete a configuration.

Create variables for remote record producers in Service Exchange for Providers

Create the variables for a remote record producer in Service Exchange for Providers application.

Before you begin

Role required: admin

Procedure

1. Navigate to **All** > `Service Exchange` **Provider** > **Administration** > **Remote Catalog Items**.
2. Click a record producer that you want to create variables for.
3. Click the **Variables** tab in the Related List and then click **New**.
4. On the form, fill in the fields.

Variable New Record form

Field	Description
Type	Supported variable types are as follows:

Field	Description
	◦ Attachment ◦ Break ◦ CheckBox ◦ Container End ◦ Container Split ◦ Container Start ◦ Date ◦ Date/Time ◦ Duration ◦ Email ◦ HTML ◦ IP Address ◦ Label ◦ List Collector ◦ Lookup Multiple Choice ◦ Lookup Select Box ◦ Masked ◦ Multi line text ◦ Multiple Choice ◦ Numeric Scale ◦ Reference ◦ Requested For ◦ Rich Text Label ◦ Select Box ◦ Single Line Text ◦ URL ◦ Wide Single LineText ◦ Yes/No If you use unsupported variables, Service Exchange might not integrate the data in the right format.
Catalog item	Catalog item that uses the variable.
Application	This is a read only field and is set by default based on the application scope.
Mandatory	Option for making the variable mandatory as part of the ordering process.

Field	Description
	Note: This behavior is applicable only on a page load. You can change it by using client APIs.
Active	This is a read only field and is enabled based on the **Publish**, **Retire**, or **Edit** actions.
Order	Placement order of the variable on the catalog item page. You organize the variables from top to bottom, and from the least to the greatest order value. For example, a variable with an order value of 1 is placed ahead of other variables with higher-order values.
Question	Question that you can ask users who are ordering the catalog item to obtain related information.
Name	Name to identify the question. **Note:** If this field is empty, its value is auto-populated based on the **Question** field for all variable types except Break, Container Split, and Container End.
Tooltip	Tooltip text to display when users point to the variable. Enter a brief note to describe the purpose of the question.
Example Text	Question field hint that appears before a user enters a value. You can use a hint for the following variables: ◦ IP Address ◦ Email ◦ URL ◦ Single Line Text ◦ Wide Single Line Text ◦ Multi Line Text ◦ Date ◦ Date/Time
Type Specification	Values specific to the type of variables.

5. Click **Submit**.
   Repeat the above steps to create additional variables for the same remote record producer.

Creating entitlements in Service Exchange for Providers

Using consumer criteria associated with record producers and other configurations, Service Exchange automatically generates the entitlement records that are replicated to eligible consumer instances.

Consumer Criteria records are used to entitle Service Exchange content, such as Remote Record Producers and Remote Task Definitions, to Service Exchange consumers. Consumer criteria enables you to ensure that a consumer has access only to the appropriate Service Exchange content. Using consumer criteria, you can entitle content explicitly to a single customer or to multiple customers.

A few examples of how you configure the consumer criteria are given below. For example, you can entitle content:

- To a specific consumer.
- To all consumers that have an active sold product of a specific model.
- To all consumers that have an active service contract.

The Service Exchange entitlement process runs as a scheduled job each night. During the entitlement process, filters defined in the condition builder of the consumer criteria record are applied to the selected table to find records that match the condition. If a matching record is found, the associated Service Exchange content is entitled to the consumer. For example, when a consumer with an active sold product creates an order, the appropriate Service Exchange content is automatically entitled to the consumer. Entitlements are updated daily, reflecting changes if the data in the tables being queried has changed.

Benefits

Your consumers can see and request the content entitled to them. A scheduled job runs nightly and updates the entitlements, based on any changes made to the tables or records that are queried by the consumer criteria. Additionally, entitlements are checked immediately when updates are made.

You can update Service Exchange entitlements in the following ways:

- Define the consumer criteria in the Remote Record Producer.
- Register a new consumer in Service Exchange.
- Click the **Refresh Entitlements** related link in the Consumer Connections record or the Provider record.

Define a consumer criteria

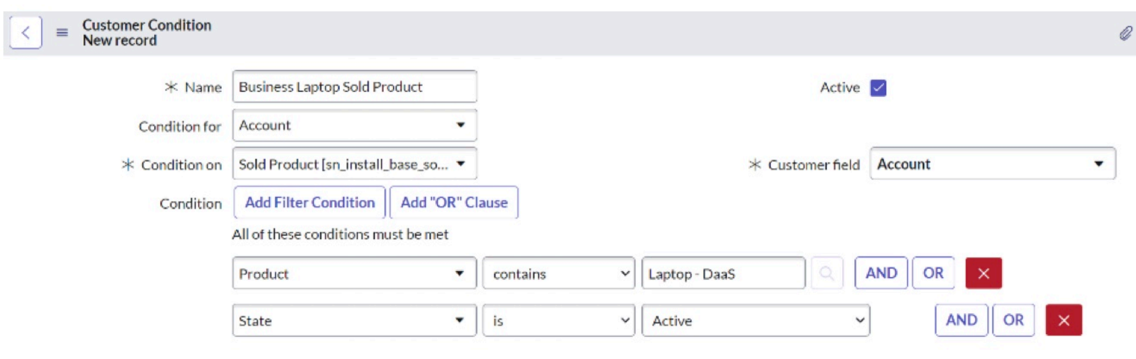
1. 1. Navigate to **All** > `Service Exchange` **Provider** > **Remote Catalog Items** or **All** > `Service Exchange` **Provider** > **Remote Task Definitions**.
2. Select a remote record producer or a remote task definition for which you want to define the consumer criteria.
3. Navigate to the Consumer Criterias tab on the related list and click **New**.
4. You can associate an existing consumer criteria or create a new one.
5. Fill in the fields on the form.

Field	Description
Name	Name of the consumer condition.

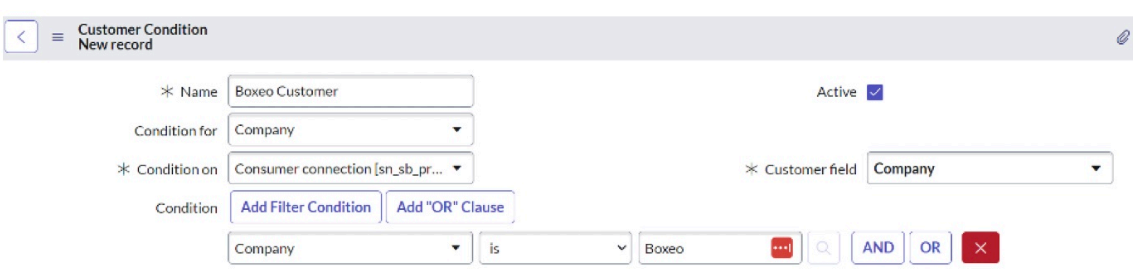
Field	Description
Active	Select this check box to enable the consumer condition.
Condition for	Allows you to specify the Company or Account can be used to match the records on the table being queried. Select the corresponding option based on which field (Company or Account) is available on the table being queried. For example, this field can be used on the Sold Product table as the Account field is used to query the table.
Condition on	Field indicates which table is to be queried to find matching records. **Note:** Tables where Customer Field cannot be selected should not be used.
Customer field	Select the field on the table being queried that matches the Company or Account defined on the Service Exchange connection. If the consumer connected through Service Exchange is an Account, you can use either a Company or Account field to match against it. If the consumer connected is only a Company, you will be restricted to Company.
Condition	Details of the filter. For example, Active is True.

The following examples show how consumer criteria can be configured.

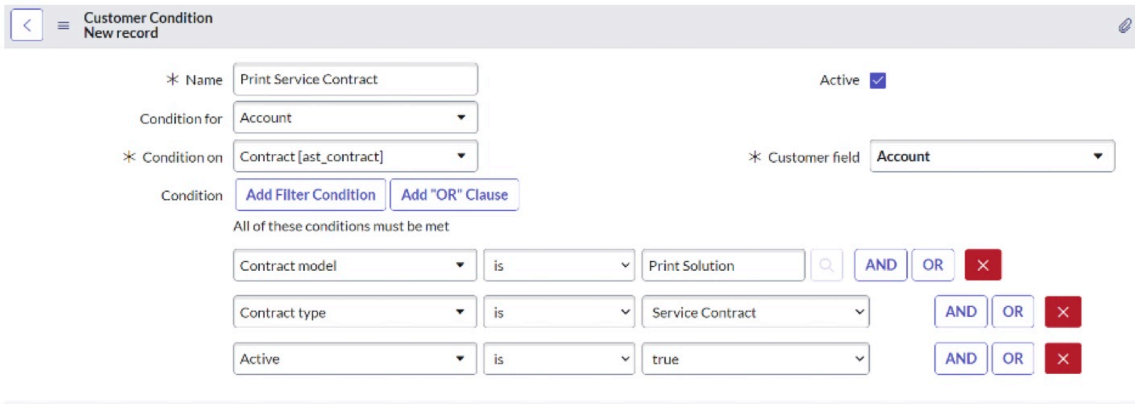
This consumer criteria can be used to entitle content to Service Exchange customers that have an active sold product where product name contains **Laptop – DaaS**.



This consumer criteria entitles content to the Boxeo Service Exchange consumer. It is used to query the Service Exchange Connection table and is filtered with Boxeo as the consumer.



This consumer criteria entitles content to Service Exchange consumers that have an active contract where the Contract model is Print Solution and the Contract Type is Service Contract.



Using variable sets with Remote Record Producers

Use single and multi-row variable sets with remote record producers.

Variable sets allow you to create a collection of variables that can be reused across multiple catalog items and order guides. Using variable sets saves time because you do not have to create the same variables individually for many catalog items. Also, when variables should be modified, you can modify the variable set and the changes are reflected across all the remote record producers that are associated with the variable set.

As a provider, you can create and associate variable sets with remote record producers. Any changes made to these variable sets are automatically synced to the remote record producers that the consumers are entitled to. You can create the following types of variable sets:

- Single-row variable set: Use a single-row variable set to capture data from variables that are grouped together.
- Multi-row variable set: Use a multi-row variable set to capture variable data in a grid layout for a group of entities. For example, for HR during the reorganization of employees, a single remote record producer should be able to capture the relevant information such as the department and manager for a group of employees.

Note:

- Variable sets containing variables with unsupported variable types (Custom, Custom with Label, and UIPage) will not be synced until the invalid variables are removed.
- Variable sets containing variables or UI Policies with scripting will not be synced until all scripting is removed.
- Remote record producers containing invalid variable sets cannot be published. To publish the remote record producer, you must either resolve the validation issues or unassign the invalid variable set from the remote record producer.

For more details on variable sets and how they are used, see Service catalog variable sets.

Create variable sets in Service Exchange for remote record producers

Create variable sets for a remote record producer in Service Exchange for Providers application.

Before you begin
Role required: admin

Procedure

1. Navigate to **All** > *`Service Exchange`* **Provider** > **Administration** > **Remote Catalog Items**.
2. Click a record producer that you want to create variables for.
3. Click the **Variable Sets** tab in the Related List and then click **New**.
4. Select one of the following:
   - Single-Row Variable Set: Creates a variable set with variables that are grouped together. Type field is set to `Single Row`.
   - Multi-Row Variable Set: Creates a variable set with multiple rows that captures variable data in a grid layout. Type field is set to `Multi Row`.
5. Fill in the fields on the form.

Field	Description
Title	Title of a variable set.
Internal name	Variable set name for internal use. If this field is left blank, it is auto-populated based on the Title field.
Order	Order number for the variable set.
Type	Type of the variable set. Possible choices are: ○ Single Row ○ Multi Row
Application	Applications that can use this variable set.
Display title	If selected, adds a title and an expandable header to the right of the variable set.
Variable Set attributes	Attributes for configuring a multi-row variable set. Use the *`max_rows`* attribute to set a limit to the number of rows that you can add to a multi-row variable set. For example, specify `max_rows=1` as the field value.
Layout	The layout display. Set to **1 Column Wide** or **2 Columns Wide, alternating sides** or **2 Columns Wide, one side, then the other**.
Description	Description of the variable set.

6. Right-click and select **Save**.
7. Create the variables to use in that set.

   a. In the Variables related list, click **New**.

   b. Follow the steps listed in Create variables for remote record producers in Service Exchange for Providers to create variables.

   Note:
   For a multi-row variable set:
   - The included variables are displayed as columns of a table.
   - The column order is the order of variables defined in the variable set.
8. Click **Submit**.

Repeat the above steps to create additional variable sets for the same remote record producer.

For more information on variable sets and the layout, see Variable set layout.

Create remote task definitions in Service Exchange for Providers

As a provider, create remote task definitions that trigger the assignment of a remote task.

Before you begin

Role required: admin

Procedure

1. Navigate to **All** > `Service Exchange` **Provider** > **Administration** > **Remote Task Definitions**.
2. Click **New**.
3. On the form, fill in the fields.

Remote Task Definition form

Field	Description
Name	Name of the remote task definition record.
Application	This is a read only field and is set by default based on the application scope.
State	Shows the status of the remote task definition. When you create a remote task definition, this field is set to the **Draft** state. **Note:** This field is automatically updated when you Publish, Archive, or Retire a remote task definition.
Provider table	Any task table that you select from the list. For example, you can choose a case table or an incident table.
Consumer table	Any task table that you select from the list. For example, you can choose a case table or an incident table.
Compatibility	This field is populated by default. It shows the Service Exchange version that is being used by the provider. If the consumer is using a compatible Service Exchange version, data can be synced between the provider and consumer instances. But if the consumer is not using a compatible version, any new remote task definitions cannot be activated until the corresponding Service Exchange version is upgraded.
Maintain SysID	If this field is checked, then the unique identifier, SysID, associated with the parent that created the remote task will be used and

Field	Description
	assigned to the parent task created for the remote task on the consumer instance.
Send attachments	If this is selected, if an attachment is added on the parent record, it is sent to the remote task.
Copy attachment to parent	If an attachment is included with a remote task, a copy is sent to the parent record.
Short description	Brief information about this remote task definition.
Description	More detailed information about this remote task definition.

4. Click **Submit**.
5. Open this new Remote task definition record.
6. On the **Inbound fields** related tab, click **New**.
7. On the form, fill in the fields.
   The inbound fields enable you to receive data from the consumer's instance when a remote task is created or updated.

   Note:
   If the inbound field values are updated, the updated information is shown in a work note on the parent record.

   Inbound field form

Field	Description
Field label	Field label that appears on the remote task form.
Field name	Field name that is used in the remote task flow and script.
Max length	Maximum length of the source field name.
Sync when	Enables you to specify when a target field on the remote task's parent record is directly updated. You can select: ◦ **Insert:** Updates the target field on the remote task's parent record only when the remote task is initially inserted. ◦ **Insert or Update**: Updates the target field on the remote task's parent record every time the remote task is updated. ◦ **Never**: The inbound field never updates a target field on the remote task's parent record directly. For example, you can use this field for state mapping where a flow is used to convert the incoming value before updating the target field.

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Field	Description
	Note: Irrespective of the option you select here, whenever an inbound field is updated, the changes are reflected in a worknote on parent record.
Source Mapping tab	This tab is not displayed if you have selected the **Virtual** check box to define a virtual field mapping.
Source table (read-only)	The Consumer table that you selected while creating the remote task definition.
Source field	Field from the source table that is sent to another ServiceNow instance. Source fields allow for Dot-walking to data in related tables, which is useful when reference data is not available between ServiceNow instances. For example, you can create multiple inbound mappings for change incidents (CIs) to include the name, class, IP address, and asset tag.
Target Mapping tab	Displayed only in the following conditions: ◦ Sync when: You select **Insert** or **Insert or update**. ◦ Virtual: You select this check box to enable virtual field mapping.
Target table (read-only)	The Provider table that you selected while creating the remote task definition.
Target field	Field from the target table that is sent to another ServiceNow instance. **Note:** If you are defining a virtual field mapping, the field you select in the target table is not present in the source table.
Active	This field is enabled by default.
Virtual	Select this check box to enable virtual inbound field mapping. A virtual field is a field that is present in the target table but does not exist in the source table. When a source table doesn't contain a field that exists on a target table, the field is configured as a virtual field. The values specified for the virtual field are passed from the source instance to the target instance.

Field	Description
	The consumer can create a remote task to sync data and update the value of the virtual field in the associated target task record. The target field can be updated either by using the Virtual Inbound option described in the Create a transform in Service Exchange or by using the `updateVirtualField` API.

8. Click **Submit**.
9. On the **Outbound fields** related tab, click **New**.
10. On the form, fill in the fields.
    The outbound fields enable you to send data to the consumer's instance when a remote task is created or updated.

Outbound field form

Field	Description
Field label	Name of the field label that appears on the remote task form.
Field name	Field name that is used in the remote task flow and script.
Max length	Maximum length of the field name.
Sync when suggestion	Enables you (the provider) to suggest to the consumer when a target field on the remote task's parent record should be directly updated. The consumer can change this setting before activating the definition ◦ **Insert:** Updates the target field on the remote task's parent record only when the remote task is initially inserted. ◦ **Insert or Update**: Updates the target field on the remote task's parent record every time the remote task is updated. ◦ **Never**: The inbound field never updates a target field on the remote task's parent record directly. For example, you can use this field for state mapping where a flow is used to convert the incoming value before updating the target field.
Source Mapping tab	This tab is not displayed if you have selected the **Virtual** check box to define a virtual field mapping.
Source table (read-only)	The Provider table that you selected while creating the remote task definition.
Source field	Field from the source table that is sent to another ServiceNow instance.

Field	Description
	Source fields allow for Dot-walking to data in related tables, which is useful when reference data is not available between ServiceNow instances. For example, you can create multiple inbound mappings for change incidents (CIs) to include the name, class, IP address, and asset tag.
Target Mapping tab	Displayed only in the following conditions: ◦ Sync when: You select **Insert** or **Insert or update**. ◦ Virtual: You select this check box to enable virtual field mapping.
Target table (read-only)	The Consumer table that you selected while creating the remote task definition.
Target field	Field from the target table that is sent to another ServiceNow instance. **Note:** If you are defining a virtual field mapping, the field you select in the target table is not present in the source table.
Active	This field is enabled by default.
Virtual	Select this check box to enable virtual inbound field mapping. A virtual field is a field that is present in the target table but does not exist in the source table. When a source table doesn't contain a field that exists on a target table, the field is configured as a virtual field. The values specified for the virtual field are passed from the source instance to the target instance. The target field can be updated either by using the Virtual Outbound option described in the Create a transform in Service Exchange or by using the *updateVirtualField API*.

11. Click **Submit**.
12. On the **Consumer criteria** related tab, click **New**.
13. On the form, fill in the fields.
    Consumer criteria enable you to manage which consumers can use these remote task definitions.

Consumer criteria form

Field	Description
Consumer condition	Customer company or account that you want this remote task definition to be entitled to.
Remote task definition	Name of this remote task definition record. This name is auto-filled.

For more details on consumer criteria, see Creating entitlements in Service Exchange for Providers.

14. Click **Publish**.

    Remote task variables are automatically created when you publish a remote task definition. These variables are the data variables for the inbound fields displayed and can be accessed on the remote tasks.

Result

A remote task definition record is created on your instance. This record is also synchronized with your customer's instance and is now pending activation on your consumer's instance. If the **Auto activate remote task definition** field has been enabled by the consumer, the remote task definition is automatically activated on your consumer's instance.

What to do next

You can create multiple configuration revisions of this published remote task definition. For details on how to create a configuration revision, see Create configuration revisions. You can also perform the following operations:

- Archive a configuration revision: See Archive a configuration revision
- Copy a configuration revision: See Copy a configuration revision.
- Retire a configuration: Retire a configuration.
- Delete a configuration: See Delete a configuration.

Create a remote task using Workflow Studio in Service Exchange for Providers

As a provider, proactively create remote tasks for your customers by using Workflow Studio.

Before you begin

Role required: admin

Procedure

1. Navigate to **All** > **Flow Designer**.
2. On the Flow Designer landing page's main header, select **New** > **Flow**.
3. In the Flow properties window, fill in the following fields.

Flow properties fields

Field	Action
Flow name	Enter the name of your flow
Description	Description of your flow
Application	Global

Field	Action
Domain	Global
Protection	None
Run As	System User

4. Under the TRIGGER section, select **Add a trigger**.
5. In the Trigger section, fill in the following fields and click **Done**.

Trigger section fields

Field	Value
Trigger	`Created or Updated`.
Table	Table name that you want to create for your consumer. For example, a Case [sn_customerservice_case].
Condition	Details of the filter. For example, `Account` is `consumer-name`.
Run Trigger	For every update

Note:
For Advanced Option fields, don't change any values.

6. Under the ACTIONS section, select **Add an Action, Flow Logic, or Subflow**.
7. Click **Action** > *`Service Exchange`* **for Providers** > **Create remote task for Consumer**.
8. Fill in the following fields.

Field	Value
Action	**Create remote task for Consumer**
Task record [Task]	**Trigger - Record Created or Updated - Record**
Remote task def record	Select the remote task definition from the list.

9. Select **Done** and click **Save**.

Result
A remote task is created on your (provider) ServiceNow instance and it gets synchronized on the consumer's ServiceNow instance.

Create a transform in Service Exchange

As a provider or a consumer, create a transform in Service Exchange to integrate tasks between connected instances.

Before you begin
Role required: admin

About this task

The following steps describe the transform process for providers. Consumers can navigate to **All** > *Service Exchange* **Consumer** > **Transforms** and follow the same process.

Procedure

1. Navigate to **All** > *Service Exchange* **Provider** > **Administration** > **Transforms**.
2. Click **New**.
3. On the form, fill in the fields.

Transform form

Field	Description
Number	Auto-generated number for the transform record.
Company	Consumer name for whom this transform is applicable.
All Companies	If this is selected, the transform runs for all companies except those with the same company level transform. Use this field to create a default transform definition that can be applied to all companies. The All companies field eliminates the need to define a specific transform for each customer account even when they have similar requirements. You can use the default definition to transform specific fields across all companies simultaneously. The global transform is applied only to companies that match the configuration and do not have a specific transform already defined. If a company specific transform for the same configuration already exists, this will override the global transform.
Type	○ **Simple**: Used when the field has a known and stable choice list on each instance. A related list of transform lines is created to match the inbound and outbound values. ○ **Advanced**: Used for complex criteria that requires a script to determine the new value. ○ **Virtual Inbound**: Used to transform a virtual inbound field. Requires a script to determine the new value. ○ **Virtual Outbound**: Used to transform a virtual outbound field. Requires a script to determine the new value.

Field	Description
Inbound	Option that enables an inbound transformation for this transform. This option is available only if you select the Type as Simple or Advanced.
Outbound	Option that enables an outbound transformation for this transform. This option is available only if you select the Type as Simple or Advanced.
Provider table	Option that designates the provider's task table. For example, Case.
Consumer table	Option that designates the consumer's task table. For example, Incident.
Provider field	Option that designates the provider's field. For example, State. This field is available only if you select the Type as Simple or Advanced.
Consumer field	Option that designates the consumer's field. For example, **State**. This field is available only if you select the Type as Simple or Advanced.
Virtual field	When Type field is set to **Virtual Inbound** or **Virtual Outbound**, this field is available to reference the virtual field this transform should populate.

4. Click **Save**.
5. Select one of the following:
   a. **Simple:** Click **New** in the Transform lines related list, and fill in the fields on the form.

Transform lines form

Field	Description
Provider label	Option that designates the provider's choice label. For example, Open.
Provider value	Option that designates the provider's choice value. For example, 10.
Customer label	Option that designates the customer's choice label. For example, Progress.
Customer value	Option that designates the customer's choice value. For example, 2.

   b. **Advanced**: Use a script to define the outbound and inbound labels and values as shown in the following example:

```
output.value=input.value;
output.label=input.label;

var ci=new GlideRecord('cmdb_ci');

if(direction=='inbound'){
```

```
   if(ci.get('correlation_id',input.value)){
      output.value=ci.sys_id+";
      output.label=ci.getDisplayValue();
      }
}
if (direction=='outbound'){
  if(ci.get(input.value)){
     if(ci.correlation_id){
        output.value=ci.correlation_id+";
        output.label=input.label;
       }
    }
}
```

c. **Virtual Inbound**: Use a script to determine the inbound label and value as shown in the following example:

```
var inputArr = input.value.split(',');
var outputValues = [];
var outputLabels = [];
for (i in inputArr) {
    getInstanceID(inputArr[i]);
}
output.value = outputValues+'';
output.label = outputLabels+'';

function getInstanceID(name) {
    var gr = new GlideRecord('cmdb_ci_server');
    if (gr.get('name', name)) {
        outputValues.push(gr.sys_id+'');
        outputLabels.push(name);
    }
}
```

d. **Virtual Outbound**: Use a script to determine the outbound label and value as shown in the following example:

```
/*
 ** The 'input' object contains the original value and label
 ** 'direction' contains an 'inbound' or 'outbound' value to
 determine transform direction
 ** 'object_data' contains the Remote Task GlideRecord
 ** It is required to set the variables 'output.value' and
 'output.label' with your script.
 */
output.value = 'condev,conprod';
output.label = 'condev,conprod';
```

6. Click **Submit**.
7. On the transform form, click **Activate**.

Result

A transform record is created on your ServiceNow® instance. Any Remote Task's inbound or outbound fields that match a transform will automatically use them. To learn more, see Create remote task definitions in Service Exchange for Providers.

Update settings for Authorized Users

As a provider, you can configure the settings for Authorized Users who have been created on the consumer's instance.

Before you begin
Role required: admin

Procedure

1. Navigate to **All** > `Service Exchange` **Provider** > **Consumers**.
2. Open the appropriate Consumer Connection form.
3. Under the Related Links, click the **Settings** tab and open the record displayed.
4. Click the **Authorized Users** tab.
   - Max authorized users: This field is available only if the Restrict authorized users flag has been enabled. Specify the maximum number authorized users that can be defined on the consumer's instance.
   - Restrict authorized users: Select the check box if you want restrict the number of authorized users on the consumer's instance.
   - Auto approve authorized users: If this check box is selected, authorized users created on the consumer instance are automatically approved.
5. Click **Update**.

   Note:
   You can view the settings defined in the Remote Record Producers and Remote Task Definitions tabs but cannot modify them.

Use Service Exchange for providers

As a provider, learn how to use Service Exchange to submit requests from the service catalog, and track order fulfillment from your ServiceNow® instances.

This section covers the following:

- Register a Service Exchange consumer
- Service Exchange Remote Catalog items
- Proactive Service Exchange case notification in Service Exchange
- Using the Scratchpad for Service Exchange tasks

Register a Service Exchange consumer

Registering a new consumer in Service Exchange establishes an instance-to-instance integration between a provider and a consumer.

Before you begin

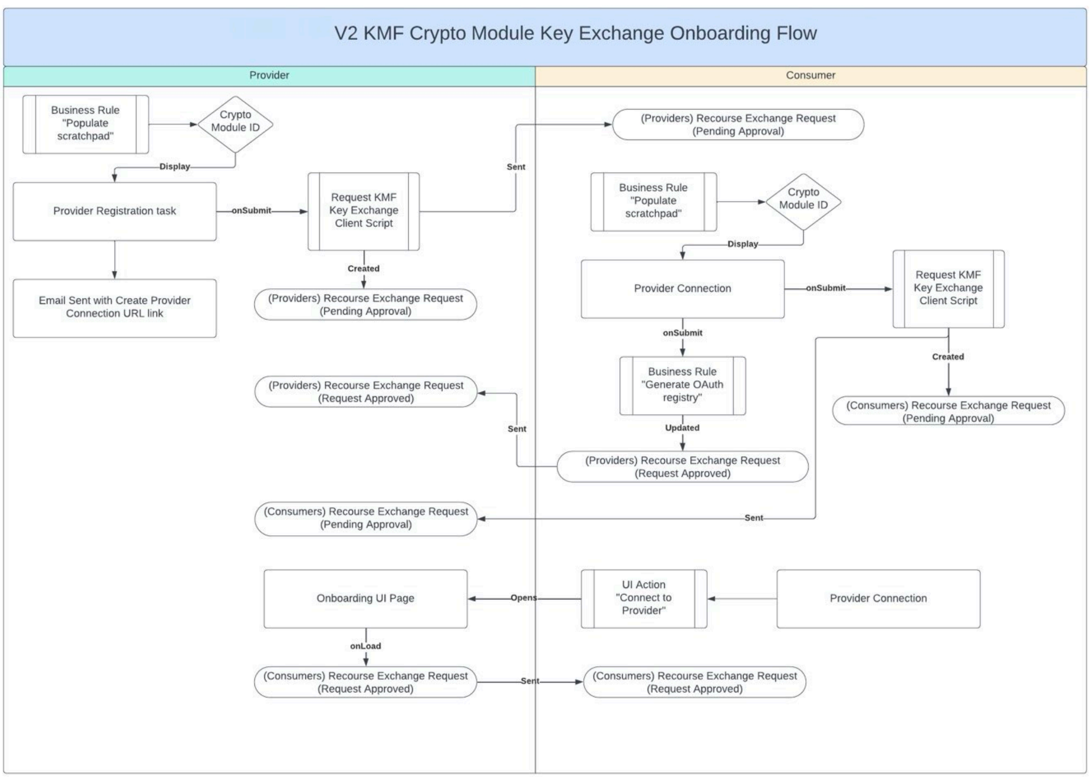
- Role required: admin
- A provider record must have been created. See Set up a Service Exchange provider record.
- A company or account must exist for the consumer in the provider’s instance, and a user or contact with the sn_sb_pro.consumer role must be associated with the company. If this is a production instance, the user must have a valid email address to receive the registration email.

- Run the **Key Management** > **Health (Diagnostics)** to ensure that the Key Management Framework health check has passed. Your administrator must have the sn_kmf.admin and sn_kmf.cryptographic_manager roles to access the health diagnostics. If your administrator does not have access, follow the instructions in Assign KMF roles to grant the required roles.

About this task

Register a new consumer by creating a registration task for the company and instance you want them to connect with. The company contact will receive an email when this registration task is created in a production instance or any other instance where email sending is enabled. If email sending is not enabled, the provider admin can copy the link from the registration task comments and send it to the consumer admin. The email contains instructions and a link that allows the consumer to complete the registration process.

The following diagram shows the onboarding flow and the exchange of data between the Service Exchange provider and consumer instances.



> **Note:**
> When setting up two instances for demonstration purposes, it is vital to ensure that the consumer contact matches the user who is currently logged into the provider instance when attempting to complete the registration from the consumer instance. In the consumer instance, selecting the **Connect to Provider** option will open an OAUTH page in the provider instance, where the consumer admin must authenticate the OAUTH token. If the contact listed on the registration task does not match the logged-in user, this process will fail.

Procedure

1. Navigate to **All** > *Service Exchange* **Provider** > **Consumer Registrations** and click **New**.
2. Enter the following details:

- Select the Company associated with the consumer instance being registered.
- Select the contact details associated with the Company you have selected.

  Note:
  This contact must be an admin user in the consumer instance, otherwise the registration process cannot be completed. On the provider instance, only a Service Exchange Consumer role is required.

- Click the **Lock** icon on the URL field and enter the URL of the consumer ServiceNow instance.

3. Click **Save**.
   An email is generated and sent to the Consumer Contact specified during registration if email sending is enabled. If not, the admin must either copy the link from the work notes and manually send it to the consumer admin. The Consumer Contact must follow the steps listed in the Registering with a provider to complete the registration process on the consumer instance.

Off-board a Service Exchange consumer

Off-board an onboarded consumer and remove all related records.

Before you begin

Role required: admin, sn_sb.admin

Procedure

1. Navigate to **All** > `Service Exchange` **Provider** > **Consumers**.
2. Select the **Number** column to open the consumer connection record.
3. Select the **Off-Board Consumer** related link on the form.
   You see a confirmation message indicating that this action will off-board this connection and delete all related connection records.
4. Select **OK** to off-board the consumer connection.
5. If you want to delete all related tasks, select the **Delete all existing tasks for this connection** check box in the confirmation message, and enter **Delete** in the dialog box that appears and select **OK**.
   The consumer is off-boarded and all related data is deleted.

Result

The following tables are deleted:

- Connection tables:
  - ih_sync_capture_definition
  - ih_sync_outbound_definition
  - ih_sync_inbound_definition
  - ih_sync_process_event
  - ih_sync_remote_system
  - http_connection
  - sys_user
  - sys_user_has_role
  - sys_alias
  - oauth_2_0_credentials

  - oauth_credential
  - oauth_requestor_profile
  - oauth_entity_profile
  - oauth_entity
  - sn_sb_rps_connection
  - sn_transport_queue
  - sn_transport_profile
  - sn_sb_pro_registration
  - sn_sb_pro_service_bridge_settings
  - sn_sb_pro_authorized_user
  - sn_sb_pro_consumer_connection
  - sn_sb_pro_entitlement
- Tasks (the following tables are deleted only if you choose to delete all existing tasks)
  - sn_sb_pro_provider_task
  - sn_sb_pro_remote_task

Service Exchange Remote Catalog items

Service Exchange Remote Catalog items are ordered from the consumer's ServiceNow instance, and they create provider tasks in each instance. The provider's agent fulfills these provider tasks in their ServiceNow instance. The data in these tasks is synchronized between instances so that they both can track the progress.

Some common Service Exchange Remote Catalog items are as follows:

- Help requests
- Service-affecting issues
- Requests for changes in service

Service Exchange request fulfillment process

1. The consumer selects a Service Exchange related item from the service catalog.
2. The consumer provides the information in the Service Exchange request form and clicks **Submit**. When the consumer places the request, the Task View appears.

   Within the view, the consumer can add comments that are replicated in the provider's instance.

3. In the consumer's instance, a single tracking task type, the Provider Task, is generated, regardless of the service.
4. The Provider Task is replicated on the provider's instance, triggering a flow that triggers the parent task.
5. The state of the task in the consumer's instance is set to Received.
6. In the provider's instance, an agent takes ownership of the parent task by clicking **Assign to me**.
7. After an agent takes ownership, the state of the Provider Task in the consumer's instance is updated to Work in Progress.

When the agent posts a comment on the provider's instance, the comment is replicated in the consumer's instance. Comments that the consumer posts are replicated in the provider's instance.

8. After the agent resolves the request, sets a resolution code, and clicks **Propose solution**, the state of the Provider Task in the consumer's instance is updated to Resolved.

   The Actions menu displays the following options, **Accept**, **Reject**, or **Cancel**.

9. If the consumer accepts the resolution, the state of the provider task on the consumer's instance, and the state of the request on the provider's instance, are updated to **Closed**.

Proactive Service Exchange case notification in Service Exchange

After a customer onboards through Service Exchange, that customer gets notified of cases that are created from alert monitoring. Customers proactively receive up-to-date information about issues that affect them, and are informed about the progress of the resolution of those issues.

A proactive case in Service Exchange is similar to the synchronization that occurs between a provider's and customer's instances when the customer submits a service request. However, in this case, the fulfillment process proactively triggers by alert monitoring.

The process is as follows:

1. An alert that is related to an onboarded Service Exchange customer triggers in the provider's instance, and a case record is created.
2. A link to the provider task is added as a comment in that case.
3. An automatic Customer Service Management notification is sent to the primary customer contact, and a link to the provider task is also included.
4. Any state changes or additional comments that are added to the case record in the provider's instance appear in the customer's instance. The status change in the case triggers creation of a case on the provider's instance.

For more information about the Service Exchange synchronization for resolving cases, see Service Exchange Remote Catalog items.

Using the Scratchpad for Service Exchange tasks

The Scratchpad feature facilitates exchange of additional data between provider and consumer instances while performing Service Exchange tasks.

Both providers and consumers can add, update, and remove information to and from the Scratchpad table. Using server side scripts, name-value pairs are associated with Provider Tasks and Remote tasks and this data is automatically synced between the instances. Shared data must be associated with a Provider or a Remote Task, and is automatically synced if the associated task is active.

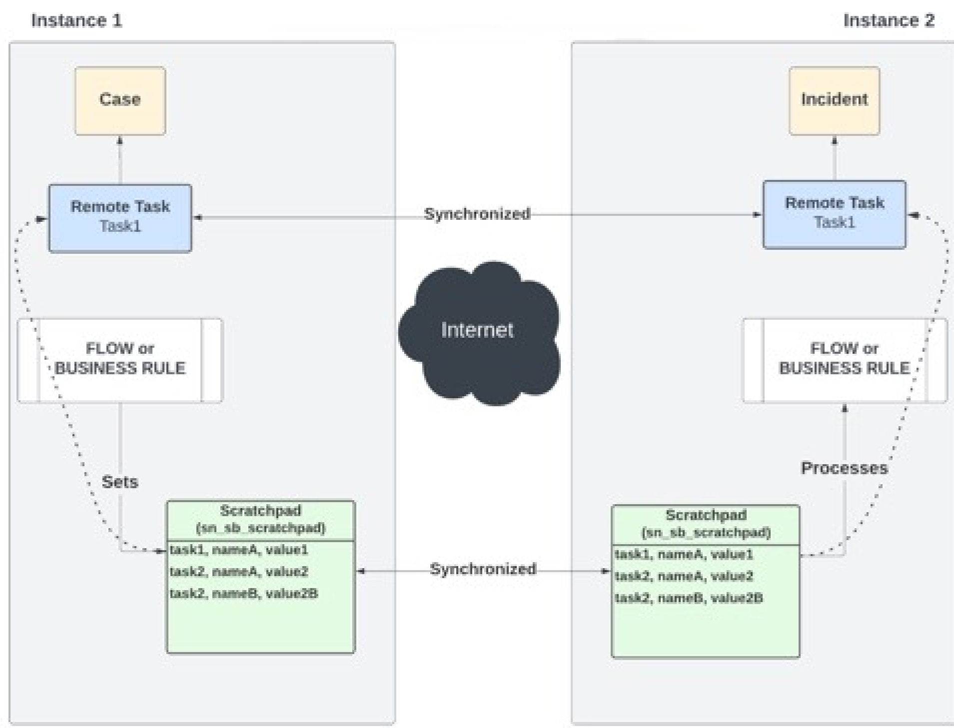
The PSBScratchpadUtil API allows providers to share extra information that is outside of any other Service Exchange service, with their consumers. See PSBScratchpadUtil - Scoped for more details.

The CSBScratchpadUtil API allows consumers to share extra information that is outside of any Service Exchange service with their providers. See CSBScratchpadUtil - Scoped for more details.

Note:

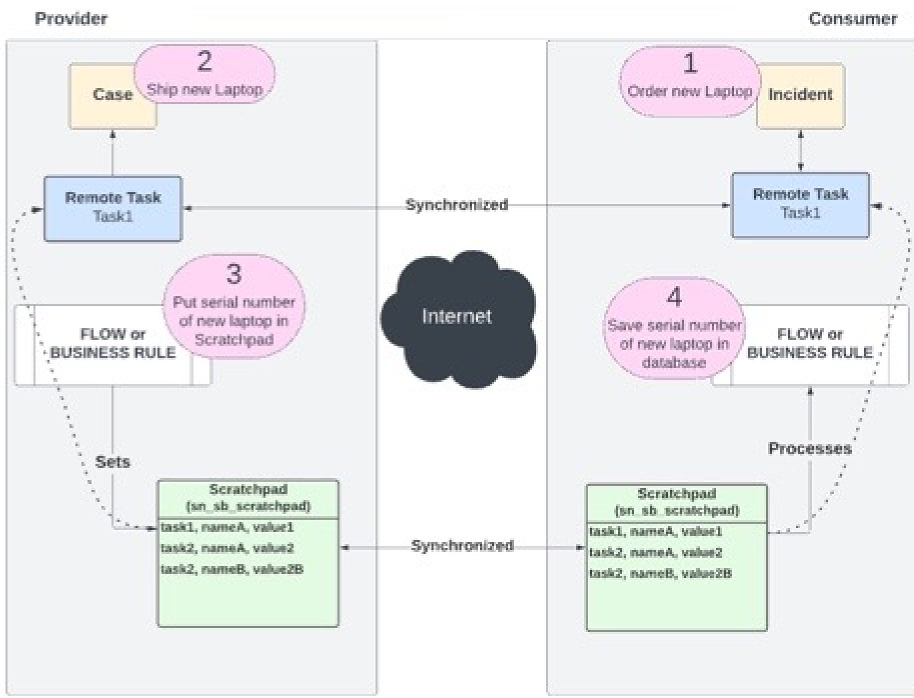
- If the associated task is deactivated or deleted, the scratchpad data is deleted after 3 days. This setting can be modified using the `sn_sb.scratchpad.autodelete.days` property.
- Each task can have a maximum of 50 scratchpad entries.
- Data in the scratchpad cannot exceed 4000 characters.

The following diagram shows how the scratchpad data is synced between the instances.



Example Scratchpad use case: This example shows how data in the Scratchpad is synced between the consumer and provider instances.

- A consumer orders a laptop from the local catalog. The local catalog in this case is a Remote Record Producer.
- This request is immediately forwarded the provider and appears as a Provider Task on the provider's instance.
- The provider then selects a laptop from the inventory, sets it up and adds relevant information like the serial number, model, configuration to the Scratchpad which is automatically sent to the consumer.
- On the consumer's instance, the Scratchpad data is retrieved and updated on the local database.
- The laptop is then assigned to the consumer.



Create configuration revisions

As a provider, you can edit and create revisions of entitlements that contain updated functionality that can be developed and deployed to consumers.

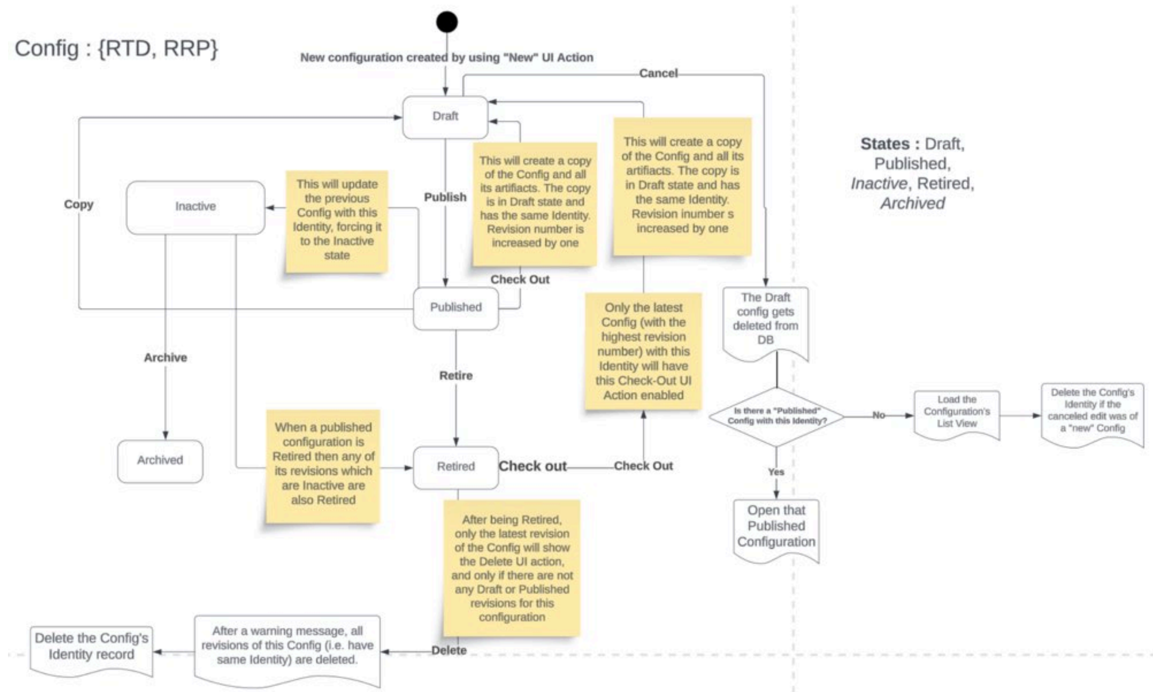
When the new revision is deployed, consumers can either activate and use the new revision, or continue to use the old revision. The new revision can be activated only if the consumer is using a Service Exchange application version that is compatible with the Service Exchange application version compatibility set on the revision. If the consumers want to use the new revision, they must upgrade their Service Exchange application to the minimum compatibility that is set on the configuration.

Configuration revision life cycle

A configuration can be one of the following:

- Remote task definition
- Remote record producer

The following diagram shows how a configuration revision is created, published, and deployed to consumers.



Note:
The following sections describe the various stages in the configuration revision life-cycle of a remote task definition. You can:

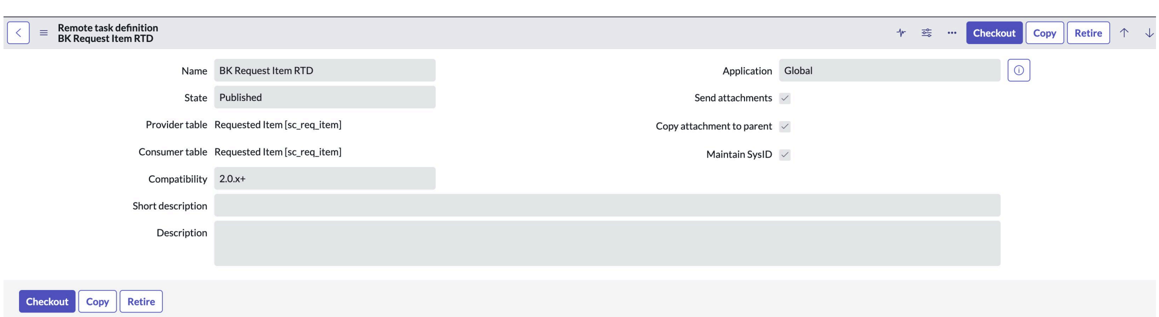
- Create a configuration revision
- Archive a configuration revision
- Retire a configuration
- Copy a configuration revision
- Delete a configuration

You can follow the same process to create revisions for a remote record producer.

Create a configuration revision

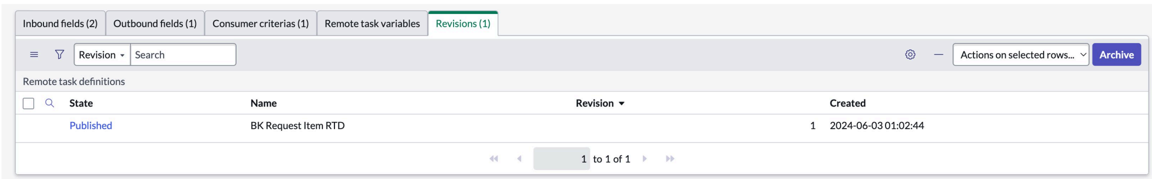
1. Navigate to the **All** > `Service Exchange` **Provider** > **Remote task definitions**.
2. Select the remote task definition for which you want to create a configuration revision.

Note:
The remote task definition that you select must be in the **Published** state.



Note the *`Compatibility`* field. This field shows the Service Exchange version that is being used by the provider. If the consumer is using a compatible Service Exchange version, data can be synced between the provider and consumer instances. But if the consumer isn't using a compatible version, any new entitlements can't be activated until the corresponding Service Exchange version is upgraded. See Service Exchange mismatched version support for additional information.

3. Select **Checkout**.
4. A new revision of the configuration is created and the State is set to **In Draft**.

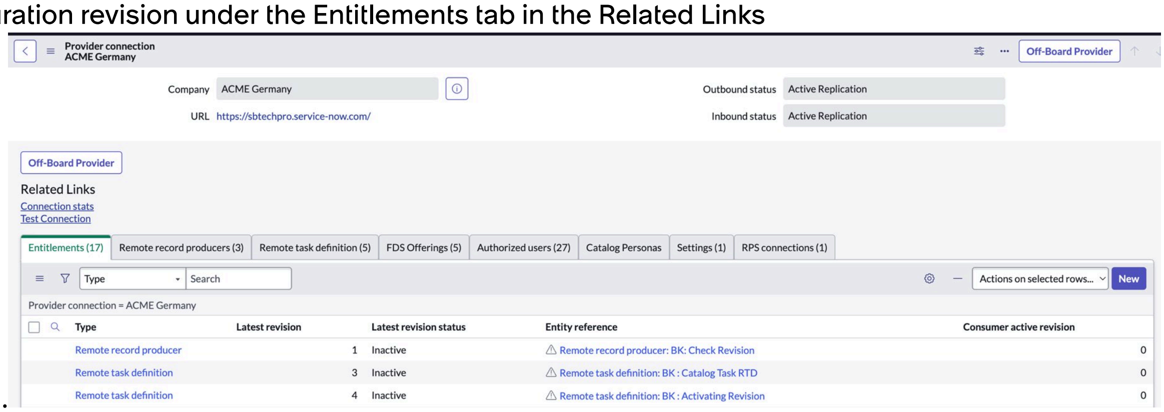


You can view the older revision by navigating to the Revisions tab under the Related List section. As you can see in the preceding image, the older revision is still in the **Published** state.

5. Make the necessary changes and select **Save** to save the changes. Select **Publish** to activate the newly created configuration revision. The newly activated revision is synced to the consumer instance. The State of the older revision is set to **Inactive**.

   Note:
   The inactive configuration is still available to the consumers and data synchronization will continue until this configuration is either archived or retired.

6. On the consumer instance, navigate to `Service Exchange` **Consumer** > **Provider Connections**. You can see the newly published configuration revision under the Entitlements tab in the Related Links



section.

7. Select the newly published configuration reference and select the **Entity reference** link to navigate to the Remote task definition page.
8. Select **Activate** to activate the new configuration revision. When the new revision is activated, the earlier revision moves to an **Inactive** state. Consumers can continue to use the earlier revision until it's archived or retired.

9. You can create multiple configuration revisions for a single configuration but only the latest published revision is active and can be used by the consumers.

   Note:
   - If you create a configuration revision and select **Save**, the revision is set to the **Draft** state. If you open the **Published** revision of this configuration, you'll notice that the **Checkout** and **Retire** options are unavailable. In this case, you must open the draft version to make any changes.
   - If the newly created draft revision isn't required, select **Cancel** to delete that draft revision. The already published revision is available to **Checkout** or **Retire**.

Archive a configuration revision

You can archive an inactive configuration revision. When a revision is archived by the provider, it's deactivated and the State is set to **Archived** on the consumer instance. The following steps describe how to archive a remote task definition configuration revision. The same process is applicable to the remote record producers.

1. Navigate to the **All** > `Service Exchange` **Provider** > **Remote task definitions**.
2. Select a remote task definition in the list.
3. Navigate to the `Revisions` tab in the Related List.
4. Select the inactive revision that you want to the archive.
5. Click **Archive** to deactivate the remote task definition. Once archived, this revision is no longer available to consumers.

   Note:
   You can't Publish, Update, or Checkout an archived configuration revision. You can use the **Copy** option to make a copy of the configuration.

Retire a configuration

You can retire a published configuration. When you retire a configuration, the entire set of revisions associated with the configuration are retired. To retire a configuration, follow these steps:

1. Navigate to the **All** > `Service Exchange` **Provider** > **Remote task definitions**.
2. Select a remote task definition configuration on the list.
3. Select **Retire** and then select **OK**. Once retired, this configuration is no longer available to consumers.

   Note:
   This option retires published and inactive configuration revisions. But configuration revisions in the **Archived** state aren't retired.

4. If you want to use the remote task definition again, you can:
   - Select **Checkout** to create a new configuration revision.
   - Select **Copy** to make a duplicate copy of the new configuration.

Copy a configuration revision

You can make a duplicate copy of a configuration revision that is one of the following states:

- Published
- Inactive
- Archived
- Retired

1. Navigate to the **All** > `Service Exchange` **Provider** > **Remote task definitions**.
2. Select a remote task definition configuration revision that is in any of the preceding states.
3. Select **Copy** to make a copy of the configuration revision.

Delete a configuration

You can delete a configuration that has been retired. There may be many retired revisions present but the **Delete** option is available only for the latest retired configuration revision. When a revision is deleted, the entire configuration set is deleted.

1. Navigate to the **All** > `Service Exchange` **Provider** > **Remote task definitions**.
2. Select a remote task definition that is in the **Retired** state.
3. Select **Delete** to delete the configuration if it's no longer required. Once deleted, all records associated with this identity are deleted and can't be undone.

Service Exchange for Consumers

Use the Service Exchange for Consumers application to seamlessly interact and collaborate with your providers.

As a consumer, you can:

- Review remote catalog items entitled to you from your local catalog and send requests to your provider for fulfillment.
- Bidirectionally integrate your tasks with your provider's tasks.
- Receive proactive tasks from providers for transparency and collaboration.

Explore	Configure	Reference
Learn about the features and capabilities of Service Exchange.	As a consumer, configure your Service Exchange installation.	Get details of domain separation and installed components.

Installing and configuring Service Exchange for Consumers

As a consumer, follow these steps to set up the Service Exchange for Consumers application in your own instance.

Pre-installation checks

Check glide.servlet.uri property: Ensure that the `glide.servlet.uri` property in the Glide instance is set to the correct instance URL. An issue can occur when an instance is cloned from production, but still refers to the production URL for the `glide.servlet.uri` property.

Setting up Service Exchange for Consumers

Task	Link
Install the Service Exchange for Consumers application.	See Install Service Exchange for Consumers.
Upgrade from version 1.x.x of Service Exchange for Consumers if required.	See Upgrade Guide - Service Exchange for Providers and Consumers application (v2.x.x release - KB1700387).
Add Service Exchange roles for consumers.	See Personas for consumers.
Register with a provider.	See Registering with a provider.
Activate entitlements.	See Activate entitlements in Service Exchange.
Configure consumer pre-flows.	See Service Exchange consumer pre-flows.
Add authorized users.	See Add an authorized user.
Create transforms.	See Create a transform in Service Exchange.
Create remote tasks to sync data.	See Create remote tasks to sync data.
Configure settings.	See Configure settings on the consumer instance.

Install Service Exchange for Consumers

If you have an admin role, you can install the Service Exchange for Consumers application. The application includes demo data and installations that are related to ServiceNow® Store applications and plugins.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see Get entitlement for a ServiceNow product or application.

Role required: admin

About this task

The following plugins are installed with the Service Exchange for Consumers application:

- sn_sb
- sn_sb_rps
- sn_transport
- com.glide.hub.process.sync
- com.snc.ihub_spoke_util_pack

Apart from these, several components including roles, business rules, tables, and flows are also installed. For more information about the components that are installed with this application, see Components installed with Service Exchange for Consumers.

Procedure

1. Navigate to **All** > **System Applications** > **All Available Applications** > **All**.
2. Find the Service Exchange for Consumers application by using the filter criteria and search bar.

   You can search for the application by its name or ID. If you can't find the application, you might have to request it from the ServiceNow Store.

   Visit the ServiceNow Store website to view all the available apps and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the ServiceNow Store version history release notes.
3. If demo data is available and you want to install it, click **Load demo data**.

   Demo data comprises sample records that describe the application features for common use cases. Load demo data when you first install the application on a development or test instance.

   Important:
   If you don't load the demo data during installation, it's unavailable to load later.
4. Select **Install**.

Personas for consumers

Learn about the different personas in the Service Exchange application.

Remote record producers can be associated with personas. If a remote record producer does not have a persona, any user with the Service Exchange Requestor role can place an order for the item. However, if one or more personas are assigned to a remote record producer, the user must have the Requestor role and at least one of the listed personas. Personas are assigned to users through the Authorized Users table. To access items protected by personas, the user's Authorized User record must be approved by the provider, activated in the consumer instance, and have the appropriate persona(s).

Consumer personas

Persona	Skills	Tasks	Roles
System administrator	Is a certified ServiceNow system administrator	• Creates provider and connection records. • Installs the Service Exchange applications. • Creates and maintains transforms. • Activates published remote task definitions and	• admin • sn_sb.admin • sn_transport.admin

Consumer personas (continued)

Persona	Skills	Tasks	Roles
		remote record producers. • Troubleshoots Service Exchange transport payloads.	
Service Exchange Requester	Is an IT administrator	• Responsible for some form of IT service that is either completely or in part supported by one or more external vendors. • Requests and monitors the service requests that are placed with the external provider from their own instance.	• itil • sn_sb.requestor
Consumer Requestor	End user	Makes requests from the Remote Catalog.	sn_sb.requestor

Assign roles to groups for Service Exchange

Assign roles to control the actions that are available for each user. In the Service Exchange for Consumers application, you assign roles by group rather than by the individual user so that when the job descriptions of users change, their roles are automatically updated.

Before you begin
Role required: admin

Procedure

1. Navigate to **All** > **User Administration** > **Groups**.
2. Click the group that you want to assign the role to.
3. In the Roles related list, click **Edit**.
4. Add the desired roles to the group.
5. Click **Save**.

Registering with a provider

Complete the registration process to establish a connection to the provider instance.

Before you begin

- Role required: admin
- Run the **Key Management** > **Health (Diagnostics)** to ensure that the Key Management Framework health check has passed. Your administrator must have the sn_kmf.admin and sn_kmf.cryptographic_manager roles to access the health diagnostics. If your administrator does not have access, follow the instructions in Assign KMF roles to grant the required roles.

About this task

Before proceeding, the provider should have requested the contact details of an admin to set as the main point of contact on their registration record. This designated contact person will receive an email either from the provider's instance or directly from the provider's admin, containing a registration link. Clicking on this link will generate a Provider Connection record in your consumer instance. The following steps assume that you have already clicked the registration link.

Procedure

1. Click the **Connect to Provider** link sent in the provider's registration email or follow the link given to you directly by the provider's admin.
   This link will generate the Provider connection record.

   Note:
   The consumer admin completing the registration process must be the named contact on the provider's registration task or an admin in the provider's instance. Registration will fail during the OAUTH authentication step if attempted by another user.

2. Navigate to **All** > `Service Exchange` **Consumer** > **Provider Connections**.
3. On the Provider Connection form in the consumer instance, select the name of the Company that the provider is associated with and click **Save**.
   The Provider Connection record is displayed.
4. Click **Connect to Provider** in the Provider connection record page.
5. Click **Authenticate** when the Service Exchange registration message appears.
   The OAuth authentication page appears.
6. Click **Allow** and then click **Submit** to proceed with the registration.
   You are redirected to the Registration task where you can view the status. When registration is completed, a connection is established between the provider and the consumer instances, and the registration task State is set to **Closed Complete** on the provider's instance.

Off-board a Service Exchange provider

Off-board a provider connection and delete all related records.

Before you begin

Role required: admin, sn_sb.admin

Procedure

1. Navigate to **All** > `Service Exchange` **Consumer** > **Provider Connections**.
2. Click on the **Number** column to open the provider connection record.
3. Click **Off-Board Provider**.
   You will see a confirmation message indicating that this action will off-board this connection and delete all related connection records.
4. Click **OK** to off-board the provider connection.

5. If you want to delete all related tasks, select the **Delete all existing tasks for this connection** checkbox in the confirmation message, and enter **Delete** in the dialog box that appears and click **OK**.
   The consumer will be off-boarded and all related data will be deleted.

Result

The following tables are deleted:

- Connection tables:
  - ih_sync_capture_definition
  - ih_sync_outbound_definition
  - ih_sync_inbound_definition
  - ih_sync_process_event
  - ih_sync_remote_system
  - http_connection
  - sys_user
  - sys_user_has_role
  - sys_alias
  - oauth_2_0_credentials
  - oauth_credential
  - oauth_requestor_profile
  - oauth_entity_profile
  - oauth_entity
  - sn_sb_rps_connection
  - sn_transport_queue
  - sn_transport_profile
  - sn_sb_con_service_bridge_settings
  - sn_sb_con_authorized_user
  - sn_sb_con_persona
  - sn_sb_con_provider_connection
  - sn_sb_con_entitlement
- The following tables are deleted only if you select the **Delete all existing tasks for this connection** checkbox in the confirmation dialog:
  - Tasks
    - sn_sb_con_provider_task
    - sn_sb_con_remote_task
  - Entitlements
    - sn_sb_con_remote_record_producer
      - item_option_new
      - item_option_new_set
    - sn_sb_con_remote_task_def (and child tables)

- sn_sb_con_remote_task_variable
- sn_sb_con_inbound_field
- sn_sb_con_outbound_field

Activate entitlements in Service Exchange

Activate entitlements to use a service or product that you have purchased.

Before you begin
Role required: admin

Procedure

1. Navigate to **All** > `Service Exchange` **Consumer** > **Provider Connections**.
2. Click the Number column to navigate to the Provider connection record.
3. The list of entitlements available is displayed.
4. Click the Remote record producers tab and select a remote record producer to you want to activate.
5. In the Remote record producer page, click **Activate** to activate the entitlement.
6. Click the Remote task definition tab and select a remote task definition to you want to activate.
7. In the Remote task definition page, click **Activate** to activate the entitlement.

Activate the remote task definitions record in Service Exchange

As a consumer, activate the remote task definitions in your instance so that you can create remote tasks.

Before you begin
Before you (the consumer) can activate a remote task definition in your ServiceNow instance, your provider must create it first in their ServiceNow instance. For more information, see Create remote task definitions in Service Exchange for Providers.

Role required: admin

Procedure

1. Navigate to **All** > `Service Exchange` **Consumer** > **Remote Tasks**.
2. Click the remote task definition record that you want to activate.
3. On the remote task definition form, review the Simple Trigger section on the form.
   If you set a simple trigger that matches a task record update, a remote task is automatically created for the task record.
4. On the **Inbound fields** related tab, review the variables data.
   The provider defines these inbound fields. When you create a remote task, your provider receives the remote task data through these inbound fields. You can modify the **Field label**, **Sync when**, and **Target field** fields.
5. On the **Outbound fields** related tab, review the variables data.
   Your provider defines these outbound fields. When the provider responds to your remote task, you receive the remote task data through these outbound fields. You can only modify the **Source field** field on these records.
6. On the **Remote task variables** related tab, review the variables data.
   The remote task variables are created from your inbound fields to be displayed on the remote tasks form.

7. Click **Activate**.
8. Verify the mappings of the inbound and outbound variables and click **OK**.
   The pop-up window enables you to verify the inbound and outbound mappings.

Add an authorized user

As a consumer, add new authorized users to control the access to catalog items that are entitled to you by your provider.

Before you begin

Role required: admin

Procedure

1. Navigate to **All** > `Service Exchange` **Consumer** > **Provider Connections**.
2. On the Provider Connections page, click the **Number** link to open a Provider Connection record.
3. Select the **Catalog Personas** related tab and check if you have any entitled personas from your provider.
4. On the **Authorized Users** related tab, click **New**.
5. On the form, fill in the fields.

   Authorized User form

Field	Description
Consumer user	Name of the user. You can select the name from the user's list.
Provider connection	Name of the service provider. This field is auto-filled.
Persona	Persona(s) that you want to add to the user.

6. Right click the form header and click **Save**.
7. Click **Activate**.

Result

The authorized user record syncs to the provider's ServiceNow instance for approval. After it is approved and activated, the user can see the remote record producers with their assigned personas.

Service Exchange consumer pre-flows

As a consumer, you can control when data should be synced between the provider tasks on the consumer and provider instances.

Before you begin

- Role required: admin
- A subflow with the sync condition should have been created

Role required: admin

About this task

You can attach a subflow with a Service Exchange remote record producer and run processes such as approvals, before syncing a task with the provider. When a new provider task is created, the attached subflow is executed before the data is synced between the consumer and provider instances. The subflow must set a field called **Sync** on the Provider task to **true** for the record to sync to the provider. If the remote record producer doesn't have an attached subflow, provider tasks are immediately synced to the provider instance.

Procedure

1. Navigate to **All** > `Service Exchange` **Provider** > **Provider Connections**.
2. Select a remote record producer for which you want to attach a subflow.
3. In the Flow field, select the subflow that is to be applied to the provider task.
   Data is synced to the provider instance only if the attached subflow sets the `Sync` flag to **true** on the provider task.
4. Select **Update**.
   Depending on the conditions defined in the subflow, the provider task is synced to the provider instance.

Create remote tasks to sync data

Remote tasks provide linked tasks across multiple instances and enable business workflows without any custom integrations.

Before you begin

- Role required: admin
- Remote task definition must already exist.

About this task

As a consumer, you can integrate tasks like incidents, cases, and service requests bi-directionally with your providers using remote tasks.

Procedure

1. Navigate to **All** > **Incidents** > **Open**.
2. Click on the **Number** link to open an incident.
3. Click **Create Remote Task for Provider** in the Related Links section.

   Note:
   The **Create Task for Provider** link appears in this section only if at least one active and valid remote task definition is available for the provider table associated with the task.

4. The Remote Task page appears.
   In the Remote Task page, the Parent field is populated with the task record and the Status field is set to New.
5. Select a Remote Task Definition from the list.

Note:

- Only active and valid remote task definitions associated with the parent task are displayed.
- The Provider Connection field is automatically filled in based on the Remote Task Definition selected.
- If only one Remote Task Definition is available, the Remote Task Definition field is automatically populated.

6. Click **Submit**.
   When you navigate back to the parent task, you can see the newly created remote task in the Remote Tasks related list.

   Note:
   The Remote Task is created asynchronously and may not show initially if the parent task form is quickly loaded. You may need to refresh the form to see the newly created Remote Task.

7. Navigate to `Service Exchange` **Consumer** > **Remote Tasks**.
   The list of remote tasks is displayed. When the newly created Remote Task is received in the provider instance, a new parent task based on the Remote Task is created.
8. Click on the newly created task and then click on the remote task under the Remote Tasks tab in the Related Links section.
   You can see the Status field is set to Connected and that the description has been updated.
9. Navigate back to the parent task.
10. Update the Short Description for the parent task and click **Save**.
11. Log into the consumer instance and open the task.
    You can see that the data has been synced and Short Description field has been updated in the consumer instance. You can also see a work note indicating that the Short Description has been updated by the provider.

    Note:

    - You can create a remote task on the provider instance by following the same steps. Data is synced between the consumer and provider instances and any changes you make in the consumer instance are automatically updated in the provider instance.
    - When you create a remote task on the consumer instance, the Provider Connection field is automatically populated when you select a Remote Task Definition.

Connect and Disconnect remote tasks

Remote tasks associated with active remote task definitions enable you to sync data between two parent tasks on the provider and consumer instances.

When you create a remote task for an active remote task definition, the Status of the remote task is set to **Connected** on the provider and consumer instances if there are no errors. This ensures that the remote task syncs data including field updates, attachments, and comments between the parent tasks.

To stop synching of data between the instances, navigate to the Remote Task page on the provider or consumer instance and click **Disconnect**. When disconnected, the remote task pauses copying or transfer of data including worknotes and comments between the instances.

Note:
To resume syncing of data, you can navigate to the Remote Task page and click **Connect**. This option works only if the existing configuration is valid and has not been modified, and the remote task definition is active.

Configure settings on the consumer instance

As a consumer, you can configure an define default settings on your instance.

Before you begin
Role required: admin

Procedure

1. Navigate to **All** > `Service Exchange` **Consumer** > **Provider Connections**.
2. Click the Number link on the Provider Connections page.
3. Under the Related Links, click the **Settings** tab and click **New**.
4. In the Settings page, click the **Remote Record Producers** tab under the Related Links.
5. Enable the **Auto activate remote record producer** check box if you want the remote record producers to be automatically activated.
6. Click the **Remote Task Definitions** tab.
7. Enable the **Auto activate remote task definition** check box if you want the remote task definition to be automatically activated.
8. Click the **Authorized Users** tab.
   - Max authorized users: This field is available only if the Restrict authorized users flag has been enabled. Specify the maximum number authorized users that can be defined on the consumer's instance.
   - Restrict authorized users: Select the check box if you want restrict the number of authorized users on the consumer's instance.
   - Auto approve authorized users: If this check box is selected, authorized users created on the consumer instance are automatically approved.
9. Click **Update**.

Using the Scratchpad for Service Exchange tasks

The Scratchpad feature facilitates exchange of data between provider and consumer instances while performing Service Exchange tasks.

Both providers and consumers can add, update, and remove information to and from the Scratchpad table. See Using the Scratchpad for Service Exchange tasks for detailed information on how to use the Scratchpad feature.

Integration with Sales Customer Relationship Management

Providers can use Service Exchange to publish their product offers to a consumer using a Service Exchange Remote Record Producer.

Consumers can order a connected provider's Sales Customer Relationship Management product offering from service catalogs in their ServiceNow instances, enabling faster order fulfillment, improved accuracy, and improved customer satisfaction. For more details, see Order Management for providers with Service Exchange.

Service Exchange reference

Reference topics provide additional information about the Service Exchange data model and configuration.

Service Exchange data model

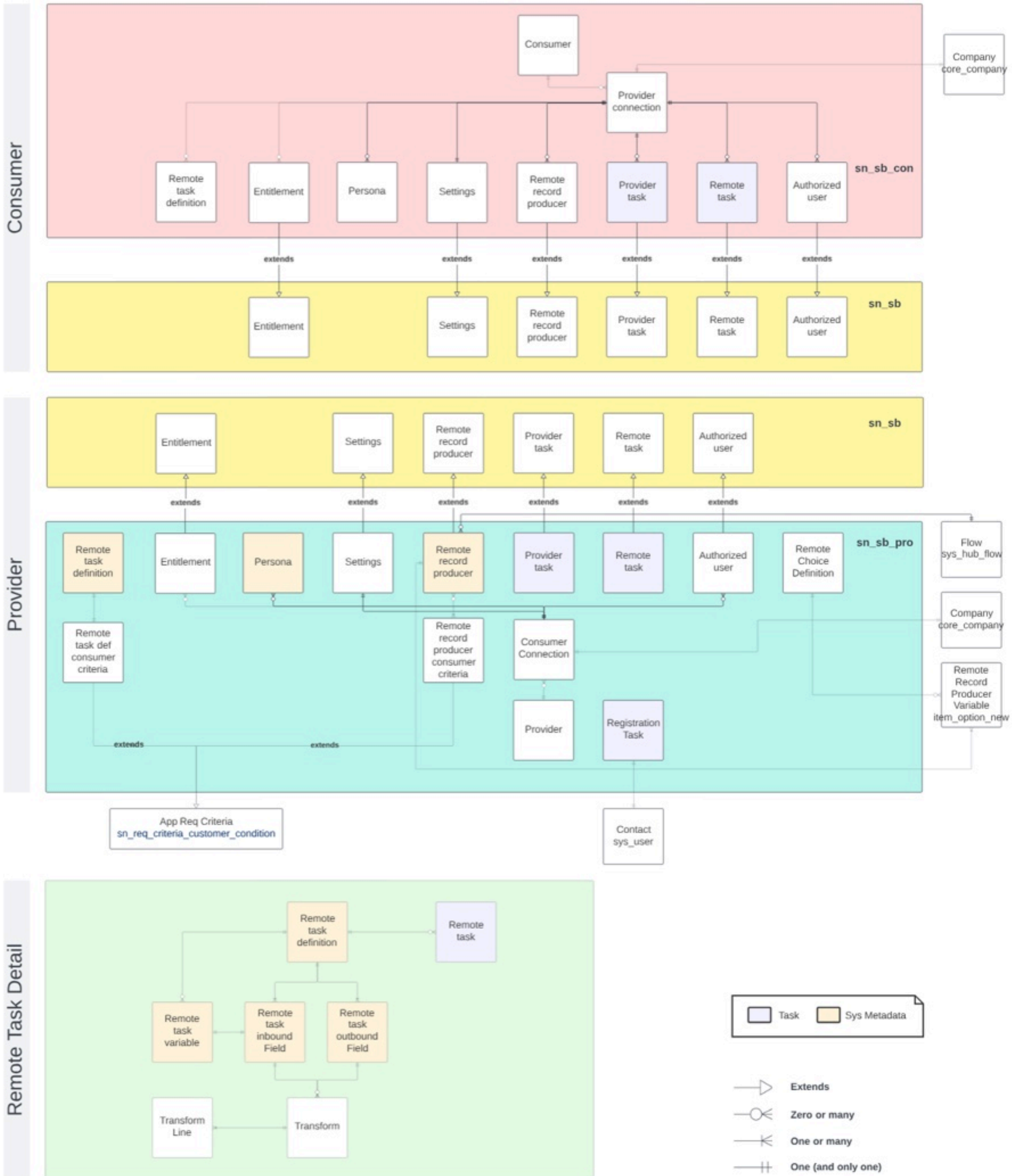
The Service Exchange applications data model provides insight into how the tables that are used in Service Exchange relate to each other.

The data model uses a combination of the following types of tables to store data:

- Service Exchange application tables.
- ServiceNow AI Platform standard tables.

The following diagram provides an overview of the data model for Service Exchange.

Service Exchange data model



The following table lists the Access Control Rights (ACR) for specific Service Exchange base table.

Access to tables by role in the Service Exchange base application

Table	Read	Write	Delete	Create
Authorized user [sn_sb_authorized_user]	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin
Connection	admin	admin	admin	admin

Access to tables by role in the Service Exchange base application (continued)

Table	Read	Write	Delete	Create
[sn_sb_connection]	sn_sb.admin			
Entitlement [sn_sb_entitlement]	admin sn_sb.admin	admin	None	None
Provider Task [sn_sb_provider_task]	admin sn_sb.admin sn_sb.requestor	admin sn_sb.admin sn_sb.requestor	admin	admin sn_sb.admin sn_sb.requestor
Remote Record Producer [sn_sb_remote_record_producer]	admin sn_sb.admin	admin	admin	admin
Remote Task [sn_sb_remote_task]	admin sn_sb.admin sn_sb.remote_task_creator	None	None	None
Scratchpad [sn_sb_scratchpad]	admin	None	None	None
Transform [sn_sb_transform]	admin sn_sb.admin	None	None	None
Transform Line [sn_sb_transform_line]	admin sn_sb.admin	None	None	None

Service Exchange for Providers data model

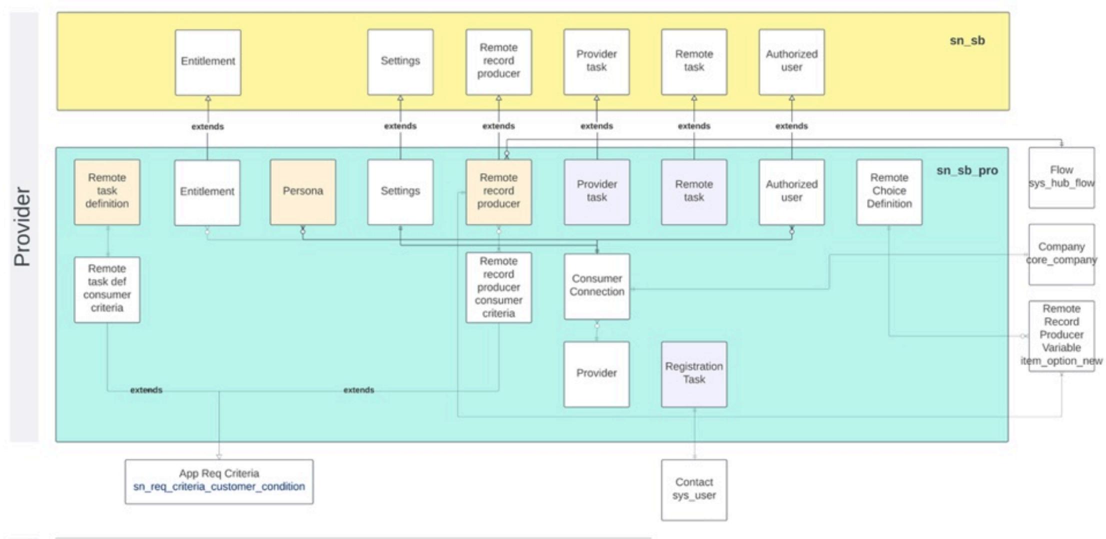
The Service Exchange for Providers data model provides insight into how the tables that are used in the Service Exchange for Providers application relate to each other.

The Service Exchange for Providers application data model uses a combination of the following types of tables to store data:

- Service Exchange of Providers application tables.
- Customer Service Management application tables.
- ServiceNow AI Platform standard tables.

The following diagram provides an overview of the data model for Service Exchange for Providers application.

Service Exchange for Providers data model



The following table lists the Access Control Rights (ACR) for specific Service Exchange for Provider tables.

Access to tables by role in the Service Exchange for Providers application

Table	Read	Write	Delete	Create
Authorized user [sn_sb_pro_authorized_user]	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin
Consumer Connection [sn_sb_pro_consumer_connection]	admin sn_sb.admin	admin	admin	admin
Entitlement [sn_sb_pro_entitlement]	admin sn_sb.admin	None	None	None
Inbound Field [sn_sb_pro_inbound_field]	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin
Outbound Field [sn_sb_pro_outbound_field]	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin
Persona [sn_sb_pro_persona]	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin
Provider	admin	admin	admin	admin

Access to tables by role in the Service Exchange for Providers application (continued)

Table	Read	Write	Delete	Create
[sn_sb_pro_provider]	sn_sb.admin			
Provider Task [sn_sb_pro_provider_task]	admin sn_sb.admin sn_sb.requestor	admin sn_sb.admin sn_sb.requestor	admin	admin sn_sb.admin sn_sb.requestor
Registration [sn_sb_pro_registration]	admin sn_sb.admin sn_sb_pro_consumer	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin
Remote Choice Definition [sn_sb_pro_remote_choice_definition]	admin sn_sb.admin	None	None	None
Remote Record Producer [sn_sb_con_remote_record_producer]	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin
Consumer Criteria [sn_sn_pro_remote_record_producer_consumer_criteria]	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin
Remote Service [sn_sb_pro_remote_service]	admin sn_sb.admin	admin	admin	admin
Remote Task [sn_sb_con_remote_task]	admin sn_sb.admin sn_sb.remote_task_creator	admin sn_sb.admin sn_sb.remote_task_creator	admin sn_sb.admin sn_sb.remote_task_creator	admin sn_sb.admin sn_sb.remote_task_creator
Remote Task Definition [sn_sb_con_remote_task_def]	admin sn_sb.admin sn_sb.remote_task_creator	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin sn_sb.remote_task_creator

Access to tables by role in the Service Exchange for Providers application (continued)

Table	Read	Write	Delete	Create
Consumer Criteria [sn_sv_pro_remote_task_def_consumer_criteria]	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin
Variable [sn_sb_con_remote_task_variable]	admin sn_sb.admin	admin	admin	admin
Service Exchange Settings [sn_sb_con_service_bridge_settings]	admin sn_sb.admin	admin sn_sb.admin	None	None
Transform [sn_sb_con_transform]	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin

Service Exchange for Consumers data model

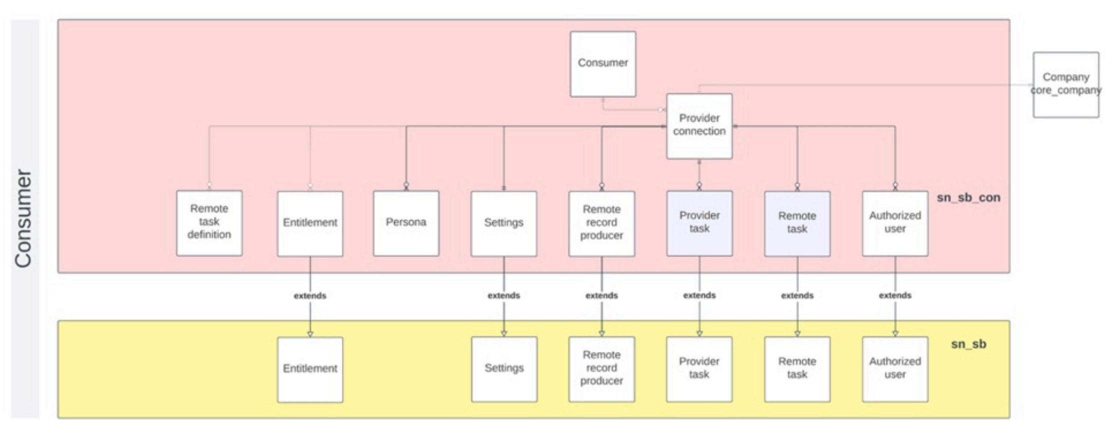
The Service Exchange for Consumers data model provides insight into how the tables that are used in the Service Exchange for Consumers application relate to each other.

The Service Exchange for Consumers data model uses a combination of the following types of tables to store data:

- Service Exchange for Consumers application tables.
- Customer Service Management application tables.
- ServiceNow AI Platform standard tables.

The following diagram provides an overview of the data model of the Service Exchange for Consumers application.

Service Exchange for Consumers data model



The following table lists the Access Control Rights (ACR) for specific Service Exchange for Consumer tables.

Access to tables by role in the Service Exchange for Consumers application

Table	Read	Write	Delete	Create
Authorized User [sn_sb_con_authorized_user]	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin
Consumer [sn_sb_con_consumer]	admin sn_sb.admin	admin	admin	admin
Entitlement [sn_sb_con_entitlement]	admin sn_sb.admin	None	None	None
Inbound Field [sn_sb_con_inbound_field]	admin sn_sb.admin	admin sn_sb.admin	None	None
Outbound Field [sn_sb_con_outbound_field]	admin sn_sb.admin	admin sn_sb.admin	None	None
Persona [sn_sb_con_persona]	admin sn_sb.admin	None	None	None
Provider Connection [sn_sb_con_provider_connection]	admin sn_sb.admin	admin	admin	None
Provider Task [sn_sb_con_provider_task]	admin sn_sb.admin sn_sb_requestor	admin sn_sb.admin sn_sb_requestor	admin	admin sn_sb.admin sn_sb_requestor
Remote Choice Cache [sn_sb_con_remote_choice_cache]	admin	admin	None	None
Remote Record Producer [sn_sb_con_remote_record_producer]	admin sn_sb.admin sn_sb_requestor	None	admin sn_sb.admin	None
Remote Task	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin

Access to tables by role in the Service Exchange for Consumers application (continued)

Table	Read	Write	Delete	Create
[sn_sb_con_remote_task]	sn_sb_remote_task_creator	sn_sb_remote_task_creator	sn_sb_remote_task_creator	sn_sb_remote_task_creator
Remote Task Definition [sn_sb_con_remote_task_def]	admin sn_sb.admin sn_sb_remote_task_creator	admin sn_sb.admin	admin sn_sb.admin	None
Variable [sn_sb_con_remote_task_variable]	admin sn_sb.admin	None	None	None
Service Exchange Settings [sn_sb_con_service_bridge_settings]	admin sn_sb.admin	admin sn_sb.admin	None	None
Remote Choice [sn_sb_con_st_remote_choice]	admin sn_sb.admin sn_sb_requestor	None	None	None
Transform [sn_sb_con_transform]	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin	admin sn_sb.admin

Components installed with Service Exchange for Providers

Several types of components are installed when you activate the Service Exchange for Providers application, including tables, user roles, and business rules.

The Application Files [sys_metadata] table lists the components that are installed with this application. For instructions on how to access this table, see Find components installed with an application.

Roles installed

The following roles are installed with the Service Exchange for Providers application.

Roles installed with the Service Exchange for Providers application

Role title [name]	Description	Contains roles
Service Exchange requester [sn_sb.requestor]	• Enables members of the customer IT staff to request and monitor services from the provider from their service catalog. **Note:** Any member of the customer's staff who needs access to the provider's remote record producers requires this role. • Provides access to the remote record producers and provider tasks.	N/A
Service Exchange read [sn_sb.read]	• Enables the provider's customer service agents to read the contents of the provider task record. • Provides read-only access to the Service Exchange application.	N/A
Service Exchange admin [sn_sb.admin]	• Typically assigned to an administrator for the Service Exchange applications on both the customer and the provider side. • Provides read access to all Service Exchange tables	• sn_sb.requestor • sn_sb.remote_task_creator • sn_sb.read • flow_designer • sn_customerservice.case_viewer • sn_customerservice.customer_data_viewer • catalog

Business rules installed

The following business rules are installed with the Service Exchange for Providers application.

Business rules installed with the Service Exchange for Providers application

Business rule	Table	Description
Abort duplicate remote task insert	sn_sb_pro_remote_task	Aborts insert of remote task if it already exists.

Business rules installed with the Service Exchange for Providers application (continued)

Business rule	Table	Description
Abort if duplicate transform is found	sn_sb_pro_transform	Aborts insert or update of transform if duplicate found.
Abort if duplicate URL	sn_sb_pro_consumer_ connection	Aborts insert of consumer connection if duplicate URL already exists.
Abort if field name already in use	sn_sb_pro_inbound_field	Aborts insert of inbound field if name is a duplicate.
Abort if field name already in use	sn_sb_pro.outbound_field	Aborts insert of outbound field if name is a duplicate.
Abort if remote task def is not editable	sn_sb_pro_remote_task_ def_customer_criteria	Blocks creating or editing consumer criteria if associated remote task def is not in an editable state.
Abort if remote task def is not editable	sn_sb_pro_inbound_field	Blocks insert of inbound fields if associated remote task definition is not in an editable state.
Abort if remote task def is not editable	sn_sb_pro_outbound_field	Blocks insert of outbound fields if associated remote task definition is not in an editable state.
Abort publish if duplicate record	sn_sb_pro_remote_task_def	Blocks publishing of remote task definition if is a duplicate record.
Abort Remote Task Create If Missing Conn	sn_sb_pro_remote_task	Sets connection on remote task if present, or aborts insert if none found.
Abort remote task def delete by provider	sn_sb_pro_remote_task_def	Prevents remote task definition deletion if definition is not in retired state.
Add cat_item name to g_scratchpad	item_option_new	Adds the catalog item name to the scratchpad on display.
Add consumer connection data to session	sn_sb_pro_consumer_ connection	Adds consumer connection data to session data.

Business rules installed with the Service Exchange for Providers application (continued)

Business rule	Table	Description
Approve approval record	sn_sb_pro_provider_task	Handles record approvals through provider tasks.
Assure deletable	sn_sb_pro_remote_choice_definition	Checks that a remote task definition is deletable.
Assure persona name uniqueness	sn_sb_pro_persona	Prevents persona records being created with same name.
Assure unique and updatable	sn_sb_pro_remote_choice_definition	Ensures that only unique remote task definitions are inserted or updated.
Assure uniqueness of criteria for RRP	sn_sb_pro_remote_record_producer_consumer_criteria	Ensures the criteria added to a remote record producer is unique.
Clear remote task client data	sn_sb_pro_remote_task	Clears session data for remote task transactions.
Copy attachment from Provider Task	sys_attachment	Copies attachments from synced provider tasks to parent task.
Copy attachment to Provider Task	sys_attachment	Copies attachments from parent task to provider tasks.
Create default user criteria on Insert	sn_sb_pro_remote_record_producer	Creates default user criteria on insert of remote record producer.
Create or Update transport connection	sn_sb_pro_consumer_connection	Manages transport connection on connection changes.
Create parent on synced remote task	sn_sb_pro_remote_task	Creates parent task on synced remote task insert.
Delete associated criteria record	sn_sb_pro_remote_task_def	Deletes associated criteria records on delete of a remote task definition.

Business rules installed with the Service Exchange for Providers application (continued)

Business rule	Table	Description
Delete associated records	sn_sb_pro_remote_task_def	Deletes inbound and outbound mapping records associated with remote task definition.
Disconnect RT when RTD Deleted	sn_sb_pro_remote_task_def	Disconnects all associated remote tasks when a remote task definition is deleted.
Display Scope mismatch warning	Item_option_new	Shows warning on variable records when in incorrect scope.
Error RT when Parent Deleted	task	When a parent task is deleted, all associated remote tasks status is set to the Error state.
Force RRP to Draft State on Edits	catalog_ui_policy_action	Sets remote record producer state to Draft when associated records are edited.
Force RRP to Draft State on Edits	sys_attachment	Sets remote record producer state to Draft when associated records are edited.
Force RRP to Draft State on Edits	catalog_ui_policy	Sets remote record producer state to Draft when associated records are edited.
Force RRP to Draft State on Edits	question_choice	Sets remote record producer state to Draft when associated records are edited.
Force RRP to Draft State on Edits	item_option_new	Sets remote record producer State to Draft when associated records are edited.
Force Updates to Update Sets	item_option_new	Forces update sets to update on record edits.
Force Updates to Update Sets	catalog_ui_policy	Forces update sets to update on record edits.
Force Updates to Update Sets	catalog_ui_policy_action	Forces update sets to update on record edits.

Business rules installed with the Service Exchange for Providers application (continued)

Business rule	Table	Description
Force Updates to Update Sets	question_choice	Forces update sets to update on record edits.
Gen entitlements for publish/retire RRP	sn_sb_pro_remote_ record_producer	Generates entitlements for remote record producers that are published or retired.
Gen entitlements for update Persona	sn_sb_pro_persona	Generates entitlements for personas when edited.
Generate entitlements for remote task def	sn_sb_pro_remote_ task_def	Generates entitlements for remote task definition changes.
Handle authorized user transport	sn_sb_pro_authorized_user	Manages transmission of authorized user changes through the transport layer.
Limit registration tasks by Company and URL	sn_sb_pro_registration	Controls registration tasks by company and URL.
Populate customer details on provider	sn_sb_pro_provider_task	Populates inserted provider task information from consumer connection.
Populate scratchpad	sn_sb_pro_registration	Populates scratchpad with relevant information on registration.
Propagate Service Exchange Version Changes	v_plugin	Adds Service Exchange version changes on settings record.
Reject approval record	sn_sb_pro_provider_task	Handles rejection through provider tasks.
Remote Choice: Update attributes field	item_option_new	Updates Attributes field on remote choice for variable changes.
Reset Consumer table on mappings	sn_sb_pro_remote_ task_def	Resets the consumer table field on mappings associated with remote task definition when consumer table mappings change.

Business rules installed with the Service Exchange for Providers application (continued)

Business rule	Table	Description
Reset Provider table on mappings	sn_sb_pro_remote_ task_def	Resets the provider table field on mappings associated with remote task definition on definition provider table change.
Restrict RRP variable types	item_option_new	Restricts the types of variables allowed when associated with a remote task definition.
Retry Errored RT on RTD Activation	sn_sb_pro_remote_ task_def	Retry parent creation for remote tasks if associated remote task definition is activated and remote task parent is null.
Send auto approval	sn_sb_pro_authorized_user	Manages automatic approvals of authorized users.
Service Exchange bootstrap	sn_sb_pro_registration	Helps manage onboarding for Service Exchange.
Set company on remote task insert	sn_sb_pro_remote_task	Sets the company (and account if present) on remote tasks on insert through sync.
Set copied RRP state to default	sn_sb_pro_remote_ record_producer	Manages setting remote record producer state when copied.
Set default values	sn_sb_pro_authorized_user	Sets default values on authorized users on insert.
Set outbound vars json on insert	sn_sb_pro_remote_task	Sets the outbound vars json field on remote task insert by current instance.
Set Provider task number	sn_sb_pro_provider_task	Sets the provider task number to synced provider task number.
Set Remote task number	sn_sb_pro_remote_task	Sets remote task number on synced remote task number.
Show warning messages	sn_sb_pro_remote_ record_producer	Shows warning messages for remote record producer errors.

Business rules installed with the Service Exchange for Providers application (continued)

Business rule	Table	Description
Show warning on incomplete Remote Task Definition	sn_sb_pro_remote_task_def	Shows warnings on remote task definition if required related records are missing.
Sync Attachment from Parent Task	sys_attachment	Syncs attachments from parent tasks to associated remote tasks.
Sync comments from provider task	sys_journal_field	Syncs comments from synced provider tasks to parent task.
Sync Remote Task Attachment to Parent	sys_attachment	Copies synced remote task attachments to parent task.
Trigger changed attachment transport	sys_attachment	Handles attachment changes syncing through the transport layer.
Trigger entitlement transport	sn_sb_pro_entitlement	Manages entitlements syncing through transport layer
Trigger inserted attachment transport	sys_attachment	Manages attachment insert syncing through the transport layer.
Trigger provider PT transport	sn_sb_pro_provider_task	Manages provider task syncing through the transport layer.
Trigger provider remote task transport	sn_sb_pro_remote_task	Manages remote task insert and delete syncing through the transport layer.
Trigger remote task transport update	sn_sb_pro_remote_task	Manages remote task update syncing through the transport layer.
Trigger SBScratchpad Transport	sn_sb_scratchpad	Manages scratchpad update syncing through the transport layer.
Trigger settings transport	sn_sb_pro_service_bridge_ settings	Manages Service Exchange setting syncing through the transport layer.
Update comments from Task to PT	task	Handles syncing of comments from parent task to provider task.

Business rules installed with the Service Exchange for Providers application (continued)

Business rule	Table	Description
Update consumer registration	sn_sb_pro_service_bridge_settings	Updates consumer registration on insert of settings record.
Update Persona RRPs on Change	sn_sb_pro_persona	Updates remote record producer persona when modified.
Validate Authorized Users Field Values	sn_sb_pro_service_bridge_settings	Validates authorized users field values when updated.
Validate max authorized user	sn_sb_pro_service_bridge_settings	Ensures max authorized user number is within valid range.
Validate Provider task	sn_sb_pro_provider_task	Validates a provider task insert or update is allowed.

Tables installed

The following tables are installed with the Service Exchange for Providers application.

Tables installed with the Service Exchange for Providers application

Table	Description
Authorized Users [sn_sb_pro_authorized_user]	Contains the authorized user records.
Consumer Connection [sn_sb_pro_consumer_connection]	Consumer connection record for provider, extends the base connection table.
Entitlement [sn_sb_pro_entitlement]	Provider entitlements associating records to entitled consumers, extends base entitlement table.
Inbound Field [sn_sb_pro_inbound_field]	Manages provider side inbound field mappings for remote task definitions.
Outbound Field [sn_sb_pro_outbound_field]	Manages provider side outbound field mappings for remote task definitions.
Personas [sn_sb_pro_persona]	Manages personas for Service Exchange.
Provider [sn_sb_pro_provider]	Provider association record to tie provider side records together.
Provider Task [sn_sb_pro_provider_task]	Provider tasks on provider side, created by consumers through remote record producers.
Registration [sn_sb_pro_registration]	Service Exchange registration records.

Tables installed with the Service Exchange for Providers application (continued)

Table	Description
Remote Choice Definition [sn_sb_pro_remote_choice_definition]	Remote choice definitions for remote record producer.
Consumer Criteria [sn_sb_pro_remote_record_producer_consumer_criteria]	Consumer criteria records attributed to remote record producers, controls which consumers are entitled to a given remote record producer.
Remote service [sn_sb_pro_remote_service]	Remote service record.
Remote Task [sn_sb_pro_remote_task]	Remote tasks for managing data transfer between parent tasks on synced instances.
Remote Task Definition [sn_sb_pro_remote_task_def]	Remote task definition, controls creation and processing of remote tasks.
Consumer Criteria [sn_sb_pro_remote_task_def_consumer_criteria]	Consumer criteria records attributed to remote task definitions, controls which consumers are entitled to a given remote task definition.
Remote Task Variable [sn_sb_pro_remote_task_variable]	Glide variables associated with a remote task, allows displaying incoming synced data
Service Exchange Settings [sn_sb_pro_service_bridge_settings]	Settings record for provider, manages various Service Exchange settings alignment between provider and consumer.
Transform [sn_sb_pro_transform]	Provider side transform records.

Flows installed

The following flows are installed with the Service Exchange for Providers application.

Flows installed with the Service Exchange for Providers application

Flow	Description
Create Proactive Provider task from Case [create_proactive_provider_task_from_case]	Creates provider task from case in proactive use case.
Process Incoming Consumer Provider Task [process_incoming_consumer_provider_task]	Manages incoming provider tasks from consumer.
Process Service Exchange registration [process_service_bridge_registration]	Manages Service Exchange registration.
Service Exchange Attachment Sync to Task	Syncs attachments from provider task to parent task.

Flows installed with the Service Exchange for Providers application (continued)

Flow	Description
[attachment_sync_provider_task_to_task]	
Service Exchange Case to Provider task Update [service_bridge_case_to_provider_task_update]	Manages creating provider tasks on case update.
Service Exchange Change Request to Provider task Update [service_bridge_change_request_to_provider_task_update]	Manages creating provider tasks on change update.
Service Exchange Incident to Provider task_Update [service_bridge_incident_to_provider_task_update]	Manages creating provider tasks on incident update.
Service Exchange Provider Task to Case Update [service_bridge_provider_task_to_case_update]	Manages processing of provider tasks and creation of associated parent case task.
Service Exchange provider task to Change Request Update [service_bridge_provider_task_to_change_request_update]	Manages processing of provider tasks and creation of associated parent change request task.
Service Exchange provider task to Incident Update [service_bridge_provider_task_to_incident_update]	Manages processing of provider tasks and creation of associated parent incident task.

Subflows installed

The following subflows are installed with the Service Exchange for Providers application.

Subflows installed with the Service Exchange for Providers application

Subflow	Description
Create Case from Provider task [create_case_from_provider_task]	Creates parent task case from a Provider Task.
Create Change from Provider task [create_change_from_provider_task]	Creates parent task change from Provider Task.

Subflows installed with the Service Exchange for Providers application (continued)

Subflow	Description
Create Incident from Provider task [create_incident_from_provider_task]	Creates parent task incident from Provider Task.
Create OAuth Client [create_oauth_client]	Creates the OAuth client on onboarding.
Process invalid Provider task [process_invalid_provider_task]	Manages provider tasks that have invalid configurations.
Repair RPS Consumer Connection Error [repair_rps_consumer_connection_error]	Attempts to fix Remote Process Sync errors in the Consumer Connection.

Flow actions installed

The following flow actions are installed with the Service Exchange for Providers application.

Flow actions installed with the Service Exchange for Providers application

Flow action	Description
Copy attachment [copy_attachment]	Copies a given attachment to a given record.
Copy task variables [copy_task_variables]	Retrieves task variable data for use in flows.
Create parent from remote task [create_parent_from_remote_task]	Creates a parent task from a given remote task.
Create remote task for consumer [create_remote_task_for_consumer]	Creates a remote task for a given parent task and consumer.
File Service Exchange registration email event [file_service_bridge_registration_email_event]	Files email with information during Service Exchange registration.
Is Transporter User	Checks if current user is transport user.

Flow actions installed with the Service Exchange for Providers application (continued)

Flow action	Description
[is_transporter_user]	
Parse Provider Task vars_json [parse_provider_task_vars_json]	Parses out the vars json field on the Provider Task.
Repair RPS Consumer Connection [repair_rps_consumer_connection]	Attempts to fix Remote Process Sync errors on Consumer Connection.

Components installed with Service Exchange for Consumers

Several types of components are installed with activation of the Service Exchange for Consumers application including tables, user roles, and business rules.

Note:
The Application Files [sys_metadata] table lists the components that are installed with this application. For instructions on how to access this table, see Find components installed with an application.

Roles installed

The following roles are installed with the Service Exchange for Consumers application.

Roles installed with the Service Exchange Consumers application

Role title [name]	Description	Contains roles
Service Exchange admin [sn_sb.admin]	• Typically assigned to an administrator for the Service Exchange applications on both the customer and the provider side. • Provides read access to all Service Exchange tables	• sn_sb.read • sn_sb.requestor • sn_sb.remote_task_creator • flow_designer • catalog
Service Exchange read [sn_sb.read]	Provides read-only access to provider tasks	N/A
Service Exchange requester [sn_sb.requestor]	Provides access to remote record producers and provider tasks	N/A

Business rules installed

The following business rules are installed with the Service Exchange for Consumers application.

Business rules installed with the Service Exchange for Consumers application

Business rule	Table	Description
Abort Duplicate Remote Task Insert	[sn_sb_con_remote_task]	Aborts remote task insert if one already exists matching the same parent and remote task definition.
Abort if duplicate transform is found	[sn_sb_con_transform]	Aborts transform insert if duplicate is found.
Abort if duplicate URL	[sn_sb_con_provider_connection]	Aborts connection record insert if record with same URL is found.
Abort Remote Task Create If Missing Conn	[sn_sb_con_remote_task]	Aborts remote task insert if connection field is empty.
Add provider connection data to session	[sn_sb_con_provider_connection]	Saves connection data for later use.
Change state to Work in Progress	[sn_sb_con_provider_task]	Updates State to Work in Progress for provider tasks.
Check provider published variable	[item_option_new]	Verifies if the provider side variable published is valid.
Check Remote Task Def Simple Triggers	[task]	Checks if changes to parent task have triggered changes in the Remote Task Definition simple trigger conditions.
Clear Remote Task Client Data	[sn_sb_con_remote_task]	Clears client data associated with remote tasks after the transaction is completed.
Create or Update Transport Connection	[sn_sb_con_provider_connection]	Manages transport connection insert and update.
Create parent on synced remote task	[sn_sb_con_remote_task]	Creates parent task for synced remote tasks.
Delete associated records	[sn_sb_con_remote_task_def]	Deletes related records when Remote Task Definition is deleted.
Disconnect RT when RTD Deleted	[sn_sb_con_remote_task_def]	Disconnects all associated remote tasks when Remote Task Definition is deleted.
Error RT when Parent Deleted	[task]	Errors out all associated remote tasks when parent task is deleted.
Generate OAuth registry	[sn_sb_con_provider_connection]	Creates OAuth registry for a connection.
Handle authorized user transport	[sn_sb_con_authorized_user]	Sends authorized user records through transport layer.

Business rules installed with the Service Exchange for Consumers application (continued)

Business rule	Table	Description
Inactive Remote Task Definition when archived	[sn_sb_con_remote_task_def]	Deactivates Remote Task Definition on consumer instance when archived by provider.
Populate Company on Consumer	[sn_sb_con_provider_task]	Sets company field on provider tasks on Insert.
Populate Provider task data	[sn_sb_con_provider_task]	Adds extra data on Insert of Provider Task.
Process Deleted Entitlements	[sn_sb_con_entitlement]	Manages entitlement deletion by deleting associated elements.
Process Entitlement attachment changes	[sys_attachment]	Manages changes to attachments for entitlements.
Process New and Updated Entitlements	[sn_sb_con_entitlement]	Manages creation of new entitlements and updates to existing entitlements.
Propagate Service Exchange Version Changes	[v_plugin]	Tracks and updates settings when Service Exchange version is updated.
Remote Choice: cache user selection	[sn_sb_con_provider_task]	Caches user selections to prevent repeat requests for the same data.
Retry Errored RT on RTD Activation	[sn_sb_con_remote_task_def]	Attempts to create parent task creation for remote tasks with errors when the associated remote task definition is activated.
Set company field on remote task insert	[sn_sb_con_remote_task]	Sets the company field for remote tasks during Insert.
Set Connection Id from RRP	[sn_sb_con_provider_task]	Sets the Connection Id from the Remote Record Producer associated with the Provider Task.
Set Customer Version on Settings Insert	[sn_sb_con_service_bridge_settings]	Sets the Service Exchange for Consumer application version on Settings during the Insert operation.
Set default values	[sn_sb_con_authorized_user]	Sets default values on authorized users when created.
Set outbound vars json on insert	[sn_sb_con_remote_task]	Sets the outbound json field on remote tasks when inserted by current instance.

Business rules installed with the Service Exchange for Consumers application (continued)

Business rule	Table	Description
Set Provider task number	[sn_sb_con_provider_task]	Sets provider task number on insert from client data
Set Remote Task number	[sn_sb_con_remote_task]	Sets remote task number on insert from client data
Set Table Details On Virtual Transform	[sn_sb_con_transform]	Sets table data on virtual transforms.
Sync Attachment from Parent Task	[sys_attachment]	Syncs attachments from parent task to all remote tasks associated with parent task.
Sync Remote Task Attachment to Parent	[sys_attachment]	Syncs attachments from remote task to parent task.
Trigger changed attachment transport	[sys_attachment]	Triggers attachment sync through transport layer when updated.
Trigger consumer PT transport	[sn_sb_con_provider_task]	Triggers provider task sync through transport layer.
Trigger consumer remote taks transport	[sn_sb_con_remote_task]	Triggers remote task sync through transport layer during Insert or Delete operations.
Trigger inserted attachment transport	[sys_attachment]	Triggers attachment sync through transport layer during Insert operation.
Trigger remote task transport update	[sn_sb_con_remote_task]	Triggers remote task sync through transport layer when updated.
Trigger SBScratchpad Transport	[sn_sb_scratchpad]	Triggers scratchpad sync through transport layer.
Trigger settings transport	[sn_sb_con_service_bridge_settings]	Triggers settings record sync through transport layer.
Update entitlement status on delete	[sn_sb_con_service_bridge_settings]	Updates entitlement status when deleted.
Update entitlement status on delete	[sn_sb_con_persona]	Updates persona record on entitlement when deleted.
Update entitlement status on delete	[sn_sb_con_remote_task_def]	Updates Remote Task Definition record on entitlement when deleted.
Update entitlement status on update	[sn_sb_con_persona]	Manages persona record on entitlement when updated.
Update entitlement status on update	[sn_sb_con_remote_task_def]	Manages Remote Task Definition record on entitlement when updated.

Business rules installed with the Service Exchange for Consumers application (continued)

Business rule	Table	Description
Update entitlement status on update	[sn_sb_con_remote_record_producer]	Manages Remote Record Producer record on entitlement when updated.
Validate activation and complete setup	[sn_sb_con_remote_record_producer]	Validates Remote Record Producer before activation.
Validate request on customer	[sn_sb_con_provider_task]	Checks for valid connection on Provider Task.
Warn if Global Script Include is missing	[sn_sb_con_remote_record_producer]	Displays warning if global script include is not present when processing Remote Record Producer.

Tables installed

Tables installed with the Service Exchange for Consumers application

Table	Description
Authorized user [sn_sb_con_authorized_user]	Authorized users.
Connection [sn_sb_con_consumer]	Consumer side connection record.
Entitlement [sn_sb_con_entitlement]	Consumer side table extending entitlements.
Inbound Field [sn_sb_con_inbound_field]	Consumer side inbound fields for Remote Task Definitions.
Outbound Field [sn_sb_con_outbound_field]	Consumer side outbound fields for Remote Task Definitions.
Personas [sn_sb_con_persona]	Consumer side persona records.
Provider Connection [sn_sb_con_provider_connection]	Provider Connection record linking consumer to provider instance, extending base connection table.
Provider Task [sn_sb_con_provider_task]	Consumer side provider task records, extends Provider Task base table.
Remote Choice Cache	Consumer side cache for remote choice queries.

Tables installed with the Service Exchange for Consumers application (continued)

Table	Description
[sn_sb_con_remote_choice_cache]	
Remote Record Producer [sn_sb_con_remote_record_producer]	Consumer side Remote Record Producer records.
Remote Task [sn_sb_con_remote_task]	Consumer side remote task records, extends remote task base table.
Remote Task Definition [sn_sb_con_remote_task_def]	Consumer side Remote Task Definition records.
Remote Task Variable [sn_sb_con_remote_task_variable]	Remote Task associated variable table extending glide vars.
Service Exchange Settings [sn_sb_con_service_bridge_settings]	Consumer side Service Exchange setting records, extends settings base table.
Remote Choice [sn_sb_con_st_remote_choice]	Consumer side remote choice records.
Transform [sn_sb_con_transform]	Consumer side transform records, extends transform base table.

Flows installed

The following flows are installed with the Service Exchange for Consumers application.

Flows installed with the Service Exchange for Consumers application

Flow	Description
Process Remote Record Producer Entitlements with Remote Choice Variables [process_remote_record_producer_entitlements_with_remote_choice_variables]	Processes entitlements for remote record producers on consumer with remote choice variables included.

Subflows installed

The following subflows are installed with the Service Exchange for Consumers application.

Subflows installed with the Service Exchange for Consumers application

Subflow	Description
Repair RPS Provider Connection Error	Handles provider connection errors with Remote Process Sync when in error state.

Subflows installed with the Service Exchange for Consumers application (continued)

Subflow	Description
[repair_rps_provider_connection_error]	

Flow actions installed

The following flow actions are installed with the Service Exchange for Consumers application.

Flow actions installed with the Service Exchange for Consumers application

Action	Description
Create Parent From Remote Task [create_parent_from_remote_task]	Creates a parent record for a synced remote task.
Create Record Producer and Remote Choice Dependent Variables [create_record_producer_and_entities]	Creates a remote record producer and the associated remote choice dependent variables from a synced entitlement.
Create Remote Task [create_remote_task]	Creates a remote task for a given parent and remote task definition.
Repair RPS Provider Connection [repair_rps_provider_connection]	Attempts to fix Remote Process Sync errors on Provider Connection.

Service Exchange error log

Track errors on recent transactions, provide connection status, run health checks, and provide recommendations.

About this task

Note:
The Xanadu release, includes a framework to capture Service Exchange errors. Currently, the table displays the following known errors:

1. Global Script Include check: Checks if this script has been installed and if it is the latest version.
2. During registration for provider: Captures errors from the creation of the registration task through closed complete. An email notification with the list of errors captured in the last one hour along with the cause and solution is sent to the Service Exchange administrator.
3. During Registration for consumer: Captures errors from the creation of the Provider Connection record through closed complete. An email notification with the list of errors captured in the last one hour along with the cause and solution is sent to the Service Exchange administrator.
4. Remote system inbound and outbound errors
5. Heartbeat connection

You can view and diagnose errors and follow the steps provided to resolve the errors. Errors are logged as they occur, and if there have been any new ones in the last hour, an email notification is sent to the Service Exchange administrators. Each error record provides the following details:

- A detailed description of the error.
- Reason the error has occurred.
- Steps to resolve the error.

Before you begin
Role required: admin

Procedure

1. Navigate to **All** > *Service Exchange* **Provider** > **Administration** > **Error Log**.
   The list of errors that have occurred is displayed.

   Note:
   You can view errors on the consumer instance. To do so, login to consumer instance, and navigate to **All** > *Service Exchange* **Consumer** > **Administration** > **Error Log**.

2. Click on the Number link to view the error.
3. The following details are displayed.

Field	Description
Number	The number assigned to the error.
Known error	Detailed information about the error and how to resolve it. This information is displayed in the fields below.
Error	A detailed description of the error.
Cause	Reason the error has occurred. If this is not a known issue, the Cause is set to **Unknown**.
Solution	A link is provided to the Knowledge Base article that contains the steps that need to be followed to resolve the error.
Connection	This field is populated if the error is caused by connection issue.
Created	Date and time at which the error occurred.

Domain separation and Service Exchange

Domain separation is supported for Service Exchange. Domain separation enables you to separate data, processes, and administrative tasks into logical groupings called domains. You can control several aspects of this separation, including which users can see and access data.

Support level: Basic

- Business logic: Ensure that data goes into the proper domain for the application's service provider use cases.
- The application supports domain separation at run time. The domain separation includes separation from the user interface, cache keys, reporting, rollups, and aggregations.
- The owner of the instance must set up the application to function across multiple tenants.

Sample use case: When a service provider (SP) uses chat to respond to a tenant-customer's message, the customer must be able to see the SP's response.

For more information on support levels, see Application support for domain separation.

The Provider Task and Remote Task tables have domain separation available. When data is added to these tables, Service Exchange inserts them into the domain of the parent task if available, or the connected instance based on the associated company by default. If necessary, the instance admin can apply their own business rule to redirect the data after the Service Exchange default rule has been applied. However, this should only be done by setting a different company on the records before inserting them.

How domain separation works in Service Exchange

- The Provider Task and Remote Task tables in the application are domain-separated.
- Make sure that the consumer company and account tables are associated to the right domain for the domain separation logic to work.

Use cases

When providers have their consumer data separated by domains, the provider tasks, remote tasks, and the corresponding parent tasks are associated with the respective customer domains.

Related topics

Domain separation for service providers

Cloning instances with Service Exchange

When installing Service Exchange, certain tables must be preserved or excluded to maintain connectivity after a clone.

If the default system profile is used, some of the Service Exchange table data isn't preserved. To address this issue, you must create a custom clone profile with specific settings required for Service Exchange. Navigate to **All** > **System Clone** > **Clone Profiles** and select **New** to create a custom profile. For more details on clone profiles, see Clone profiles for clone requests. In this profile, you must validate if the following Service Exchange tables are included in the custom profile:

Note:

- If the same company isn't present on the provider and consumer instances, the Company field is deleted, and the inbound and outbound connections move to an Error state.
- Even if the same company is present on both the instances, the Connection may be in an Error state. In this case, you must reestablish the connection and activate the Capture Definitions.

Service Exchange tables to preserve

Add the following Service Exchange tables to the Clone Profile Preservers list if they're missing. Remove any Service Exchange tables that aren't in this list.

Users	Table names
Provider	• catalog_ui_policy • catalog_ui_policy_action • ih_sync_capture_definition • ih_sync_definition • ih_sync_inbound_definition • ih_sync_outbound_definition • ih_sync_process_event • ih_sync_remote_system • item_option_new • sc_cat_item_catalog • sc_cat_item_category • sc_cat_item_user_criteria_mtom • sc_cat_item_user_criteria_no_mtom • sc_category • scan_finding • scan_task • sn_sb_authorized_user • sn_sb_error • sn_sb_identity • sn_sb_known_error_code • sn_sb_pro_authorized_user • sn_sb_pro_consumer_connection • sn_sb_pro_entitlement • sn_sb_pro_provider • sn_sb_pro_provider_task • sn_sb_pro_registration • sn_sb_pro_remote_choice_definition • sn_sb_pro_remote_record_producer • sn_sb_pro_remote_service • sn_sb_pro_remote_task • sn_sb_pro_remote_task_variable • sn_sb_pro_service_bridge_settings • sn_sb_pro_transform • sn_sb_provider_task • sn_sb_release • sn_sb_remote_script_approval • sn_sb_remote_task

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Users	Table names
	• sn_sb_rps_connection • sn_sb_scratchpad • sn_sb_service_bridge_settings • sn_sb_transform_line • sn_transport_profile • sn_transport_queue • sys_alias • sys_user • sys_user_has_role • user_criteria
Consumer	• catalog_ui_policy • catalog_ui_policy_action • ih_sync_capture_definition • ih_sync_definition • ih_sync_inbound_definition • ih_sync_outbound_definition • ih_sync_process_event • ih_sync_remote_system • item_option_new • sc_cat_item_catalog • sc_cat_item_category • sc_cat_item_user_criteria_mtom • sc_cat_item_user_criteria_no_mtom • sc_category • scan_finding • scan_task • sn_sb_authorized_user • sn_sb_con_authorized_user • sn_sb_con_consumer • sn_sb_con_entitlement • sn_sb_con_inbound_field • sn_sb_con_outbound_field • sn_sb_con_persona (consumer side) • sn_sb_con_provider_connection • sn_sb_con_provider_task • sn_sb_con_remote_record_producer

Users	Table names
	• sn_sb_con_remote_task • sn_sb_con_remote_task_def • sn_sb_con_remote_task_variable • sn_sb_con_service_bridge_settings • sn_sb_con_transform • sn_sb_error • sn_sb_identity • sn_sb_known_error_code • sn_sb_provider_task • sn_sb_release • sn_sb_remote_script_approval • sn_sb_remote_task • sn_sb_rps_connection • sn_sb_scratchpad • sn_sb_service_bridge_settings • sn_sb_transform_line • sn_transport_profile • sn_transport_queue • sys_alias • sys_user • sys_user_has_role • user_criteria

Service Exchange tables to exclude

Add the following Service Exchange tables to the Clone Profile Exclusions list if they're missing. Remove any Service Exchange tables that aren't in this list.

Users	Table names
Provider	• ih_sync_capture_definition • ih_sync_definition • ih_sync_inbound_definition • ih_sync_outbound_definition • ih_sync_process_event • ih_sync_remote_system • scan_finding • scan_task • sn_sb_authorized_user

Users	Table names
	• sn_sb_connection • sn_sb_entitlement • sn_sb_error • sn_sb_identity • sn_sb_pro_inbound_field • sn_sb_pro_outbound_field • sn_sb_pro_persona • sn_sb_pro_provider • sn_sb_pro_registration • sn_sb_pro_remote_record_producer_consumer_criteria • sn_sb_pro_remote_task_def • sn_sb_pro_remote_task_def_consumer_criteria • sn_sb_pro_remote_task_variable • sn_sb_pro_transform • sn_sb_provider_task • sn_sb_remote_record_producer • sn_sb_remote_script_approval • sn_sb_remote_task • sn_sb_rps_connection • sn_sb_scratchpad • sn_sb_service_bridge_settings • sn_sb_transform_line • sn_transport • sys_alias
Consumer	• ih_sync_capture_definition • ih_sync_definition • ih_sync_inbound_definition • ih_sync_outbound_definition • ih_sync_process_event • ih_sync_remote_system • scan_finding • scan_task • sn_sb_authorized_user • sn_sb_con_consumer • sn_sb_con_inbound_field • sn_sb_con_outbound_field

Users	Table names
	• sn_sb_con_persona (consumer side) • sn_sb_con_remote_task_def • sn_sb_con_remote_task_variable • sn_sb_con_transform • sn_sb_connection • sn_sb_entitlement • sn_sb_error • sn_sb_identity • sn_sb_provider_task • sn_sb_remote_record_producer (consumer side) • sn_sb_remote_script_approval • sn_sb_remote_task • sn_sb_rps_connection • sn_sb_scratchpad • sn_sb_service_bridge_settings • sn_sb_transform_line • sn_transport • sys_alias