



ServiceNow for Lenovo XClarity Administrator Installation and User Guide



Version 1.0

Note

Before using this information and the product it supports, read the information in [Appendix A “Notices” on page 35](#).

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Contents

Contents	i	Scheduling jobs.	16
About this publicationiii	Adding Lenovo XClarity Administrator	16
Conventions and terminology	iii	Chapter 3. Uninstalling ServiceNow for Lenovo XClarity Administrator	19
PDF and web resources	iii	Chapter 4. Using ServiceNow for Lenovo XClarity Administrator workflows	21
Chapter 1. ServiceNow for Lenovo XClarity Administrator	1	Updating credentials of a REST user.	21
Chapter 2. Installing and configuring ServiceNow for Lenovo XClarity Administrator	3	Adding Lenovo XClarity Administrator	22
Installing ServiceNow for Lenovo XClarity Administrator.	3	Deleting Lenovo XClarity Administrator.	23
Installing and configuring the MID Server	4	Importing inventory data from Lenovo XClarity Administrator.	24
Setting up MID Server user and role	4	Viewing the Lenovo XClarity Administrator inventories.	25
Installing a MID Server on a Windows system	5	Viewing the CI Relationship among connected inventories	28
Installing a MID Server as a Windows service	6	Clearing the Lenovo XClarity Administrator inventory	30
Installing Multiple MID Servers on a single Windows system	6	Monitoring events	30
Uninstalling a MID Server on Windows	7	Chapter 5. Troubleshooting	33
Adding the ServiceNow certificate to Lenovo XClarity Administrator	8	Viewing logs	33
Creating new users	9	Troubleshooting and common errors	33
Assigning roles to a user or group	11	Appendix A. Notices	35
Creating new groups	12	Trademarks	36
Configuring email notification	14	Important notes.	36
Importing inventory data from Lenovo XClarity Administrator.	15		

About this publication

This book provides instructions for installing and using ServiceNow for Lenovo XClarity Administrator.

Lenovo XClarity Integrator (LXCI) for ServiceNow is a plug-in for ServiceNow that integrates with Lenovo XClarity Administrator (LXCA). It retrieves inventory data from LXCA into the ServiceNow configuration management database (CMDB), and enables event management, including viewing the information of fans, power supplies, and switches, and monitoring events of the Lenovo servers.

Conventions and terminology

Paragraphs that start with a bold **Note**, **Important**, or **Attention** are notices with specific meanings that highlight key information.

Note: These notices provide important tips, guidance, or advice.

Important: These notices provide information or advice that might help you avoid inconvenient or difficult situations.

Attention: These notices indicate possible damage to programs, devices, or data. An attention notice appears before the instruction or situation in which damage can occur.

PDF and web resources

This product publication is available in PDF format.

Type of documentation	Version
Installation and User Guide	• 1.0

To view a PDF file, you need Adobe Reader. You can download it at no charge from the [Adobe Acrobat website](#).

Use the following resources to learn more about ServiceNow for Lenovo XClarity Administrator and related products.

- [ServiceNow for Lenovo XClarity Administrator](#)
- [ServiceNow for Lenovo XClarity Administrator program license](#)
- [ServiceNow](#)
- [Lenovo XClarity Administrator](#)

Chapter 1. ServiceNow for Lenovo XClarity Administrator

Lenovo XClarity Integrator (LXCI) for ServiceNow is a plug-in for ServiceNow that integrates with Lenovo XClarity Administrator (LXCA). It retrieves inventory data from LXCA into the ServiceNow configuration management database (CMDB), and enables event management, including viewing the information of fans, power supplies, and switches, and monitoring events of the Lenovo servers.

ServiceNow for Lenovo XClarity Administrator connects to one or more XClarity Administrator instances to synchronize inventory data between ServiceNow and XClarity Administrator using an HTTPS connection.

The primary feature of ServiceNow for Lenovo XClarity Administrator is to retrieve inventory data from registered XClarity Administrator instances import the data into the ServiceNow configuration management database (CMDB) and enable event management. The incidents updated in the ServiceNow Incident table are reflected back to the XClarity Administrator instances.

Inventory data is imported into the ServiceNow CMDB, allowing you to use and track them along with existing inventories. As a part of event management, ServiceNow for Lenovo XClarity Administrator raises incidents for serviceability events. Each incident includes inventory data from the hardware experiencing the issues. The ServiceNow incident passes on to the XClarity Administrator for further tracking. The ServiceNow for Lenovo XClarity Administrator generates an email notification on incident creation and updating.

Event management helps you to track and resolve service requests that are generated from ServiceNow for Lenovo XClarity Administrator. This integration enhances XClarity Administrator capabilities by merging them with ServiceNow capabilities.

ServiceNow for Lenovo XClarity Administrator supports the following features:

- Register XClarity Administrator with ServiceNow
- Import inventories and map them into the ServiceNow CMDB
- Set up ServiceNow for Lenovo XClarity Administrator as an event monitor in XClarity Administrator
- Raise incidents for serviceability events
- Send incident details to the XClarity Administrator instance that passed the generated event
- Send incident updates from ServiceNow to XClarity Administrator.
- Provide email notification for any changes/updates in the Incident Table.

Chapter 2. Installing and configuring ServiceNow for Lenovo XClarity Administrator

Review this section for information about installing and configuring ServiceNow for Lenovo XClarity Administrator.

Installing and configuring ServiceNow for Lenovo XClarity Administrator includes the following steps.

1. Installing ServiceNow for Lenovo XClarity Administrator in the ServiceNow instance
2. Install the Management, Instrumentation, and Discovery (MID) Server on a system in the network, and configure it with information about the corresponding ServiceNow instance where ServiceNow for Lenovo XClarity Administrator is installed.
3. Adding the ServiceNow certificate to Lenovo XClarity Administrator
4. (Optional): Create new users and groups
5. Configure email notification
6. Import inventories
7. Schedule jobs
8. Add XClarity Administrator

Attention: You must have “admin” privileges to configure and use ServiceNow for Lenovo XClarity Administrator.

Installing ServiceNow for Lenovo XClarity Administrator

ServiceNow for Lenovo XClarity Administrator is an XML file that can be imported and committed to each ServiceNow instance that is running in your network.

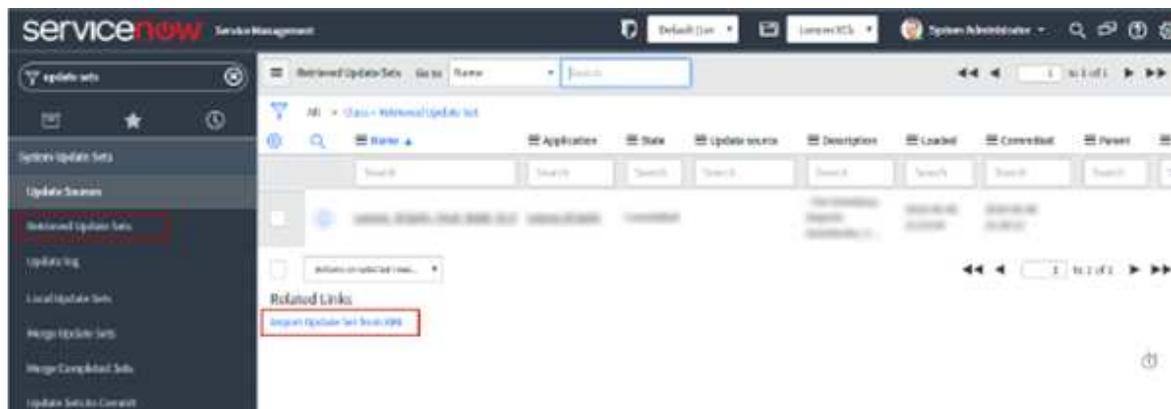
The following software is required by ServiceNow for Lenovo XClarity Administrator.

- ServiceNow (Jakarta or Kingston version)
- Mozilla Firefox or Google Chrome (latest version)

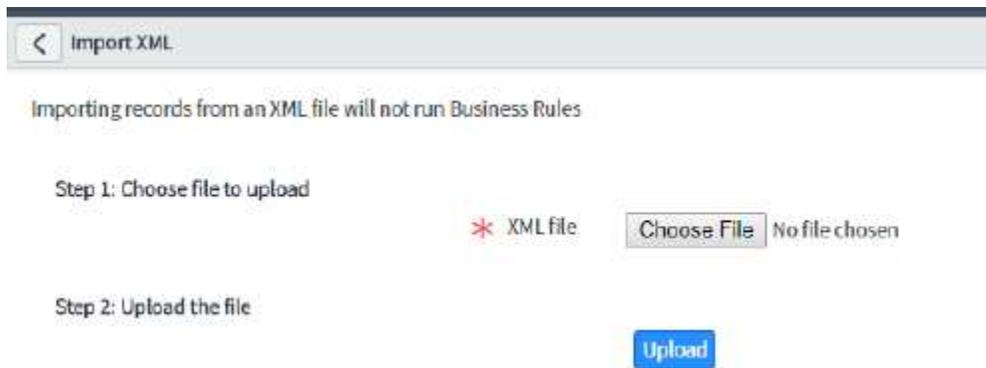
Procedure

To install the ServiceNow for Lenovo XClarity Administrator, complete the following steps.

- Step 1. From the ServiceNow portal, type **update sets** in the left pane **Search** box, and then click **Retrieved Update Sets** on the left pane.



- Step 2. Click **Import Update Set from XML** to display the Import XML page.



Step 3. Click **Choose File**, and then click **XClarity Integrator for ServiceNow**.

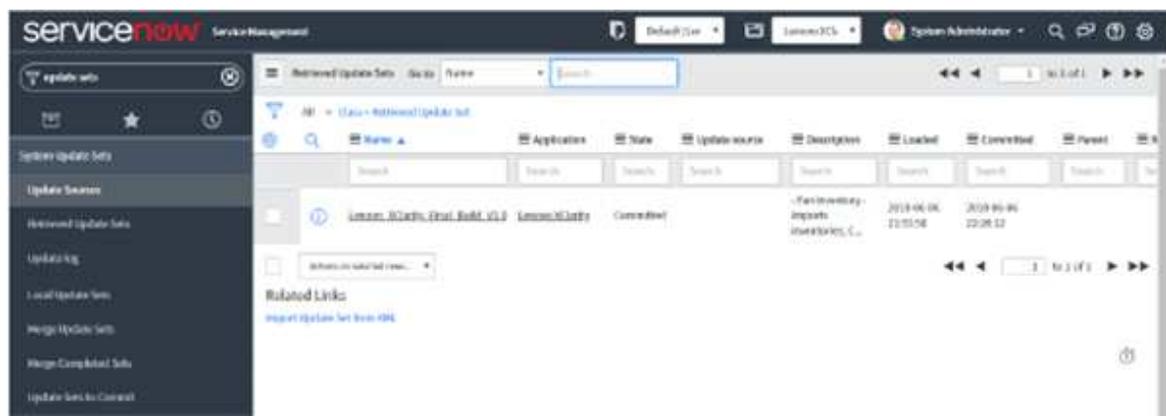
Note: After the xml file is uploaded, it displays the status as “Loaded.”

Step 4. Click the uploaded file, and then click **Preview Update Set**.

Step 5. Click **Commit Update Set**.

Important: If errors are generated before the update set is committed, accept the remote update option.

After ServiceNow for Lenovo XClarity Administrator is successfully committed, you can view the details as shown in the following example.



Installing and configuring the MID Server

The Management, Instrumentation, and Discovery (MID) Server is a Java server that facilitates communication and movement of data between the ServiceNow platform and external applications, data sources, and services.

To install the MID server, setup a MID Server user and role in ServiceNow, and then install and configure the MID Server using one of the following procedures.

- A MID server as a Windows Service
- A single MID Server on a Windows system
- Multiple MID Servers on a single Windows system

Setting up MID Server user and role

The MID Server connects to a ServiceNow instance by using the SOAP web service. To allow authentication with the ServiceNow instance, create a separate user account for each MID Server or share the same

account across multiple MID Servers. Each MID Server account must use the “mid_server” role to access protected tables.

Procedure

To set up the MID Server user account on the ServiceNow instance, complete the following steps.

- Step 1. From the ServiceNow portal, navigate to **User Administration → Users**.
- Step 2. Locate the **mid.user** user account in the **User ID** column.
- Step 3. Verify that the following fields are filled. Update the password, if required.
 - **User ID**. User ID that is to be specified in the **mid.instance.username** parameter of `config.xml`.
 - **Password**. Password that is to be specified in the **mid.instance.password** parameter of `config.xml`.
 - **First name**. User's first name
 - **Last name**. User's last name

Notes:

- Change the default password as soon as possible.
- Avoid updating the fields other than **Password**. For information about the password for default user accounts, see [“Creating new users” on page 9](#).

- Step 4. Click **Update**.

Installing a MID Server on a Windows system

You can install a MID Server on a Windows system.

Procedure

To install a MID Server on a single Windows system, complete the following steps.

- Step 1. Download the MID Server archive file.
 - a. From the ServiceNow portal, click **Mid Server → Downloads**.
 - b. Select and download the MID Server for the appropriate operating system.

If the download does not begin immediately, try the download later as the system may be busy.
- Step 2. From the system where you want to install the MID Server, create a directory for the MID Server on the top level of the drive using a unique and distinctive name (for example, `ServiceNow\MID Server1`).
- Step 3. Extract the downloaded MID Server file into the MID Server directory. When complete, the `\agent` directory is in under the MID Server directory (for example, `\ServiceNow\MIDServer_SMS_Int\agent`).
- Step 4. Edit the `\agent\config.xml` file using a text editor (such as WordPad), as follows:
 1. Locate the `<parameter name="url" value="https://YOUR_INSTANCE.service-now.com" />` element, and change the value to the URL of your ServiceNow instance.
 2. If basic authentication is enabled, enter the MID Server user credentials in the `mid.instance.username` and `mid.instance.password` parameters.

Note: Basic authentication for SOAP messages is enabled by default. The password value is also encrypted authentication.

3. Locate the `<parameter name="name" value="YOUR_MIDSERVER_NAME_GOES_HERE" />` element, and change the value to the name of your MID Server.
4. Optionally, enter the connection information for a proxy server that is used, and remove the comment tags from the proxy configuration information. For example, you can configure the `mid.proxy.use_proxy`, `mid.proxy.host`, `mid.proxy.port`, `mid.proxy.username`, and `mid.proxy.password`.

- Step 5. If this MID Server is installed on a system that contains other MID Servers, also edit the `\agent\conf\wrapper-override.conf` file. For more information, see [“Installing Multiple MID Servers on a single Windows system” on page 6](#).

Installing a MID Server as a Windows service

You can install a MID Server as a Windows Service.

Procedure

To run a MID Server as a Windows service, complete the following steps.

- Step 1. Download the MID Server archive file.
- From the ServiceNow portal, click **Mid Server → Downloads**.
 - Select and download the MID Server for the appropriate operating system. If the download does not begin immediately, try the download later as the system may be busy.
- Step 2. From the system where you want to install the MID Server, click **Start**.
- Step 3. In the Search box, type `command prompt` or `cmd.exe`.
- Step 4. In the results list, right-click **Command Prompt** or **cmd.exe**, and then click **Run as administrator**. This enables the MID Server to be installed with administrative rights under any Windows User Account Control (UAC) setting.
- Step 5. From the command prompt, navigate to `\agent` in the directory you created for the MID Server files. For example, the path might be `C:\ServiceNow\MID Server1\agent`.
- Step 6. Run `start.bat`.

Installing Multiple MID Servers on a single Windows system

You can install multiple MID Servers on a single host or on a virtual machine using Windows. This is useful when one MID Server is down so another can take its place. Note that installing multiple MID Servers might involve additional setup steps, depending on your network configuration.

Procedure

To install a MID Server on a single Windows system, complete the following steps.

- Step 1. Download the MID Server archive file.
- From the ServiceNow portal, click **Mid Server → Downloads**.
 - Select and download the MID Server for the appropriate operating system.
- If the download does not begin immediately, try the download later as the system may be busy.
- Step 2. From the system or virtual machine where you want to install multiple MID Servers, create a directory for each MID Server on the top level of the drive using unique and distinctive names (for example, `ServiceNow\MIDServer_SMS_Int` or `ServiceNow\MIDServer_Disc1`).
- Step 3. Extract the downloaded MID Server file into each MID Server directory. When complete, the `\agent` directory is in under each MID Server directory (for example, `\ServiceNow\MIDServer_SMS_Int\agent`).
- Step 4. For each Windows MID Server, edit the `\agent\config.xml` file using a text editor (such as WordPad), as follows:
- Locate the `<parameter name="url" value="https://YOUR_INSTANCE.service-now.com" />` element, and change the value to the URL of your ServiceNow instance.
 - If basic authentication is enabled, enter the MID Server user credentials in the **mid.instance.username** and **mid.instance.password** parameters.

Note: Basic authentication for SOAP messages is enabled by default. The password value is also encrypted authentication.

3. Locate the `<parameter name="name" value="YOUR_MIDSERVER_NAME_GOES_HERE" />` element, and change the value to the name of your MID Server.
4. Optionally, enter the connection information for a proxy server that is used, and remove the comment tags from the proxy configuration information. For example, you can configure the `mid.proxy.use_proxy`, `mid.proxy.host`, `mid.proxy.port`, `mid.proxy.username`, and `mid.proxy.password`.

Step 5. For each Windows MID Server, edit the `\agent\conf\wrapper-override.conf` file with a text editor, and enter the following configuration information.

Attention: Do not edit the `wrapper.conf` file, which contains the default configuration for the MID Server. Any future ServiceNow upgrades overwrite the contents of the `wrapper.conf` file but not the `wrapper-override.conf` file.

- **wrapper.name.** The MID Server process, maps to the Service name, and must be unique. The default value is `snc_mid`.
- **wrapper.displayname.** The display name in the Windows Services console (for example, ServiceNow DevMID01). The default value is ServiceNow MID Server.
- (Optional) **wrapper.java.command.** The path to the Java `\bin` directory, either relative to the agent directory or absolute. The default value is `jre/bin/java`.
- (Optional) **wrapper.java.initmemory.** The initial Java heap size in MB. The default value is 10.
- (Optional) **wrapper.java.maxmemory.** The maximum Java heap size in MB. The default is 512.

These values cannot be edited while the MID Server is running.

Step 6. Confirm that the MID Server is running.

- To start the server, run one of the following commands:
 - (Windows) `start.bat`
 - (Linux) `start.xh`
- To stop the server, run one of the following commands:
 - (Windows) `stop.bat`
 - (Linux) `stop.xh`

Step 7. Optionally, configure MID Server clustering for load balancing or failover as necessary.

Step 8. After you configure the MID Server, you can view a list of installed MID Server in the Servers table under the MID Server module.

Uninstalling a MID Server on Windows

The MID Server runs as a standalone service. It can be removed easily to accommodate such tasks as redeploying the MID Server to another host system or changing the unique name of a MID Server when deploying multiple MID Servers.

Procedure

To uninstall a MID Server on Windows, complete the following steps.

- Step 1. Stop the running MID Server service by running one of the following commands.
 - (Windows) `stop.bat`
 - (Linux) `stop.xh`
- Step 2. Open a command window (**Start** → **Run** → **cmd**).
- Step 3. Navigate to the `\agent\bin` directory in the MID Server installation directory.
- Step 4. Double-click the `UninstallMID-NT.bat` file.

Adding the ServiceNow certificate to Lenovo XClarity Administrator

You must add the ServiceNow certificate to Lenovo XClarity Administrator so that ServiceNow for Lenovo XClarity Administrator can access to XClarity Administrator inventories and events.

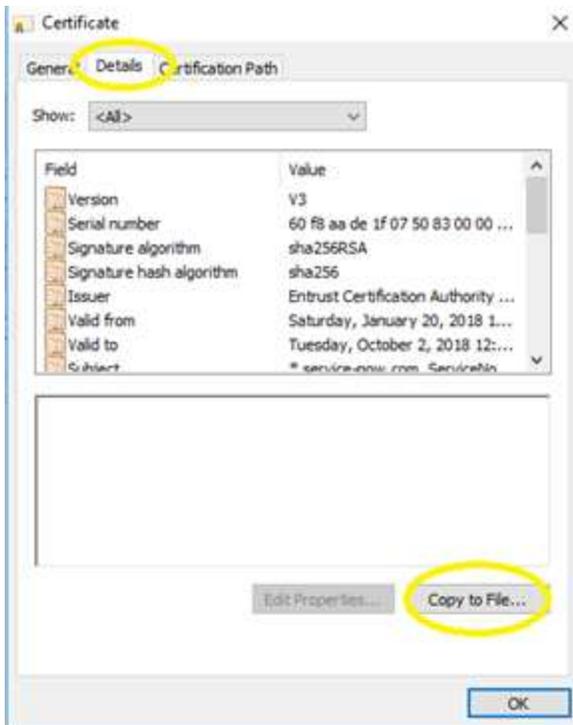
Procedure

To add ServiceNow certificate to XClarity Administrator, complete the following steps.

Step 1. From the ServiceNow portal, right-click **Secure**, and then click **Certificate**. The Certificate dialog is displayed.

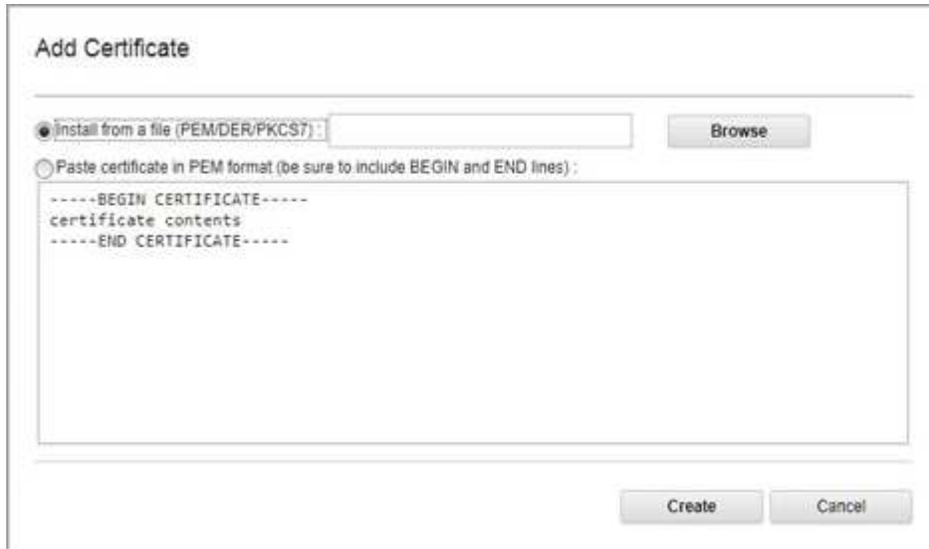


Step 2. Click the **Details** tab, and then click **Copy to File**.



Step 3. Click **Next**.

- Step 4. Select the “DER encoded binary X.509(.CER)” format from one of the options available on the dialog.
- Step 5. Enter a location and name for the file to be exported.
- Step 6. Click **Next**. The certificate file is exported to the location provided in the previous step.
- Step 7. Add this exported certificate file (.cert) to XClarity Administrator.
 1. From the XClarity Administrator menu bar, click **Administration → Security** to display the Security page.
 2. Click **Trusted certificates** under **Certificate Management** in the left navigation.
 3. Click **All Actions → Add Certificate** to display the Add Certificate dialog.



4. Browser for the certificate file.
5. Click **Create** to add the certificate.

Creating new users

ServiceNow for Lenovo XClarity Administrator includes a set of default user accounts. You can create additional users as needed.

ServiceNow for Lenovo XClarity Administrator adds the following default accounts.

- **ServiceNow REST user:** This user is required to configure REST user credentials.
 - **User ID:** sn.rest.admin
 - **Password:** ****
 - **Roles:** web_service_admin and x_188271_lenovo_xc.user

Attention: After you update the password, you must update the same password under the REST User credentials module. To update the REST credentials, see [“Updating credentials of a REST user” on page 21](#).

- **XClarity End User:** This user is created for the end user with limited access to applications.
 - **User ID:** xclarity.enduser
 - **Password:** ****
 - **Roles:** x_188271_lenovo_xc.user, and itil
- **MID Server User:** This user is created for MID server installation. The credentials are used during the MID server installation.
 - **User ID:** mid.user
 - **Password:** ****
 - **Roles:** mid_server

Attention: When you update the password for MID Server user, you must also update the password in the configuration file (config.xml) that is used during MID server installation.

Attention: You must set the password for these users as soon as possible after you install ServiceNow for Lenovo XClarity Administrator. To change the password for the default users or any other user, complete the following steps.

1. From the ServiceNow portal, on the left navigation panel, click **Users Administration → Users**, and then click **Users**.

Note: You must be logged in to the ServiceNow portal using a user with Admin privileges.

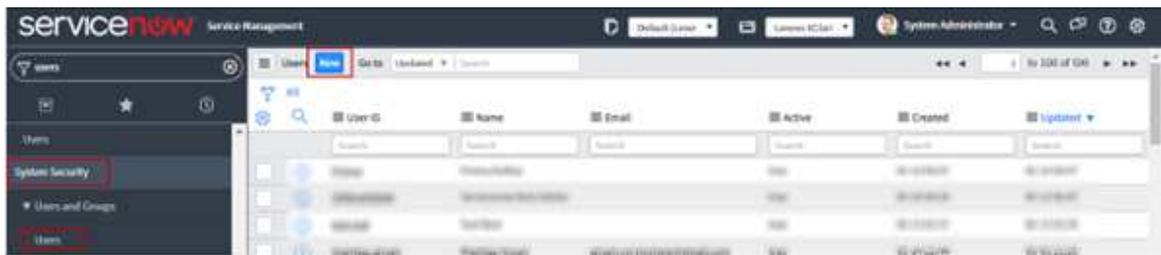
2. Type the user name whose password is to be set in the **Search** field.
3. Enter the password, and click **Update**.

Procedure

To create a user with roles, complete these steps.

- Step 1. From the ServiceNow portal, on the left navigation panel, type **Users** and click **Users** under the **System Security** category.

Note: You must be logged in to the ServiceNow portal using a user with Admin privileges.



- Step 2. Click **New** to create new user.

A screenshot of the 'User: New record' form in ServiceNow. The form is divided into two columns. The left column contains fields for 'User ID', 'First name', 'Last name', 'Title', 'Department', and 'Password'. Below these are several checkboxes: 'Password needs reset', 'Locked out', 'Active' (checked), 'Web service access only', and 'Internal integration'. The right column contains fields for 'Email', 'Calendar delegation' (set to 'Outlook'), 'Time zone' (set to 'System (EST/Pacific Time)'), 'Business phone', and 'Mobile phone'. There is also a 'Photo' field with a 'Click to add...' link. At the bottom left is a 'Submit' button.

- Step 3. Fill in the fields on the form, and click **Submit** to create a user.
- Step 4. After the user is created, select the created user from the list to assign roles.
- Step 5. In the **Roles** section at the bottom, click **Edit**.
- Step 6. Type `web_service_admin` in the **Search** field, and click the appropriate arrow to move it under **Roles List** for a REST user only.

Assign “web_server_admin” role to a user account through which the Lenovo XClarity Administrator can use to log in to that particular ServiceNow instance to push incidents into ServiceNow.

Notes: After assigning the “web_service_admin” role to a user, the following roles are also assigned automatically to the user.

- api_analytics_read
- pa_viewer
- rest_api_explorer

Step 7. Type `x_188271_lenovo_xc.user` in the **Search** field, and click the appropriate arrow to move it under **Roles List** for both a REST user and an end user.

Step 8. Type `itil` in the **Search** field, and click the appropriate arrow to move it under **Roles List** of an end user that is a member of a group that is notified of an incident when the incident is assigned.



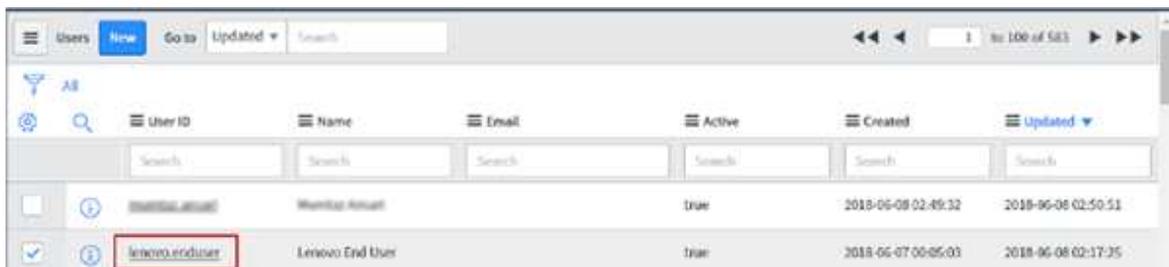
Assigning roles to a user or group

You can assign roles to users and groups.

Procedure

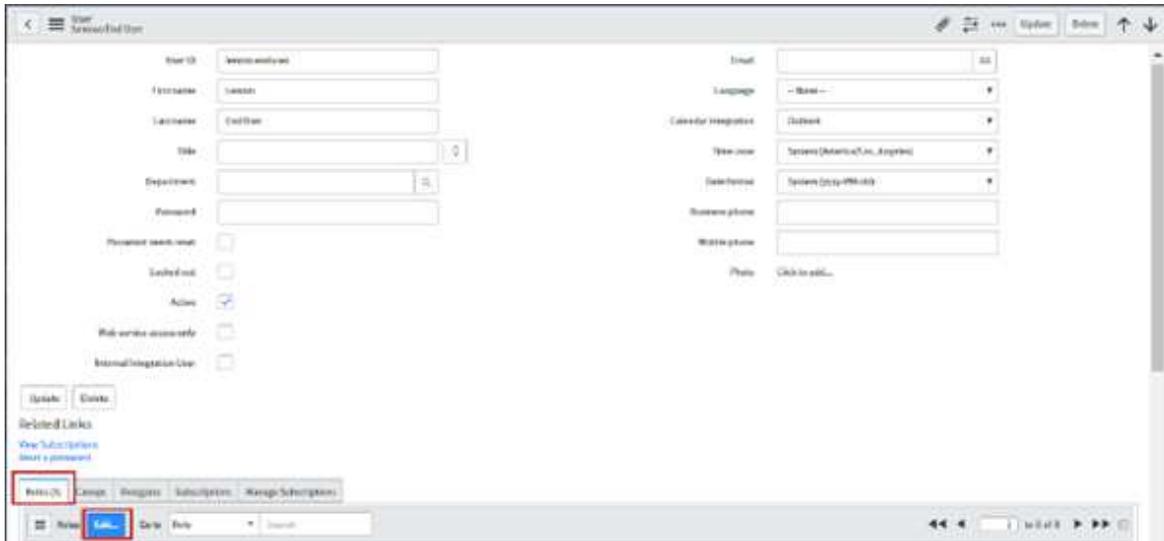
To assign a role to a user or group, complete the following steps

- Step 1. From the ServiceNow portal, type "users" in the left panel **Search** field.
- Step 2. Click **User → Administration → Users**. A list of added user is displayed.



Step 3. Click the user to which you want to assign roles.

Step 4. Scroll the following screen to the bottom. Then, in the **Roles** tab, click the **Edit** button.



Step 5. Select the roles that you want to assign to the user, and click the appropriate arrow to move the roles to the list on the right.

Note: You must assign the “x_188271_lenovo_xc.user” role to the user. Optionally, you can add more roles, as needed.

Step 6. Click **Save**.

After the roles are assigned to the user, you can view the roles on the **Role** tab.

Creating new groups

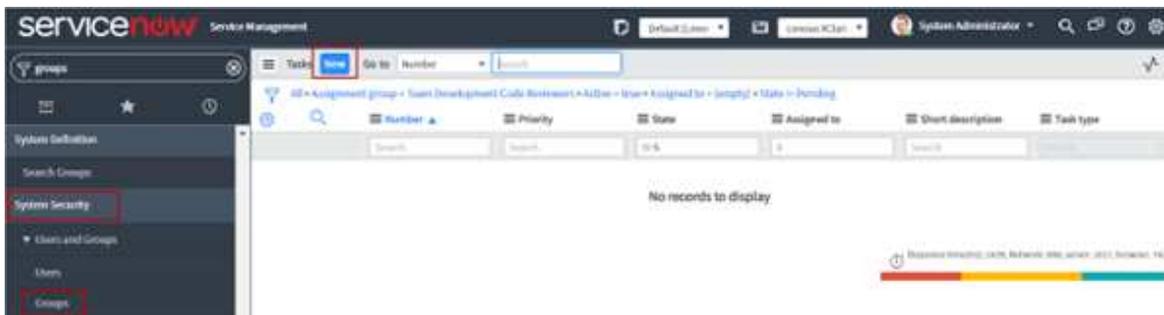
ServiceNow for Lenovo XClarity Administrator includes a default group, named **Lenovo XClarity**, for the incident assignment. You can create additional groups and assign roles before using the workflows.

If users are not added to the group, you can specify email ID in the Group email by editing the Group.

Procedure

To create a group with roles, complete these steps.

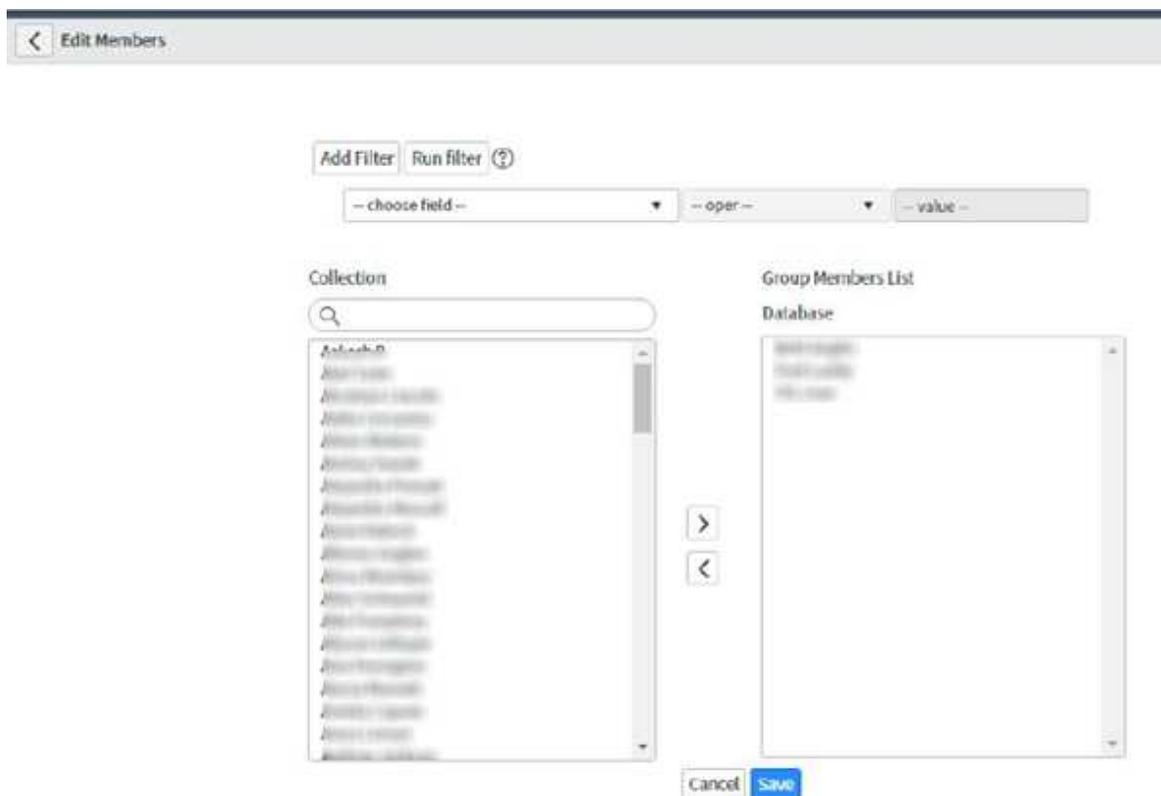
Step 1. From the ServiceNow portal, on the left navigation panel, type **Groups** and click **Groups** under the **System Security > Users and Groups** category.



Step 2. Click **New** to create a new group.

- Step 3. Fill in the fields on the form, and click the **Submit** button to create a group.
- Step 4. After the group is created, select the created group from the list to add members.
- Step 5. In the **Group Members** section at the bottom, click **Edit**.

- Step 6. Type the user names in **Search** field.
- Step 7. Select the name in the **Collection** list, and click the right arrow to move the name to the **Group Members List**.



Step 8. Click **Save**.

Configuring email notification

When a new incident is raised in the incident table or when the state of the incident changes, an email notification is sent to all users in the assigned group and to a specific assigned user for handling the incident. You can configure the email notification so that the configured email address receives notifications.

Procedure

To configure email notification, complete the following steps.

Step 1. From the ServiceNow portal, type "email properties" in the left pane **Search** box, and click **System Properties > Email Properties** from the left navigation.



Step 2. Select **Global** from the **Application** drop-down list on the top right corner.

Step 3. In the **Outbound Email Configuration** and **Inbound Email Configuration** sections, select **Yes**.

Step 4. Click **Save**.

Importing inventory data from Lenovo XClarity Administrator

ServiceNow provides access to Lenovo XClarity Administrator inventories by retrieving information from XClarity Administrator and mapping it to the configuration management database (CMDB).

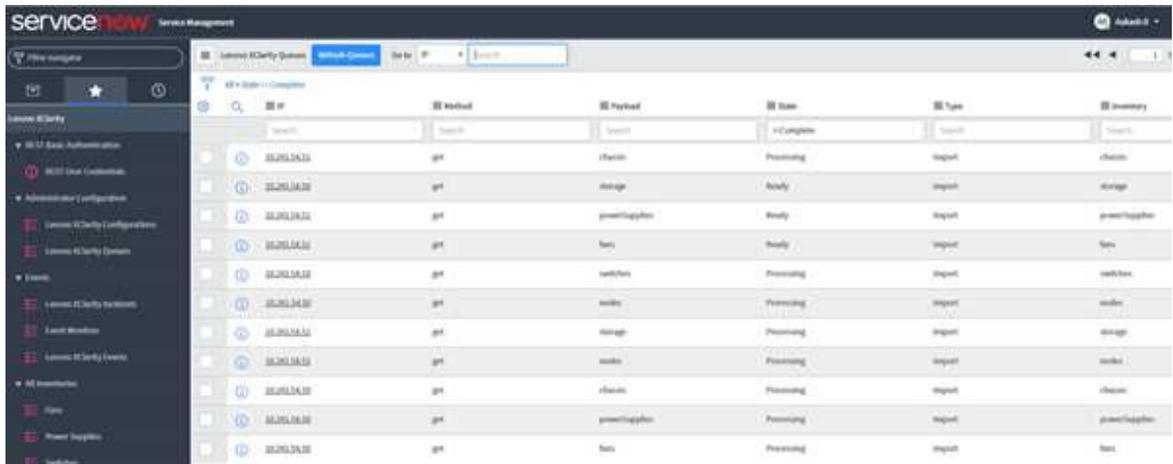
Procedure

To import inventory data of the selected XClarity Administrator instances to the ServiceNow instance, complete the following steps

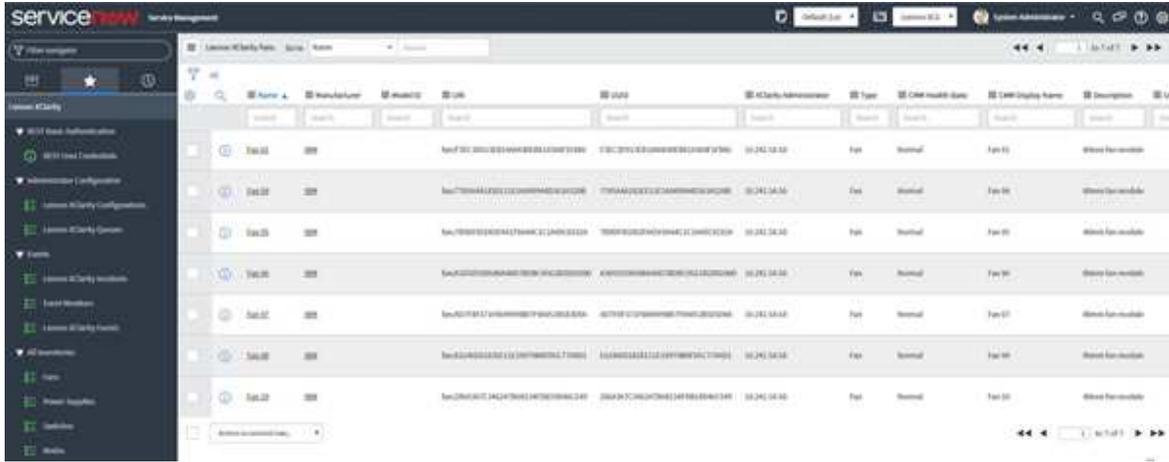
- Step 1. From the ServiceNow portal, click **Lenovo XClarity Configuration** under the **Administrator Configuration** group in the left pane.



- Step 2. Select each XClarity Administrator, and click **Import Inventories** from the **Actions** drop-down. The **Queue** table shows the progress of retrieved data import. Following is a sample screen.



- Step 3. Under **All Inventories**, click the desired module to view the records for each inventory. Following example shows the fan data.



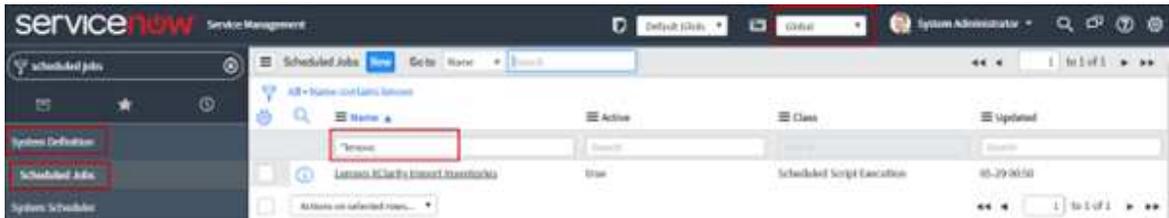
Scheduling jobs

You can schedule a job to update the inventory records in the ServiceNow at a regular interval of time.

Procedure

To schedule jobs, complete the following steps.

- Step 1. From the ServiceNow portal, type **scheduled jobs** in the left panel **Search** box, and click **System Definition > Scheduled Jobs** from the left navigation.



- Step 2. Click the **Lenovo XClarity Import Inventories** link to display the following page.



- Step 3. Select the time interval for automatically updating the inventory records from Lenovo XClarity Administrator, and click **Update**.

Adding Lenovo XClarity Administrator

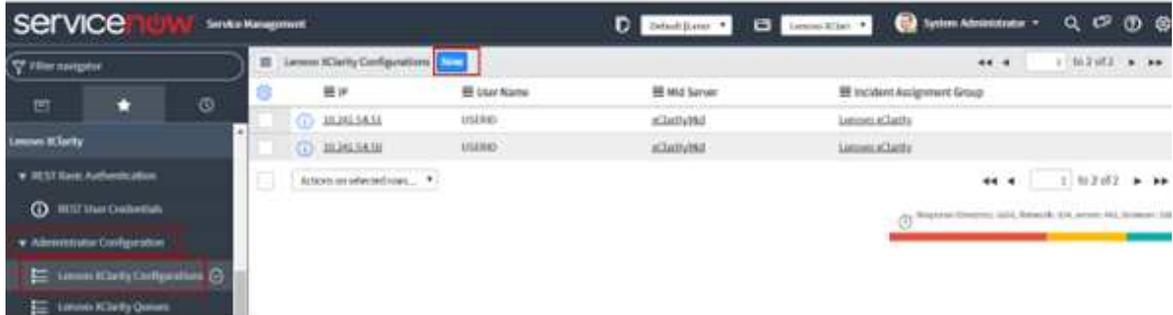
When you add an Lenovo XClarity Administrator to ServiceNow, XClarity Administrator is registered as an event monitor and inventory data can be retrieved from XClarity Administrator.

Note: Only one XClarity Administrator user can be registered against a single XClarity Administrator IP address.

Procedure

To add XClarity Administrator, complete the following steps.

Step 1. From the ServiceNow portal, click **Administrator Configuration** → **Lenovo XClarity Configurations**. A list of Registered XClarity Platforms are displayed.



Step 2. Click **New**.



Step 3. Enter the user name, password and XClarity Administrator IP address in the respective fields.

Step 4. Enter the Incident Assignment Group and MID Server details.

Step 5. Click **Add XClarity**. An XClarity Administrator is added.

Note: The new XClarity Administrator instance is added only if the specified credentials are correct and the MID Server is running.

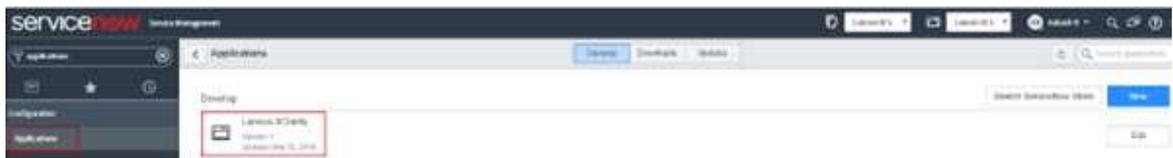
Chapter 3. Uninstalling ServiceNow for Lenovo XClarity Administrator

You can uninstall the ServiceNow for Lenovo XClarity Administrator plugin from the ServiceNow instance by deleting the application (plugin).

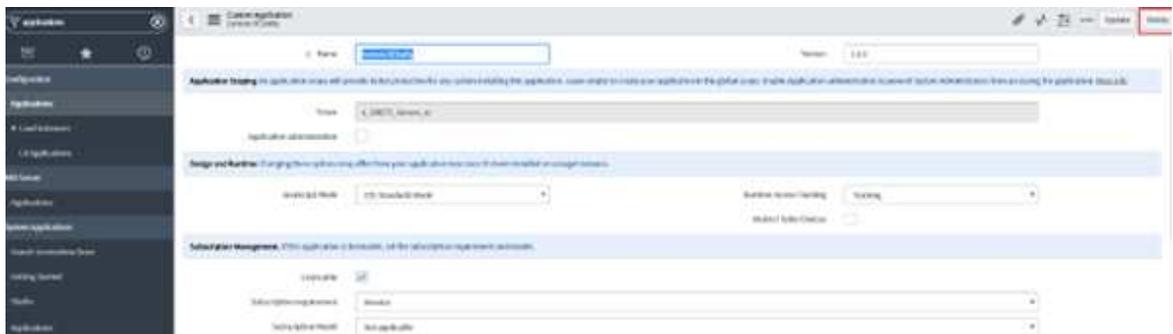
Procedure

To uninstall ServiceNow for Lenovo XClarity Administrator, complete the following steps.

Step 1. From the ServiceNow portal, navigate to **System Application** → **Applications**.



Step 2. In the **Develop** tab, open the ServiceNow for Lenovo XClarity Administrator instance that you want to delete.



Step 3. Click **Delete** on the top-right corner. A confirmation dialog is displayed.

Step 4. Click **Delete** to delete the application.

For more details to delete an application, see your ServiceNow documentation

Chapter 4. Using ServiceNow for Lenovo XClarity Administrator workflows

Use information in this section to perform specific tasks in ServiceNow for Lenovo XClarity Administrator.

About this task

You can discover the following devices using ServiceNow for Lenovo XClarity Administrator:

- REST Basic Authentication
 - REST User Credentials
- Administrator Configuration
 - Lenovo XClarity Configurations
 - Lenovo XClarity Queues
- Events
 - Lenovo XClarity Incidents
 - Event Monitors
 - Lenovo XClarity Events
 - REST Message
- All Inventories
 - Fan
 - Power Supplies
 - Switches
 - Nodes
 - Storage
 - Chassis

Procedure

To view the ServiceNow workflows, complete the following steps.

Step 1. From the ServiceNow portal, type `Lenovo` in the left panel **Search** box.

Step 2. Click the required link to view more details in the right pane and to perform various actions.

Updating credentials of a REST user

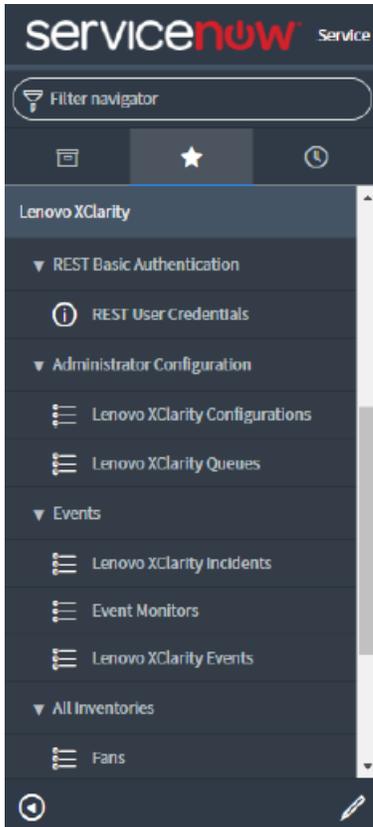
This section provides the details to update REST user credentials.

Values in the Name, Username and Password fields are the default. You must update the password for each of the default and newly created REST users after you install ServiceNow for Lenovo XClarity Administrator (see [“Creating new users” on page 9](#)). It is mandatory to update the credentials of the REST user

Procedure

To update a REST user credentials, complete the following steps.

Step 1. From the ServiceNow portal, click **Lenovo XClarity** → **REST Basic Authentication** → **REST User Credentials** in the left panel.



Step 2. Enter the desired name in the **Name** field.

Step 3. Enter the user ID in the **Username** field.

Note: The user ID must be assigned roles `web_service_admin` and `x_188271_lenovo_xc.user`.

Step 4. Enter the desired password in the **Password** field.



Step 5. Click **Update**.

Note: If you change the REST password after one or more event monitors are registered in ServiceNow, you must manually update the same password at the corresponding Lenovo XClarity Administrator event monitor credentials. You can do this from XClarity Administrator by clicking **Monitoring → Event Monitors → Event Forwarding** and editing an event monitor.

Adding Lenovo XClarity Administrator

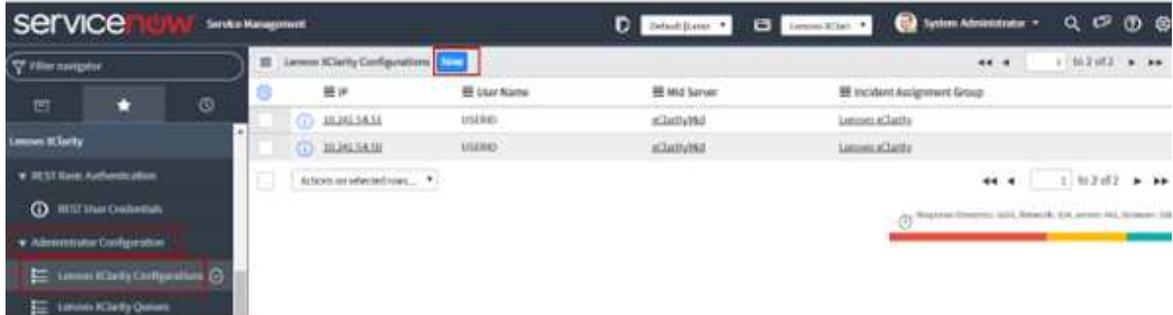
When you add an Lenovo XClarity Administrator to ServiceNow, XClarity Administrator is registered as an event monitor and inventory data can be retrieved from XClarity Administrator.

Note: Only one XClarity Administrator user can be registered against a single XClarity Administrator IP address.

Procedure

To add XClarity Administrator, complete the following steps.

Step 1. From the ServiceNow portal, click **Administrator Configuration → Lenovo XClarity Configurations**. A list of Registered XClarity Platforms are displayed.



Step 2. Click **New**.



Step 3. Enter the user name, password and XClarity Administrator IP address in the respective fields.

Step 4. Enter the Incident Assignment Group and MID Server details.

Step 5. Click **Add XClarity**. An XClarity Administrator is added.

Note: The new XClarity Administrator instance is added only if the specified credentials are correct and the MID Server is running.

Deleting Lenovo XClarity Administrator

When you delete Lenovo XClarity Administrator, imported data is removed, and Lenovo XClarity Administrator is deregistered as an event monitor. Incidents that were raised by XClarity Administrator are not removed, but further incidents cannot be raised for that XClarity Administrator instance.

Procedure

To delete XClarity Administrator, complete the following steps

- Step 1. From the ServiceNow portal, select the XClarity Administrator instances from the Lenovo XClarity Configurations page, and select **Delete XClarity**.



- Step 2. Click **OK** to confirm the deletion.
- Step 3. Click **OK** to confirm that imported data will be deleted and XClarity Administrator will be deregister the ServiceNow instance.

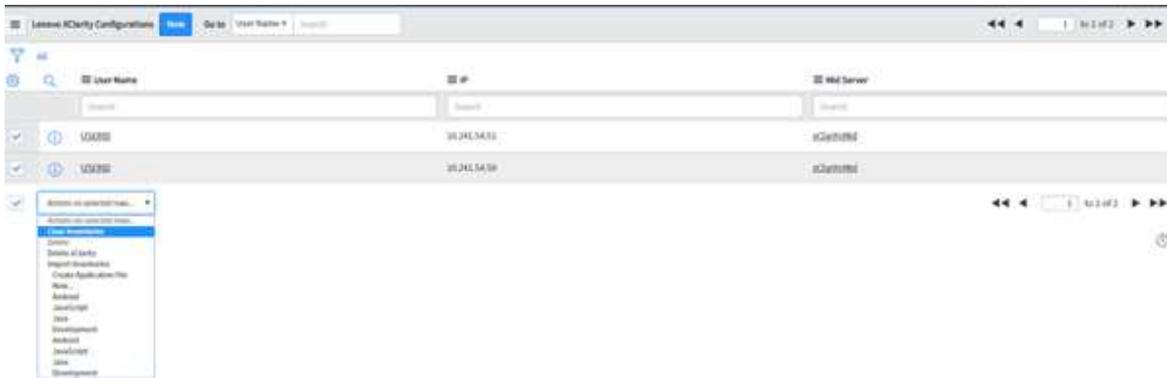
Importing inventory data from Lenovo XClarity Administrator

ServiceNow provides access to Lenovo XClarity Administrator inventories by retrieving information from XClarity Administrator and mapping it to the configuration management database (CMDB).

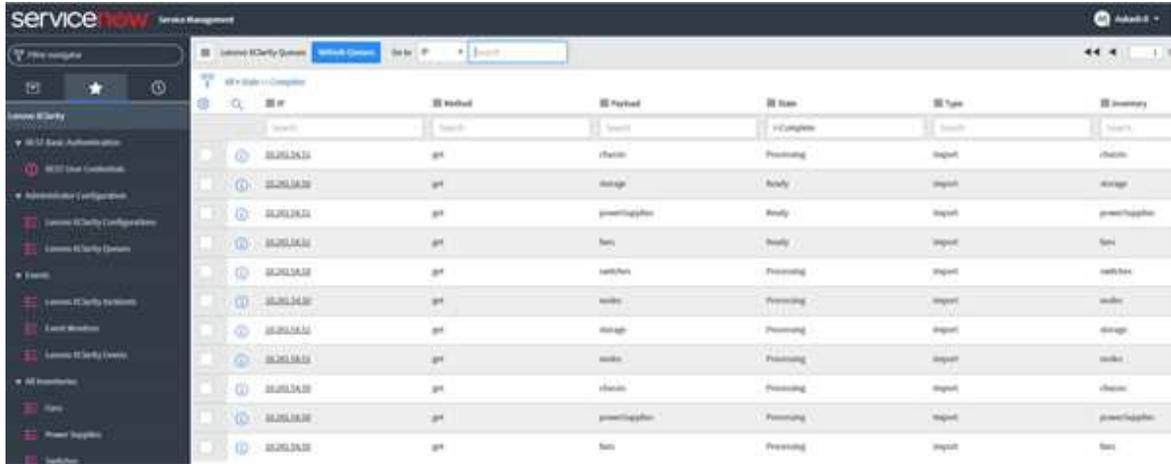
Procedure

To import inventory data of the selected XClarity Administrator instances to the ServiceNow instance, complete the following steps

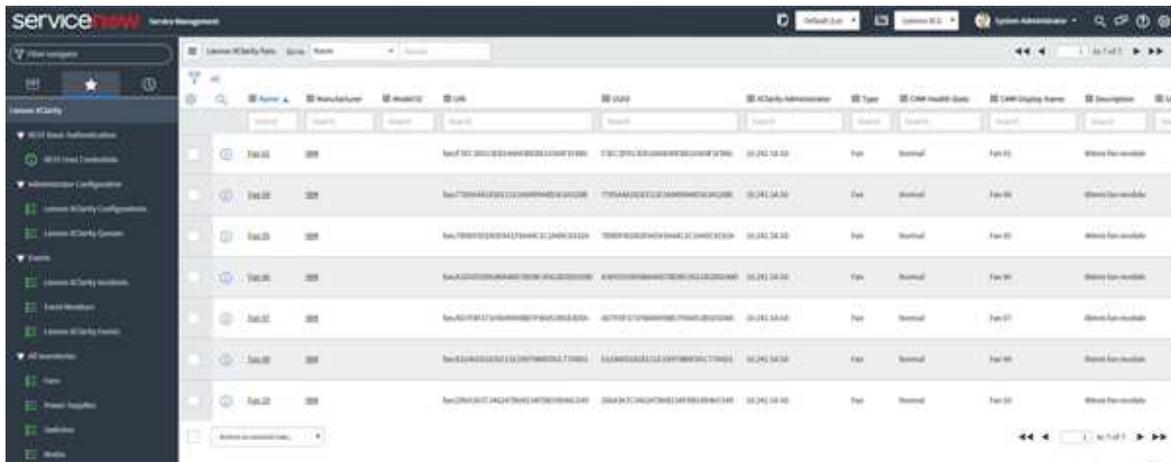
- Step 1. From the ServiceNow portal, click **Lenovo XClarity Configuration** under the **Administrator Configuration** group in the left pane.



- Step 2. Select each XClarity Administrator, and click **Import Inventories** from the **Actions** drop-down. The **Queue** table shows the progress of retrieved data import. Following is a sample screen.



Step 3. Under **All Inventories**, click the desired module to view the records for each inventory. Following example shows the fan data.



Viewing the Lenovo XClarity Administrator inventories

You can view related list of inventories, such as fans, power supplies, switches, nodes, storage, and chassis.

Note: If an inventory item is unmanaged in Lenovo XClarity Administrator, the changed inventory is updated in ServiceNow when the next scheduler runs or when the inventory is manually imported again. When an inventory item is in the unmanaged state in Lenovo XClarity Administrator, the **Is Obsolete** field is set to “true” for that inventory item.

Procedure

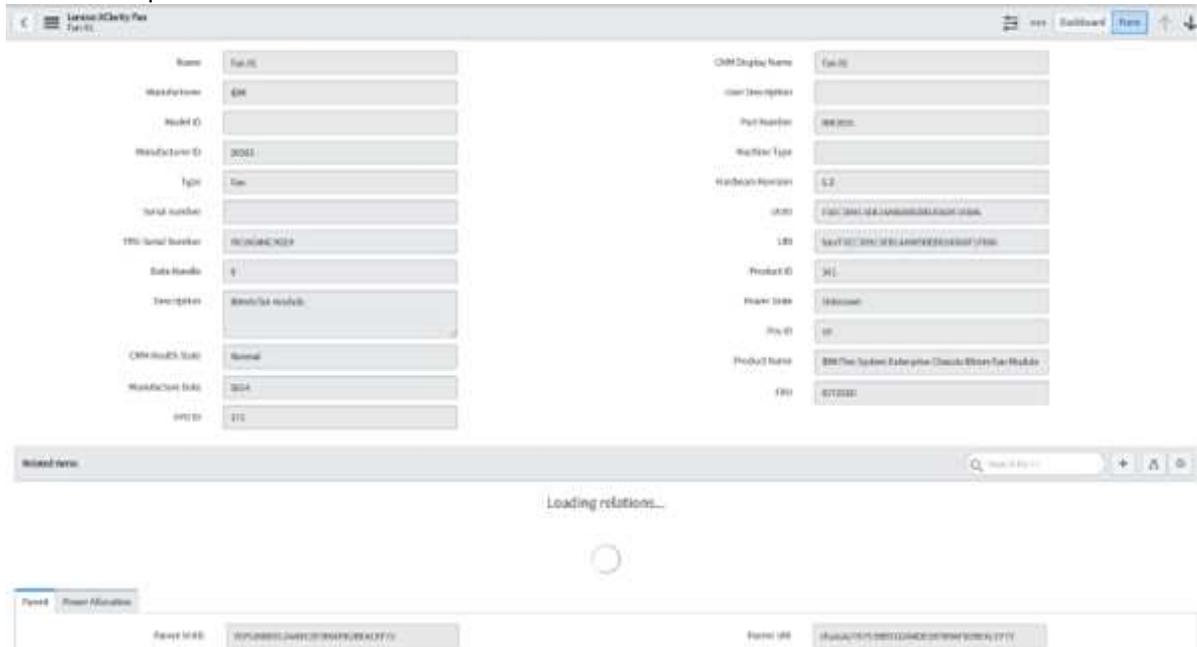
The following examples illustrate how to view different levels of details for inventories.

- Fans in the inventory

1. From the ServiceNow portal, click the **All Inventories** group in the left pane, and then click **Fans**.



2. Click the required record to view details.



You might need to scroll to view more details.

The tabs in between indicates sections that contain data that is related to same inventory. The tabs at the bottom are called as Related Lists that contain arrays of data or deep dives that are related to a particular record of an inventory.

Note: If there are more details of records that are shown in the Related Lists, click on any record in the extreme left column to display the details.

- Nodes and the boot-order list in the inventory
 1. Select record under the **Nodes** inventory.



2. Select **Boot Order Related List**



3. Click on the record in the left most columns. You are redirected to another page that contains details about a particular boot order that is under a particular record in the Node Inventory table.



4. Select any one of the record from the BootOrderList related list. You are redirected to another page listing two related lists.

- Current Boot Order Devices
- Possible Boot Order Devices



5. Click on any one of the record in the related list to view more details.

This type of deep dive is found in the following related links under the inventories.

Inventory Name	Related List Name
Chassis	CMMS
Chassis	Energy Policies
Chassis	Fan Muxes
Nodes	Activation Keys
Nodes	Add In Cards
Nodes	Boot Order
Nodes	IP Interfaces
Nodes	On Board PCI Devices
Nodes	PCI Devices
Switches	IP Interfaces

Similarly, you can view the details of other inventories as well.

Viewing the CI Relationship among connected inventories

After importing the Lenovo XClarity Administrator data into ServiceNow CMDB, mapping is done to create inventory relationship by the plug-in.

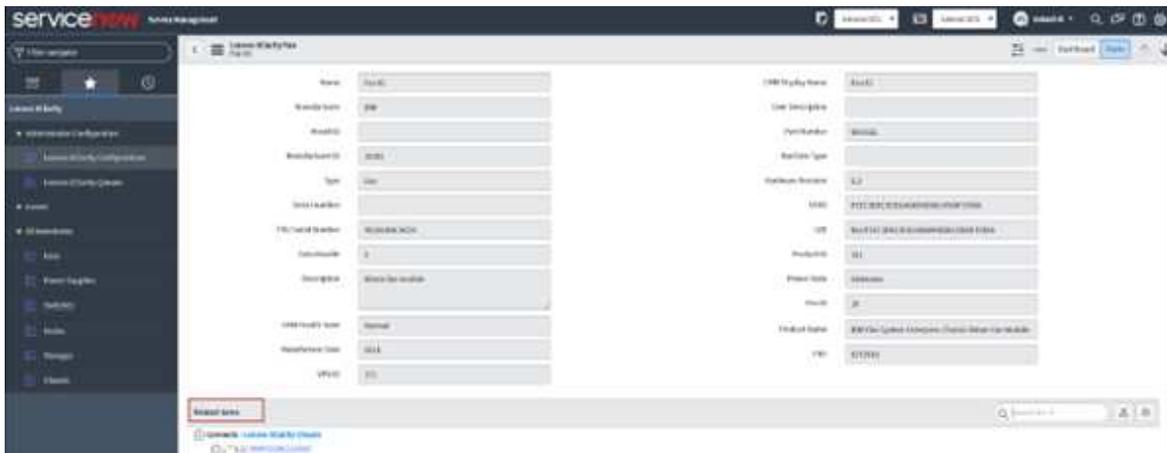
Under each inventory, there is a section tab named **CI Relations/ Related Items**. Chassis is the parent of all inventories for any XClarity Administrator. Under **All Inventories** (except chassis), their parent chassis is displayed as follows.



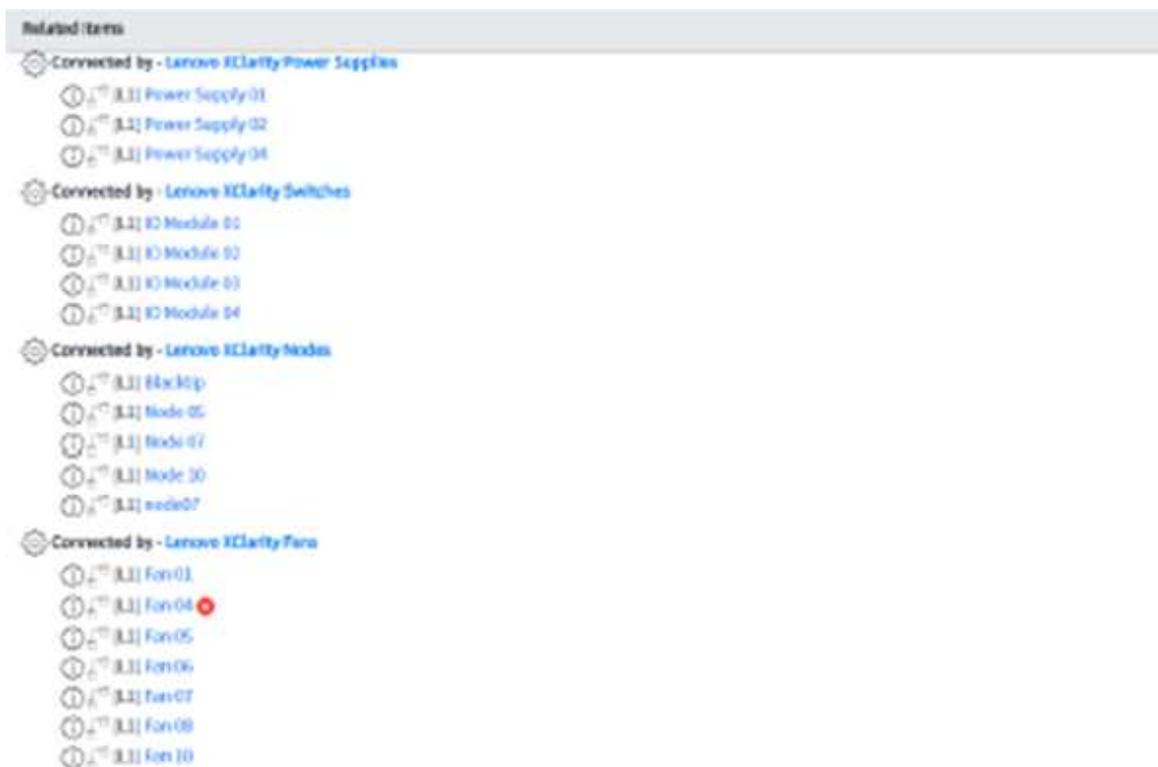
Procedure

For example, to view the relationship of devices, complete the following steps.

- Step 1. From the ServiceNow portal, click **All Inventories** → **Chassis**.
- Step 2. Click the desired chassis to view the relationship.

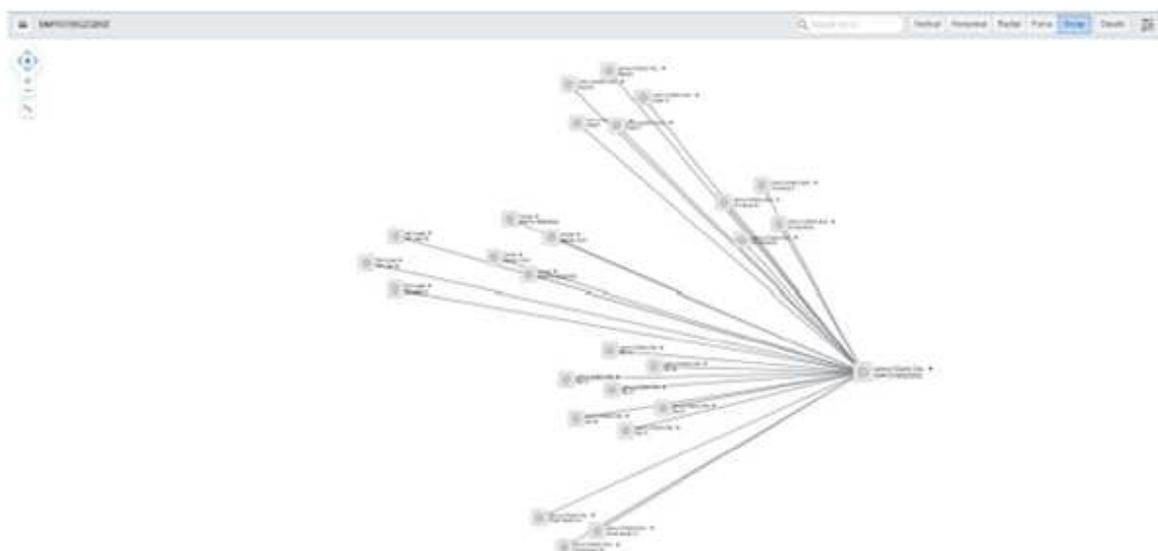


- Step 3. Click in the **Related Items** section to list the dependency views. Following is a sample dependency view for the CI Relations under chassis. This list shows the connected device under Chassis.

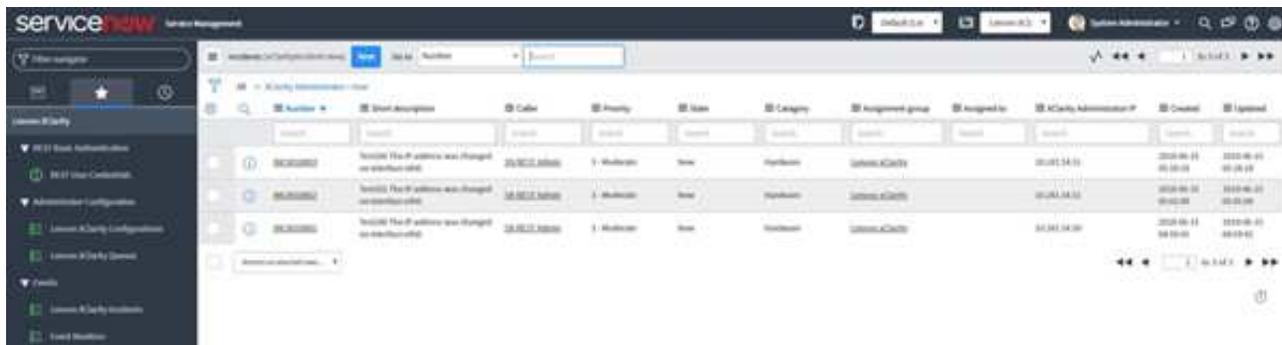


Note: The red cross icon (✖) indicates that an event was generated against that inventory and a ticket is open.

Step 4. Click on the  icon, and select **Group** to view the Dependency View. You are redirected to the other page.



Similar devices are grouped together under their parent chassis. The arrows indicate the direction of data flow.



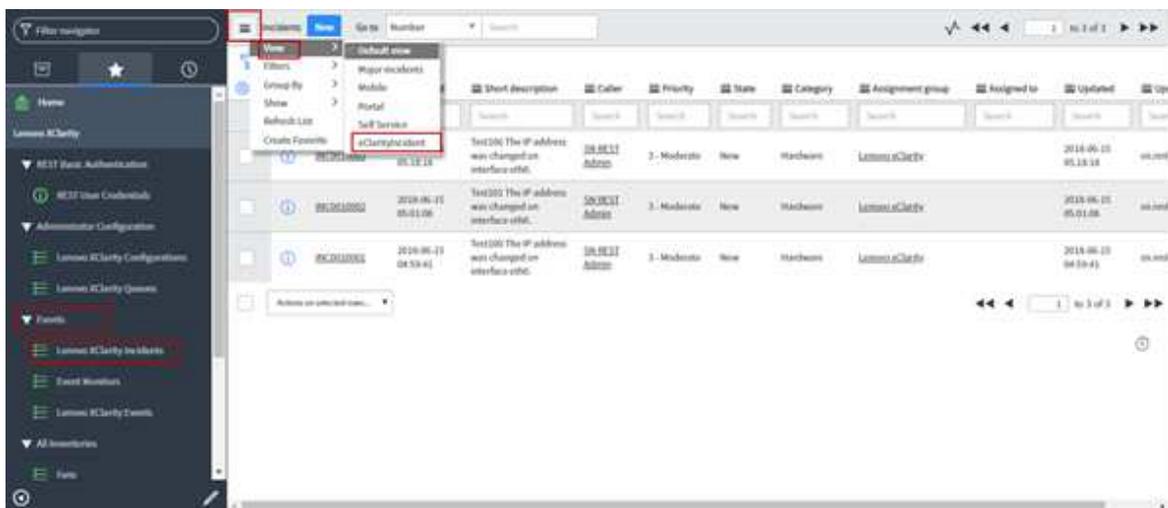
As incident status changes in ServiceNow, the status is reflected in the corresponding XClarity Administrator. An email notification is sent to the group or individual that is the assignee of ticket.

Note: Only user accounts with the “admin” role or end users with “itil” and “x_188271_lenovo_xc.user” roles can view the incidents. End user accounts with only the “x_188271_lenovo_xc.user” role cannot view the incidents.

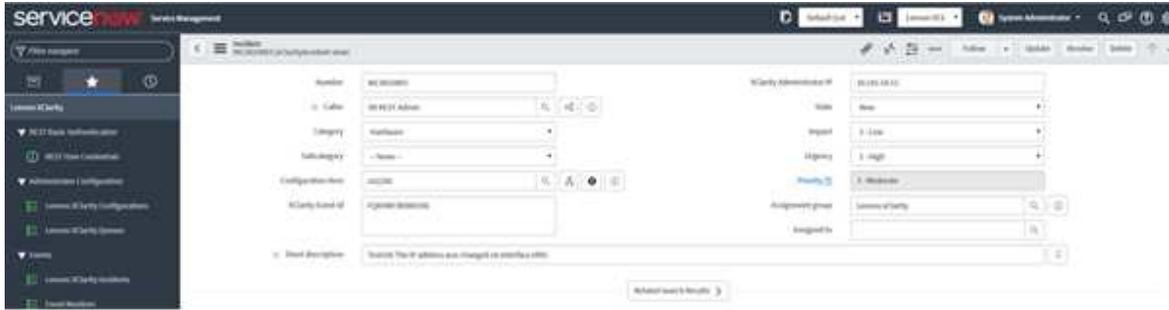
Procedure

To change the view of an incident to xClarityIncident, complete the following steps.

- Step 1. From the ServiceNow portal, click the **Lenovo XClarity → Lenovo XClarity Incidents** to open an incident from list.
- Step 2. Click on the icon near an Incident name at the top left corner, and then click **View → xClarityIncident**.



The form automatically reloads, and the selected view is applied for all the incidents. The following figure shows group/individual allocated against this incident and the ticket has been updated. A notification message is displayed.



You can change the state of a specific incident by changing the value of the **Impact** drop down menu.

Chapter 5. Troubleshooting

This section describes situations that sometimes occur with ServiceNow for Lenovo XClarity Administrator and how you can solve them.

Viewing logs

Log details are available under **System Logs**. Only users with “admin” privileges can view the logs.

Troubleshooting and common errors

Review these common errors when troubleshooting issues with ServiceNow for Lenovo XClarity Administrator.

- When registering a new Lenovo XClarity Administrator, if an error occurs with the MID Server, an appropriate error message is displayed. For this case, verify that the MID Server is running.
- If an error occurs while retrieving inventories, error status is displayed in the **Queue** table, and appropriate logs are available under **System Logs** . Only users with “admin” privileges can view the logs.

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