servicenow™

SCOPE CERTIFIED APPLICATION INSTALLATION AND CONFIGURATION GUIDE

Service Graph Connector for Lansweeper (2.6.0)

Version Control

#	Document Version	Date	Owner	Document Status	Comments
1	1.0.0	10th Aug 2021	Dhaval Bhimani	Completed	Added information about v2.1.0
2	2.0.0	22nd July 2022	Dhaval Bhimani	Completed	Support of San Diego version (v2.4.0)
3	2.0.1	24th March 2023	Dhaval Bhimani	Completed	Support of Tokyo version
4	2.0.2	28th April 2023	Dhaval Bhimani	Completed	Support of Utah version
5	2.5.1	5th Feb 2024	Dhaval Bhimani	Completed	Support of Vancouver and Washington DC version
6	2.6.0	1st September 2024	Dhaval Bhimani	Completed	Identical to v2.5.1, with fix for software data

1. Overview

Lansweeper is an application that gathers hardware and software information of computers and other devices on a computer network for management and compliance and audit purposes. The application also encompasses a ticket-based help desk system and capabilities for software updates on target devices.

Service Graph Connector for Lansweeper

The application maps assets from Lansweeper with ServiceNow CMDB tables. The application allows users to visualize the assets from the Lansweeper in the CMDB tables. The Service Graph Connector for Lansweeper is based on a flow designer that performs all the necessary calls to Lansweeper, after that obtains a file with all assets, stores it in a flattened way, and uses the integrationHub ETL to transform the data in CMDB tables. To keep the instance updated, there is a Scripted REST API to receive data from webhooks with authorization from Lansweeper and use the existing transformation of the IntegrationHub ETL. To identify and add relationships between assets in CMDB tables as per the data received from Lansweeper.

1.1. Application features

The purpose of Service Graph Connector for Lansweeper is to integrate a ServiceNow customer instance with Lansweeper cloud API. At a high level, the application performs several actions:

1. To authenticate ServiceNow users against Lansweeper in order to decide which Lansweeper sites can be accessed by Service Graph Connector for Lansweeper.

2. To request an export document with all supported asset types for each authorized site, which will be downloaded by the Service Graph Connector for Lansweeper in order to store Lansweeper assets into CMDB tables.

3. To receive updates about assets inserted/deleted/updated in Lansweeper.

Describe the business need that this application solves:

- Some Lansweeper customers have ServiceNow instances but they are missing some of their assets discovered by Lansweeper in those instances. The application wants to synchronize these customer assets to their instance by keeping ServiceNow updated with the data changes provided by Lansweeper.

Customer use cases:

- I want to see all my assets of new asset types discovered in Lansweeper in my ServiceNow instance.

- I want to be able to modify the assets in Lansweeper without requiring a manual update in ServiceNow.

- I want to be able to delete assets in Lansweeper and see the asset in ServiceNow as "retired".

- I want to connect several Lansweeper sites with all the features described above in my ServiceNow instance.

Compatibility Matrix

ServiceNow Version: Utah , Vancouver and Washington

Lansweeper API Version: 2.0

2.   Installation

This section describes how to download and install the Service Graph Connector for the Lansweeper application from the store.

2.1.   Pre-Requisites

The user must have access to the Lansweeper Platform.

These are the prerequisites required to install the Service Graph Connector for the Lansweeper application.

ServiceNow Plugins

These ServiceNow plugins must be activated:

- System Import Sets 1.0.0
- Integration Commons for CMDB 2.12.0
- IntegrationHub ETL 3.2.1
- Robust Transform Engine 1.0.0
- ITOM Discovery License 1.0.0

To install the plugins:

1. Login to your instance with your user credentials.
2. Verify you have the system administrator (admin) role.
3. Navigate to "System Definition" -> "Plugins" in your instance.
4. Search and install the above plugin. Repeat this step for each plugin mentioned above.
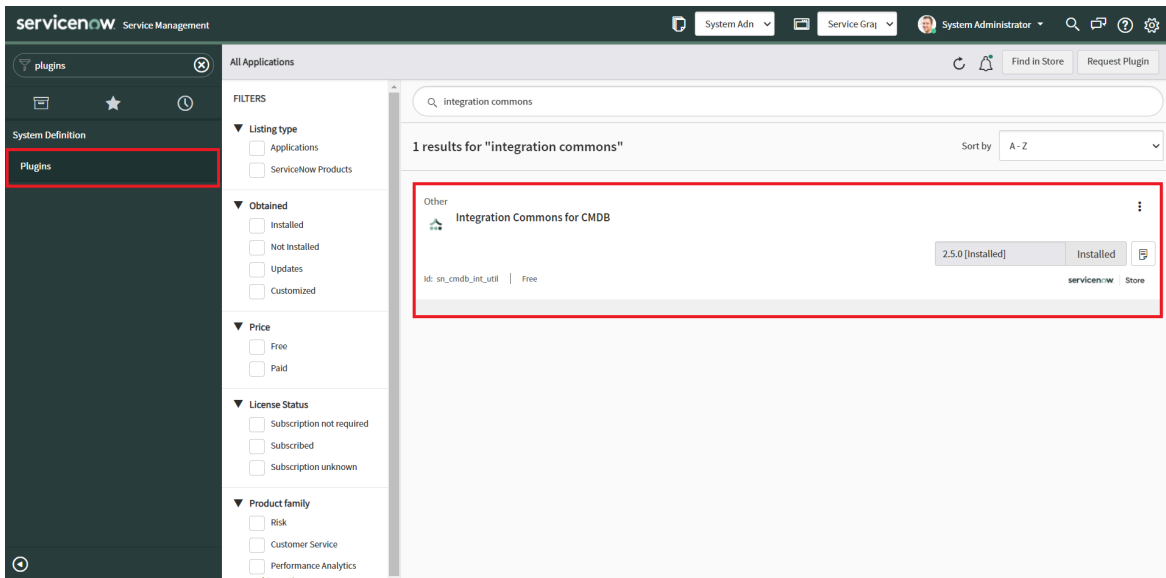
2.2. Permissions and Roles

These are the ServiceNow roles and the permissions that are needed to install, configure, and use the features of the application.

Role	Permissions
System administrator (admin)	- Installation of the plugins - View Application Logs - Configure Guided Setup of the application - View Dashboard - View and be able to do operations on the modules - Data sources - System Import sets - Import schedules - Configure application in IntegrationHub ETL
cmdb_import_api_admin	Role for webhook users to insert the data into the import set table from the received webhooks.
x_lans2_service_gr.flatten_assets_user	Create, read, update, and delete operations on the Flatten Assets Table.
x_lans2_service_gr.flatten_memories_user	Create, read, update, and delete operations on the Flatten Memories Table.
x_lans2_service_gr.flatten_networks_user	Create, read, update, and delete operations on the Flatten Networks Table.
x_lans2_service_gr.flatten_logical_disk_user	Create, read, update, and delete operations on the Flatten Logical Disk Table.

x_lans2_service_gr.flatten_networks_adapters_user	● Create, read, update, and delete operations on the Flatten Network Adapters Table.
x_lans2_service_gr.flatten_snmp_infos	● Create, read, update, and delete operations on the Flatten SNMP Info Table.
x_lans2_service_gr.flatten_softwares_user	● Create, read, update, and delete operations on the Flatten Softwares Table.
x_lans2_service_gr.ls_table_user	● Combination of below roles x_lans2_service_gr.flatten_networks_adapters_user, x_lans2_service_gr.flatten_logical_disk_user, x_lans2_service_gr.flatten_memories_user, x_lans2_service_gr.flatten_snmp_infos, x_lans2_service_gr.flatten_networks_user, x_lans2_service_gr.flatten_assets_user x_lans2_service_gr.flatten_softwares_user

2.3.   Application Download and Installation

- Get the Service Graph Connector for Lansweeper Application from the ServiceNow Store by clicking on "Get" and entering your HI credentials.
- Login to the instance on which you want to install the application.
- Navigate to "System Applications" -> "All Available Applications" -> "All".
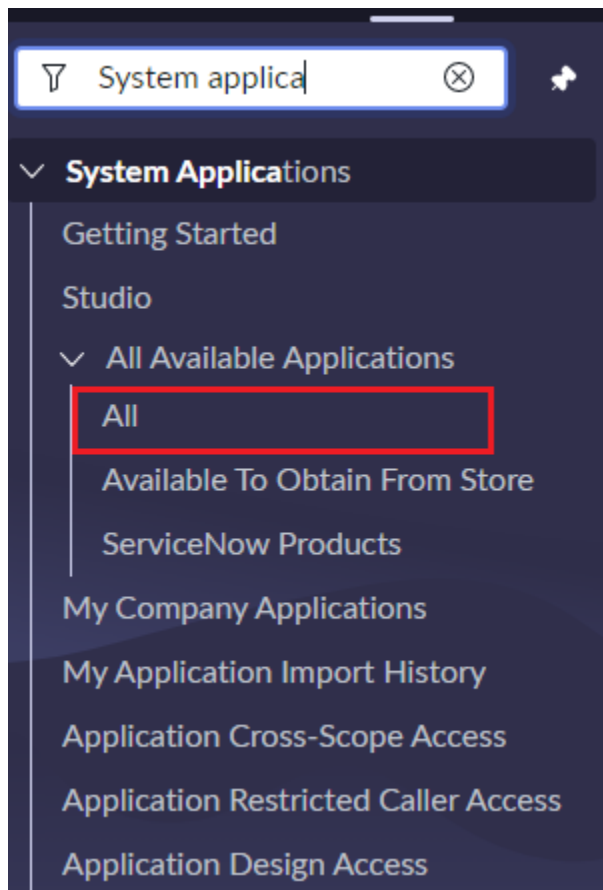
- Search for the Service Graph Connector for Lansweeper application, select it, and click on "Install".

- One progress bar will appear and after some time the application will be installed into your instance.

- Navigate to the application by searching "Service Graph Connector" -> "Lansweeper" in the navigation bar, you will find the following modules:

  - **Setup**: Guided setup which will guide you through the configuration of the application.
  - **Data Sources**: List of data sources used in the application.
  - **Import schedules**: List of Import schedulers used in the application.
  - **System import sets**: List of custom tables in the application.
  - **Application Logs:** List of logs of this application created today.
  - **Support**: Page containing Lansweeper contact information in case any support is required.
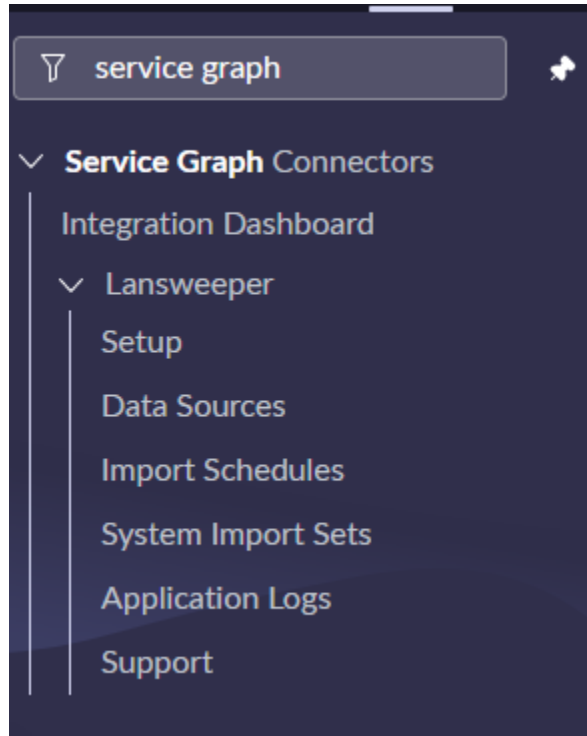
3.   Configuration

This section describes how to configure the "Service Graph Connector for Lansweeper" application. To configure this app, the user should have an "admin" role.
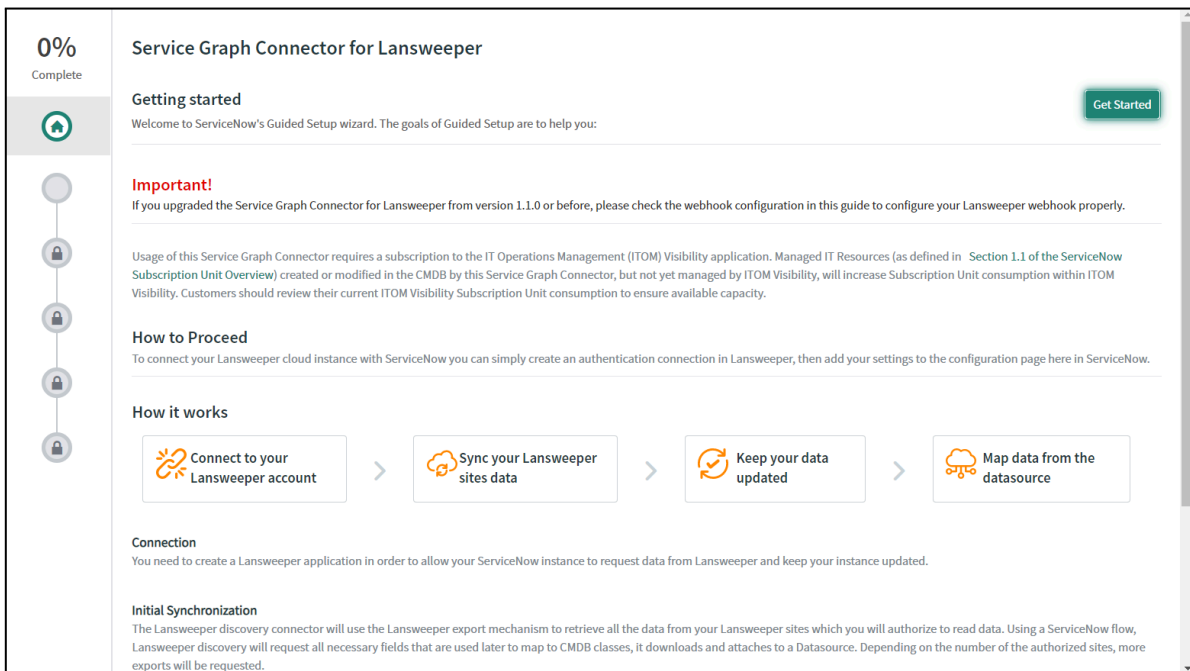
3.1.   Guided Setup

The following steps will guide you to configure the application through the guided setup

- Navigate to "Service Graph Connector" -> "Lansweeper" -> "Setup"

- After this you can find the guided setup page.

- Follow the steps mentioned in the guided setup to complete configuration

3.1.1.   Credentials and Connections

This step is to configure the ServiceNow instance to support inbound data from Lansweeper.

This step contains 3 tasks:

1. Lansweeper Configuration
2. Configure Credentials
3. Validate lansweeper

3.1.2. Initial Sync Configuration

This step is to configure the schedulers used in the export of the data from the Lansweeper portal to ServiceNow, provide the size limit based on the data on Lansweeper and configure the flow which is used to fetch the data from Lansweeper

This step contains 3 tasks:

1. Activate Schedulers
2. Set JSON file limit size
3. Export Flow

3.1.3. Webhook Config

This step is to configure the user in the ServiceNow Application to establish a connection between ServiceNow and Lansweeper and configure the webhooks with the credentials of a user so that you can get the updates from the Lansweeper to ServiceNow.

This step contains 2 tasks:

1. Create a User
2. Webhook Process

3.1.4. Asset Type Configuration

After configuring the webhook, you will need to configure the asset types to be fetched from the Lansweeper. Here, the users could configure the properties and type of assets that are desired to be fetched from Lansweeper into respective CMDB tables.

This step contains 3 tasks:

1. Fetch Lansweeper Asset Types
2. Configure Asset Types
3. Configure Lansweeper Asset Properties

3.1.5. Mapping Configuration and Execution

Upon configuring the asset types, users can initiate the Service Graph Connection for Lansweeper to retrieve data and tailor the ETL mapping process. This process involves transforming the data obtained from Lansweeper into the final tables within the ServiceNow CMDB, allowing for customization according to specific requirements.

NOTE : It is not recommended to do any changes in the step.

This step contains 3 tasks:

1. Execute Lansweeper
2. ETL Configuration
3. Activate Scheduler

4.   Use Cases

This section describes the use-cases to view and manage the "Service Graph Connector for Lansweeper" application on ServiceNow.

4.1.   Populating assets from Lansweeper in CMDB tables

Role Required: admin

Description:

After completing the steps mentioned above in the guided setup, various types of Lansweeper assets would be populated in their respective CMDB classes.

Procedure:

1. Login to the ServiceNow instance.
2. Navigate to any of the following CMDB tables in order to view the populated assets fetched from various sites on Lansweeper.

Asset Type	CMDB Table
APC	UPS
Chromebook Devices	Computer
Citrix Guest	Citrix Collector
FTP server	FTP Server
Firewall	IP Firewall
Hub	Hub Hardware
Hyper-V Guest	Hyper-V Virtual Machine Instance
IP Gateway	IP Router
Intrusion detection system	Intrusion Detection System
Linux	Computer / Linux Server
Load balancer	Load Balancer
Mac	Computer/ "OS/X Server"
Mail Server	Email Server
Printer	Printer

Router	IP Router
Switch	IP Switch
Unix	Computer/ Unix Server
UPS	UPS
VMware ESXi Server	ESX Server
Webserver	Web Server
Windows	Computer/ Windows Server
Wireless access point	Wireless Access Point
xDSL Modem	Modem Hardware
xDSL Router	IP Router

4.2. Integration Dashboard

Role Required: System Administrator (admin)

Description:

The Dashboard allows the user to easily visualize the data related to the CMDB Execution Status and Integration Errors.

Procedure:

1. Login to the ServiceNow instance.
2. Navigate to "Service Graph Connector" -> "Integration Dashboard".
3. Set the CMDB Applications filter as "Lansweeper ETL".
4. The description of the panels is listed in the table below:

Tab	Panel Name	Description
CMDB Execution Status	Total Imports	This section shows the count of imports that are fetched from Lansweeper.
	Number of Processed Rows	This section shows the sum of the rows that are processed.
	Approximate Processing Rate (rows/hr)	This section shows the approximate processing rate of the rows, per hour.
	Import Date	This section allows the user to filter the dashboard data with respect to the import date. Available options: All, Today, Yesterday, Last 7 Days, Last 30 Days.

	Actively Running Imports	This section shows the count of actively running imports.
	Imports with Errors	This section shows the count of imports with errors.
	CMDB Imports	This section allows the user to filter the dashboard data with respect to the CMDB Applications and their respective CMDB Imports.
	Import Duration per Day	This section shows a bar chart of the duration taken by each import with respect to the day of its execution.
	Updated Classes	This section shows a bar chart having a bar for each class that is updated. Each bar represents the count of records inserted, unchanged, updated etc.
CMDB Integration Errors	Imported Rows with Errors	This section shows the count of rows that are imported with errors.
	Imports with Errors	This section shows the count of imports with errors.
	Import Date	This section allows the user to filter the dashboard data with respect to the import date. Available options: All, Today, Yesterday, Last 7 Days, Last 30 Days.
	Integrations with Errors by Applications	This section shows a bar chart of integrations with errors by applications.
	Incomplete CMDB Imports	This section shows a bar chart representing the duration of incomplete CMDB imports with respect to the day of its execution.
	CMDB Imports	This section allows the user to filter the dashboard data with respect to the CMDB Applications and their respective CMDB Imports.
	CMDB Integration Errors	This section shows the list of records representing CMDB Integration errors.

CMDB Execution Status | CMDB Integration Errors

Total Imports

270

Number of Processed Rows

3,638

Approximate Processing Rate (rows/hr)

181.87

Import Date

Last 7 days ▼

Actively Running Imports

1

Imports with Errors

0

CMDB Imports

CMDB Applications

Lansweeper ETL ▼

CMDB Import

All ▼

Apply

Import Duration per Day

Total Duration

0 Days 2 Hours 13 Minutes
0 Days 1 Hours 40 Minutes
0 Days 1 Hours 6 Minutes
0 Days 0 Hours 33 Minutes
0 Days 0 Hours 0 Minutes 0 Seconds

Wednesday/2021   Thursday/2021

Updated Classes

CI Count

5k

0

cmdb_rel_ci, cmdb_ci_computer, cmdb_ci_memory_mo..., cmdb_ci_disk, cmdb_ci_win_server, cmdb_ci_network_a..., cmdb_ci_linux_server, cmdb_ci_unix_server, cmdb_ci_printer, cmdb_ci_ip_switch, Other

AdditionalInserted | Inserted | mergedPartialPayloads | Partial
Unchanged | Updated | warnings

CMDB Execution Status | **CMDB Integration Errors**

Imported Rows with Errors

0

Imports with Errors

0

Import Date

Last 7 days ▼

CMDB Imports

CMDB Applications

Lansweeper ETL ▼

CMDB Import

All ▼

Apply

Integrations with Errors by Applications

Integrations with Errors

No data to display

Incomplete CMDB Imports

Total Duration

rs 0 Minutes 40 Seconds
rs 0 Minutes 30 Seconds
rs 0 Minutes 20 Seconds
rs 0 Minutes 10 Seconds
rs 0 Minutes 0 Seconds

Thursday/2021, CEXI001004 = 30 Seconds (100%)

Thursday/2021

CMDB Integration Errors

Application	Error Message	Count	Created ▼
	No records to display		

5.   Uninstallation

This section describes how to uninstall the Service Graph Connector for the Lansweeper application from a ServiceNow instance.

Role Required: System Administrator (admin)

The following steps will guide you on how to uninstall the Service Graph Connector for Lansweeper App from the ServiceNow UI.

- Navigate to "System Definition" -> "Plugins" -> "Installed".
- From the list of applications, search and select the "Service Graph Connector for Lansweeper" application.
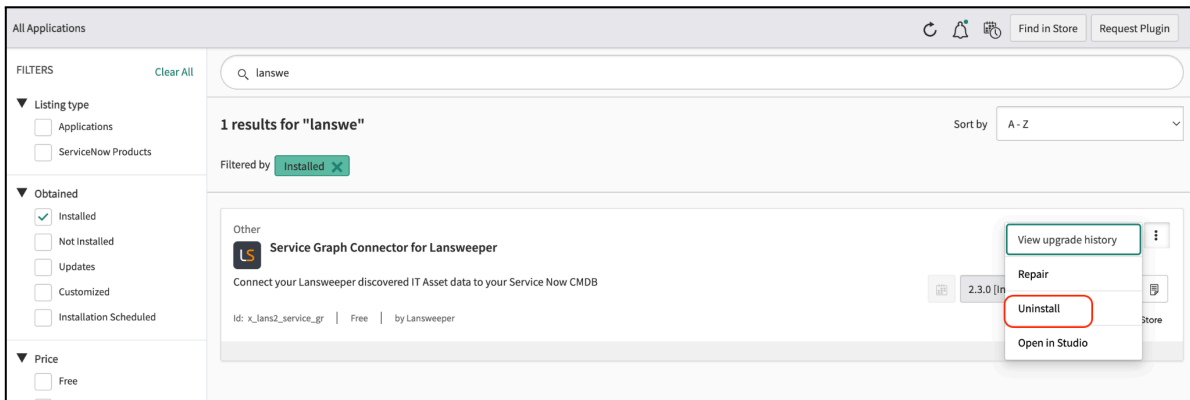
- Click "Uninstall" to remove the application.

6.   Support, Troubleshooting, and Debugging

6.1.   Support

Role Required: System Administrator (admin)

Support Contact Details:

Lansweeper Portal: https://www.lansweeper.com/

Support Portal: https://www.lansweeper.com/contact-support/
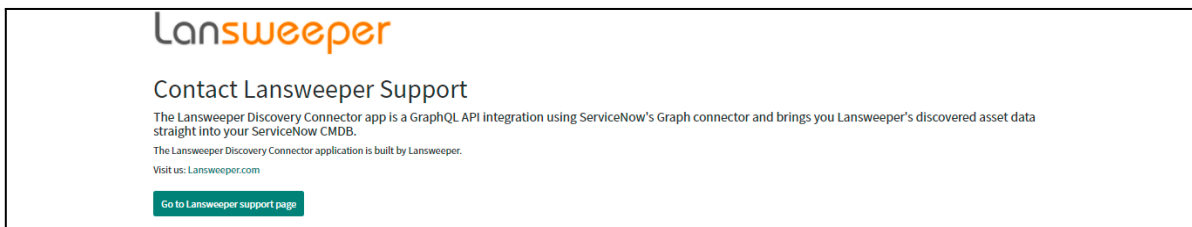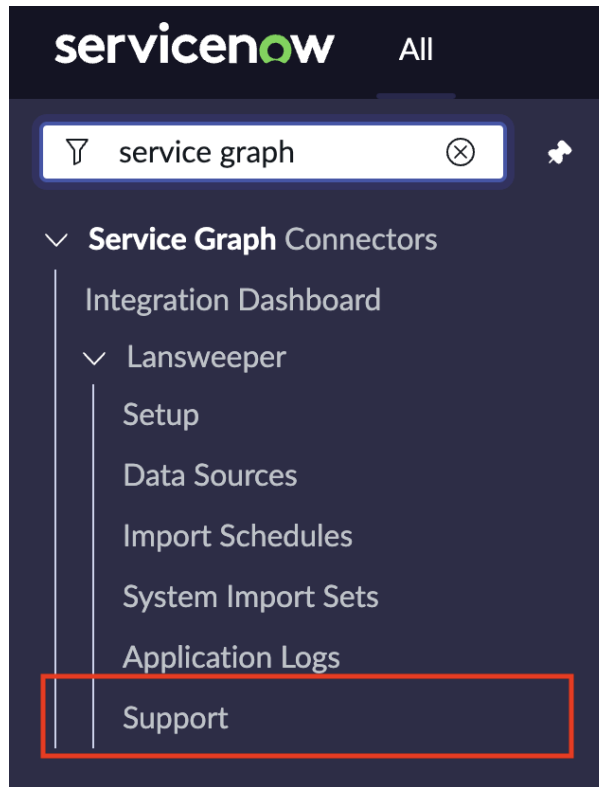
6.2.   Troubleshooting

6.2.1. Application Logs

Role Required: System Administrator (admin)

1. The user can check the application logs from the module "Application logs" under the Lansweeper application whenever he/she experiences any errors.

6.2.2. Unable to install Service Graph Connector for Lansweeper application from ServiceNow Store

Problem Statement: Unable to install the application from ServiceNow Store.

1. Verify you have the system administrator (admin) role.

2. Navigate to "System Definition" -> "Plugins" in your instance.

3. Verify the following plugins are in the active state. If not then first install and activate these plugins.

   a. System Import Sets 1.0.0
   b. IntegrationHub ETL 2.2.1
   c. Robust Transform Engine 1.0.0
   d. ITOM Discovery License 1.0.0
   e. Integration Commons for CMDB 2.8.0

6.2.3. Unable to find Lansweeper custom roles

Problem Statement: Unable to find Lansweeper custom roles.

1. Login to the ServiceNow instance with System Administrator.

2. Navigate to "System Application" -> "Applications".

3. Verify the Service Graph Connector for Lansweeper application is installed properly.

4. If any error occurred while installation, then the user should have to reinstall the application.

6.2.4. Unable to create a new user with Lansweeper custom roles

Problem Statement: Unable to create a new user for Service Graph Connector for Lansweeper.

1. Review the following link and execute the steps.

   https://docs.servicenow.com/en-US/bundle/utah-platform-administration/page/administer/users-and-groups/task/t_CreateAUser.html

6.2.5. Unable to install/activate plugin in ServiceNow instance

Problem Statement: Unable to install/activate plugin in ServiceNow instance.

1. Review the following link and execute the steps.

https://docs.servicenow.com/bundle/utah-platform-administration/page/administe
r/plugins/task/t_ActivateAPlugin.html

6.2.6. Lansweeper Cloud API is unavailable

Problem Statement: Lansweeper Cloud API is unavailable

1. The flow will finish with error, and the initial synchronization using the flow should
   be restarted manually.

6.2.7. Lansweeper Site is not selected while authorization

Problem Statement: Lansweeper Site is not selected while authorization

1. The flow will not import data and the webhooks system will not receive data.
2. To resolve this please follow the authorization process again and select the
   respective Lansweeper sites.

6.2.8. Unable to import data from Lansweeper

Problem Statement: Unable to import data from Lansweeper

1. Login to the ServiceNow instance.

2. Navigate to "System properties -> Import Export" and scroll down to the "Import
   Properties -> JSON format" section.

3. Increase the value for the property "Maximum file size for import (MB)" according
   to the expected assets to be received. Increase the value by 150 for each 100K
   assets that you have in your Lansweeper site. For example, a value of 400 for a site
   of 200K assets (100 default size + 150 first 100K assets + extra 150 next 100K
   assets).

6.2.9. Some assets do not have all the information in CMDB tables

Problem Statement: Some assets do not have all the information in CMDB tables

1. These assets will be kept in the staging table in order to be imported if all necessary
   information is received in future.
2. Each row in this table has a value ready to map, which is set to true when it can be
   transformed into a CMDB element.

6.2.10. After uninstalling the application, some files are not deleted automatically

Problem Statement: After uninstalling the application, some files are not deleted
automatically

1. Following might be the files which are not deleted automatically, delete these files
   manually.
   a. Table user, user name sg.lansweeper.integration
   b. Application registry, with name Lansweeper Credential.

6.2.11. Unable to fetch data using webhooks

Problem Statement 1: Unable to fetch data using webhooks.

1. Check the username and password set in the integration user in ServiceNow (sg.lansweeper.integration) and set the value in the webhook created in Lansweeper.

Problem Statement 2: Unable to fetch data using webhooks and getting 403 status code in the Lansweeper portal.

1. In the ServiceNow instance check if the user has all the required roles mentioned below:

    a. cmdb_import_api_admin
    b. x_lans2_service_gr.flatten_assets_user
    c. x_lans2_service_gr.flatten_memories_user
    d. x_lans2_service_gr.flatten_networks_user
    e. x_lans2_service_gr.flatten_logical_disk_user
    f. x_lans2_service_gr.flatten_networks_adapters_user
    g. x_lans2_service_gr.flatten_snmp_infos
    h. x_lans2_service_gr.flatten_softwares_user

6.2.12. Data is not being populated while doing "Execute Lansweeper"

Problem Statement: Data is not being populated while doing "Execute Lansweeper".

1. Check the Executions of the flow "Lansweeper Export Assets v2"
2. If the execution is completed, check the "Application logs" module under Lansweeper.
3. If there is an error message that says "[Lansweeper] Error while saving the incoming attachment received from the API response.", there can be two possibilities
    a. The zip extension is not authorized.
        i. To authorize the extension follow mentioned steps:
            1. Navigate to "sys_properties.list"
            2. Search for "glide.attachment.extensions"
            3. Add the zip extension at the end.
    b. The attachment size is larger than allowed from the ServiceNow instance.
        i. To increase the allowed size follow mentioned steps:
            1. Navigate to "sys_properties.list".
            2. Search for "com.glide.attachment.max_size".
            3. Increase the value in Megabytes.
4. Run the export again.

6.3.   Debugging

- The export process can be debugged with the flow execution, where you can find which step of the flow is being processed in each moment and the runtime value of each variable. Furthermore, the tables Export Status and Site Export details indicate in which step is the execution of each flow.

- The Scripted REST API requests errors should be debugged in Lansweeper UI where you can check if each webhook has been successfully and the data sent. In case it has been received, it should appear in the Flatten staging table.

- Check all schedules have been activated by the customer.

- Check the flow is set as active.

- In case the user is not configuring the authentication method in the right way, they should check the values set in the Lansweeper application, and update the right values in the application registry in concrete:

  - Client ID

  - Client Secret

  - Authorization URL

  - Callback URL, which should match with
    https://<instance-name>.service-now.com/oauth_redirect.do

- In case an export should be restarted manually the last record of the Export Status table should be in state FINISHED or FAILED.

- Other errors should be analyzed using System Logs.

6.4. Failure modes

List of expected failure modes (for example, third-party server down):

- Meanwhile the initial export using the flow is being executed, if the customer decides to remove the permissions in Lansweeper to one of the authorized sites at the beginning, it will fail due to the Service Graph Connector for Lansweeper unable to retrieve the data. The export should be restarted manually from the execution section specified in the setup guide. The customer should validate that the last record of the Export Status table should be in the state FINISHED or FAILED.

- In case the Lansweeper Cloud API is not available the export flow will fail. The export should be restarted manually from the execution section specified in the setup guide. The customer should validate that the last record of the Export Status table should be in the state FINISHED or FAILED.

6.5. Known Issues

- There are some workarounds in the mapping we have applied because of the IRE rules in ServiceNow, workarounds are mentioned as below:

Asset type	ServiceNow Table	ServiceNow field	Lansweeper field
Citrix Guest	cmdb_ci_appl_citrix_collector	Version	key
FTP Server	cmdb_ci_ftp_server	Running Process Command	key
Webserver	cmdb_ci_ftp_server	Running Process Command	key
Mail Server	cmdb_ci_ftp_server	Running Process Command	key

- If there are multiple assets with the same name in Lansweeper, then it could cause data loss in ServiceNow because of IRE rules.

There are application warning logs added if there are multiple assets with the same name. Logs should be added like:

[Lansweeper] There is more than 1 asset available having the same name. Please find the asset details below:
Name: <Asset name>
Asset key: <Asset key>

Note: This warning will only be present from the initial import, not from webhooks

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