



# Lenovo XClarity Orchestrator Problem Determination Guide



**Version 2.0.0**

## Note

Before using this information and the product it supports, read the [general and legal notices in the XClarity Orchestrator online documentation](#).

First Edition (March 2023)

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## Summary of changes

Follow-on releases of Lenovo XClarity Orchestrator management software support new software enhancements and fixes.

Refer to the change history file (\*.chg) that is provided in the update package for information about fixes.

This version supports the following enhancements for problem determination and resolution. For information about changes in earlier releases, see [What's new](#) in the XClarity Orchestrator online documentation.

Function	Description
Service and support	XClarity Orchestrator no longer parses service data archives into a readable format can be viewed from the user interface.



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# Chapter 1. Getting help and technical assistance

If you need help, service, or technical assistance for Lenovo XClarity Orchestrator, you can find a wide variety of sources available from Lenovo to assist you.

## Before you begin

For general information about contact numbers, resources, and guidance to help you get the best support possible when and where you need it, see the [Lenovo Support Plan – Software webpage](#).

## Procedure

- Submit ideas about XClarity Orchestrator by clicking the **User-Account** menu (  ) that is located in the upper-right corner of the XClarity Orchestrator web interface, and then clicking **Submit ideas**. You can also submit ideas and feedback from the [Lenovo XClarity Ideation website](#).
- Check the event log, and follow the suggested actions to resolve any event codes (see [Monitoring events](#) in the XClarity Orchestrator online documentation).
- Find solutions to problems that have identifiable symptoms, and follow the suggested actions to resolve any problems. For the latest troubleshooting procedures, see .
- Check the [Lenovo Data Center Support website](#) for the latest tips and techniques that you can use to solve issues that you might have with XClarity Orchestrator. These *tech tips* provide procedures to work around issues that are related to the operation of XClarity Orchestrator. To find tech tips that are available for your product:
  1. Go to the [Lenovo Data Center Support website](#).
  2. Enter “XClarity Orchestrator” in the **Search** field.
  3. Either click **View All** in the **Top Articles** section to view all tips, or enter keywords in the **Search** field to find a specific tip.

**Tip:** You can sort the list by **Relevance**, **Popularity**, or **Newest** tips.

- Ask questions and find answers on the [Lenovo XClarity Community forum website](#).
- If the problem remains, and you are an entitled customer with a support-line contract, maintenance agreements, and/or warranty, submit an online service request. Submitting a service request starts the process of determining a resolution to your problem by making the pertinent information available to Lenovo Support quickly and efficiently. Lenovo service technicians can start working on your resolution as soon as you have completed and submitted a request.
- Through the Lenovo Support Line, you can get technical assistance, for a fee, for utilization, configuration, and software problems with your Lenovo products. To find the local and toll-free support phone numbers, see the [Support Phone List website](#). You can dial the number that you find for your geographical area or click **Contact Us** on the webpage to get assistance.

For severity 1 issues, support hours are 24/7. For all other severities, hours of operation and languages are listed on the webpage for your geographical area.

To contact product support in China, see the [Lenovo Services – China website](#). You can also call 400-106-8888 for product support. The call support is available Monday through Friday, from 9 AM - 6 PM.





## Chapter 2. Monitoring active alerts

Alerts are hardware or orchestrator events that require investigation and user action. Lenovo XClarity Orchestrator polls the resource managers asynchronously and displays alerts that are received from those managers.

### About this task

There is no limit to the number of active alerts that are stored in the local repository.

From the Alerts card, you can view a list of all active alerts.

Date and Ti	Severity	Alert	Resource	Serviceabili	Resource T <sub>1</sub>	Source Type	Groups
10/5/2...	Warning	Hot air ex	SN#Y0...	No...	Chassis	Device	Not Availi
10/5/2...	Warning	The conn...	XClarit...	No...	Chassis	Manage...	Not Availi
10/5/2...	Warning	The conn...	XClarit...	No...	Chassis	Manage...	Not Availi
10/5/2...	Warning	The conn...	XClarit...	No...	Switch	Manage...	Not Availi
10/5/2...	Warning	The conn...	XClarit...	No...	Switch	Manage...	Not Availi
10/5/2...	Warning	The conn...	XClarit...	No...	Switch	Manage...	Not Availi
10/5/2...	Warning	The conn...	XClarit...	No...	Switch	Manage...	Not Availi
10/5/2...	Warning	The conn...	XClarit...	No...	Switch	Manage...	Not Availi
10/5/2...	Warning	The conn...	XClarit...	No...	Switch	Manage...	Not Availi
10/5/2...	Warning	The conn...	XClarit...	No...	Switch	Manage...	Not Availi

The **Severity** column identifies the severity of the alert. The following severities are used.

- (i) **Informational**. No action is required.
- (⚠) **Warning**. Action can be deferred, or no action is required.
- (⊗) **Critical**. Immediate action is required.

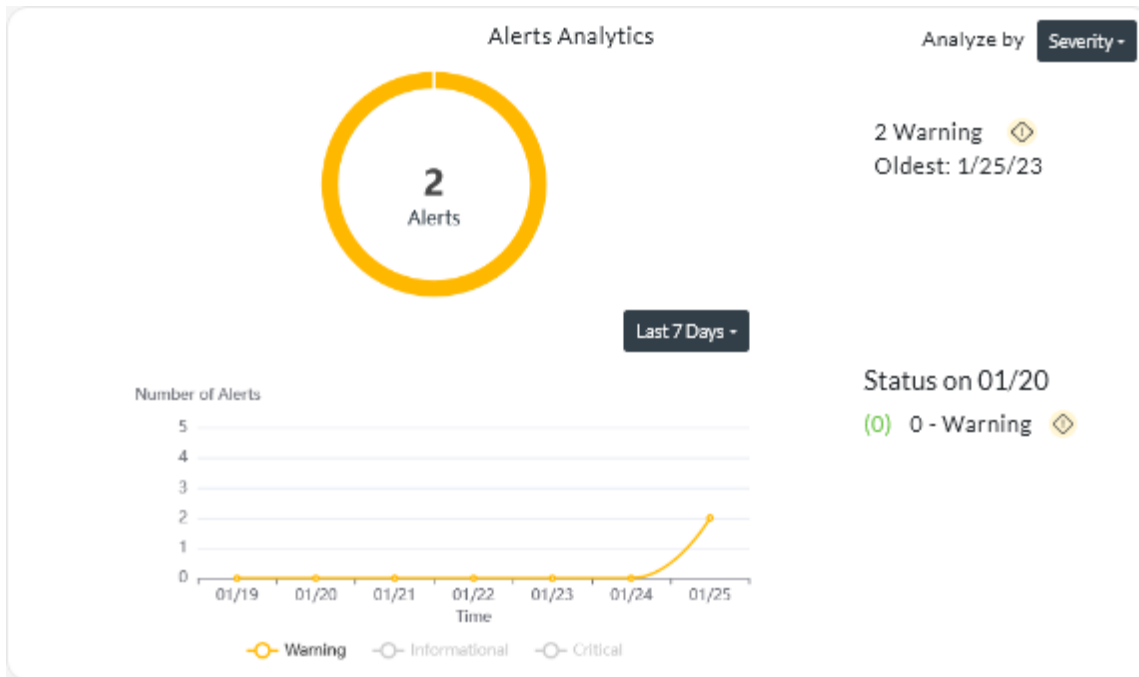
The **Serviceability** column identifies whether the device requires service and who typically performs that service. The following serviceability types are used.

- **None**. The alert is informational and does not require service.

- (👤) **User.** Take appropriate recovery action to resolve the issue.
- (🔧) **Support.** If Call Home is enabled for XClarity Orchestrator or for the resource manager that manages the associated device, the alert is typically submitted to Lenovo Support Center unless an open service ticket for the same alert ID already exists for the device (see [Automatically opening service tickets using Call Home](#)).

If Call Home is not enabled, it is recommended that you manually open a service ticket to resolve the issue (see [Manually opening a service ticket in the Lenovo Support Center](#)).

If active alerts exist, alert statistics are displayed in the Alerts Analytics card. You can view alert statistics by severity, source, resource, and serviceability for the current day and over a specific period of time (see ).



## Procedure

To view active alerts, complete one or more of the following steps.

- **View all active alerts** Click **Monitoring** (📊) → **Alerts** from the XClarity Orchestrator menu bar to display the Alerts card.

To view information about a specific alert, click the description in the **Alert** column. A pop-up is displayed with information about the source of the alert, explanation, and recovery actions.

- **View active alerts for a specific device**
  1. From the XClarity Orchestrator menu bar, click **Resources** (👤) and then click the device type to display a card with a tabular view of all managed devices of that type.
  2. Click the row for a device to display the device summary cards for that device.
  3. Click **Alerts Log** to display the list of active alerts for the device on the Alerts Analytics card. To view information about a specific alert, click the description in the **Alert** column. A pop-up is displayed with information about the source of the alert, explanation, and recovery actions.

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## Chapter 3. Monitoring events

From Lenovo XClarity Orchestrator, you have access to a historical list of all resource and audit events.

**Learn more:**  [How to monitor specific device events](#)

### About this task

A *resource event* identifies a hardware or orchestrator condition that occurred on a managed device, resource manager, or XClarity Orchestrator. You can use these events to track and analyze hardware and orchestrator-server related issues.

An *audit event* is a record of user activities that were performed from a resource manager or XClarity Orchestrator. You can use these audit events to track and analyze authentication-related issues.

The event log contains both resource and audit events. It can contain a maximum of 100,000 events from all sources. A maximum of 50,000 events can be from a single resource manager and its managed devices. A maximum of 1,000 events can be from a single managed device. When the maximum number of events is reached, the oldest event is discarded when the next event is received.

The **Severity** column identifies the severity of the event. The following severities are used.

- (i) **Informational**. No action is required.
- (⚠) **Warning**. Action can be deferred, or no action is required.
- (⊗) **Critical**. Immediate action is required.

The **Serviceability** column identifies whether the device requires service and who typically performs that service. The following serviceability types are used.

- **None**. The alert is informational and does not require service.
- (👤) **User**. Take appropriate recovery action to resolve the issue.
- (🛠) **Support**. If Call Home is enabled for XClarity Orchestrator or for the resource manager that manages the associated device, the alert is typically submitted to Lenovo Support Center unless an open service ticket for the same alert ID already exists for the device (see [Automatically opening service tickets using Call Home](#)).

If Call Home is not enabled, it is recommended that you manually open a service ticket to resolve the issue (see [Manually opening a service ticket in the Lenovo Support Center](#)).

### Procedure

To view events, complete one or more of the following steps.

- **View all resource or audit events** Click **Monitoring** (📄) → **Events** from the XClarity Orchestrator menu bar to display the Events card. Then, click the **Resource Events** or **Audit Events** tab to the view log entries.

**Events**

The Event log provides a history of hardware and management conditions that have been detected (resource events) and an audit trail of user actions (audit events).

**Resource Events**    **Audit Events**

All Actions ▾    Filters ▾   

	Date and Tim	Severity :	Event :	Resource :	Serviceability	Resource Typ	Groups :
<input type="radio"/>	10/5/22, ...	Infor...	Power supp	SN#Y031Bf	None	Chassis	Not Availab
<input type="radio"/>	10/5/22, ...	Infor...	Failed to dis	IO Module :	None	Switch	Not Availab
<input type="radio"/>	10/5/22, ...	Warn...	The device l	Not Availab	None	Not Availab	Not Availab
<input type="radio"/>	10/5/22, ...	Warn...	A warning a	Not Availab	None	Not Availab	Not Availab
<input type="radio"/>	10/5/22, ...	Warn...	Power supp	SN#Y031Bf	Servi...	Chassis	Not Availab
<input type="radio"/>	10/5/22, ...	Infor...	Power supp	SN#Y031Bf	None	Chassis	Not Availab
<input type="radio"/>	10/5/22, ...	Warn...	Power supp	SN#Y031Bf	Servi...	Chassis	Not Availab
<input type="radio"/>	10/5/22, ...	Infor...	Failed to dis	IO Module :	None	Switch	Not Availab
<input type="radio"/>	10/5/22, ...	Warn...	The device l	Not Availab	None	Not Availab	Not Availab
<input type="radio"/>	10/5/22, ...	Warn...	A warning a	Not Availab	None	Not Availab	Not Availab

13908 Total    Rows per page: 10 ▾    < 1 2 3 4 5 >

- **View resource or audit events for a specific device**

1. Click **Resources** (🔍) from the XClarity Orchestrator menu bar, and then click the device type to display a card with a tabular view of all managed devices of that type.
2. Click the row for a device to display the device summary cards for that device.
3. Click the **Events log** tab to display the Events page for that device.

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## Chapter 4. Working with service and support

Lenovo XClarity Orchestrator provides a set of tools that you can use to collect and send service files to Lenovo Support, set up automatic notification to service providers when certain serviceable events occur on specific devices, view service-ticket status, and warranty information. You can contact Lenovo Support to get help and technical assistance when you run into problems.

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### Sending periodic data to Lenovo

You can optionally allow Lenovo XClarity Orchestrator to collect information about your hardware environment and to send that data to Lenovo on periodic basis. Lenovo uses this data to improve your experience with the Lenovo products and with Lenovo support.

#### Before you begin

You must be a member of a user group to which the predefined **Supervisor** role is assigned.

**Attention:** You must accept the [Lenovo Privacy Statement](#) before you can transfer data to Lenovo Support.

#### About this task

By analyzing hardware data from multiple users, Lenovo can learn about hardware changes that regularly occur. This data can then be used to improve predictive analytics and to enhance your service and support experience by stocking parts in the right geographies.

When you agree to send hardware data to Lenovo, the following data is collected and sent on a periodic basis.

- **Daily hardware data.** Only changes to inventory data and drive-analytics data (if data collection is enabled) for each managed device
- **Weekly hardware data.** All inventory data for managed devices, and information about connected resource managers

**Attention:** This data *is not anonymous*.

- The collected data *includes* UUIDs, WWNs, device IDs, and serial numbers. XClarity Orchestrator modifies the inventory by hashing the UUIDs, WWNs, and device IDs using SHA512.
- The collected data *does not include* networking information (IP addresses, domain names, or hostnames) or user information.

When data is sent to Lenovo, it is transmitted from the XClarity Orchestrator instance to the Lenovo Upload Facility using HTTPS. REST APIs are called over this HTTPS connection to send the data. A certificate that is pre-loaded on XClarity Orchestrator is used for authentication. If an XClarity Orchestrator instance does not have direct access to the Internet, and there is a proxy configured in XClarity Orchestrator, the data is transmitted through that proxy.

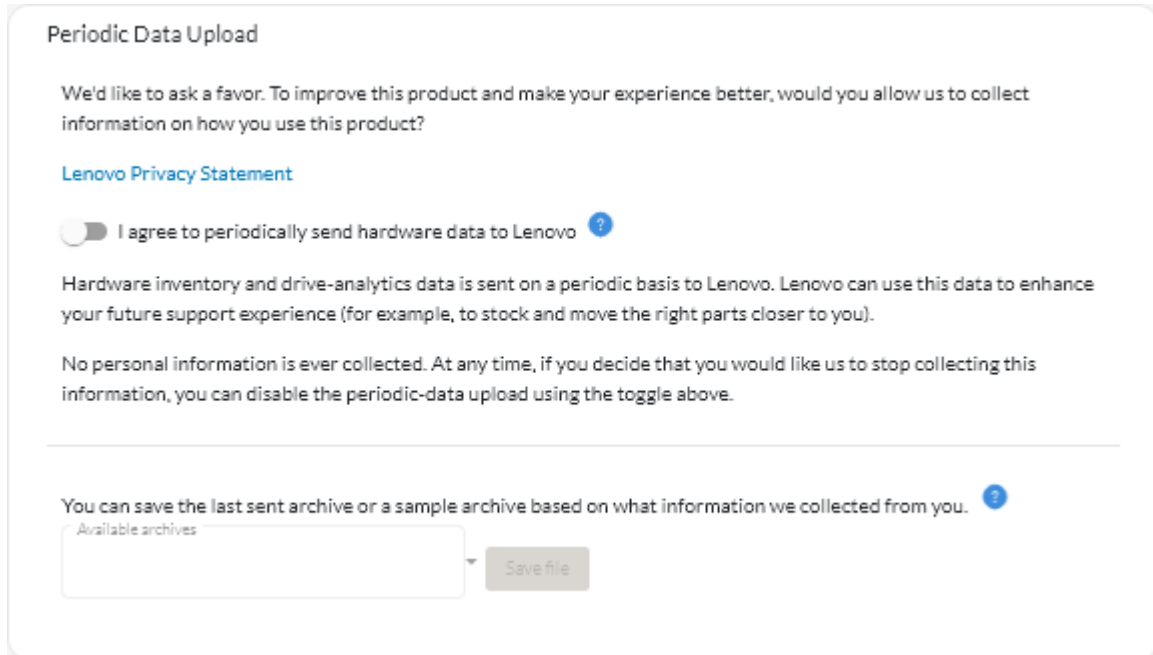
The data is then moved to the Lenovo Customer Care repository, where it is stored for up to 5 years. This repository is a secure location that is also used when debug data is sent to Lenovo to troubleshoot problems. It is used by most Lenovo server, storage, and switch products.

From the Lenovo Customer Care repository, queries are run on the provided data, and graphs are made available to the Lenovo product team for analysis.

## Procedure

To allow XClarity Orchestrator to collect and send customer data to Lenovo, complete the following steps.

Step 1. From the XClarity Orchestrator menu bar, click the **Administration** (⚙️) → **Service and Support**, and then click **Periodic Data Upload** in the left navigation to display the Periodic Data Upload card.



Periodic Data Upload

We'd like to ask a favor. To improve this product and make your experience better, would you allow us to collect information on how you use this product?

[Lenovo Privacy Statement](#)

I agree to periodically send hardware data to Lenovo ?

Hardware inventory and drive-analytics data is sent on a periodic basis to Lenovo. Lenovo can use this data to enhance your future support experience (for example, to stock and move the right parts closer to you).

No personal information is ever collected. At any time, if you decide that you would like us to stop collecting this information, you can disable the periodic-data upload using the toggle above.

---

You can save the last sent archive or a sample archive based on what information we collected from you. ?

Available archives

Step 2. Optionally agree to send hardware data to Lenovo.

Step 3. Accept the [Lenovo Privacy Statement](#).

## After you finish

You can perform the following actions from this page if you agreed to send data.

- You can save the last daily and weekly data archives that were sent to Lenovo to the local system by selecting the archive that you want to download and then clicking **Save file**.

---

## Collecting service data for XClarity Orchestrator

You can manually collect service data for Lenovo XClarity Orchestrator and then save the information as an archive in tar.gz format to the local system. You can then send the service files to your preferred service provider to get assistance in resolving issues as they arise.

Learn more:  [How to collect service data](#)

## Before you begin

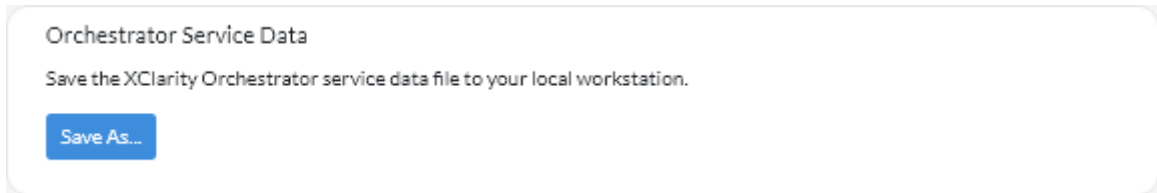
You must be a member of a user group to which the predefined **Supervisor** role is assigned.

Ensure that web browser does not block pop-ups for the XClarity Orchestrator website when downloading service data

## Procedure

To collect service data for XClarity Orchestrator, complete the following steps.

- Step 1. From the XClarity Orchestrator menu bar, click the **Administration** (⚙️) → **Service and Support**, and then click **Service Data** in the left navigation to display the Management Service Data card.



- Step 2. Click **Save As** to collect service data and save the archive to the local system.

A job is created to collect service data. You can monitor the progress of the job from the **Monitoring** (📊) → **Jobs** card. If the job did not complete successfully, click the job link to display details about the job (see [Monitoring jobs](#) in the XClarity Orchestrator online documentation.)

## After you finish

You can also perform these related actions.

- Manually open a service ticket for a specific device from the Service Tickets card on the device-specific Service page by clicking the **Open service ticket** icon (📄) (see [Manually opening a service ticket in the Lenovo Support Center](#)).
- Attach a service-data archive to a selected active service ticket from the Service Tickets card on the device-specific Service page by clicking the **Attach service file** icon (📎). You can attach a file from XClarity Orchestrator or the local system.

### Notes:

- You can attach a single archive file that is no more than 2 GB. The file name can be no longer than 200 characters. For information about creating service-data archives, see (see [Collecting service data for devices](#)).
- The service ticket must be in the Open, In Progress, or On Hold state. You cannot attach an archive to a service ticket that is in the Closed or Other state.
- You cannot attach an archive to a *software* service ticket that was opened for Lenovo XClarity Administrator.
- Save one or more selected service-data archives to the local system from the Management Service Data card by clicking the **Save** icon (↓). If multiple files are selected, the files are compressed into a single .tar.gz file before downloading.
- Delete one or more selected service-data archives that are no longer needed from the Management Service Data card by clicking the **Delete** icon (🗑️), or delete all archives by clicking the **Delete All** icon (⊖).

---

## Collecting service data for devices

When there is a problem with a device that requires the assistance of a service provider such as Lenovo Support to resolve, you can manually collect service data (including service information, inventory, and logs) for that device as an archive file in tar.gz format to help identify the cause of the issue. You can save the archive file to your local system, and then send the archive to your preferred service provider.

## Before you begin

You must accept the [Lenovo Privacy Statement](#) before you can collect service data. You can accept the privacy statement by clicking **Administration** (🔗) → **Service and Support**, and clicking **Call Home Configuration** in the left navigation, and then selecting **I Agree with the Lenovo Privacy Statement**.

## About this task

When you collect service data through Lenovo XClarity Orchestrator, the orchestrator server sends the request to the resource manager (such as Lenovo XClarity Administrator). The resource manager collects and saves the data as an archive file in its local repository, and then transfers the archive file to XClarity Orchestrator.

For information about saving service data for XClarity Orchestrator to your local system, see [“Collecting service data for XClarity Orchestrator” on page 8](#).

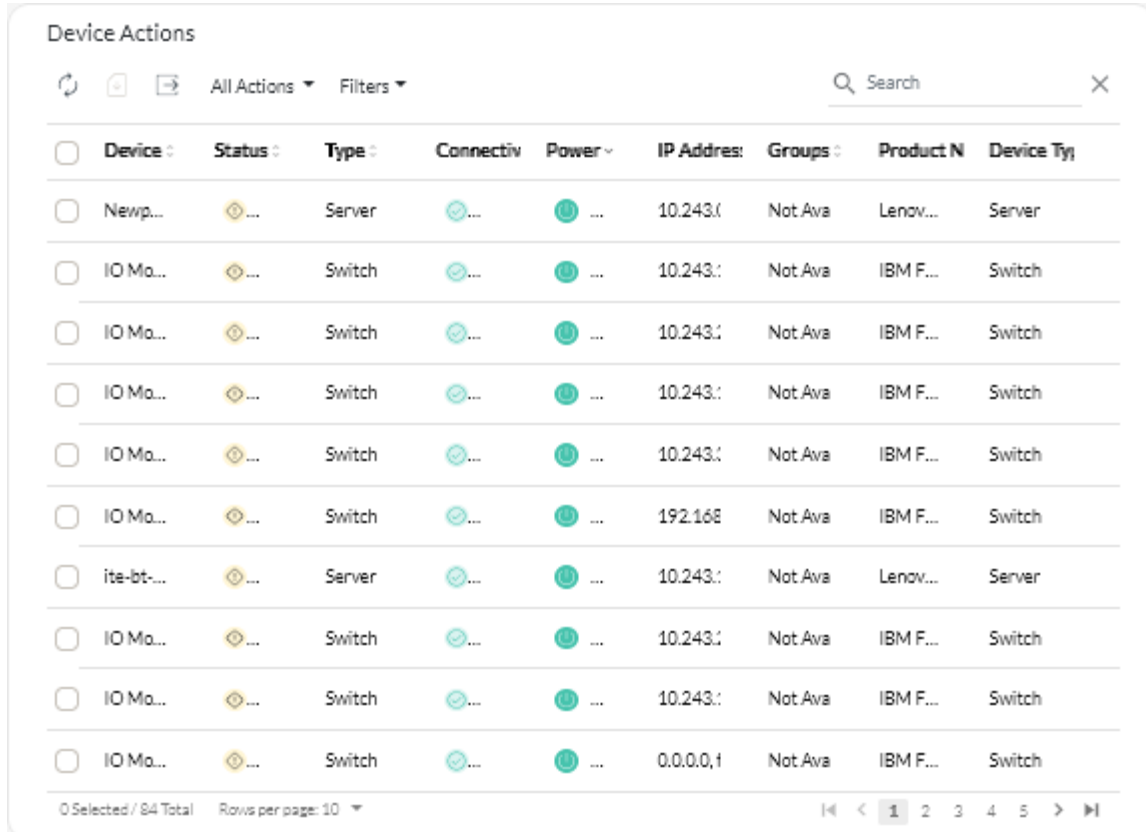
For information about manually opening a service ticket and sending service data to the Lenovo Support Center, see [“Manually opening a service ticket in the Lenovo Support Center” on page 16](#).

For information about setting up Call Home to automatically open a service ticket in the Lenovo Support Center and send the service-data archive when a serviceable event occurs on a device, see [“Automatically opening service tickets using Call Home” on page 13](#).

## Procedure

To collect service data for a specific device, complete the following steps.

- Step 1. From the XClarity Orchestrator menu bar, click the **Administration** (🔗) → **Service and Support**, and then click **Device Actions** in the left navigation to display the Device Actions card.



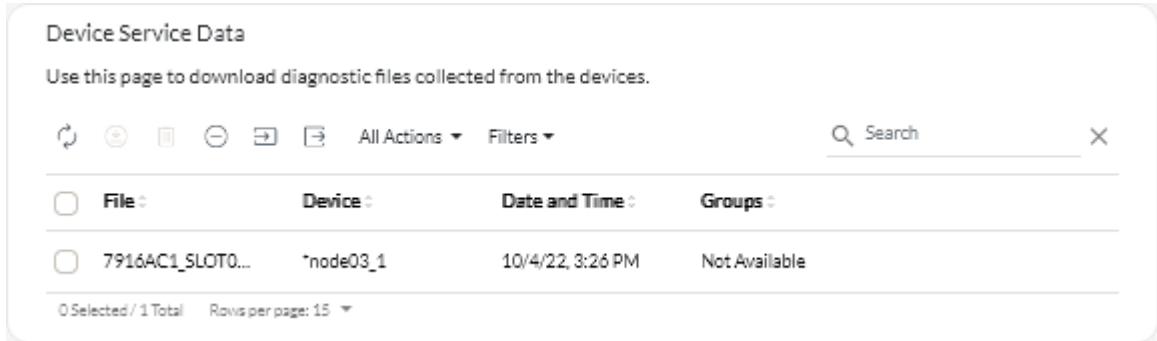
<input type="checkbox"/>	Device	Status	Type	Connectivity	Power	IP Address	Groups	Product Name	Device Type
<input type="checkbox"/>	Newp...	🟡...	Server	🟢...	🟢...	10.243.1	Not Ava	Lenov...	Server
<input type="checkbox"/>	IO Ma...	🟡...	Switch	🟢...	🟢...	10.243.1	Not Ava	IBM F...	Switch
<input type="checkbox"/>	IO Ma...	🟡...	Switch	🟢...	🟢...	10.243.1	Not Ava	IBM F...	Switch
<input type="checkbox"/>	IO Ma...	🟡...	Switch	🟢...	🟢...	10.243.1	Not Ava	IBM F...	Switch
<input type="checkbox"/>	IO Ma...	🟡...	Switch	🟢...	🟢...	10.243.1	Not Ava	IBM F...	Switch
<input type="checkbox"/>	IO Ma...	🟡...	Switch	🟢...	🟢...	192.168	Not Ava	IBM F...	Switch
<input type="checkbox"/>	ite-bt...	🟡...	Server	🟢...	🟢...	10.243.1	Not Ava	Lenov...	Server
<input type="checkbox"/>	IO Ma...	🟡...	Switch	🟢...	🟢...	10.243.1	Not Ava	IBM F...	Switch
<input type="checkbox"/>	IO Ma...	🟡...	Switch	🟢...	🟢...	10.243.1	Not Ava	IBM F...	Switch
<input type="checkbox"/>	IO Ma...	🟡...	Switch	🟢...	🟢...	0.0.0.0,1	Not Ava	IBM F...	Switch



Step 2. Select the device for which you want to collect service data, and click the **Collect service data** icon (↓).

A job is created to perform this operation. You can monitor the progress of the job from the **Monitoring** (📧) → **Jobs** card. If the job did not complete successfully, click the job link to display details about the job (see [Monitoring jobs](#) in the XClarity Orchestrator online documentation.)

Step 3. Click **Device Service Data** in the left navigation to display the Service Data card. The service-data archive is listed in the table.



The screenshot shows a web interface titled "Device Service Data". Below the title is a subtitle: "Use this page to download diagnostic files collected from the devices." There are several icons for actions like refresh, delete, and save. A search bar is on the right. Below the icons is a table with columns: File, Device, Date and Time, and Groups. One row is visible with the following data: File: 7916AC1\_SLOT0..., Device: \*node03\_1, Date and Time: 10/4/22, 3:26 PM, Groups: Not Available. At the bottom of the table, it says "0 Selected / 1 Total" and "Rows per page: 15".

File	Device	Date and Time	Groups
7916AC1_SLOT0...	*node03_1	10/4/22, 3:26 PM	Not Available

Step 4. Optionally save the service file to the local system by selecting the file clicking the **Save** icon (↓).

## After you finish

You can also perform these related actions.

- Manually open a service ticket for a specific device from the Service Tickets card on the device-specific Service page by clicking the **Open service ticket** icon (📧) (see [Manually opening a service ticket in the Lenovo Support Center](#)).
- Attach a service-data archive to a selected active service ticket from the Service Tickets card on the device-specific Service page by clicking the **Attach service file** icon (📎). You can attach a file from XClarity Orchestrator or the local system.

### Notes:

- You can attach a single archive file that is no more than 2 GB. The file name can be no longer than 200 characters. For information about creating service-data archives, see (see [Collecting service data for devices](#)).
- The service ticket must be in the Open, In Progress, or On Hold state. You cannot attach an archive to a service ticket that is in the Closed or Other state.
- You cannot attach an archive to a *software* service ticket that was opened for Lenovo XClarity Administrator.
- Save one or more selected service-data archives to the local system from the Service Data card by clicking the **Save** icon (↓). If multiple files are selected, the files are saved as a single .tar.gz file.
- Delete one or more selected service-data archives that are no longer needed from the Service Data card by clicking the **Delete** icon (🗑️), or delete all archives by clicking the **Delete All** icon (⊖).

**Note:** You must be a member of the **SupervisorGroup** group to delete all archives.

---

## Importing service data for devices

You can import a service-data archive for a specific device. The archive can be retrieved from a Lenovo XClarity Administrator resource manager or directly from the baseboard management controller.

## About this task

You can import up to 10 files at a time with combined total of 2GB or less.

If you import service data for the same device multiple times, the inventory data is overwritten by the service data that was imported last.

## Procedure

To import a service-data archive, complete the following steps.

- Step 1. From the XClarity Orchestrator menu bar, click the **Administration** (⚙️) → **Service and Support**, and then click **Service Data** in the left navigation to display the Device Service Data card.
- Step 2. Click the **Import** icon (📁) to import service-data archives.
- Step 3. Drag and drop one or more service-data archives (in .tar.gz, tzz, or tgz format) to the Import dialog, or click **Browse** to locate the archive.
- Step 4. Optional: Select **Add the server in the service data to the inventory for review only** if the archive is for a device that is not currently managed by XClarity Orchestrator (see ).
- Step 5. Click **Import** to import and parse the archive and optionally manage the offline device.

A job is created to perform this operation. You can monitor the progress of the job from the **Monitoring** (📊) → **Jobs** card. If the job did not complete successfully, click the job link to display details about the job (see [Monitoring jobs](#) in the XClarity Orchestrator online documentation.)

---

## Creating and assigning contacts for service and support

When resources require assistance from Lenovo Support, Lenovo needs to know who to contact. You can define contact information in one place and then assign those contacts as default primary and secondary contacts for specific resources.

### Before you begin

Ensure that the [Lenovo Privacy Statement](#) is accepted. You can review and accept the privacy statement from the **Administration** → **Service and Support** → **Call Home Configuration** page.

## About this task

You can assign primary and secondary contacts to resource groups. When you assign contacts to a resource group, the contacts are assigned to all resources in that group.

Assigning primary and secondary contacts is optional; however, if you want to assign a secondary contact, you must also assign a primary contact.

If a device is a member of multiple groups, it is possible that each group is assigned a different primary contact. You can choose to use the primary contact assignment for the first group or the last group that the device was assigned to (see [Manually opening a service ticket in the Lenovo Support Center](#)).

If a device is not a member of a group with an assigned primary contact, the Call Home contact is assigned by default. The Call Home contact is used when service tickets are opened automatically using Call Home (see [Automatically opening service tickets using Call Home](#)). Contacts assigned to resources and groups take precedence over the default Call Home contact.

When manually open a service ticket, you can choose to use the contacts that are assigned to the problem resource, or you can choose another contact (see [Manually opening a service ticket in the Lenovo Support Center](#)).

## Procedure

- **Define a contact**

1. From the Lenovo XClarity Orchestrator menu bar, click **Administration** (⚙️) → **Service and Support**, and then click **Contact Information** in the left navigation to display the Contact Information card.
2. Click the **Create** icon (+) to display the Add Contact dialog.
3. Fill in the contact name, email, phone number, and location.
4. Select the preferred method of contact.
5. Click **Save** to create the contact.

- **Assign contacts to resource groups**

1. From the Lenovo XClarity Orchestrator menu bar, click **Resources** (📁) → **Groups** to display the Groups card.
2. Select the group, and click the **Edit** icon (✎) to display the Edit group dialog.
3. Select the resource group.
4. Click the **Contact Information** tab.
5. Select the primary support contact and one or more secondary support contact to assign to all devices in the group.
6. Click **Save**.

## After you finish

You can perform the following actions from the Contact Information card.

- Modify a selected contact by clicking the **Edit** icon (✎).
- Delete a selected contact by clicking **Remove** icon (🗑️).

---

## Automatically opening service tickets using Call Home

You can set up Lenovo XClarity Orchestrator to automatically open a service ticket and send collected service data to Lenovo Support using the Call Home function when a device generates certain serviceable events, such as an unrecoverable memory, so that the issue can be addressed.

### Before you begin

You must be a member of a user group to which the predefined **Supervisor** role is assigned.

Ensure that all ports that are required by XClarity Orchestrator and by the Call Home function are available before you enable Call Home. For more information about ports, see [Port availability](#) in the XClarity Orchestrator online documentation.

Ensure that a connection exists to the Internet addresses that are required by Call Home. For information about firewalls, see [Firewalls and proxy servers](#) in the XClarity Orchestrator online documentation.

If XClarity Orchestrator accesses the Internet through an HTTP proxy, ensure that the proxy server is configured to use basic authentication and is set up as a non-terminating proxy. For more information about setting up the proxy, see [Configuring network settings](#) in the XClarity Orchestrator online documentation.

**Important:** If Call Home is enabled on both XClarity Orchestrator and Lenovo XClarity Administrator, ensure that Lenovo XClarity Administrator v2.7 or later is used to avoid duplicate service tickets. If Call Home is enabled on XClarity Orchestrator and disabled on Lenovo XClarity Administrator, then Lenovo XClarity Administrator v2.6 or later is supported.

When contacts are in the following countries, Call Home requires a Lenovo Premier Support contract. For more information, contact your Lenovo representative or authorized business partner.

- Qatar
- Saudi Arabia
- United Arab Emirates

## About this task

If Call Home is configured and enabled and a serviceable event occurs on a specific device, XClarity Orchestrator *automatically* opens a service ticket and transfers service data for that device to the Lenovo Support Center.

**Important:** Lenovo is committed to security. Service data that you would typically upload manually to Lenovo Support is automatically sent to the Lenovo Support Center over HTTPS using TLS 1.2 or later. Your business data is never transmitted. Access to service data in the Lenovo Support Center is restricted to authorized service personnel.

When Call Home is not enabled, you can manually open a service ticket and send service files to the Lenovo Support Center by following the instructions on the [How to open a support ticket webpage](#). For information about collecting service files, see [Manually opening a service ticket in the Lenovo Support Center](#).

For information about viewing service tickets that were opened automatically by Call Home, see [Viewing service tickets and status](#).

## Procedure

To setup Call Home for automatic problem notification, complete the following steps.

- Step 1. From the XClarity Orchestrator menu bar, click the **Administration** (⚙️) → **Service and Support**, and then click **Call Home Configuration** in the left navigation to display the Call Home Configuration card.

### Call Home Configuration

From this page, you can configure a Call Home that automatically sends service data for any managed endpoint to Lenovo Support when certain serviceable events occur on a managed endpoint.

[Lenovo Privacy Statement](#)

I agree with the Lenovo Privacy Statement

#### Customer Details

---

Customer Number

#### Primary contact to use from multiple group assignments ?

First group assignment  
 Last group assignment

#### Default Contact

---

Call Home State:  Enabled  Disabled

<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

System Location ?

---

Step 2. Review the [Lenovo Privacy Statement](#), and then click **I Agree with the Lenovo Privacy Statement**

Step 3. Optional: Specify the default Lenovo customer number to use when reporting problems.

You can find your customer number in the proof-of-entitlement email that you received when you purchased your XClarity Orchestrator license.

Step 4. Change the Call Home status to **Enable**.

Step 5. Select the primary contact to use from multiple group assignments.

You can assign a primary support contact to a group of devices. If a device is a member of multiple groups, it is possible that each group is assigned a different primary contact. You can choose to use the primary contact assignment for the first group or the last group that the device was assigned to.

Step 6. Fill in the contact information and preferred method of contact by Lenovo Support.

If a device is not a member of a group with an assigned primary contact, the default contact is used for Call Home.



Step 7. Optional: Fill in the system location information.

Step 8. Click **Call Home Connection Test** to verify that XClarity Orchestrator can communicate with the Lenovo Support Center.


Step 9. Click **Apply**.

## After you finish

You can perform the following actions that are related to service data.

- Reset Call Home settings to the default values by clicking **Reset Configuration**.
- View information about *all* service tickets that were submitted to the Lenovo Support Center either automatically or manually using Call Home by clicking **Service Tickets** in the left navigation. For more information, see [Viewing service tickets and status](#).
- Collect service data for a selected device from the Device Actions card by clicking the **Collect Service Data** icon () . For more information, see [Collecting service data for devices](#).
- Attach a service-data archive to a selected active service ticket from the Service Tickets card on the device-specific Service page by clicking the **Attach service file** icon () . You can attach a file from XClarity Orchestrator or the local system.

### Notes:

- You can attach a single archive file that is no more than 2 GB. The file name can be no longer than 200 characters. For information about creating service-data archives, see (see [Collecting service data for devices](#)).
- The service ticket must be in the Open, In Progress, or On Hold state. You cannot attach an archive to a service ticket that is in the Closed or Other state.
- You cannot attach an archive to a *software* service ticket that was opened for Lenovo XClarity Administrator.
- Manually open a service ticket in the Lenovo Support Center, collect service data for a specific device, and send those files to the Lenovo Support Center from the Device Actions card, selecting the device and then clicking the **Open service ticket** icon () . For more information, see [Manually opening a service ticket in the Lenovo Support Center](#). If the Lenovo Support Center requires additional data, the Lenovo Support might instruct you to recollect service data for that device or for another device.

---

## Manually opening a service ticket in the Lenovo Support Center

If Call Home is enabled using a service forwarder and a serviceable event occurs on a managed device, Lenovo XClarity Orchestrator automatically opens a service ticket, collects service files for the managed device, and sends the files to the Lenovo Support Center. You can also manually collect service files for a managed device as an archive, save the archive to the local system, and send the files to the Lenovo Support Center at any time. Opening a service ticket starts the process of determining a resolution to your hardware issues by making the pertinent information available to Lenovo Support quickly and efficiently. Lenovo

service technicians can start working on your resolution as soon as you have completed and opened a service ticket.

## Before you begin

Lenovo is committed to security. Service data that you would typically upload manually to Lenovo Support is automatically sent to the Lenovo Support Center over HTTPS using TLS 1.2 or later; your business data is never transmitted. Access to service data in the Lenovo Support Center is restricted to authorized service personnel.

- Ensure that the Call Home contact information is configured and enabled ([Automatically opening service tickets using Call Home](#)).
- Ensure that XClarity Orchestrator can communicate with the Lenovo Support Center by clicking **Administration** (⚙️) → **Service and Support** from the XClarity Orchestrator menu bar, and clicking **Call Home Configuration** in the left navigation to display the Call Home Configuration page. Then, click **Call Home Configuration Test** to generate a test event and verify that XClarity Orchestrator can communicate with the Lenovo Support Center.
- Ensure that all ports that XClarity Orchestrator requires (including ports that are required for Call Home) are available before you enable Call Home. For more information about ports, see [Port availability](#) in the XClarity Orchestrator online documentation.
- Ensure that a connection exists to the Internet addresses that are required by Call Home. For information about firewalls, see [Firewalls and proxy servers](#) in the XClarity Orchestrator online documentation.
- If XClarity Orchestrator accesses the Internet through an HTTP proxy, ensure that the proxy server is configured to use basic authentication and is set up as a non-terminating proxy. For more information about setting up the proxy, see [Configuring network settings](#) in the XClarity Orchestrator online documentation.

**Important:** Lenovo is committed to security. Service data that you would typically upload manually to Lenovo Support is automatically sent to the Lenovo Support Center over HTTPS using TLS 1.2 or later. Your business data is never transmitted. Access to service data in the Lenovo Support Center is restricted to authorized service personnel.

## About this task

When manually open a service ticket, you can choose to use the contacts that are assigned to the problem resource, or you can choose another contact.

When primary and secondary contacts are assigned to a group, those contacts become assigned to each device in that group. Each device can be assigned one primary contact and one or more secondary contacts. If a device is a member of multiple groups, all secondary contacts that are assigned to all groups of which the device is a member are assigned to the device. If a device is a member of multiple groups, it is possible that each group is assigned a different primary contact. You can choose to use the primary contact assignment for the first group or the last group that the device was assigned to (see [Automatically opening service tickets using Call Home](#)).

If a device is not a member of a group with an assigned primary contact, the Call Home contact is assigned by default. The Call Home contact is used when service tickets are opened automatically using Call Home (see [Automatically opening service tickets using Call Home](#)). Contacts assigned to resources and groups take precedence over the default Call Home contact.

## Procedure

To manually open a service ticket, complete the following steps.

- If Call Home is configured and enabled, perform the following steps to open a service ticket, collect service data, and send the files to the Lenovo Support Center.
  1. From the XClarity Orchestrator menu bar, click **Resources** (📁), and then click the device type to display a card with a tabular view of all managed devices of that type.
  2. Click the row for the device to display the device summary cards for that device.
  3. Click **Service** in the left navigation to display the Service Tickets card.
  4. Click the **Open service ticket** icon (📄➕) to display the Add New Ticket dialog.
  5. Provide a description of the problem that is being reported, including relevant event codes.
  6. Optionally choose the severity of the problem. This can be one of the following values.
    - **Urgent**
    - **High**
    - **Medium** (default)
    - **Low**
  7. Click **Send**.
- If Call Home is configured and enabled and a serviceable event occurs on a specific device, XClarity Orchestrator *automatically* opens a service ticket and transfers service data for that device to the Lenovo Support Center.

## After you finish

You can perform the following actions from the device-specific Service page.

- View information about *all* open service tickets by clicking **Service and Support** → **Service Tickets** from the XClarity Orchestrator menu bar.
- Add a note to a selected service ticket by clicking the **Add service ticket note** icon (📄).

### Notes:

- The service ticket must be in the Open, In Progress, or On Hold state. You cannot add a note to a service ticket that is in the Closed or Other state.
- You can add a note to only Lenovo service tickets. You cannot add a note to IBM, Service Now, or Cherwill service tickets.
- You cannot add a note to a *software* service ticket that was opened for Lenovo XClarity Administrator.
- Attach a service-data archive to a selected active service ticket from the Service Tickets card on the device-specific Service page by clicking the **Attach service file** icon (📄➕). You can attach a file from XClarity Orchestrator or the local system.

### Notes:

- You can attach a single archive file that is no more than 2 GB. The file name can be no longer than 200 characters. For information about creating service-data archives, see (see [Collecting service data for devices](#)).
- The service ticket must be in the Open, In Progress, or On Hold state. You cannot attach an archive to a service ticket that is in the Closed or Other state.
- You cannot attach an archive to a *software* service ticket that was opened for Lenovo XClarity Administrator.








## Viewing service tickets and status

You can view information about service tickets that were manually created or automatically submitted to the Lenovo Support Center using Call Home, and service tickets that were generated by support services other than Call Home.

### About this task

Service ticket status is synchronized with Lenovo Support Center every 24 hours.

The **State** column identifies the service ticket status. A service ticket can be in one of the following states:

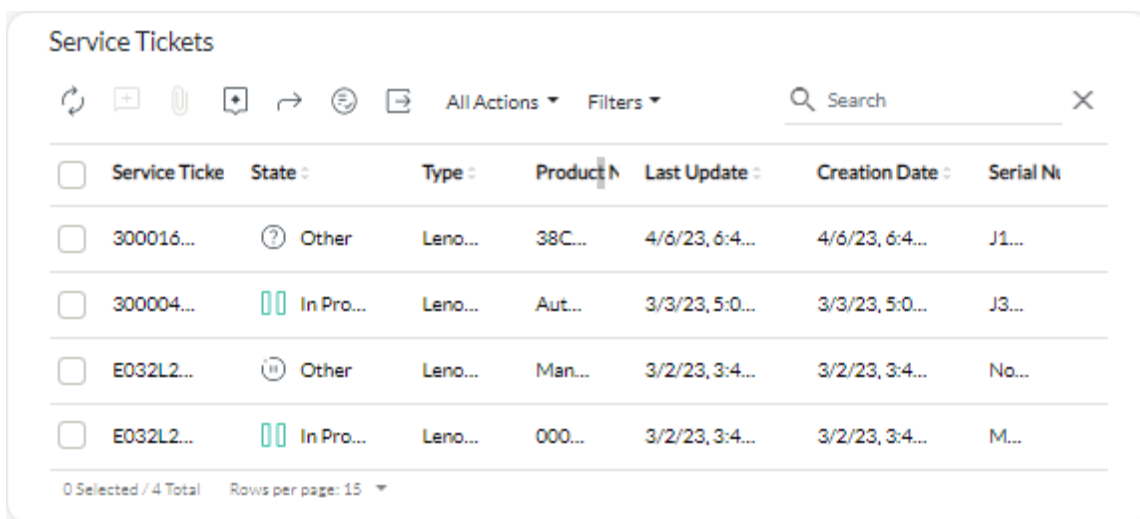
-  **Open**. Lenovo Support received the service ticket but is not actively working on the issue.
-  **In progress**. Lenovo Support is actively working on the issues.
-  **On hold**. Lenovo Support is waiting for feedback and has temporarily paused work on the issue.
-  **Closed**. The service ticket was resolved and is no longer active.
-  **Other**. The status of the service ticket is unknown.

The **Type** column identifies the type of service ticket that is listed in Service Ticket Number column. The service-ticket type can be one of the following values.

- **Cherwill Ticket**
- **IBM Call Home Ticket**
- **Lenovo Call Home Ticket**
- **Lenovo Call Home Pass Through Ticket**
- **Lenovo Software Call Home Ticket**
- **ServiceNow**


### Procedure

- **View the status of all service tickets** Click **Administration**  → **Service and Support**, and then click **Service Tickets** in the left navigation to display the Service Tickets card.



The screenshot shows a table titled "Service Tickets" with the following columns: Service Ticket, State, Type, Product, Last Update, Creation Date, and Serial Number. There are four rows of data. The first row has a state of "Other", the second "In Progress", the third "Other", and the fourth "In Progress".








Service Ticket	State	Type	Product	Last Update	Creation Date	Serial Number
300016...	Other	Leno...	38C...	4/6/23, 6:4...	4/6/23, 6:4...	J1...
300004...	In Pro...	Leno...	Aut...	3/3/23, 5:0...	3/3/23, 5:0...	J3...
E032L2...	Other	Leno...	Man...	3/2/23, 3:4...	3/2/23, 3:4...	No...
E032L2...	In Pro...	Leno...	000...	3/2/23, 3:4...	3/2/23, 3:4...	M...

- **View the status of service tickets for a specific device**
  1. From the XClarity Orchestrator menu bar, click **Resources** , and then click the device type to display a card with a tabular view of all managed devices of that type.
  2. Click the row for the device to display the device summary cards for that device.

- Click **Service** in the left navigation to display the Service Tickets card with a list of service tickets for the device.

**Service Data**

You can download service-data archives that were collected for a device.










 All Actions ▾ Filters ▾ Search 

<input type="checkbox"/>	File :	Device :	Date and Time :	Groups :
<input type="checkbox"/>	7X05RCZ000_SR65...	XCC-7X05-SR650R...	5/4/23, 9:59 AM	Not Available
<input type="checkbox"/>	7X05RCZ000_SR65...	XCC-7X05-SR650R...	5/4/23, 10:11 AM	Not Available
<input type="checkbox"/>	7X05RCZ000_SR65...	XCC-7X05-SR650R...	5/5/23, 8:09 AM	Not Available


0 Selected / 3 Total Rows per page: 15 ▾

## After you finish

You can perform the following actions that are related to service tickets.

- Configure XClarity Orchestrator to automatically open a service ticket when a serviceable event occurs (see [Automatically opening service tickets using Call Home](#)).
- Synchronize data with the Lenovo Support Center, and update the status of all active service tickets by clicking the **Update service ticket status** icon ()
- Manually open a service ticket for a specific device from the Service Tickets card on the device-specific Service page by clicking the **Open service ticket** icon ()
- Add a note to a selected service ticket by clicking the **Add service ticket note** icon ()

### Notes:

- The service ticket must be in the Open, In Progress, or On Hold state. You cannot add a note to a service ticket that is in the Closed or Other state.
- You can add a note to only Lenovo service tickets. You cannot add a note to IBM, Service Now, or Cherwill service tickets.
- You cannot add a note to a *software* service ticket that was opened for Lenovo XClarity Administrator.
- Attach a service-data archive to a selected active service ticket from the Service Tickets card on the device-specific Service page by clicking the **Attach service file** icon ()

### Notes:

- You can attach a single archive file that is no more than 2 GB. The file name can be no longer than 200 characters. For information about creating service-data archives, see (see [Collecting service data for devices](#)).
- The service ticket must be in the Open, In Progress, or On Hold state. You cannot attach an archive to a service ticket that is in the Closed or Other state.
- You cannot attach an archive to a *software* service ticket that was opened for Lenovo XClarity Administrator.

- Forward reports about active service tickets on a reoccurring basis to one or more email addresses by clicking the **Create Report Forwarder** icon (⊕). The report is sent using the data filters that are currently applied to the table. All shown and hidden table columns are included in the report. For more information, see .
- Add an active service tickets report to a specific report forwarder using the data filters that are currently applied to the table by clicking the **Add to Report Forwarder** icon (↗). If the report forwarder already includes an active service-tickets report, the report is updated to use the current data filters.

---

## Viewing warranty information

You can determine the warranty status (including extended warranties) of the managed devices.

### Before you begin

Lenovo XClarity Orchestrator must have access to the following URLs to collect warranty information for the managed devices. Ensure that there are no firewalls blocking access to these URLs. For more information, see [Firewalls and proxy servers](#) in the XClarity Orchestrator online documentation.

- Lenovo Warranty Database (world-wide) – <https://ibase.lenovo.com/POIRequest.aspx>
- Lenovo Warranty Web Service – <http://supportapi.lenovo.com/warranty/> or <https://supportapi.lenovo.com/warranty/>

### Notes:

- Warranty support for users in China currently is not supported.
- Warranties are listed for chassis but not the corresponding Chassis Management Modules (CMMs).

### About this task

Warranty information is retrieved weekly for devices that have warranties and daily for devices that do not have warranties.

### Procedure

To view warranty information, click the **Administration** (⚙️) → **Service and Support**, and then click **Warranty** in the left navigation to display the Warranty card.

Warranty

All Actions ▾ Filters ▾
 
 Search

Device	Status	Product Na	Type-Mode	Warranty N	Serial Num	Start Date	Expiration	Groups
*node02	Not Av...	IBM Flex	7916/...	Not Avail	SLOT002	Not Avail	Not Avail	Not Avail
*node02	Not Av...	IBM Flex	7916/...	Not Avail	SLOT002	Not Avail	Not Avail	Not Avail
*node03	Not Av...	IBM Flex	7916/...	Not Avail	SLOT003	Not Avail	Not Avail	Not Avail
*node03	Not Av...	IBM Flex	7916/...	Not Avail	SLOT003	Not Avail	Not Avail	Not Avail
*node06	Not Av...	IBM Flex	7916/...	Not Avail	SLOT006	Not Avail	Not Avail	Not Avail
*node06	Not Av...	IBM Flex	7916/...	Not Avail	SLOT006	Not Avail	Not Avail	Not Avail
*node09	Not Av...	IBM Flex	7916/...	Not Avail	SLOT009	Not Avail	Not Avail	Not Avail
*node09	Not Av...	IBM Flex	7916/...	Not Avail	SLOT009	Not Avail	Not Avail	Not Avail
*node11	Not Av...	IBM Flex	7916/...	Not Avail	SLOT011	Not Avail	Not Avail	Not Avail
*node11	Not Av...	IBM Flex	7916/...	Not Avail	SLOT011	Not Avail	Not Avail	Not Avail
10.243.1	Expired	Lenovo F	9532/...	3XL	06DGCV	2/24/15,	3/5/18, 7	Not Avail
10.243.1	Expired	IBM Flex	8731/...	IBM	23LAR6E	10/9/11,	10/9/11,	Not Avail
10.243.1	Not Av...	IBM Flex	7916/...	Not Avail	CAR206:	Not Avail	Not Avail	Not Avail
10.243.1	Expired	IBM Flex	7917/...	3XL	06EKZB:	9/12/12,	9/21/15,	Not Avail
10.243.2	Expired	IBM Flex	8737/...	3XL	06PGVA:	4/15/13,	4/24/16,	Not Avail

211 Total Rows per page: 15 ▾ 
 < 1 2 3 4 5 >

## After you finish

You can perform the following actions from the Warranty card.

- Look up warranty information (if available) for a specific device on the Lenovo Support website by clicking the link in the **Status** column..
- Forward reports about warranties on a reoccurring basis to one or more email addresses by clicking **All Actions** → **Add Report Forwarder**. The report is sent using the data filters that are currently applied to the table. All shown and hidden table columns are included in the report. For more information, see .
- Add a warranties report to a specific report forwarder using the data filters that are currently applied to the table by clicking the **Add to Report Forwarder** icon (). If the report forwarder already includes a warranties report, the report is updated to use the current data filters.

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## Chapter 5. Resolving problems with XClarity Orchestrator

Use this information to resolve issues that might occur with Lenovo XClarity Orchestrator.

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### Troubleshooting installation and uninstallation issues

Use this information to troubleshoot installation and uninstallation issues.

#### Installation unexpectedly fails

Use this information to troubleshoot issues when installing Lenovo XClarity Orchestrator.

- Ensure that your physical host system meets the minimum system requirements (see [Supported hardware and software](#) in the XClarity Orchestrator online documentation).
- Ensure your system or virtual system meets the minimum system requirements (see [Supported hardware and software](#) in the XClarity Orchestrator online documentation).
- Ensure you are using a supported hypervisors (see [Supported hardware and software](#) in the XClarity Orchestrator online documentation).

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### Troubleshooting discovery and management issues

Use this information to troubleshoot device discovery and management issues.

#### Cannot discover a device

Use this information to troubleshoot issues when finding manageable devices.

- Ensure that Lenovo XClarity Orchestrator supports the device. For a list of supported devices, see [Supported hardware and software](#) in the XClarity Orchestrator online documentation.
- Ensure that the device is reachable on the network from XClarity Orchestrator and that XClarity Orchestrator is reachable on the network from the device.
- Ensure that the correct ports are open in the firewall. For information about port requirements, see [Port availability](#) in the XClarity Orchestrator online documentation.
- Ensure that the minimum required firmware is installed on each server that you want to manage using [Supported hardware and software](#) in the XClarity Orchestrator online documentation.
- Ensure that unicast and multicast SLP is enabled on the network.
- For ThinkEdge Client devices, ensure that a UDC agent is installed on the device. For more information, see .
- For ThinkServer servers:
  - Using the management web interface for the server, ensure that the hostname of the server is configured using a valid hostname or IP address.
  - Ensure that SLP is enabled and the hostname is enabled on ThinkServer System Manager (TSM). To determine which ThinkServer servers have SLP enabled, send an SLP request querying for the WBEM service using your preferred SLP tool.

```
$ slptool findsrvs service:wbem
service:wbem:http://<TSM_IP>:5988,65535
service:wbem:https://<TSM_IP>:5989,65535
```

To determine whether SLP is enabled on a specific ThinkServer, send an SLP request querying for the WBEM service using your preferred SLP tool.

```
$ slptool unicastfindattrs <TSM_IP> service:wbem
(template-type=wbem),(template-version=2.0),(template-url-syntax=service:URL),
(service-hi-name=qom),(service-hi-description=Quasi Object Manager 1.0.0),
(CommunicationMechanism=cim-xml),(CommunicationMechanismsVersion=1.0),
(MultipleOperationsSupported=false),(AuthenticationMechanismsSupported=Basic),
(InteropSchemaNamespace=root/interop),(service-id=Lenovo G5 WBEM Service)
```

If a device is not responding to the SLP request, restart the TSM firmware by sending an IPMI command to the TSM using the following parameters. It might take several minutes for the TSM to restart.

```
NetFn = 0x06
Command = 0x03
Data = ()
```

The following example enables SLP using the ipmitool open-source tool.

```
$ ipmitool -H <TSM_IP> -U <IPMI_user> -P <IPMI_pw> raw 0x06 0x03
```

- For RackSwitch switches, ensure that SLP is enabled and the hostname is set in the switch configuration.
  - ThinkSystem DB series and NVIDIA Mellanox switches cannot be discovered. To manage these switches, manually input the IP address of the switch by clicking **Manual Input** on the Discover and Manage New Devices page.
  - For other switches, ensure that SLP is enabled and the hostname is set in the switch configuration. To determine which switches have SLP enabled, send the following SLP multicast request using your preferred SLP tool. This request finds only switches that are in the same subnet in which the SLP tool is running.

```
$ slptool findsrvs service:io-device.Lenovo:management-module
service:io-device.Lenovo:management-module://<RackSwitch IP>,64225
```

To determine whether SLP is enabled on a specific switch, send the following unicast SLP request using your preferred SLP tool.

```
$ slptool findattrs service:io-device.Lenovo:management-module://<RackSwitch IP>
(level=1.0),(Type=switch),(data-protocols=ethernet),(serial-number=US7116000D),
(sysoid=1.3.6.1.4.1.26543.1.7.6),(ipv4-enabled=TRUE),(ipv4-address=<RackSwitch IP>),
(ipv6-enabled=FALSE),ipv6-addresses,(ipv4-mgmt-protocols=http:80:true,https:443:true),
telnet:23:true,ssh:22:true,snmpv1v2v3:161:true,snmpv3only:161:false),
(snmp-engineid=80:00:67:af:03:08:17:f4:33:d3),
(ssh-fingerprint=8a:43:cb:be:47:d9:31:37:7a:3b:80:f6:dd:00:61:a6),
(deviceName=<RackSwitch hostname>)
```

- For Lenovo Storage devices (other than ThinkSystem DE series): Ensure that SLP is enabled and your network is not blocking SLP communication between XClarity Orchestrator and the storage device.

To determine which storage devices have SLP enabled, send an SLP request querying for the API service using your preferred SLP tool.

```
$ slptool findsrvs service:api
service:api:https://<controller_IP>:443/api,65535
service:api:https://<controller_IP>:443/api,65535
```

To determine whether SLP is enabled on a specific storage device, send an SLP request querying for the API service using your preferred SLP tool.

```
$ slptool unicastfindattrs <CONTROLLER_IP> service:api
(x-system-name=S3200_5.65),(x-system-location=rack\2Crack\2Crack),(x-system-contact=Support contact),
(x-system-information=S3200_65),(x-vendor-name=Lenovo),(x-product-id=S3200),(x-product-brand=Storage),
(x-midplane-serial-number=00C0FF2682A8),(x-platform-type=Gallium),(x-bundle-version=""),
(x-build-date=""),(x-health=OK),(x-wwnn=208000c0ff2682a8),(x-mac-address=00:00:00:00:00:EB)
```

If a storage device is not responding to the SLP request:

- Ensure that your network allows SLP communication between your devices.
- Ensure that your storage devices have **Storage Management Initiative Specification (SMI-S)** enabled, and restart the storage device using the management web interface or CLI.

## Cannot manage a resource

Use this information to troubleshoot issues when managing resources.

- Ensure that Lenovo XClarity Orchestrator supports the resource. For a list of supported devices and managers, see [Supported hardware and software](#) in the XClarity Orchestrator online documentation.
- Ensure that the resource is reachable on the network from XClarity Orchestrator and that XClarity Orchestrator is reachable on the network from the resource.
- Ensure that the correct ports are open in the firewall. For information about port requirements, see [Port availability](#) in the XClarity Orchestrator online documentation.
- Ensure that the minimum required firmware is installed on each server that you want to manage using [Supported hardware and software](#) in the XClarity Orchestrator online documentation.
- Ensure that the credentials are correct for the resource.

**Note:** Ensure that the password follows the security and password policies for the device. Security and password policies might vary.

When the device is managed by XClarity Orchestrator, the management controller is put into centralized user management. This means that the user accounts that are defined in the XClarity Orchestrator internal or external authentication server are also used to log in to the management controller. A new local user account named RECOVERY\_ID is created while all other local accounts are disabled on the management controller.

- Ensure that CIM over HTTPS is enabled on each device.
  1. Log in to the management web interface for the server using the RECOVERY\_ID user account.
  2. Click **IMM Management → Security**.
  3. Click the **CIM Over HTTPS** tab, and ensure that **Enable CIM Over HTTPS** is selected.
- If the resource's server certificate is signed by an external certificate authority, ensure that the certificate authority certificate and any intermediate certificates are imported into the XClarity Orchestrator trust store (see [Installing an externally-signed XClarity Orchestrator server certificate](#) in the XClarity Orchestrator online documentation).
- Management Hub
  - Ensure that the connection path is setup correctly on XClarity Management Hub.
  - Ensure that the registration key that was generated by XClarity Management Hub is installed in XClarity Orchestrator (see ).
  - Ensure that the registration key was generated by XClarity Orchestrator is installed in XClarity Management Hub. If the registration key is not valid, generated and install a new key (see ).
  - If XClarity Management Hub encountered an error while attempting to install the registration key, contact Lenovo Support for assistance..
- For devices, if the system board was replaced, the device was given a new serial number and UUID. If you want XClarity Orchestrator to recognize the device as the same device as before the replacement, you must update the serial number and UUID to match what it was previously. See the documentation for the device for instructions.
- ThinkSystem SR635 and SR655 servers:
  - Ensure that an operating system is installed, and that the server was booted to the OS, mounted bootable media, or efshell at least once so that XClarity Orchestrator can collect inventory for those servers.
  - Ensure that IPMI over LAN is enabled. IPMI over LAN is disabled by default on these servers and must be manually enabled before the servers can be managed. To enable IPMI over LAN using TSM, click **Settings → IPMI Configuration**. You might need to restart the server to activate the change.

- RackSwitch switches:
  - Ensure that SSH is enabled on the switch.
  - If set, ensure that the “enable” password that is used to enter Privileged Exec Mode on the switch is correct.
- System x3950 X6 serves:
  - The servers must be managed as two 4U enclosures, each with its own baseboard management controller.

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## Troubleshooting connectivity issues

Use this information to troubleshoot resource connectivity issues.

### Cannot access Lenovo XClarity Orchestrator

Use this information to troubleshoot issues when connecting to Lenovo XClarity Orchestrator.

- If the host operating system shut down unexpectedly, and you can no longer connect to XClarity Orchestrator, restore XClarity Orchestrator from the last backup.

### Cannot connect a resource manager

Use this information to troubleshoot issues when connecting a resource manager.

- Ensure that the credentials are correct for the resource manager and that the password is not expired.
 

**Note:** Ensure that the password follows the security and password policies for the device. Security and password policies might vary.
- Ensure that the resource manager does not have the maximum number of supported data forwarders. XClarity Orchestrator creates an event forwarder in the Lenovo XClarity Administrator resource manager when a connection is created to that resource manager.
- Ensure that the event forwarder in the XClarity Administrator resource manager is enabled.
- Ensure that the resource manager is at a supported version. For a list of supported devices, see [Supported hardware and software](#) in the XClarity Orchestrator online documentation.
- Ensure that the resource manager is reachable on the network from XClarity Orchestrator and that XClarity Orchestrator is reachable on the network from the resource manager.
- Ensure that the correct ports are open in the firewall. For information about port requirements, see [Port availability](#) in the XClarity Orchestrator online documentation.
- If the resource manager's certificate is signed by an external certificate authority (CA), ensure that the CA certificate and any intermediate certificates are imported into the XClarity Orchestrator truststore (see [Working with security certificates](#) in the XClarity Orchestrator online documentation).
- When connecting an XClarity Administrator that has an externally signed certificate:
  - Ensure that it is an X.509 v3 certificate. XClarity Orchestrator cannot connect to an XClarity Administrator that has an externally signed v1 certificate.
  - Ensure that the certificate details include the following requirements.
    - KeyUsage must contain
      - Key Agreement
      - Digital Signature
      - Key Encipherment
    - Enhanced Key Usage must contain
      - Server Authentication (1.3.6.1.5.5.7.3.1)



- Client Authentication (1.3.6.1.5.5.7.3.2)

## Sudden connectivity loss to a resource manager

Use this information to troubleshoot issues when a resource manager or device goes offline.

- For Lenovo XClarity Administrator resource managers, ensure that the event forwarder in the XClarity Administrator management server is enabled. XClarity Orchestrator creates and enables an event forwarder in the XClarity Administrator management server when a connection is created to that resource manager.
- Check the event log for any network events for the resource manager, and resolve those first. For more information about the event log, see [Monitoring events](#) in the XClarity Orchestrator online documentation.
- Attempt to log in directly to the resource manager, and ensure that the credentials have not changed.
- Ensure that the IP address for the resource manager is valid for the network. Ping the IP address to test if it is visible on the network.
- Ensure that the network hardware is functioning correctly for the connection path to the resource manager.
- Ensure that the correct switch and firewall ports are enabled for the resource. For information about required ports, see [Port availability](#) in the XClarity Orchestrator online documentation.

## Sudden connectivity loss to a resource

Use this information to troubleshoot issues when a device or infrastructure resource goes offline.

- Check the event log for any network events for the resource, and resolve those first. For more information about the event log, see [Monitoring events](#) in the XClarity Orchestrator online documentation.
- Attempt to log in directly to the resource, and ensure that the credentials have not changed.
- Ensure that the IP address of the resource is valid for the network. Ping the resource to test if it is visible on the network.
- Ensure that the network hardware is functioning correctly for the connection path to the resource.
- Ensure that the correct switch and firewall ports are enabled for the resource. For information about required ports, see [Port availability](#) in the XClarity Orchestrator online documentation.
- If the encapsulation mode is **encapsulationLite** on managed devices, the following situations might cause communication and authentication issues between the resource manager and managed devices, rendering the managed devices unreachable. Because the devices are configured to ignore TCP requests from other sources, it is not possible to access those devices through a network interface. In most cases, these devices do not respond to ping, SSH or TELNET requests.
  - Network changes on the hypervisor in which the resource manager runs
  - Virtual Local Area Networks (VLANs) or VLAN tags changes
  - Permanent changes to device IP addresses while encapsulation is enabled
  - Force-unmanagement of a device while encapsulation is enabled
  - Loss of the resource manager virtual machine
  - Loss of TCP communication between the virtual machine and the managed devices
  - Other network issues that prevent the resource manager from communicating directly with managed devices while encapsulation mode is enabled

If a permanent problem occurs, complete one of the following actions to recover access to the previously managed devices. For more information, see [Encapsulation management](#), [Recovering management with a CMM after a management server failure](#), and [Recovering management with a CMM after a management server failure](#) in the Lenovo XClarity Administrator online documentation.

- To recover the access to a managed IMM where encapsulation mode is active, the default settings must be loaded from local console through UEFI graphical user interface.

- Use the USB-to-Ethernet bridge to gain in-band access to the management controller, and run the following command:  
`encaps lite -off`
- To recover access to a managed CMM where encapsulation mode is active, the default settings must be loaded using the rear reset button or by running the following command if the console can still be reached:  
`accesscontrol -off -T mm[p]`

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## Troubleshooting authentication and security issues

Use this information to troubleshoot authentication and security issues.

### Cannot log in to XClarity Orchestrator

Use this information to troubleshoot issues when logging in to XClarity Orchestrator

- Ensure that the password is correct and that the Caps Lock and Number Lock keys are not on.
- Ensure that the user account is not locked. If it is locked, wait for the lockout period to expire and attempt to log in again. The default lockout period is **60** minutes.
- If you are using an external LDAP authentication server, and if you changed the password for the user account that is used to bind XClarity Orchestrator to the LDAP server, ensure that you also updated the new password in XClarity Orchestrator.
  1. Log in to XClarity Orchestrator using the client name and password that is currently defined in XClarity Orchestrator (see [Setting up an external LDAP authentication server](#) in the XClarity Orchestrator online documentation).
  2. From the XClarity Orchestrator menu bar, click **Administration** (⚙️) → **Security** and then click **LDAP Client** in the left navigation.
  3. Update the password in the **Client password** field, and click **Apply changes**.

If the user account is locked out due to too many failed login attempts after the password was changed in LDAP server, either unlock the account directly in the external authentication server or wait for the lockout period to expire before trying to change the password in XClarity Orchestrator.

- If the password for the client account that is used to bind XClarity Orchestrator to the external authentication server has expired, perform the following steps to unlock the account and change the password in XClarity Orchestrator.
  1. Unlock the client account and then change the client password in the external authentication server.
  2. Log in to XClarity Orchestrator using the client name and password that is currently defined in XClarity Orchestrator (see [Setting up an external LDAP authentication server](#) in the XClarity Orchestrator online documentation).
  3. From the XClarity Orchestrator menu bar, click **Administration** (⚙️) → **Security** and then click **LDAP Client** in the left navigation
  4. Update the password in the **Client password** field, and click **Apply**.
- If the host operating system shut down unexpectedly, and you are now getting an authentication error, restore XClarity Orchestrator from the last backup.

### Cannot setup an external LDAP client

Use this information to troubleshoot issues when setting up an external authentication server.

- Ensure that the root distinguished name is correct.

- If you are using preconfigured server addresses, ensure that the IP address and port number of the server are correct.
- Ensure that the DNS configuration settings are correct.
- If you are using DNS to discover servers, ensure that the domain name and forest name are correct.
- Ensure that the client distinguished name and password are correct.

For information about setting up the external authentication server, see [Setting up an external LDAP authentication server](#) in the XClarity Orchestrator online documentation.

## Server certification validation fails

Use this information when you attempt to install a server certificate in Lenovo XClarity Orchestrator and the validation of the certificate fails.

Server certification validation might fail when XClarity Orchestrator attempts to:

- Connect to managed resources using CIM-XML over HTTPS.
- Reach an external authentication server using secure LDAP (if you have configured a secure LDAP connection).

To resolve this issue, complete the following steps.

- Ensure that the certificate or its signing certificate exists in the Trusted Certificates truststore or the External Services Certificates truststore in XClarity Orchestrator. For more information about trusted certificates and external services certificates, see [Working with security certificates](#) in the XClarity Orchestrator online documentation.
- Ensure that the certificate has not been revoked (see [Working with security certificates](#) in the XClarity Orchestrator online documentation).
- Ensure that the server's IP address or hostname matches one of the subject alternative names or the common name (if SAN is not present) in the certificate.
- Ensure that today's date is between the "Not valid before" and "Not valid after" dates in the certificate.

## SSL Certificate Cannot Be Trusted

The certificate chain might contain a signature that is self-signed or does not originate from a known Certificate Authority.

Each Lenovo XClarity Orchestrator instance has a unique, internally generated Certificate Authority (CA). By default, port 43 (used for communication between the user and virtual appliance or between the managed resources and virtual appliance) uses a certificate that is signed by that CA. If the SSL certificate cannot be trusted, generate and deploy a customized externally-signed server certificate to XClarity Orchestrator. For more information, see [Working with security certificates](#) in the XClarity Orchestrator online documentation.

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## Troubleshooting poor or slow performance issues

Use this information to troubleshoot issues with poor or slow performance.

- Ensure that the amount of memory, the disk size, and the number of processors is suitable for the number of managed devices. For more information about the virtual appliance requirements, see [Supported hardware and software](#) in the XClarity Orchestrator online documentation.
- Ensure that the rest of the network is operating at a nominal utilization.
- If you have implemented quality of service, ensure that it is configured to allow optimal connectivity to Lenovo XClarity Orchestrator.
- Ensure that your network topology is optimized for XClarity Orchestrator connectivity and performance.

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## Troubleshooting user interface issues

Use this information to troubleshoot user-interface issues.

### JSON response failed, parse error, and other unexpected errors

Use this information to troubleshoot JSON response issues.

Log out of Lenovo XClarity Orchestrator, and then log back in.

### Menu items, toolbar icons, and buttons are disabled

Use this information to troubleshoot issues when are menu items, toolbar icons, and buttons disabled (greyed out).

- Ensure that user account is a member of the user group that is assigned correct role..A *role* is used to limit the actions that users can perform. The role that is assigned to each user group determines the actions that are available to each user that is a member of that user group. Each Lenovo XClarity Orchestrator user must be a member of at least one user group. For information about roles and privileges, see .


For more information, contact your system administrator.

- Ensure that the required number of active licenses is installed in XClarity Orchestrator. If the number of active licenses is less than the number of managed devices that support Lenovo XClarity Administrator advanced functions (for example, if licenses expire or if managing additional devices exceeds the total number of active licenses), you have a grace period of 90 days to install appropriate licenses. If the grace period expires and appropriate licenses are not installed, functions are disabled depending on the license.

To continue using XClarity Orchestrator functions, you must install appropriate licenses. For more information about installing licenses, see .

### User interface is not in the preferred language

Use this information to troubleshoot issues with language preferences.

- Ensure that the web browser is using the locale of your preferred language.
- Click the **User-Account** menu () that is located in the upper-right corner of the Lenovo XClarity Orchestrator web interface, click **Change language**, and then select the language that you want to display.

### Slow or seeming unresponsive load times, long wait to refresh, or improper rendering

Use this information to troubleshoot issues with the user interface responses.

- Refresh the page by clicking the **Refresh** icon for your web browser.
- Clear the web-browser cache, and reload the page.

### Unexpected loss of data

Use this information to troubleshoot data-loss issues in Lenovo XClarity Orchestrator.

If the host operating system shuts down unexpectedly, and data is no longer displaying, restore XClarity Orchestrator from the last backup.

## Web browser becomes unresponsive when multiple tabs are open

When multiple tabs containing XClarity Orchestrator pages are open, the web browser might crash or become unresponsive.

XClarity Orchestrator uses client-side JavaScripts that exchange a large amount of data with the orchestrator server. When multiple tabs are open, the web browser consumes more memory, processor cycles, and network bandwidth. Several tabs can make some browsers crash or become unresponsive. The effect varies with web browser types and versions.

To resolve this issue, reduce the number of web browser tabs that contain XClarity Orchestrator pages.

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## Troubleshooting access-control issues

Use this information to troubleshoot issues when users cannot access specific resources.

- If a user cannot access data for a specific resource that should be accessible:
  - Identify the access-control lists that are associated with the user and then view the membership of each resource group that is also associated with those access-control lists. Ensure that the resource in question is included in those resource groups.
- If a user can access data for a specific resource that should not be accessible:
  - Ensure that the user is not a member of a group to which the predefined **Supervisor** role is assigned. Resource access cannot be restricted for supervisor users.
  - Identify the access-control lists that are associated with the user and then view the membership of each resource group that is also associated with those access-control lists. Ensure that the resource in question is not included in those resource groups.

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## Troubleshooting data forwarding issues

Use this information to troubleshoot issues when metrics data is not being forwarded to a TruScale Infrastructure Service.

- Ensure that Lenovo XClarity Administrator resource manager is online and connected to XClarity Orchestrator. To resolve connectivity issues, see [Cannot connect a resource manager](#).

**Tip:** The FQXHMMF0002J event is raised by XClarity Administrator when it cannot establish a connection to XClarity Orchestrator for more than 100 minutes (see [Monitoring events](#)).

- Ensure that managed devices are online and connected to the XClarity Administrator resource manager (see [Viewing the status of servers](#) and [Viewing the status of storage devices](#) in the Lenovo XClarity Administrator online documentation. To resolve connectivity issues, see [Sudden connectivity loss to a device](#) in the Lenovo XClarity Administrator online documentation.

**Tip:** The FQXHMMF0001J event is raised by XClarity Administrator when it cannot establish a connection to the baseboard management controller for more than 100 minutes (see [Monitoring events](#)).

- Ensure that the Lenovo XClarity Controller certificates are valid and not expired. From the Lenovo XClarity Controller web interface, click the **Secure** icon, and then click **Certificate**. Check **Issued By** and **Valid From/To Dates**. If the dates are not valid, regenerate the certificate by clicking **Regenerate the certificate**.
- Ensure the Lenovo XClarity Controller certificates are certificate signed by a certificate authority. Verify the certificate details for the ThinkSystem or ThinkAgile server. If the certificate is not signed by valid certificate authority, regenerate the certificate with a valid CA. **Tip:** If the server is a ThinkSystem compute node, the certificate is obtained from the chassis after the chassis is managed by the XClarity Administrator resource manager.

---

## Troubleshooting remote-control issues

Use this information to solve problems that might occur when you use the remote-control function.

### Remote-control session does not start

Use this information when you attempt to start the remote-control session from the Lenovo XClarity Orchestrator web interface or from the shortcut on your system, but it does not start.

To resolve the issue, complete the following steps.

- Ensure that the server to which you are connecting is managed by XClarity Orchestrator, and has a Normal health state and Online connectivity state. For more information about server status, see .
- Ensure that pop-up dialogs are not disabled in your web browser for the session.
- Ensure that your web browser has accepted security certificates from XClarity Orchestrator. Typically, you are prompted to accept the certificate the first time that you access XClarity Orchestrator from your browser.
- From the Remote Control window, click **Preferences** → **General** → **Synchronize** with management server, and wait for one minute. Then, open the remote control session again.
- Ensure that you are using the supported JRE to start the application
- In Internet Explorer, click **Tools** → **Internet Options** → **Advanced**. Ensure that the correct JRE is selected (JRE version 7.0, update 18 or later).
- In Firefox, click **Tools** → **Options** → **Applications**. Ensure that Java Web Start Launcher is associated with the JNLP content type.

**Note:** Ensure that the Use SSL 2.0 compatible ClientHello format option *is not* selected in the in Java Control Panel.

If you are starting the application from the shortcut on your desktop, ensure that your local system has connectivity to XClarity Orchestrator. The application validates your user ID with the XClarity Orchestrator authentication server.

- Clear the Java Web Start cache on the local system. To clear the Java Web Start cache on a system that is running a Windows operating system, run the command `javaws -uninstall`. This can also be done from the Windows Control Panel in the JAVA menu.
- For ThinkSystem and ThinkAgile servers, ensure that baseboard management controller firmware v2.94 or later is installed.
- Remote control requires that a Features on Demand key for ThinkServer System Manager Premium Upgrade is installed on ThinkServer servers. For more information about FoD keys that are installed on your servers, see [Viewing Features on Demand keys](#) in the Lenovo XClarity Administrator online documentation.

### Cannot connect to a server

Use this information to resolve the issue when you cannot establish a remote-control session with a server.

Complete the following steps to resolve this issue.

- Ensure that you are a member of a user group that is assigned the **Hardware Administrator** role.
- Ensure that you have access to the server through the appropriate access control list.
- Ensure that your local system has network connectivity and that it can connect to Lenovo XClarity Orchestrator.

- Ensure that the server is being managed by XClarity Orchestrator by clicking **Resources** (🔧) → **Servers** from the XClarity Orchestrator menu bar.
- If a firewall is installed on your local system, ensure that the firewall allows connections to the IP address for the managed server.
- Ping the IP address of the managed server to ensure that your local system has connectivity to the managed server. If you are attempting to access a managed server from a local system that has an IP address from an external network, the managed server must also have an IP address that can be accessed externally.
- Ensure that XClarity Orchestrator tunneling has not been disabled so that XClarity Orchestrator can tunnel your remote-control requests to the managed server that is network addressable only on the private management network. Tunneling is enabled by default. You can enable XClarity Orchestrator tunneling from the remote-control Preferences dialog on the **Security** tab. For more information, see [Setting remote-control preferences](#) in the XClarity Orchestrator online documentation..

## Cannot connect to a server in single-user mode

Use this information to resolve the issue when you cannot connect to a server in single-user mode.

For ThinkSystem and ThinkAgile servers, only multiple-user mode is supported; single-user mode is not supported.

When you connect to a server in single-user mode, only one remote-control session can be established to the server at a time.

Complete the following steps to solve the issue.

1. Attempt to connect to the managed server in multi-user mode (if allowed, based on security requirements).
2. Contact other users to determine if anyone else has already established a remote-control session with the managed server. If so, wait until the user ends the remote-control session with the managed server.
3. Attempt to connect to the managed server in single-user mode again.

## Remote Control can connect to a server, but no video is available

Use this information to resolve the issue when you are connected to a server from a remote-control session, but the session displays the No video available message.

Ensure that the server is powered on and that the operating system is running a supported resolution and refresh rate.

The following table lists the supported resolutions and refresh rates.

*Table 1. Supported resolutions and refresh rates*

<b>Resolution</b>	<b>Refresh rates</b>
640 x 480	60, 72, 75, and 85 Hz
800 x 600	60, 72, 75, and 85 Hz
1024 x 768	60, 72, 75, and 85 Hz
1440 x 900	60 Hz
1280 x 1024	60 and 75 Hz

Table 1. Supported resolutions and refresh rates (continued)

Resolution	Refresh rates
1680 x 1050	60 Hz
1600 x 1200	60 and 75 Hz

## A server does not appear in the list for adding a new session

Use this information to resolve the issue when a server does not appear in the list for adding a new session, or a server no longer appears in the thumbnail area.

Complete the following steps to resolve the issue.

- Ensure that the managed server is being managed by XClarity Orchestrator by clicking **Resources** (🔍) → **Servers** from the XClarity Orchestrator menu bar.
- Synchronize the inventory by clicking the **General** tab on the remote-control Preference menu and then clicking Synchronize with management server. For more information about remote-control preferences, see [Setting remote-control preferences](#) in the XClarity Orchestrator online documentation..

## State of server in remote-control session does not match state in the XClarity Orchestrator

Use this information to troubleshoot when the state of a managed server in a remote-control session does not match the state of the managed server in Lenovo XClarity Orchestrator.

Complete the following steps to resolve this issue.

- Ensure that the managed server is being managed by XClarity Orchestrator by clicking **Resources** (🔍) → **Servers** from the XClarity Orchestrator menu bar.
- Synchronize the inventory by clicking the **General** tab on the remote-control Preference menu and then clicking Synchronize with management server. For more information about remote-control preferences, see [Setting remote-control preferences](#) in the XClarity Orchestrator online documentation..

## A drive or image cannot be mounted to a server

Use this information to troubleshoot when you attempt to mount a drive or image by using remote media, but the drive or image cannot be mounted.

Complete the following steps to resolve the issue.

1. Stop and restart the remote-control session.
2. Set the debug mode to “Full” for the remote-control session. You can set the debug mode from Preferences on the **General** page. When you set debug mode to “Full,” the remote-control session generates diagnostic log files. For more information about the debug mode, [Setting remote-control preferences](#) in the XClarity Orchestrator online documentation..
3. Contact Lenovo Support and provide the log files. For more information about sending diagnostic data to Lenovo Support, see [Manually opening a service ticket in the Lenovo Support Center](#) in the XClarity Orchestrator online documentation..

## Storage media option is not shown in the list of remote media devices available for mounting

Use this information to troubleshoot when the storage-media option is not shown in the list of remote-media devices that are available for mounting.



If a CD, DVD, or USB device does not appear in the list of available remote-media devices to be mounted to a managed server, click **Relaunch using Administrator account** on the remote-media panel to access more local devices.

## Power operation cannot be performed

Use this information to troubleshoot issues when you attempt to perform a power operation on a managed server within a remote-control session and it cannot be performed.

When you attempt to perform a power operation on a managed server from a remote-control session, you might receive a message stating that the power operation failed or that the power operation is not applicable to the current state of the managed server. Complete the following steps to resolve the issue.

- You cannot power on or power off a ThinkSystem or ThinkAgile server from a remote-control session.
- When you attempt to perform a power operation on a managed server from a remote-control session, you might receive a message stating that the power operation failed or that the power operation is not applicable to the current state of the managed server. Complete the following steps to resolve the issue.
  - Ensure that the server is being managed by XClarity Orchestrator by clicking **Resources** (⚙️) → **Servers** from the XClarity Orchestrator menu bar.
  - From the Servers page, verify that the status of the server is valid.
  - Ensure that the power operation is valid for the current state of the server. For example, if the server is currently powered off, issuing a power off will not work.
  - Check the jobs log to see if the power operation has completed. It might take some time for the operation to complete, depending on the current load of XClarity Orchestrator. For more information about viewing the job status, see [Monitoring jobs](#) in the XClarity Orchestrator online documentation..

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## Troubleshooting firmware-update issues

Use this information to troubleshoot issues when downloading and applying firmware updates.

- If you cannot download an update for a specific resource platform, ensure that the updates catalog for the platform was downloaded. To download the updates catalog, select the platform, and click **Update Catalog** → **Update Selected**.

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## Troubleshooting server-configuration issues

Use this information to troubleshoot issues when configuring servers using configuration patterns.

### An activation error occurred when deploying a server-configuration pattern

An activation error indicates that an issue occurred when deploying a server-configuration pattern to a managed device. An activation error can occur for several reasons. Use this information to troubleshoot these types of issues.

To identify the issue, review the error messages in the job log for configuration operation in the Stopped with Error status (see ).

- There are connectivity or network routing issues between Lenovo XClarity Orchestrator and the managed device. These issues might be represented in the job messages as LDAP errors. This indicates that there was an issue related to the device connecting to the virtual appliance over the configured network interface.

Ensure that the network connection between the XClarity Orchestrator virtual appliance and the device is operational. If they are on different network segments, ensure that there is network routability between the two segments.

- One or more configuration settings in the pattern result in a setting change that is not valid on the selected device. Consider the following examples.
  - The selected UEFI Extended pattern is not compatible with the selected device. For example, if a UEFI pattern for an ThinkSystem SR650 server is selected and deployed to a ThinkSystem SD650 server, the differences in the processor settings between the two servers might cause the configuration activation to fail. To resolve the issue, ensure that the selected Extended UEFI Pattern is compatible with the selected server.
  - Some settings are not supported on the selected managed device after a firmware update. For example, after updating firmware for an I/O adapter, some settings might be removed or renamed by the new firmware, and therefore the setting in the server pattern is not valid on the target server. These issues are represented in the job message as “xxx is not a setting.” To resolve this issue, you can learn a new server pattern from the server, so the new pattern includes all the settings that are supported with the new firmware. If you need to keep using the old pattern, manually edit the server pattern to remove the invalid settings.
- An error occurs while powering on or restarting the server when full activation is selected when deploying a pattern. Ensure that the device power state is stated correctly in XClarity Orchestrator. If not, refresh the inventory to synchronize the power state.
  1. From the XClarity Orchestrator menu bar, click **Resources** (🔍) → **Servers**. The Servers page is displayed with a tabular view of all managed servers.
  2. Select the server, and click **All Actions** → **Refresh Inventory**.

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## Troubleshooting operating system deployment issues

Use this information to troubleshoot issues that you might encounter when you attempt to deploy operating systems to managed servers from Lenovo XClarity Orchestrator.

For general issues that are related to operating-system deployment, see [Cannot deploy an operating system](#).

### Cannot deploy an operating system

Use this information to troubleshoot general issues that you might encounter when you attempt to deploy an operating system to a managed server from Lenovo XClarity Orchestrator.

Complete the following steps to resolve the issue:

1. Review all requirements for the operating system that is being deployed. See in the XClarity Orchestrator online documentation. For example, an issue can occur with the deployment of VMware ESXi if you do not set the Memory Mapped I/O (MMIO) space to at least 3 GB.
2. Review operation-system deployment support limitations for specific I/O adapters. For information about I/O adapter support, see the [Lenovo XClarity Support – Compatibility webpage](#).
3. Ensure that the target server does not have a deferred or partially activated server-configuration pattern. If a configuration pattern has been deferred or partially activated on the target server, restart the server to apply all configuration settings.
4. View the status of the server from the Deploy OS Images page to ensure that it has a deployment status of “Ready”. If the status is “Not Ready”, click the status link to determine why the server is not ready for operating-system deployment. For more information about operating-system deployment, see in the XClarity Orchestrator online documentation.
5. Ensure that the device has visibility to the storage location that was selected in the assigned operating-system profile.

**Tip:** To ensure that operating-system deployments are successful, detach all storage from the server except the storage chosen for the operating-system deployment.

## Cannot import a file into the OS-images repository

Use this information section to troubleshoot issues that you might encounter when you attempt to import files into the Lenovo XClarity Orchestrator image repository.

Complete the following steps to resolve the issue:

- Ensure that the file that is being imported has been verified through the checksum test.
- Ensure the base operating system is supported by XClarity Orchestrator (see in the XClarity Orchestrator online documentation).
- Ensure that there is enough disk space in the OS-images repository to store the file (see in the XClarity Orchestrator online documentation).
- Microsoft Edge web browsers have an upload limit of 4 GB. If the file that you are importing is greater than 4 GB, consider using another web browser (such as Chrome or Firefox).

## OS installer cannot find the disk drive on which you want to install

For servers that include software RAID adapters (such as 110i AnyRAID Adapter, ServeRAID C100 or C105 adapter, and Intel RSTe SATA Software RAID adapter), when the SATA adapter is enabled in the management controller, the SATA mode must be set to “AHCI.” Other modes (such as “RAID” and “IDE”) are not supported for software RAID by RHEL, SLES, or VMware operating systems.

**Note:** Each server must have a hardware RAID adapter that is installed and configured. The software RAID that is typically present on the onboard Intel SATA storage adapter is not supported. However, if a hardware RAID adapter is not present, setting the SATA adapter to AHCI SATA mode enabled operating-system deployment might work in some cases.

To modify the SATA mode, complete the following steps.

1. From the F1 Setup Utility, select the **System Settings → Devices and I/O Ports → Onboard SATA Mode** menu.
2. Press **+** to change the value to AHCI.
3. Press **F10** to save the change.

## VMware ESXi deployment issues

Use this information to troubleshoot issues that you might encounter when you attempt to deploy VMware ESXi operating systems to managed servers from Lenovo XClarity Orchestrator.

### VMware deployment causes system to hang or restart

The hang or restart might occur shortly after the following message:

```
Loading image.pld
```

Complete the following steps to resolve the issue:

**Tip:** Instead of configuring setting using the Setup utility on each server, consider using configuration patterns to modify the UEFI settings (see in the XClarity Orchestrator online documentation).

1. Restart the system. When Press <F1> Setup is displayed, press F1.
2. Select **System Settings → Devices and I/O Ports**.
3. Change the setting for **MM Config** to **3 GB**.
4. Ensure that the setting for **PCI 64-Bit Resource** is set to **Disable**.
5. Attempt to install the VMware image again.

## VMware deployment fails with disk errors

During the installation of VMware ESXi, an error that is related to the disk drive might be returned and the deployment does not succeed.

The error message might be similar to the following example:

```
error:/tmp/partitioning:line 2: install requires --disk
or --firstdisk
error:/tmp/partitioning:line 1: clearpart requires
one of the following arguments: --alldrives, --firstdisk,
--ignoredrives=, --drives=
```

This error might occur if the ESXi installer does not detect a SAS configuration that is available for formatting and installation. Typically, this means that the RAID configuration on the server is either inactive or configured incorrectly. Alternatively, this might happen if a server pattern was deployed through the Lenovo XClarity Orchestrator and **Disable local disk** was selected for the pattern.

Complete the following steps to resolve the issue:

- If a server pattern was deployed to this server and **Disable local disk** was selected, update the server pattern and deploy it again. For more information about configuring local storage using server patterns, see in the XClarity Orchestrator online documentation.
- Validate that the RAID configuration is correct on the server:
  1. Restart the server and attempt to boot into a legacy option by pressing F12 (choose something like HD0).
  2. During startup, when you see information about the LSI SAS adapter, press Ctrl-C to change the configuration.
  3. When the user interface displays, select **RAID properties**, and **View Existing Configuration**.
    - If **View Existing Configuration** does not appear, the RAID was not configured.
    - If the existing configuration shows a status of “Inactive,” ensure that the RAID is configured correctly.

## Red Hat and SUSE Linux deployment issues

Use this information to troubleshoot issues that you might encounter when you attempt to deploy Red Hat and SUSE Linux operating systems to managed servers from Lenovo XClarity Orchestrator.

### OS deployment fails due to missing drivers

When deploying Red Hat® Enterprise Linux (RHEL) Server or SUSE® Linux Enterprise Server (SLES) to a server, you might see an error message that stops the deployment and the deployment job eventually times out.

This issue can occur when the operating-system image does not contain drivers to support all adapters that are installed in the managed server.

Out-of-box drivers are not preloaded in XClarity Orchestrator for certain Mellanox IB adapters. Therefore, deploying RHEL or SLES to a server with these Mellanox adapters is not supported. For more information about Mellanox adapter limitations, see the [Lenovo XClarity Support for Mellanox adapters webpage](#).



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