



# Lenovo XClarity Orchestrator REST API Reference



**Version 2.0.0**

## Note

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## Summary of changes in the REST API for v2.0.0

Lenovo XClarity Orchestrator v2.0.0 supports enhancements to the Open REST API.

For a summary of changes to the REST API in other releases, see [Summary of changes in the REST API](#) in the XClarity Orchestrator online documentation.

This documentation includes new methods and parameters that apply to the current XClarity Orchestrator release and later. If you are using an earlier release of XClarity Orchestrator, you can use the *REST API Reference* PDF for a list of methods and parameters that apply to that specific release. To find PDFs for the release that you need, see [PDF files](#) in the XClarity Orchestrator online documentation.

The following methods were added or updated in this release.

### • Resources

- (New) [GET /api/v1/boarding/agentInstaller/{filename}](#). Download a specific Lenovo Universal Device Client (UDC) agent installation package to the local system.
- (New) [POST /api/v1/boarding/agentInstaller](#). Create a Lenovo Universal Device Client (UDC) agent installation package for specific ThinkEdge Client devices.
- (New) [GET /api/v1/boarding/devices](#). Returns a list of all discovered (but not managed) Lenovo devices with or without baseboard management controllers.
- (New) [GET /api/v1/boarding/devices/{id}](#). Returns information about a specific discovered (but not managed) Lenovo device with or without baseboard management controllers.
- (New) [POST /api/v1/boarding/discovery](#). Directly discovers manageable Lenovo devices with or without baseboard management controllers by specifying an individual IP addresses or hostname, range of IP addresses, or subnet.
- (New) [GET /api/v1/boarding/discoverySettings](#). Returns the discovery settings.
- (New) [PUT /api/v1/boarding/discoverySettings](#). Modifies the discovery settings.
- (New) [POST /api/v1/boarding/management](#). Directly manage discovered devices with or without baseboard management controllers.
- (New) [DELETE /api/v1/boarding/management](#). Unmanages devices that are directly managed by the orchestrator server.
- (New) [GET /api/v1/boarding/managementSettings](#). Returns the UDS Portal credentials.
- (New) [PUT /api/v1/boarding/managementSettings](#). Retrieves and verifies the UDS Portal credentials, and then save the credentials in the vault.
- (New) [DELETE /api/v1/boarding/managementSettings](#). Deletes the stored UDS Portal credentials.
- [GET /api/v1/data/devices/{id}](#). Added the **accessStateRecords** response attribute to return information about access state records. Added the **accountLockoutPeriod** response attribute to return the account lockout period. Added the **deviceTypeKey** response attribute to several objects to return the device-type key. Added the **agentVersion** response attribute to return the version of the UDC agent that is running on a ThinkEdge Client device. Added the **deviceDrivers** response attribute to return information about device drivers. Added the **manager.id** response attribute to return the resource manager ID. Added the **diskDriverSensorInfo** response attribute to return a list of hard-driver sensor names. Added the **drives.encryptedStatus** response attribute to return whether disk drive is encrypted. Added **drives.hotSpareType** response attribute to return the type of hot spare drive. Added the **inProcessing** response attribute. Added the **lanOverUsbPortForwardingModes** response attribute to return information about the Ethernet-over-USB port forwarding mode. Added the **lastSyncTimestamp** response attribute to return the timestamp when this data was last refreshed from

the resource manager. Added the **lastUpdateTimestamp** response attribute to return the timestamp when this data was last updates from the resource manager. Added the **m2Presence** response attribute to return whether the device contains M.2 storage. Added the **onboardPciDevices** response attribute to return information about onboard PCI device. Added the **osInfo** response attribute to return information about the operating system that is installed on the device. Added the **osProfiles** response attribute to return information about operating-system profile for the server. Added the **pattern** response attribute to return information about the server-configuration pattern that is assigned to this device. Added the **processorIntelSpeedSelect** response attribute to return information about the Intel processor speed setting. Added the **raidSettings.diskDrives .encryptionStatus** response attribute to return whether the disk drive is encrypted. Added the **raidSettings.diskDrives .hotSpareType** response attribute to return the hot-spare drive type. Added the **releaseName** response attribute to return the release name. Added the **securityMode** response attribute to return the security mode. Added the **selLog** response attribute to return whether the SEL log is supported and present on this server. Added the **ssoEnabled** response attribute to return whether single sign-on is enabled on the server.

- (New) [GET /api/v1/managers-management/managers](#). Determines whether the connection to the management hub is active.
- (New) [POST /api/v1/managers-management/managers](#). Connects to a resource manager.
- (New) [GET /api/v1/managers-management/managers/{id}](#). Returns information about a specific resource manager.
- (New) [DELETE /api/v1/managers-management/managers/{id}](#). Deletes a specific resource manager.
- The following REST APIs will be deprecated in a future release.
  - [GET /api/v1/connector/managers](#). Use [GET /api/v1/managers-management/managers](#) instead.
  - [POST /api/v1/connector/managers](#). Use [POST /api/v1/managers-management/managers](#) instead.
  - [GET /api/v1/connector/managers/{id}](#). Use [GET /api/v1/managers-management/managers/{id}](#) instead.
  - [PATCH /api/v1/connector/managers/{id}](#)
  - [DELETE /api/v1/connector/managers/{id}](#). Use [DELETE /api/v1/managers-management/managers/{id}](#) instead.

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# Chapter 1. Using this REST API

Review this information to learn about how to use the Lenovo XClarity Orchestrator REST API, including authentication requirements, response codes and error handling, and filtering and sorting.

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## Authorization and authentication

When programming with the Lenovo XClarity Orchestrator REST APIs, you must authenticate using a user ID and password. The user ID must have the correct authorization to perform the intended task.

You can use XClarity Orchestrator web interface to configure the authorizations that provide access to XClarity Orchestrator tasks and resources (see [Creating a user](#) in the XClarity Orchestrator online documentation).

**Note:** If you encounter a temporary HTTP connection error, attempt to log in to XClarity Orchestrator again.

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## Paginating, scoping, filtering, sorting, including data, and excluding data in responses

You can use query parameters to limit the number of returned objects and to include, exclude, filter, and sort data in the response body.

### Paginating data

If a request returns all resource instances in the response body, you can use query parameters to limit the number of objects that are returned at one time. This is especially useful for the user interface when only a limited number of rows are displayed in a table.

You can use the **limit** query parameter to identify the number of elements to return at one time. The default limit is 10.

You can use the **offset** query parameter to identify the offset. The default offset is 0.

The following example returns the first 20 users.

```
/api/v1/auth/users
```

The following example returns the next 20 users.

```
/api/v1/auth/users?limit=20&offset=20
```

The following example returns all users without pagination.

```
/api/v1/auth/users?limit=0&offset=0
```

### Scoping data

If a request returns multiple resource instances in the response body, can narrow the scope of data to only those resources that are in specific resource managers and groups

You can use the following scoping query parameters, based on the resources that you want to scope.

- **managerIDs.** Returns data for all resources that are managed by the specified resource managers.

```
?managerIDs={ID_list}
```

Where *{ID\_list}* is one or more resource manager IDs, separated by a comma. The following example scopes the returned data to devices that are managed by specific resource managers.

```
?managerIDs=2A04DFF7DDA8777EBCCD3DAF9F9BEDFD,8D735FCEFBBCD49118C68169312166C68
```

- **groupIDs**. Returns data for all resources that are members of the specified groups.

`?groupIDs={ID_list}`

Where `{ID_list}` is one or more resource group IDs, separated by a comma. The following example scopes the returned data to devices that are managed by specific resource groups.

`?groupIDs=2A04DFF7DDA8777EBCCD3DAF9F9BEDFD,8D735FCEFBBCD49118C68169312166C68`

You can use scoping query parameters in addition to other filtering query parameters. The response body returns only data that matches *all* queries.

### Including data

You can use the **includeAttributes** query parameter to include specific attributes in the response body. If this query parameter is present, only the specified attributes are returned. If it is missing, all attributes are returned by default.

`?includeAttributes={attributes_list}`

Where `{attributes_list}` is one or more attributes that are listed in the response body, separated by a comma.

### Notes:

- To specify child attributes, use a JSON path separated by a period (for example, `drives.capacity`).
- When the **includeAttributes** query parameter is specified, the **excludeAttributes** query parameter is ignored.
- *Base attributes* are essential attributes that are always returned in the response body unless excluded using **excludeAttributes** query parameter.

The following example returns data for the base attributes plus two additional attributes (name and severity) in the response body.

`?includeAttributes=name,severity`

### Excluding data

You can use the **excludeAttributes** query parameter to exclude specific attributes from the response body. If this query parameter is present, the specified attributes are not returned. If it is missing, all attributes are returned by default.

`?excludeAttributes={attributes_list}`

Where `{attributes_list}` is one or more attributes that are listed in the response body, separated by a comma.

The following example does not return data for two attributes (name and severity). Data for all other attributes are returned in the response body.

`?excludeAttributes=name,severity`

**Note:** To specify child attributes, use a JSON path separated by a period (for example, `drives.capacity`).

### Filtering resources

If a request returns all resource instances in the response body, you can use the filter query parameters to return data for only those resources that match all the specified criteria.

A single filter query contains two keys-value pairs, separated by an ampersand (&): one pair to specify the response attribute and another pair set to specify the value for that attribute. You can also use an ampersand to separate multiple filter queries in the same URI. If you specify multiple filter queries, data is returned only if it matches all filter queries individually.



You can use the following filter query parameters, based on the type of filter that you want to perform.

- **filterContains[]**. Returns data that contains a specific pattern. Within the same filter query, data matches the query if the value of any one of the specified attributes contains any one of the specified patterns.  
`?filterContains[{index}][attributes]={attribute_list}`  
`&filterContains[{index}][values]={pattern_list}`

- **filterNotContains[]**. Returns data that does not contain a specific pattern. Within the same filter query, data matches the query if the value of any one of the specified attributes does not contain any of the specified patterns.  
`?filterNotContains[{index}][attributes]={attribute_list}`  
`&filterNotContains[{index}][values]={pattern_list}`

**Note:** If you specify **filterContains[]** and **filterNotContains[]** with the same attributes and values, the result is an empty array.

- **filterEquals[]**. Returns data that exactly matches a specific pattern. Within the same filter query, data matches the query if the value of any one of the specified attributes exactly matches any one of the specified patterns.  
`?filterEquals[{index}][attributes]={attribute}`  
`&filterEquals[{index}][values]={pattern_list}`

- **filterNotEquals[]**. Returns data that does not exactly match a specific pattern. Within the same filter query, data matches the query if the value of any one of the specified attributes does not exactly match any of the specified patterns.  
`?filterNotEquals[{index}][attributes]={attribute}`  
`&filterNotEquals[{index}][values]={pattern_list}`

**Note:** If you specify **filterEquals[]** and **filterNotEquals[]** with the same attributes and values, the result is an empty array.

- **filterRange[]**. Returns data that exactly matches a pattern in a specific range. Within the same filter query, data matches the query if the value of any one of the specified attributes exactly matches a pattern in any one of the specified ranges.  
`?filterRange[{index}][attributes]={attribute_list}`  
`&filterRange[{index}][values]={pattern_list}`

Where:

- *{index}*. Index number for the filter query. This number must be the same for the attribute and value filters. If there is only one filter query of specific type in the URI, the index number is not required.
- *{attribute\_list}*. Zero or more attributes that are associated with the resource, separated by a comma. If an attribute name is not provided, all attributes are evaluated. You *can* specify:
  - Attributes that are associated with the resource, regardless of whether the attributes are included in the response for the REST API.

If you choose an attribute that is not in the base response, you can add it to the response by using the **includeAttributes** query parameter.

- Attributes at the any level. To specify child attributes, use a JSON path separated by a period (for example, `drives.capacity`).
- Attributes that contain string values for **filterContains[]**, **filterNotContains[]**, **filterEquals[]**, and **filterNotEquals[]** queries.
- Attributes that contain timestamp (string) or numerical values for **filterRange[]** queries.
- *{pattern\_list}*. One or more patterns, separated by a comma. Patterns are not case sensitive. For **filterRange[]** queries:
  - Each pattern can be a range of timestamps or numbers.
  - Each range contains the start and end values in the range, separated by a comma. Multiple ranges are also separated by a comma.

- If the first value in the range is later than second value, the values are swapped during processing.
- A timestamp must be specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the [W3C Date and Time Formats webpage](#).

## Sorting data

If a request returns all resource instances in the response body, you can use the **sort[]** query parameter to sort the returned data. If this query parameter is present, the data is sorted in the order specified. If it is missing, the data is sorted using the default sorting order for the base attributes. The default sorting order varies depending on the resource, and can be determined from the metadata response attribute (see [Metadata](#)).

```
?sort[{sort_priority}={attribute},{sort_order}]
```

Where:

- *{sort\_priority}*. Sort priority. This can be an integer, where the lowest number is sorted first. If a number is not specified, the priority defaults to the order of the **sort[]** query parameter.
- *{attribute}*. Response attribute name to sort by.
- *{sort\_order}*. Sort order. This can be **asc** (ascending) or **desc** (descending). Dates and numbers are sorted in descending order by default. Other strings are sorted in ascending order by default.

The following example sorts data first by name in ascending order and then by severity in descending order.

```
?sort[]=name,asc&sort[]=severity,desc
```

The following example sorts data first by severity in descending order and then by name in ascending order.

```
?sort[1]=name,asc&sort[0]=severity,desc
```

---

## Response codes

The Lenovo XClarity Orchestrator REST APIs use the HTTP protocol for sending and retrieving data. Client code using the REST APIs makes an HTTP request to the XClarity Orchestrator server and processes the HTTP response accordingly. Included with the HTTP response data is the HTTP status code. The status code provides some indication as to the success of the HTTP request and can provide information about how to handle the included response data.

The following table lists some of the most common response codes.

Code	Description	Comments
200	OK	The request completed successfully. If a single query parameter is specified and the value of that parameter has no matches, the response body returns default values. If a list of query parameters is specified and the value of at least one parameter has no matches, the response body returns only what matches.
201	Created	One or more new resources were successfully created.
202	Accepted	The request has been accepted for processing, but the processing has not yet completed. The request might or might not be acted upon, depending on the results of the processing.
204	No Content	The request completed successfully, but no response content is returned (for example, a successful DELETE request).
206	Partial Content	Partial content was returned for a multi-part response. The response header includes a content-range header field indicating the range that is included in the response body for each part.

Code	Description	Comments
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
401	Unauthorized	The user cannot be authenticated. Authentication has not been provided or has failed. A descriptive error message is returned in the response body. For GET requests, this code is returned when the user session is expired because the web inactivity session time-out expired or the mandatory session expiration time was exceeded. You must log in again to view data. For information about session time-outs, see <a href="#">Configuring user security settings</a> in the XClarity Orchestrator online documentation.
403	Forbidden	The orchestrator server was prevented from fulfilling the request. A descriptive error message is returned in the response body.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.
405	Method Not Allowed	The resource is invalid. A descriptive error message is returned in the response body.
406	Not Acceptable	The request cannot be fulfilled. A descriptive error message is returned in the response body. POST, PUT, PATCH, and DELETE requests return 406 when the user session is expired because the Web inactivity session for full operations timeout expired or the mandatory session expiration time was exceeded. You must log in again to modify data. For information about session timeouts, see <a href="#">Configuring user security settings</a> in the XClarity Orchestrator online documentation.
408	Request Timeout	The orchestrator server did not receive a required request in a specific amount of time. A descriptive error message is returned in the response body.
409	Conflict	There is a conflict with the current state of the resource. A descriptive error message is returned in the response body.
410	Gone	The resource no longer available. A descriptive error message is returned in the response body.
413	Request Entity Too Large	Clients might impose limitations on the length of the request URI, and the request URI is too long to be handled. A descriptive error message is returned in the response body.
500	Internal Server Error	An internal error occurred. A descriptive error message is returned in the response body.

## Links

Each GET request returns information about the URIs for the resource or resource instance.

### Requests that can return only a single resource or a single instance of a resource

Attributes	Type	Description
_links	Object	Information about the URI
rel	String	Relationship. This value is always "self."
uri	String	URI for the current resource

In the following example, the request can return information about only a single resource. This object identifies the URI for that resource.

```
{
```

```

    "_links": {
      "rel": "self",
      "uri": "/api/v1/data/devices/AAAAAAAAAAAAAAAAAAAA"
    }
  }
}

```

### Requests that can return multiple instances of a resource

Attributes	Type	Description
_metadata	Object	Information about the request, including the request URI, base attributes, sorting, and filtering for the specified query For information about other metadata attributes, see <a href="#">Metadata</a> .
_links	Object or Array of objects	Information about the URI
rel	String	Relationship. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>prev</b>. Link information for the previous set of members.</li> <li>• <b>self</b>. Link information for the current set of members.</li> <li>• <b>next</b>. Link information for the next set of members.</li> </ul>
uri	String	URI for the current resource

In the following example, pagination is used to return information for multiple devices in chunks of 20. The **\_links** attribute is an array of objects. The first object in the array identifies information about the URI for the current response body, with the first 20 devices. The first object in the array identifies information about the URI for the next response body, with next 20 devices

```

{
  "_links": [{
    "rel": " self ",
    "uri": "/api/v1/data/devices?offset=0&limit=20"
  },
  {
    "rel": " next ",
    "uri": "/api/v1/data/devices?offset=20&limit=20"
  }
]
}

```

In the following example, all devices are returned in the current response body. (Pagination is not used).

```

{
  "_links": [{
    "rel": "self",
    "uri": "/api/v1/data/devices?offset=0&limit=0"
  }
]
}

```

---

## Metadata

If a GET request returns multiple instances of a resource type, the response body returns the **\_metadata** attribute. The **\_metadata** attribute contains information that describes the returned data, including the request URL, total number of resources instances, pagination information, and the common query parameters that are supported by the request. If common query parameters are not specified, default values are returned.

**Note:** If a GET request returns a single resource or a single instance of a resource, the **\_metadata** attribute is not returned.

The following table describes the attributes that can be returned in the **\_metadata** attribute.

For more information about common query parameters, see [Paginating, scoping, filtering, sorting, including data, and excluding data in responses](#).

Attributes		Type	Description
_metadata		Object	Information about the request, including the request URL, base attributes, sorting, and filtering for the specified query
limit		Integer	Number of resource instances that can be returned on the page (for pagination) If set to 0, all instances are returned.
offset		Integer	Offset at which to start the set of resource instances to be returned (for pagination)
total		Integer	Total number of resource instances that are available (for pagination)
baseAttributes		Array of objects	Information about essential (default) attributes that are returned in the response body
	name	String	Name of the base attribute
	sortOrder	String	Default sort order for the attribute. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>asc</b>. Ascending order</li> <li>• <b>desc</b>. (default) Descending order</li> </ul>
excludeAttributes		Array of strings	List of attributes, separated by a comma, that are excluded in the response body This attribute is returned only when the <b>excludeAttributes</b> query parameter is supported. <b>Note:</b> When both <b>excludeAttributes</b> and <b>includeAttributes</b> query parameters are specified, the <b>excludeAttributes</b> query is ignored; in this case, the value of the <b>excludeAttributes</b> attribute is empty.
includeAttributes		Array of strings	List of attributes, separated by a comma, that are included in the response body <b>Note:</b> If the <b>excludeAttributes</b> query parameter is specified, the <b>includeAttributes</b> attribute is empty.
filterOptions		Array of objects	List of criteria that is used to limit the resources that are returned in the response body when a filter query parameter is specified <b>Note:</b> If filter query parameters are not specified, the <b>filterOptions</b> attribute is empty.
	filterContains	Array of objects	Information about filter queries that search for data that <i>contains</i> a specific value Within the same filter query, data matches the query if the value of any one of the specified attributes contains any one of the specified patterns
	attributes	String	List of zero or more attribute names in the filter query, separated by a comma If an attribute name is not provided, all attributes are evaluated.
	values	String	List of one or more patterns, separated by a comma
	filterNotContains	Array of objects	Information about filter queries that search for data that <i>exactly matches</i> a specific value Within the same filter query, data matches the query if the value of any one of the specified attributes contains any one of the specified patterns

Attributes		Type	Description
	attributes	String	List of zero or more attribute names in the filter query, separated by a comma If an attribute name is not provided, all attributes are evaluated.
	values	String	List of one or more patterns, separated by a comma
	filterEquals	Array of objects	Information about filter queries that search for data that <i>exactly matches</i> a specific value Within the same filter query, data matches the query if the value of any one of the specified attributes contains any one of the specified patterns
	attributes	String	List of zero or more attribute names in the filter query, separated by a comma If an attribute name is not provided, all attributes are evaluated.
	values	String	List of one or more patterns, separated by a comma
	filterNotEquals	Array of objects	Information about filter queries that search for data that <i>exactly matches</i> a specific value Within the same filter query, data matches the query if the value of any one of the specified attributes contains any one of the specified patterns
	attributes	String	List of zero or more attribute names in the filter query, separated by a comma If an attribute name is not provided, all attributes are evaluated.
	values	String	List of one or more patterns, separated by a comma
	filterRange	Array of objects	Information about filter queries that search for data that matches a value in a specific range Within the same filter query, data matches the query if the value of any one of the specified attributes contains any one of the specified patterns
	attributes	String	List of zero or more attribute names in the filter query, separated by a comma If an attribute name is not provided, all attributes are evaluated.
	values	String	List of one or more patterns, separated by a comma Each range contains the start and end values in the range, separated by a comma. Multiple ranges are also separated by a comma.  This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
	sortOptions	Array of objects	List of criteria that is used to sort the resources that are returned in the response body when the <b>sort</b> query parameter is specified <b>Tip:</b> The order of the returned attributes identifies the sort order of the attributes.
	name	String	Name of the attribute to sort by
	order	String	Sort order. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>asc.</b> Ascending order</li> <li>• <b>desc.</b> (default) Descending order</li> </ul>
	_links	Object or Array of objects	Request URL (see <a href="#">Links</a> )

The following example returns metadata for a specific request when no query parameters are specified.

```
{
  "metadata": {
    "offset": 0,
    "limit": 0,
    "total": 2,
    "baseAttributes": [{
      "name": "msg"
    },
    {
      "name": "service"
    },
    {
      "name": "severity"
    },
    {
      "name": "systemName "
    },
    {
      "name": "systemType "
    },
    {
      "name": "timeStamp",
      "sortOrder": "asc"
    }
  ],
  "excludeAttributes": [],
  "includeAttributes": [
    "msg",
    "service",
    "severity",
    "systemName",
    "systemType",
    "timeStamp"
  ],
  "filterOptions": {},
  "sortOptions": [{
    "name": "timeStamp",
    "order": "asc"
  }
  ],
  "_links": {
    "rel": "self",
    "uri": "/api/v1/inbound/events?offset=0&limit=0"
  }
}
```

---

## Status messages

The status message attributes identify the success or failure of a REST API operation.

POST, PUT, PATCH, and DELETE requests include status-message attributes in the response body to describe the success or failure of the request, using the following JSON structure.

GET requests that are successful (2xx response code) *do not* include a status-message attributes. GET requests that fail (response codes other than 2xx) include status-message attributes in the response body to describe the failure of the request, using the following JSON structure.

**Note:** If the server returns multiple messages for a single request, the top-level attributes are used to describe the overall status of the request, and each message is returned in the **messages** array.RL

Attributes	Type	Description
status	String	Overall status of the request. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Informational</b>. The request completed successfully.</li> <li>• <b>Warning</b>. The request completed with warnings.</li> <li>• <b>Critical</b>. The request failed.</li> </ul> In case there are messages in the <b>messages</b> array, then this is the most severe from all the messages.
code	String	Message code (see <a href="#">Event and alert messages</a> in the XClarity Orchestrator online documentation)
text	String	Message text that is associated with the message ID
description	String	Additional information to clarify the reason for the message
userAction	String	User actions that can be taken to recover from the error
recoveryURL	String	Link to more information or recovery actions, if available
messages	Array of objects	Information about multiple messages
status	String	Status of the request. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Informational</b>. The request completed successfully.</li> <li>• <b>Warning</b>. The request completed with warnings.</li> <li>• <b>Critical</b>. The request failed.</li> </ul> In case there are messages in the <b>messages</b> array, then this will be the most severe from all the messages.
code	String	Message ID (see <a href="#">Event and alert messages</a> in the XClarity Orchestrator online documentation)
text	String	Message text that is associated with the message ID
description	String	Additional information to clarify the reason for the message
userAction	String	User actions that can be taken to recover from the error
recoveryURL	String	Link to more information or recovery actions, if available

The following example is returned for a single-message response.

```
{
  "status": "Informational",
  "code": "FQXX0SE0001I",
  "text": "The request completed successfully.",
  "description": "",
  "userAction": "Information only; no action is required.",
  "recoveryURL": ""
}
```

The following example is returned for a multi-message response.

```
{
  "status": "Critical",
  "code": "",
  "text": " There was an error parsing the input.",
  "description": "",
  "userAction": "",
  "recoveryURL": "",
  "messages": [{
    "status": "Critical",
    "code": "FQXDM0558G",
    "text": " A specified attribute is not compatible with the value of another attribute.",
    "description": "The field {1} is not allowed when field {2} has value {3}."
  }
]
```



```
    "userAction": "Correct the values, and attempt the request again.",
    "recoveryURL": ""
  },
  {
    "status": "Critical",
    "code": "FQXDM0557G",
    "text": "Incompatible fields were specified.",
    "description": "The field {1} is not allowed when field {2} is specified.",
    "userAction": " Correct the values, and attempt the request again.",
    "recoveryURL": ""
  ]
}
```



---

## Chapter 2. Security

The following REST APIs are available for managing security.

---

### **/api/v1/maintenance/certificate**

Use this REST API to retrieve, export, or regenerate the XClarity Orchestrator server certificate.

#### **HTTP methods**

GET, DELETE

#### **GET /api/v1/maintenance/certificate**

Use this method to return information about or save (export) the XClarity Orchestrator server certificate.

#### **Authentication**

Authentication with user name and password is required.

#### **Resource URI**

GET `https://{orchestrator_server_IP}/api/v1/maintenance/certificate`

#### **Query parameters**

<b>Parameters</b>	<b>Re-quired / Optional</b>	<b>Description</b>
<code>format={type}</code>	Optional	Response format. This can be one of the following values. <ul style="list-style-type: none"><li>• <b>pem</b>. Export the server certificate as a file in PEM format.</li><li>• <b>json</b>. (default) Return the server certificate in the response body in JSON format.</li></ul>

The following example retrieves the server certificate in JSON format.

GET `https://192.0.2.0/api/v1/communications/certificates/7633531801c5688f7d3b830d57cdea73`

The following example exports the server certificate as a file in PEM format.

GET `https://192.0.2.0/api/v1/communications/certificates/7633531801c5688f7d3b830d57cdea73?format=pem`

#### **Request body**

None

#### **Response codes**

<b>Code</b>	<b>Description</b>	<b>Comments</b>
200	OK	The request completed successfully. If a query parameter is specified and the value of that parameter has no matches, the response body returns default values.
500	Internal Server Error	An internal error occurred. A descriptive error message is returned in the response body.

## Response body

When **format=pem** is specified, the response body is returned only when the request generates an error (see [Status messages](#)).

When **format=json** is specified and the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
pem	String	Server certificate, in PEM format
_links	Object	Server certificate URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "pem": "-----BEGIN CERTIFICATE-----\nMIIDuDCCAqCgAwIBAgIUQ1JWiK2/OUvzWcreE
YEtuQ6TgiYwDQYJKoZIhvcNAQEL\nBQAwSzEMMAoGA1UECwwDRENHMQ8wDQYDVQQKDAZMZW5vdm8x
EDA0BgNVBACMB1Jh\nbGVpZ2gxZzAzBgNVBAGMAk5DMQswCQYDVQQGEwJVUzAeFw0yMDEwMDg4NDU
MDRa\nFw0zMDUwMDYxNDU0MDRaMIGSMQswCQYDVQQGEwJVUzEPMAOGA1UECgwGTGVub3Zv\nnMUUw
QwYDVQQDDdxHZW5lcmlFZ2Vub3ZvIE1hbmFnZW1lbnQgRWNvc3lz\nndGVtIG9uIElQIDE
wLjIOMy4xNy4xMDg4ZzAzBgNVBAGMAk5DMQswCgYDVQQLDANE\nnQ0cxEADA0BgNVBACMB1Jh
bGVpZ2gwggEiMA0GCSqGSIb3DQEBAAQ4IBDwAwggEK\nAoIBAQCfkDRxfvLmzd3QswmdFwZRR6X3jLxTh
RfHca7AwigKX/CgOI9Vh/TCkw5W\nnANLB3DdKfJSntgXTNhrjWk4y1boNdaBmr1eHFhjQYGRteHVr
fPPafSYk0AKEIsV9\nnX9h8i0e7HJZeCqa0N6GqK8/uto62kInFqqRE0YqWk0/jFdfnKFj69Nf9J0u
qABPc\nnbn+tLXkWggRdrizvZMs3qRdjkt7Cl+8pbDKJuaUw9ZyfnNFwd2Rv8edITEz15pU\nnbJjl
YqUzGeaAr/PnxUBrLZLS9qDPuj6ZxlnxQ2yxy5xsUYVkBUMwZq5nCdQ2yLqw\nn0qB5LFUvJKo3I6m
7dXLO9IN8g0hDAGMBAAGjTDBKMB8GA1UdIwQYMBaAFD+FiELg\nnA+OFa+IexISpy9kHuj9eMAKGA1
UdEwQCMAAwCwYDVROPAQDAgTwMA8GA1UdEQI\nnMAaHBArZEWwwDQYJKoZIhvcNAQELBQADggEBA
E1ijVWctYAQ8LVtego0nWhscUXn\nnV9lwxCUtwyKUK9eMF7syrC4TYBad3KLZT8eUvLhn2rA47dN
Yhc92I9YPRR+DZZQ\nnCmH3epUXcAKaeCJXSvIRPqGXH07Ziv6xi6yvu2AVbz/bQ0eSrAbFnYnvXTm
mQjhx\nn06mLU3vYLG13fuJZLVRDg+ek0yKEbEyBxMPFFbz2yh/J/dJ4RzSVs0x0tcqAv+8U\nnW9yq
DhK9L7ywhlblhUdeDBS/Ac0yLnRivVPUtRK00MnCoJqEAYD1W28TGAUfqB2+\nn0v4SuSuv7v6oyDS
H3bARQ4ykmyXBlzuMNjD3Pgpw6Kppq6+CEcWcB9SYQgjw=\nn-----END CERTIFICATE-----\n",
  "_links": {
    "rel": "self",
    "uri": "/api/v1/maintenance/certificate"
  }
}
```

## DELETE /api/v1/maintenance/certificate

Use this method to delete and regenerate the Lenovo XClarity Orchestrator server certificate.

### Authentication

Authentication with user name and password is required.

### Resource URI

DELETE [https://{{orchestrator\\_server\\_IP}}/api/v1/maintenance/certificate](https://{{orchestrator_server_IP}}/api/v1/maintenance/certificate)

### Query parameters

None

### Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully.
500	Internal Server Error	An internal error occurred. A descriptive error message is returned in the response body.

## Response body

Attributes	Type	Description
{message_attributes}	varies	Status messages (see <a href="#">Status messages</a> )

---

## /api/v1/maintenance/certificateSettings

Use this REST API to return and modify the XClarity Orchestrator server certificate settings.

### HTTP methods

GET, PUT

## GET /api/v1/maintenance/certificateSettings

Use this method to return information about the XClarity Orchestrator server certificate settings.

**Note:** You can retrieve setting using this GET request only after you first modify the settings using [PUT /api/v1/maintenance/certificateSettings](#).

### Authentication

Authentication with user name and password is required.

### Resource URI

GET `https://{orchestrator_server_IP}/api/v1/maintenance/certificateSettings`

### Query parameters

None

### Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully.
500	Internal Server Error	An internal error occurred. A descriptive error message is returned in the response body.

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

## Response body

Attributes	Type	Description
commonName	String	Name of the certificate owner Typically, this is the fully-qualified domain name (FQDN) or IP address of the server that is using the certificate (for example, www.domainname.com or 10.15.23.99).
country	String	Two-letter ISO 3166 code for the country or region of origin associated with the certificate organization (for example, US for the United States) To retrieve the country or region codes, use <a href="#">GET /api/v1/service/countryCodes</a> .
notAfter	String	Timestamp before which the created certificate is not valid This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
notBefore	String	Timestamp after which the created certificate is not valid This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
organization	String	Organization (company) that owns the certificate. Typically, this is the legal incorporate name of a company. It should include any suffixes, such as Ltd., Inc., or Corp.
organizationUnit	String	Organizational unit that owns the certificate
stateLocality	String	Full name of the locality (city) to be associated with the certificate
stateProvince	String	Full name of the state or province to be associated with the certificate
_links	Object	Server certificate URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "commonName": "Generated by Lenovo Management Ecosystem on IP 10.243.17.108",
  "country": "US",
  "notAfter": "2030-10-06T14:54:04.000Z",
  "notBefore": "2020-10-08T14:54:04.000Z",
  "organization": "Lenovo",
  "organizationUnit": "DCG",
  "stateLocality": "Raleigh",
  "stateProvince": "NC",
  "_links": {
    "rel": "self",
    "uri": "/api/v1/maintenance/certificateSettings"
  }
}
```

## PUT /api/v1/maintenance/certificateSettings

Use this method to modify the Lenovo XClarity Orchestrator server certificate settings.

### Authentication

Authentication with user name and password is required.

### Resource URI

PUT [https://{orchestrator\\_server\\_IP}/api/v1/maintenance/certificateSettings](https://{orchestrator_server_IP}/api/v1/maintenance/certificateSettings)

## Query parameters

None

## Request body

This PUT request updates the entire resource. To clear a value, set the attribute to null (if applicable). If an array of objects is specified, the entire array is replaced. If an optional attribute is not specified, that attribute is not changed. If an immutable (unchangeable) attribute is specified, it is ignored.

Attributes	Required / Optional	Type	Description
commonName	Optional	String	Name of the certificate owner Typically, this is the fully-qualified domain name (FQDN) or IP address of the server that is using the certificate (for example, www.domainname.com or 10.15.23.99).  The length of this value cannot exceed 63 characters.
country	Optional	String	Two-letter ISO 3166 code for the country or region of origin associated with the certificate organization (for example, US for the United States) To retrieve the country or region codes, use <a href="#">GET /api/v1/service/countryCodes</a> .
notAfter	Optional	String	Timestamp before which the created certificate is not valid This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
notBefore	Optional	String	Timestamp after which the created certificate is not valid This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
organization	Optional	String	Organization (company) that owns the certificate. Typically, this is the legal incorporate name of a company. It should include any suffixes, such as Ltd., Inc., or Corp.  The length of this value cannot exceed 60 characters.
organizationUnit	Optional	String	Organizational unit that owns the certificate The length of this value cannot exceed 60 characters.
stateLocality	Optional	String	Full name of the locality (city) to be associated with the certificate The length of this value cannot exceed 50 characters.
stateProvince	Optional	String	Full name of the state or province to be associated with the certificate

The following example modifies the server certificate settings.

```
{
  "commonName": "Generated by Lenovo System Management Software",
  "country": "US",
  "notAfter": "2069-12-31T23:59:59Z",
  "notBefore": "1970-01-01T00:00:00Z",
  "organization": "Lenovo",
```

```

    "organizationUnit": "EBG",
    "stateLocality": "Raleigh",
    "stateProvince": "North Carolina"
}

```

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
500	Internal Server Error	An internal error occurred. A descriptive error message is returned in the response body.

### Response body

Attributes	Type	Description
{message_attributes}	varies	Status messages (see <a href="#">Status messages</a> )

## /api/v1/maintenance/certificateSigningRequest

Use this REST API to return the current Certificate Signing Request (CSR) or generate a new CSR.

### HTTP methods

GET, POST

### GET /api/v1/maintenance/certificateSigningRequest

Use this method to return or save (export) the current Certificate Signing Request (CSR).

### Authentication

Authentication with user name and password is required.

### Resource URI

GET `https://{orchestrator_server_IP}/api/v1/maintenance/certificateSigningRequest`

### Query parameters

Parameters	Re-quired / Optional	Description
format={type}	Optional	Response format. This can be one of the following values. <ul style="list-style-type: none"> <li><b>pem</b>. Export the CSR as a file in PEM format.</li> <li><b>json</b>. (default) Return the CSR in the response body in JSON format.</li> </ul>

The following example retrieves the current CSR in JSON format.

GET `https://192.0.2.0/api/v1/maintenance/certificateSigningRequest`

The following example exports the current CSR as a file in PEM format.

GET `https://192.0.2.0/api/v1/maintenance/certificateSigningRequest?format=pem`



## Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully. If a query parameter is specified and the value of that parameter has no matches, the response body returns default values.
500	Internal Server Error	An internal error occurred. A descriptive error message is returned in the response body.

## Response body

When **format=pem** is specified, the response body is returned only when the request generates an error (see [Status messages](#)).

When **format=json** is specified and the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
pem	String	CSR, in PEM format
_links	Object	CSR URI (see <a href="#">Links</a> )

The certificate signing request is returned if the request is successful, for example:

```
{
  "pem": "-----BEGIN CERTIFICATE REQUEST-----MIIDjDCCAnQCAQAwwYoxCzAJBgNVBA
  YTAUVTRMRcwFYQYDVQQIEw50b3J0aCBDYXJvbnGluYTEQMA4GA1UEBxMHUUMFsZWlnaDELKCMGA1UECh
  McR2VuZXJhdGdVIGJ5IFNlcnZlcjBGA1UECjBMR3JnYW5pemF0aW9uIHVuaX
  QxDALBgNVBAMTBExYQ0EwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQCmwy8q5PrWhH
  tLv1c00dVjIXTHK3JNcQXicWXL3/+vhGkgfd8rqqCv vxjTg7N2hYaFlQghEFTEWDhMmxvMFZtAh
  QfBnzcdiWj23I3MSRqDWBa8NsQHwffxyqc0EqhoGiOMCjHW9zdkSkJ0fZvFJ5RTPmhY+Xnt92LZg
  SGwmnTcGq9dxNv6ixMvnHzWE9+MguTxsfgMSRZJ4Rf+d35X9ovQHEge1jMaq0coBuqVMK9TkWsb
  101GJ2tggDR5tp8YHws7wkp1isXc4AtDDIzrKfhvxqTHqsAppREQD79srzsG+jNsOYvg7Jd7bm
  2/zP9gxMwVFUY0m7DYg8HF6mZ9AgMBAAGgbSwgbGCSqGSIb3DQEJDbjCBpZCBpAYDVR0RBI
  GcMIGZhd+gAAAAAAAAA0AJ//+zQ6Dgh5mZTgw0jA6MDow0mEwMDoyN2Zm0mZLY2Q6ZTgzJTKHBA
  rxieCCIGlwMTAtMjQxLTEzNy0yMjQubGficY5sZW5vdm8uY29thxAAAAAAAAAAAAAAAAAABgg
  UAA4IBAQCACBkc6nxzo/8NBQ0xuRe+wOMNzrAg9cIyh7cFcCtBSVmam0xAauRHvVIsge/x/xQP3tQ
  FvfJ0qYr4eyJvEqHINY71ZgQjIunMVX90qf5MEdbYEsQE7g/2WzVXIDZ6p1qewjW85YeunHVS3fg
  WfD3jXZ66BXZyEB4L7xRt0r85E6bCkhlymj3060LHCdmeCewT/r0a0KnR9trSBB2zSkqTPSaxJQX
  B+6rKS+DGu+LSCNHYLr8cKYloLaG08GaRZF4kedPQ1JSoz4jX0dgpZqAXJl0JVWPUeKkLpGUomB
  BBUK5PwBN10kuB8c/wXhB9+ki3CpcolGXoBpJk+fM6ij/8-----END CERTIFICATE REQUEST-----",
  "_links": {
    "rel": "self",
    "uri": "/api/v1/maintenance/certificateSigningRequest"
  }
}
```

## POST /api/v1/maintenance/certificateSigningRequest

Use this method to generate a Certificate Signing Request (CSR) using specific server-certificate settings or regenerate the CSR using the current settings. The existing CSR is overwritten with the new CSR.

### Authentication

Authentication with user name and password is required.

## Resource URI

POST [https://{{orchestrator\\_server\\_IP}}/api/v1/maintenance/certificateSigningRequest](https://{{orchestrator_server_IP}}/api/v1/maintenance/certificateSigningRequest)

## Query parameters

None

## Request body

Attributes	Re-quired / Optional	Type	Description
altNames	Optional	Array of objects	Information about the Subject Alternative Names to be included in Certificate Signing Request
name	Required	String	Subject Alternative Name
type	Required	String	RFC 5280 GeneralName type of this Subject Alternative Name
commonName	Optional	String	Name of the certificate owner. Typically, this is the fully-qualified domain name (FQDN) or IP address of the server that is using the certificate (for example, <a href="http://www.domainname.com">www.domainname.com</a> or 10.15.23.99) The length of this value cannot exceed 63 characters.  The default is LXC0.
country	Optional	String	Two-letter ISO 3166 code for the country or region of origin associated with the certificate organization (for example, US for the United States) To retrieve the country or region codes, use <a href="https://api/v1/service/countryCodes">GET /api/v1/service/countryCodes</a> .  The default is US.
organization	Optional	String	Organization (company) that is to own the certificate. Typically, this is the legal incorporate name of a company. It should include any suffixes, such as Ltd., Inc., or Corp (for example, ACME International Ltd.) The length of this value cannot exceed 60 characters.  The default is generated by the server firmware.
organizationUnit	Optional	String	Organizational unit that will own the certificate (for example, ABC Division) The length of this value cannot exceed 60 characters.  The default is None.
stateLocality	Optional	String	Full name of the locality (city) to be associated with the certificate (for example, San Jose) The length of the value cannot exceed 50 characters.  The default is Raleigh.
stateProvince	Optional	String	Full name of the state or province to be associated with the certificate (for example, California or New Brunswick)

The following example generates the certificate signing request using the specified server certificate settings

```
{  
  "altNames": [{
```

```

    "name": "bar.example.org",
    "type": "DNS"
  },
  {
    "name": "foo.example.org",
    "type": "DNS"
  },
  {
    "name": "10.241.54.111",
    "type": "IP"
  },
  {
    "name": "test@test.com",
    "type": "email"
  }
}],
"commonName": "10.241.54.169",
"country": "US",
"organization": "Lenovo",
"organizationUnit": "LXCO",
"stateLocality": "Raleigh",
"stateProvince": "North Carolina"
}

```

## Response codes

Code	Description	Comments
200	OK	The request completed successfully.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
401	Unauthorized	The user cannot be authenticated. Authentication has not been provided or has failed. A descriptive error message is returned in the response body.
403	Forbidden	The orchestrator server was prevented from fulfilling the request. A descriptive error message is returned in the response body.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.
408	Request Timeout	The orchestrator server did not receive a required request in a specific amount of time. A descriptive error message is returned in the response body.
409	Conflict	There is a conflict with the current state of the resource. A descriptive error message is returned in the response body.
500	Internal Server Error	An internal error occurred. A descriptive error message is returned in the response body.

## Response header

### Response body

Attributes	Type	Description
<i>{message_attributes}</i>	<i>varies</i>	Status messages (see <a href="#">Status messages</a> )

---

## /api/v1/maintenance/signedCertificate

Use this REST API to upload a new signed Lenovo XClarity Orchestrator server certificate that was generated using a certificate signing request.

### HTTP methods

POST

## POST /api/v1/maintenance/signedCertificate

Use this method to update the signed Lenovo XClarity Orchestrator server certificate that was generated using a certificate signing request.

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

### Authentication

Authentication with user name and password is required.

### Resource URI

POST `https://{{orchestrator_server_IP}}/api/v1/maintenance/signedCertificate`

### Query parameters

None

### Request body

Provide the server certificate, in PEM format, that was created from the certificate signing request using the [GET /api/v1/maintenance/certificateSigningRequest](#) or downloaded from the XClarity Orchestrator user interface. The following example is provided in the request body

```
-----BEGIN CERTIFICATE REQUEST-----
MIIDjDCCAnQCAQAwYoxCzAJBgNVBAYTALVTMRcwFQYDVQIEw50b3J0aCBDYXJv
bGluYTEQMA4GA1UEBxMHUmfSZWlnaDELmCMGA1UEChMcR2VuZXJhdGVkIGJ5IFNL
cnZlcjBGAxJtd2FyZTEaMBGGA1UECXMRT3JnYW5pemF0aW9uIHVuaXQxDTALBgNV
BAMTBExYQ0EwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQCmwy8q5PrW
hHtLv1c00dVJiXTHK3JNcQXicWXzL3/+vhGkgfd8rqQcVvxjTg7N2hYaFLQghEFT
EWDhMmxvMFZtAhQfBnzcdiWj23I3MSRqDWBa8NsqHWffxyqc0EqhoGiOMCjHW9zd
kSkJ0fZvFJ5RTPmhY+Xnt92LZgSGwmnTcGq9dxNvV6ixMvnHzWE9+MguTxsfGMSR
ZJ4Rf+d35X9ovQHEge1jMaqQc0BuqVMK9TkWsb101GJ2tggDR5tp8YHws7wakp1i
sXc4AtDDIzrKfhxvxqTHqsAppREQD79srzsG+jNs0Yvg7Jd7bm2/zP9gxMwVFUY0
m7DYg8HF6mZ9AgMBAAGggbswgbgGCSqGSIb3DQEJDDjGBqjCBpzCBpAYDVRORBIGc
MIGZhxD+gAAAAAAAAAAoAJ//+zQ6Dgh5mZTgw0jA6MDow0mEwMDoyN2Zm0mZLY2Q6
ZTgzJTKHBArxieCCIGlwMTAtMjQxLTEzNy0yMjQubGFicy5sZW5vdm8uY29thxAA
AAAAAAAAAAAAAAAAAABgglsb2NhbGhvc3SHBH8AAAGCCWxvY2FsaG9zdIIJbG9j
YXxob3N0ggRMWENBMA0GCSqGSIb3DQEBChUA4IBAQACBk6nxzo/8NBQ0xuRe+w
OMNzrAg9cIyh7cFcTbSVmam0xAuRHvVIsgE/x/xQP3tQFvfJ0qYr4eyJvEqHIN
Y71ZgQjIunMVX90qf5MEdbYEsQE7g/2WzVXIDZ6p1qewjW85YeunHVS3fgWfD3jX
Z66BXZyEB4L7xRt0r85E6bCkhlymj3060LHCdmeCewT/r0a0KnR9trSBB2zSkqTP
SaxJQXB+6rKS+DGu+lSCNHYLr8cKYLoLaG08GaRZF4kedPQ1JSoz4jX0dgpZqAX
Jl0JVWPUeKkLpGUomBBBUK5PwBN10kuB8c/wXhB9+ki3CpcolGXoBpJk+fM6ij/8
-----END CERTIFICATE REQUEST-----
```

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
500	Internal Server Error	An internal error occurred. A descriptive error message is returned in the response body.

### Response header

### Response body

Attributes	Type	Description
<i>{message_attributes}</i>	<i>varies</i>	Status messages (see <a href="#">Status messages</a> )

---

## /api/v1/service/countryCodes

Use this REST API to return a list of country and region codes.

### HTTP methods

GET

## GET /api/v1/service/countryCodes

Use this method to return a list of country and region codes.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET `https://{orchestrator_server_IP}/api/v1/service/countryCodes`

### Query parameters

None

### Request body

None

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.

### Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
results	Array of objects	Information about each country or region
abbreviation	String	Two-letter ISO 3166 code for the country or region
name	String	Country or region name
_links	Object	Resource URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "result": [
    {
      "abbreviation": "AO",
      "name": "ANGOLA"
    },
    {
      "abbreviation": "AR",
      "name": "ARGENTINA"
    },
    ...,
    {
      "abbreviation": "ZM",
      "name": "ZAMBIA"
    },
    {
      "abbreviation": "ZW",
      "name": "ZIMBABWE"
    }
  ],
  "_links": {
    "rel": "self",
    "uri": "/api/v1/service/countryCodes"
  }
}
```

---

## Chapter 3. Resources

The following REST APIs are available for working with resource managers and their managed devices and infrastructure resources.

---

### **/api/v1/boarding/agentInstaller**

Use this method to create a Lenovo Universal Device Client (UDC) agent installation package for specific devices. This UDC agent must be installed on ThinkEdge Client devices so that the devices can be securely discovered and managed by a Lenovo XClarity Management Hub resource manager.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

#### **HTTP methods**

POST

### **POST /api/v1/boarding/agentInstaller**

Use this method to create a Lenovo Universal Device Client (UDC) agent installation package for specific ThinkEdge Client devices. This UDC agent must be installed on ThinkEdge Client devices so that the devices can be securely discovered and managed by a Lenovo XClarity Management Hub resource manager.

After the UDC-agent installation package is created, you can download the package the local system using [GET /api/v1/boarding/agentInstaller/{filename}](#).

A job is created to complete this request. The response header returns the URI for the job in the **Location** field.

A successful response code indicates that the job was successfully transmitted and accepted by the orchestrator. It does not indicate that the operation that is associated with the job was successful. If a job was not successfully started, refer to the response code and response body for details.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

#### **Authentication**

Authentication with user name and password is required.

#### **Resource URI**

POST `https://{orchestrator_server_IP}/api/v1/boarding/agentInstaller`

#### **Query parameters**

None

## Request body

Attributes	Re-quired / Optional	Type	Description
expirationTimeInDays	Optional	Integer	Number of days before the UDC agent installer becomes unusable after it is downloaded. This can be one of the following values. <ul style="list-style-type: none"><li>• 10</li><li>• 30 (default)</li><li>• 60</li><li>• 90</li></ul>
managerID	Required	String	Lenovo XClarity Management Hub resource manager ID
maxUsageLimit	Optional	Integer	Number of times that you plan to install the UDC agent on a server. This is typically the number of servers on which you need to install the UDC agent. The minimum value is 1, and the maximum value is 1,000,000. The default is 10 usages.
operatingSystem	Required	String	Operating system that is installed on the server <ul style="list-style-type: none"><li>• LinuxARM</li><li>• LinuxX86</li><li>• Windows</li></ul>

The following example create a UDC-agent installation package for up to 10 Windows-based ThinkEdge Client devices that can be installed within 7 days and can be managed by a specific Lenovo XClarity Management Hub resource manager.

```
{
  expirationTimeInDays: 7,
  managerID: "48331a223bf34fba90732b379b837b9c",
  maxUsageLimit: 10,
  operatingSystem: "Windows"
}
```

## Response codes

Code	Description	Comments
201	Created	One or more new resources were successfully created.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.

## Response header

The URI and ID of the root job are returned in the **Location** and **JobID** fields respectively, for example:

```
Location: /api/v1/jobs-management/jobs/56?childrenLevels=-1
jobID: 56
```

## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).



Attributes	Type	Description
installer	String	File name of the UDC agent installer, in the following format: <code>edgeInstaller_{operatingSystem}_{managerID}_{timestamp}.gz</code> for Linux or <code>zip</code> for Windows
jobID	Integer	Job ID
_links	Object	Resource URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  installer: "edgeInstaller_Windows_Hub1_2019-05-02T19:28:14.000Z.zip",
  jobID: 1 // The job id which was triggered when making the POST
}
```

---

## **/api/v1/boarding/agentInstaller/{filename}**

Use this REST API to download a specific Lenovo Universal Device Client (UDC) agent installation package to the local system. This UDC agent must be installed on ThinkEdge Client devices so that the devices can be securely discovered and managed by a Lenovo XClarity Management Hub resource manager.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### **HTTP methods**

GET

### **GET /api/v1/boarding/agentInstaller/{filename}**

Use this method to download a specific Lenovo Universal Device Client (UDC) agent installation package to the local system. This UDC agent must be installed on ThinkEdge Client devices so that the devices can be securely discovered and managed by a Lenovo XClarity Management Hub resource manager.

To create a UDC-agent-installation package for a specific device, use [POST /api/v1/boarding/agentInstaller](#).

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### **Authentication**

Authentication with user name and password is required.

### **Resource URI**

GET `https://orchestrator_server_IP/api/v1/boarding/agentInstaller/{filename}`

where *{filename}* is the filename of the management-agent installer. The file name is returned in the response body when you create the installer using [POST /api/v1/boarding/agentInstaller](#).

### **Query parameters**

None

### **Request body**

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.

## Response body

Attributes	Type	Description
{message_attributes}	varies	Status messages (see <a href="#">Status messages</a> )

---

## /api/v1/boarding/devices

Use this REST API to return a list of all discovered (but not managed) Lenovo devices with or without baseboard management controllers.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### HTTP methods

GET

## GET /api/v1/boarding/devices

Use this method to return a list of all discovered (but not managed) Lenovo devices with or without baseboard management controllers.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET `https://{orchestrator_server_IP}/api/v1/boarding/devices`

### Query parameters

This REST API supports query parameters for paginating, filtering, sorting, including data, and excluding data in the response. For more information about these common query parameters, see [Paginating, scoping, filtering, sorting, including data, and excluding data in responses](#). For a list of supported attributes, see [GET /api/v1/boarding/devices/{id}](#).

The following example return a list of all discovered Lenovo devices.

```
GET https://192.0.2.0/api/v1/boarding/devices
```

The following example return a list of all discovered Lenovo servers

```
GET https://192.0.2.0/api/v1/boarding/devices
?filterContains[0][attributes]=type&filterContains[0][values]=server
```

### Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully. If a single query parameter is specified and the value of that parameter has no matches, the response body returns default values. If a list of query parameters is specified and the value of at least one parameter has no matches, the response body returns only what matches.
206	Partial Content	Partial content was returned for a multi-part response. The response header includes a content-range header field indicating the range that is included in the response body for each part.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
401	Unauthorized	The user cannot be authenticated. Authentication has not been provided or has failed. A descriptive error message is returned in the response body.
403	Forbidden	The orchestrator server was prevented from fulfilling the request. A descriptive error message is returned in the response body.

## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
results	Array of objects	Information about each discovered device
id	String	Device ID <b>Tip:</b> The device ID is made up of the UUID of the device and the UUID of the resource manager that manages the device, separated by a dash.
deviceName	String	Device name
discoveredBy	Array of objects	Information about each resource manager that discovered this device
id	String	Manager ID
name	String	Manager name
uri	String	Manager URI
ipv4Addresses	Array of strings	List of IPv4 addresses that are assigned to this device
ipv6Addresses	Array of strings	List of IPv6 addresses that are assigned to this device
jobId	Integer	ID of the job through which this device was discovered
name	String	Name that is displayed in the user interface for this device
overallHealthState	String	Highest severity of all devices (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>

Attributes	Type	Description
powerStatus	String	Power status (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• Off</li> <li>• On</li> <li>• Standby</li> <li>• Unknown</li> </ul>
productName	String	Product name
uuid	String	Device UUID
_links	Array of objects	User URI (see <a href="#">Links</a> )
_metadata	Object	Request metadata (see <a href="#">Metadata</a> )

The following example is returned if the request is successful.

```
{
  "results": [{
    "id": "ABC31213310B11EAAC96A252EC8212C0-1CB64754EA1543E0AAAA46C1D45CD549",
    "deviceName": "Steel-AMD-53-125",
    "discoveredBy": [{
      "id": "1CB64754EA1543E0AAAA46C1D45CD549",
      "name": "10.241.54.149",
      "uri": "/api/v1/managers-management/managers/1CB64754EA1543E0AAAA46C1D45CD549"
    }],
    "ipv4Addresses": ["10.241.53.125"],
    "ipv6Addresses": ["fd55:faaf:e1ab:21bb::125", "fe80::a94:efff:feaa:9393"],
    "jobId": 29,
    "name": "Steel-AMD-53-125",
    "overallHealthState": "Unknown",
    "powerStatus": "Off",
    "productName": null,
    "uuid": "ABC31213310B11EAAC96A252EC8212C0"
    "_links": [{
      "rel": "self",
      "uri": "/api/v1/boarding/devices/ABC31213310B11EAAC96A252EC8212C0-1CB64754EA1543E0AAAA46C1D45CD549"
    }]
  }],
  "_metadata": {...}
}
```

---

## **/api/v1/boarding/devices/{id}**

Use this REST API to return information about a specific discovered (but not managed) Lenovo device with or without baseboard management controllers.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### **HTTP methods**

GET

### **GET /api/v1/boarding/devices/{id}**

Use this method to return information about a specific discovered (but not managed) Lenovo device with or without baseboard management controllers.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

## Authentication

Authentication with user name and password is required.

## Resource URI

GET `https://{orchestrator_server_IP}/api/v1/boarding/devices/{id}`

where *{id}* is the ID of the discovered device. To obtain the discovered device IDs, use [GET /api/v1/boarding/devices](#).

## Query parameters

None

## Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully. If a single query parameter is specified and the value of that parameter has no matches, the response body returns default values. If a list of query parameters is specified and the value of at least one parameter has no matches, the response body returns only what matches.
206	Partial Content	Partial content was returned for a multi-part response. The response header includes a content-range header field indicating the range that is included in the response body for each part.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
401	Unauthorized	The user cannot be authenticated. Authentication has not been provided or has failed. A descriptive error message is returned in the response body.
403	Forbidden	The orchestrator server was prevented from fulfilling the request. A descriptive error message is returned in the response body.

## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
id	String	Device ID <b>Tip:</b> The device ID is made up of the UUID of the device and the UUID of the resource manager that manages the device, separated by a dash.
accessState	String	Access state of the device (translated). This can be one of the following values. <ul style="list-style-type: none"><li>• <b>Online</b></li><li>• <b>Offline</b></li><li>• <b>Offline Managed</b></li><li>• <b>Partial</b></li><li>• <b>Pending</b></li><li>• <b>Unknown</b></li></ul>

Attributes	Type	Description
accurateHealth	Boolean	Indicates whether the health status is accurate. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The accessState is Offline Managed, Online, or partial.</li> <li>• <b>false</b>. The accessState is Offline, Pending, or Unknown.</li> </ul>
canisters	Array of objects	(Storage devices only) Information about each canister in the device
id	String	Canister ID
cmmDisplayName	String	Chassis name
cmmHealthState	String	Health state (translated). This can be one of the following values.
cmms	Array of objects	(Chassis only) Information about each CMM
accessState	String	Access state (translated) of the chassis. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Online</b></li> <li>• <b>Offline</b></li> <li>• <b>Offline Managed</b></li> <li>• <b>Partial</b></li> <li>• <b>Pending</b></li> <li>• <b>Unknown</b></li> </ul>
accessStateKey	String	Access state key of the chassis. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Online</b></li> <li>• <b>Offline</b></li> <li>• <b>Offline Managed</b></li> <li>• <b>Partial</b></li> <li>• <b>Pending</b></li> <li>• <b>Unknown</b></li> </ul>
accurateHealth	Boolean	Indicates whether the health status is accurate. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The accessState is Offline Managed, Online, or partial.</li> <li>• <b>false</b>. The accessState is Offline, Pending, or Unknown.</li> </ul>
backedBy	String	Indicates whether the data is from a real or demo server. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>real</b>. The inventory describes real hardware.</li> <li>• <b>demo</b>. The inventory describes demo (mock) hardware.</li> <li>• <b>proxy</b>. A proxy is temporarily serving to provide the inventory.</li> </ul>
cmmDisplayName	String	Display name provided by the CMM
cmmHealthState	String	Health summary that corresponds to the highest event severity of all the devices. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
dataHandle	Long	Time stamp of the last status update
description	String	Description that was provided by the CMM
deviceTypeKey	String	
domainName	String	User-defined domain name

Attributes		Type	Description
	dnsHostnames	Array of strings	
	errorFields	Array of objects	Error code. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>FETCH_SUCCESS</b></li> <li>• <b>FETCH_FAILED</b></li> <li>• <b>NO_CONNECTOR</b></li> <li>• <b>FATAL_EXCEPTION</b></li> <li>• <b>NETWORK_FAIL</b></li> </ul>
	excludedHealthState	String	Highest severity alert with exclusions. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	firmware	Array of objects	Information about CMM firmware
	build	String	Firmware build
	classifications	Array of integers	Firmware type codes
	date	String	Firmware date
	name	String	Firmware name
	deviceTypeKey	String	
	revision	String	Firmware revision
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID	String	Firmware ID
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type, such as UEFI, MP, or DSA
	version	String	Firmware version
	FRU	String	CMM FRU part number
	fruSerialNumber	String	CMM FRU serial number
	hostConfig	Array of objects	Information about host configuration
	DDNSenabled	Boolean	Identifies whether dynamic DNS enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. Dynamic DNS is enabled.</li> <li>• <b>false</b>. Dynamic DNS is disabled.</li> </ul>
	DNSenabled	Boolean	Identifies whether DNS enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. DNS is enabled.</li> <li>• <b>false</b>. DNS is disabled.</li> </ul>

Attributes		Type	Description
	IPversionPriority	String	IP version priority. This can be one of the following values <ul style="list-style-type: none"> <li>• <b>IPv6ThenIPv4</b></li> <li>• <b>IPv4ThenIPv6</b></li> </ul>
	prilIPv4userDNSserver	String	Primary user assigned IPv4 DNS server
	prilIPv6userDNSserver	String	Primary user assigned IPv6 DNS server
	seclIPv4userDNSserver	String	Secondary user assigned IPv4 DNS server
	seclIPv6userDNSserver	String	Secondary user assigned IPv6 DNS server
	terIPv4userDNSserver	String	Tertiary user assigned IPv4 DNS server
	terIPv6userDNSserver	String	Tertiary user assigned IPv6 DNS server
	hostname	String	User-defined hostname
	ipInterfaces	Array of objects	Information about each IP interface
	IPv4assignments	Array of objects	Information about each IPv4 assignment
	id	Integer	IPv4 assignment ID
	address	String	IPv4 address
	deviceTypeKey	String	
	gateway	String	IPv4 gateway
	subnet	String	IPv4 subnet mask
	type	String	Type of the IPv4 assignment. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>INUSE</b></li> <li>• <b>CONFIGURED</b></li> <li>• <b>ALIAS</b></li> <li>• <b>UNKNOWN</b></li> </ul>
	IPv4DHCPmode	String	IP address assignment method. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>STATIC_ONLY</b></li> <li>• <b>DHCP_ONLY</b></li> <li>• <b>DHCP_THEN_STATIC</b></li> <li>• <b>UNKNOWN</b></li> </ul>
	IPv4enabled	Boolean	Identifies whether IPv4 is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv4 is enabled.</li> <li>• <b>false</b>. IPv4 is disabled.</li> </ul>
	IPv6assignments	Array of objects	Information about each IPv6 assignment
	id	Integer	IPv6 assignment ID
	address	String	IPv6 address
	gateway	String	IPv6 gateway
	prefix	Integer	IPv6 prefix



Attributes		Type	Description
	scope	String	Scope of the IPv6 assignment. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Global</b></li> <li>• <b>LinkLocal</b></li> <li>• <b>Unknown</b></li> </ul>
	source	String	Source of the IPv6 assignment. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>DHCP</b></li> <li>• <b>Stateless</b></li> <li>• <b>Static</b></li> <li>• <b>Other</b></li> <li>• <b>Unknown</b></li> </ul>
	type	String	Type of the IPv6 assignment. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>INUSE</b></li> <li>• <b>CONFIGURED</b></li> <li>• <b>ALIAS</b></li> <li>• <b>UNKNOWN</b></li> </ul>
	IPv6DHCPEnabled	Boolean	Identifies whether IPv6 DHCP is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv6 DHCP is enabled.</li> <li>• <b>false</b>. IPv6 DHCP is disabled.</li> </ul>
	IPv6enabled	Boolean	Identifies whether IPv6 is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv6 is enabled.</li> <li>• <b>false</b>. IPv6 is disabled.</li> </ul>
	IPv6statelessEnabled	Boolean	Identifies whether IPv6 stateless is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv6 stateless is enabled.</li> <li>• <b>false</b>. IPv6 stateless is disabled.</li> </ul>
	IPv6staticEnabled	Boolean	Identifies whether IPv6 static is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv6 static is enabled.</li> <li>• <b>false</b>. IPv6 static is disabled.</li> </ul>
	label	String	Label
	name	String	Name
	ipv4Addresses	Array of strings	List of IPv4 addresses
	ipv6Addresses	Array of strings	List of IPV6 addresses
	leds	Array of objects	Information about server LEDs
	color	String	LED color. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Red</b></li> <li>• <b>Amber</b></li> <li>• <b>Yellow</b></li> <li>• <b>Green</b></li> <li>• <b>Blue</b></li> <li>• <b>Unknown</b></li> </ul>

Attributes		Type	Description
	location	String	LED location. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Front panel</b></li> <li>• <b>Lightpath Card</b></li> <li>• <b>Planar</b></li> <li>• <b>FRU</b></li> <li>• <b>Rear Panel</b></li> <li>• <b>Unknown</b></li> </ul>
	name	String	LED name
	state	String	LED state. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Blinking</b></li> <li>• <b>Unknown</b></li> </ul>
	macAddresses	Array of strings	List of MAC addresses
	machineType	String	Server machine type
	manufacturer	String	Manufacturer
	manufacturerId	String	Manufacturer ID
	mgmtProclPAddress	String	IP address used by XClarity Orchestrator to manage this resource
	model	String	CMM model
	name	String	Name that is displayed in the user interface for this device
	overallHealthState	String	Highest severity of all alerts. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	overallHealthStateKey	String	Highest severity key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>
	parent	Object	Information about the parent device
	uri	String	Parent URI
	uuid	String	Parent UUID
	partNumber	String	CMM part number
	powerAllocation	Object	
	maximumAllocatedPower	Long	Maximum power that is allocated
	minimumAllocatedPower	Long	Minimum power that is allocated
	powerStatus	String	
	powerStatusKey	String	
	productId	String	CMM product ID
	role	String	Role of the CMM. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>primary</b></li> <li>• <b>backup</b></li> </ul>

Attributes		Type	Description
	serialNumber	String	CMM serial number
	slots	Array of integers	CMM primary slot
	type	String	Resource type. This value is always <b>CMM</b> .
	userDefinedName	String	User-defined name for the device
	userDescription	String	Description that was defined by the user
	uri	String	CMM URI
	uuid	String	CMM UUID
deviceInfo		Object	Information about the device
	domainName	String	Domain name
	entitledSerialNumber	String	Entitled serial number
	groups	Array of strings	List of IDs for groups that include this device
	id	String	Groups ID
	name	String	Group name
	type	String	Group type
	uri	String	Group URI
	healthStatus	String	Highest severity of all alerts (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	hostname	String	Hostname
	ipv4Addresses	Array of strings	List of IPv4 addresses
	ipv6Addresses	Array of strings	List of IPv6 addresses
location		Object	Information about the location of the server or Flex System storage device
	location	String	Location
	lowestRackUnit	Integer	Lowest rack unit
	rack	String	Rack
	room	String	Room
	machineType	String	Machine type
	model	String	Device model
	powerStatus	String	Power status (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Standby</b></li> <li>• <b>Unknown</b></li> </ul>

Attributes		Type	Description
	productName	String	Product name
	serialNumber	String	Device serial number
	userDefinedName	String	User-defined name for the device
	uuid	String	Device UUID
	_ui	Object	Information about web-interface-specific attributes.
	healthStatusKey	String	Severity key of the highest severity of all devices. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>
	powerStatusKey	String	Power status key. This can be one of the following values: <ul style="list-style-type: none"> <li>• <b>off</b></li> <li>• <b>on</b></li> <li>• <b>standby</b></li> <li>• <b>unknown</b></li> </ul>
	deviceName	String	Device name
	deviceType	String	Device name
	discoveredBy	Array of objects	Information about each resource manager that discovered this device
	id	String	Manager ID
	name	String	Manager name
	uri	String	Manager URI
	displayName	String	Display name
	driveBays	String	Domain name
	drives	Integer	Number of drive bays
	bay	Integer	Drive bay
	blockSize	Integer	Block size
	capacity	Long	Drive capacity
	description	String	Description
	diskState	String	Disk-drive state
	firmware	Array of objects	Information about add-in card firmware
	build	String	Firmware build
	classifications	Array of integers	Firmware type codes
	date	String	Firmware date
	name	String	Firmware name
	deviceTypeKey	String	
	revision	String	Firmware revision

Attributes		Type	Description
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID	String	Firmware ID
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type, such as UEFI, MP, or DSA
	version	String	Firmware version
	FRU	String	FRU
	healthState	String	Highest severity of all alerts. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	healthStateKey	String	Highest severity key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>
	interfaceType	String	(ThinkServer servers only) Drive interface type
	largestAvailableSize	Integer	
	m2Location	String	(M.2 drives only) Location of M.2 drive and bay
	manufacturer	String	Manufacturer
	mediaType	String	Media type
	model	String	Model
	name	String	Drive name
	numberOfBlocks	Integer	Number of blocks
	partNumber	String	Part number
	remainingLife	Integer	Indicate the amount of life that remains for a solid-state drive (SSD). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>0 – 100</b>. Percent of remaining life</li> <li>• <b>-1</b>. Unknown (default)</li> <li>• <b>-2</b>. Information is not available</li> <li>• <b>-3</b>. The drive is not an SSD</li> </ul>
	serialNumber	String	Serial number
	temperature	String	Device temperature
	uuid	String	Storage device UUID
	drivesInstalled	Integer	(Storage devices only) Number of installed drives

Attributes	Type	Description
enclosureFormFactor	String	Form factor of the chassis. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>dense-computing</b></li> <li>• <b>edge-computing</b></li> <li>• <b>rack-tower</b></li> </ul>
excludedHealthState	String	Highest severity alert with exclusions. This can be one of the following values.
firmware	Array of objects	Information about each firmware
build	String	Firmware build
date	String	Firmware date
version	String	Firmware version
fruNumber	String	Device FRU number
groups	Array of objects	Information about each group that include this device
id	String	Group ID
name	String	Group name
uri	String	Group URI
hostname	String	Hostname
ipv4Addresses	Array of strings	List of IPv4 addresses that are assigned to this device
ipv6Addresses	Array of strings	List of IPv6 addresses that are assigned to this device
isEmbeddedisEmbedded	Boolean	
jobId	Integer	ID of the job through which this device was discovered
location	Object	Information about the location of the server or Flex System storage device
location	String	Location
lowestRackUnit	Integer	Lowest rack unit
rack	String	Rack
room	String	Room
machineType	String	Device machine type
managementProcessor	String	Management controller type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>integrated-management-module</b></li> <li>• <b>integrated-management-module2</b></li> <li>• <b>lenovo-xclarity-controller</b></li> <li>• <b>chassis-management-module</b></li> </ul>
manufacturer	String	Manufacturer

Attributes	Type	Description
mgmtProcType	String	Type of management controller. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>FSP</b></li> <li>• <b>IMM2</b></li> <li>• <b>XCC</b></li> <li>• <b>XCC2</b></li> <li>• <b>UNKNOWN</b></li> </ul>
model	String	Device model
mtm	String	Device machine type and model, separate by a forward slash (for example, 8387/AC1)
name	String	Name that is displayed in the user interface for this device
overallHealthState	String	Highest severity of all devices (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
powerStatus	String	Power status (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Standby</b></li> <li>• <b>Unknown</b></li> </ul>
powerSupplies	Array of objects	(Rack servers only) Information about power supplies
cmmDisplayName	String	Assigned component name
cmmHealthState	String	Health state (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
dataHandle	Long	Time stamp of the last status update
description	String	Assigned component description
deviceTypeKey	String	
excludedHealthState	String	Highest severity alert with exclusions. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
firmware	Array of objects	Information about firmware
build	String	Firmware build
classifications	Array of integers	Firmware type codes
date	String	Firmware date
deviceTypeKey	String	
name	String	Firmware name

Attributes		Type	Description
	revision	String	Firmware revision
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID	String	Firmware ID
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type, such as UEFI, MP, or DSA.
	version	String	Firmware version
	FRU	String	FRU part number
	fruSerialNumber	String	FRU serial number
	hardwareRevision	String	Hardware revision
	healthState	String	Health state (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	healthStateKey	String	Health state key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>
	inputVoltageIsAC	Boolean	Identifies whether the input voltage is ac or dc. This can be one of the following values. The value is valid only if <b>inputVoltageMin</b> and <b>inputVoltageMax</b> are valid. <ul style="list-style-type: none"> <li>• <b>true</b>. ac</li> <li>• <b>false</b>. dc</li> </ul>
	inputVoltageMax	Integer	Maximum input voltage A value of -1 mean it has not been set yet.
	inputVoltageMin	Integer	Minimum input voltage A value of -1 means it has not been set yet.
	leds	Array of objects	Information about power-supply LEDs.
	color	String	LED color. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Red</b></li> <li>• <b>Amber</b></li> <li>• <b>Yellow</b></li> <li>• <b>Green</b></li> <li>• <b>Blue</b></li> <li>• <b>Unknown</b></li> </ul>



Attributes		Type	Description
	location	String	LED location. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Front panel</b></li> <li>• <b>Lightpath Card</b></li> <li>• <b>Planar</b></li> <li>• <b>FRU</b></li> <li>• <b>Rear Panel</b></li> <li>• <b>Unknown</b></li> </ul>
	name	String	LED name
	state	String	LED state. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Blinking</b></li> <li>• <b>Unknown</b></li> </ul>
	machineType	String	Machine type
	manufactureDate	String	Manufacture date
	manufacturer	String	Manufacturer name
	manufacturerId	String	Manufacturer ID
	model	String	Power-supply model
	name	String	User-defined name, if available. Otherwise, this is one of the following values. <ul style="list-style-type: none"> <li>• component name</li> <li>• serial number</li> <li>• UUID</li> </ul>
	overallHealthState		Highest severity of all power supplies(translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	overallHealthStateKey		Highest severity key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	parent	Object	Information about the parent device, if applicable
	uri	String	Parent URI
	uuid	String	Parent UUID
	partNumber	String	Part number
	posID	String	Position ID
	powerAllocation	Object	Information about the power allocation
	totalInputPower	Long	Total input power
	totalOutputPower	Long	Total output power

Attributes	Type	Description
powerState	String	Current power state of the power supply. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>ShuttingDown</b></li> <li>• <b>Standby</b></li> <li>• <b>Hibernate</b></li> <li>• <b>Unknown</b></li> </ul>
productId	String	Product ID
productName	String	Product name
serialNumber	String	Serial number
slots	Array	Power-supply primary slot
type	String	Resource type. This value is always <b>PowerSupply</b>
uri	String	URI
userDescription	String	User description
uuid	String	UUID
vpdID	String	VPD ID
productName	String	Product name
securityDescriptor	Object	Information about the authentication enablement and support the associated stored credentials for a managed device
identityManagementSystemEnabled	Boolean	Indicates whether to use an identity-management system for authentication. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. An identity-management system is to authenticate this device.</li> <li>• <b>false</b>. An identity-management system is not used to authenticate this device. In this case, either manually entered credentials or stored credentials must be used.</li> </ul> <p><b>Note:</b> Identity management systems can be used to authenticate only ThinkSystem and ThinkAgile servers.</p>
managedAuthEnabled	Boolean	Indicates whether the device uses managed authentication. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The device uses managed authentication.</li> <li>• <b>false</b>. The device uses local authentication.</li> </ul>
managedAuthSupported	Boolean	Indicates whether the device supports the ability to choose whether managed authentication is to be used. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. This device supports the ability to choose managed authentication.</li> <li>• <b>false</b>. This device does not support the ability to choose managed authentication.</li> </ul>
publicAccess	Boolean	Indicates whether the device can be accessed by all role groups. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The resource can be access by all role group.</li> <li>• <b>false</b>. The resource is restricted to specific role groups.</li> </ul>
roleGroups	Array of strings	List of role groups that are permitted to view and manage this device

Attributes	Type	Description
storedCredentials	object	Information about the stored credential that is associated with this device, if applicable
id	String	Description of the stored credential
description	String	ID of the stored credential
userName	String	Name of the stored credential
uri	String	URI of the device
serialNumber	String	Device serial number
server-type	String	Server type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ITE</b>. Flex System server</li> <li>• <b>DenseChassis</b></li> <li>• <b>Edge Server</b>. ThinkSystem SE server</li> <li>• <b>NeXtScale</b>. NeXtScale server</li> <li>• <b>Rack-Tower Server</b>. Converged, System x, ThinkAgile or ThinkSystem SD, SR, or ST server</li> </ul>
status	Object	Information about management status
name	String	Status. This is always <b>UNMANAGED</b> .
message	String	Status message. This is always <b>Unmanaged</b> .
systemBoard	Object	Information about the system board
machineType	String	Device machine type
model	String	Device model
productName	String	Product name
serialNumber	String	Device serial number
uuid	String	Device UUID
type	String	Resource type (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>chassis</b></li> <li>• <b>server</b></li> <li>• <b>storage</b></li> <li>• <b>switch</b></li> </ul>
userDefinedName	String	User-defined name for the device
uuid	String	Device UUID
_id	String	Device internal ID
_links	Object	Devices URI (see <a href="#">Links</a> )
_rawDeviceData	Object	Raw data about the device data from the resource manager
_ui	Object	Information about web-interface-specific attributes

Attributes	Type	Description
overallHealthStateKey	String	Severity key of the highest severity of all devices. This can be one of the following values. <ul style="list-style-type: none"> <li>• normal</li> <li>• warning</li> <li>• critical</li> <li>• unknown</li> </ul>
powerStatusKey	String	Power status key. This can be one of the following values. <ul style="list-style-type: none"> <li>• off</li> <li>• on</li> <li>• standby</li> <li>• unknown</li> </ul>

The following example is returned if the request is successful.

```
{
  "id": "ABC31213310B11EAAC96A252EC8212C0-1CB64754EA1543E0AAAA46C1D45CD549",
  "accurateHealth": true,
  "deviceInfo": {
    "domainName": null,
    "entitleSerialNumber": null,
    "healthStatus": "Unknown",
    "hostname": "XCC-SR665",
    "ipv4Addresses": ["10.241.53.125"],
    "ipv6Addresses": ["fd55:faaf:e1ab:21bb::125", "fe80::a94:efff:feaa:9393"],
    "location": null,
    "machineType": "7D2W",
    "model": "RCZ000",
    "powerStatus": "Off",
    "productName": null,
    "serialNumber": "1234567890",
    "userDefinedName": null,
    "uuid": "ABC31213310B11EAAC96A252EC8212C0",
    "_ui": {
      "powerStatusKey": "Off",
      "healthStatusKey": "Unknown"
    }
  },
  "deviceName": "Steel-AMD-53-125",
  "discoveredBy": [{
    "id": "1CB64754EA1543E0AAAA46C1D45CD549",
    "name": "10.241.54.149",
    "uri": "/api/v1/managers-management/managers/1CB64754EA1543E0AAAA46C1D45CD549"
  }],
  "displayName": "Steel-AMD-53-125",
  "enclosureFormFactor": "rack-tower",
  "firmware": [],
  "fruNumber": "02YE183",
  "groups": [],
  "hostname": "XCC-SR665",
  "ipv4Addresses": ["10.241.53.125"],
  "ipv6Addresses": ["fd55:faaf:e1ab:21bb::125", "fe80::a94:efff:feaa:9393"],
  "jobId": 29,
  "model": "RCZ000",
  "machineType": "7D2W",
  "managementProcessor": "lenovo-xclarity-controller",
  "mtm": "7D2W/RCZ000",
  "name": "Steel-AMD-53-125",
  "overallHealthState": "Unknown",
  "powerStatus": "Off",
}
```

```

"productName": null,
"serialNumber": "1234567890",
"server-type": "Rack-Tower Server",
"systemBoard": {
  "machineType": "7D2W",
  "model": "RCZ000",
  "productName": null,
  "serialNumber": "1234567890",
  "uuid": "ABC31213310B11EAAC96A252EC8212C0"
},
"type": "server",
"uuid": "ABC31213310B11EAAC96A252EC8212C0",
"_id": "62c6e4632d1860bf666e12c6",
"_links": {
  "rel": "self",
  "uri": "/api/v1/boarding/devices/ABC31213310B11EAAC96A252EC8212C0-1CB64754EA1543E0AAAA46C1D45CD549"
}
}_rawDeviceData": {
  "displayName": "Steel-AMD-53-125",
  "enclosureFormFactor": "rack-tower",
  "firmware": [{
    "build": "D8BT37L",
    "date": "2022-04-20",
    "version": "4.10"
  },
  {
    "build": "D8E101P",
    "date": "2019-12-26",
    "version": "1.00"
  }
],
"fruNumber": "02YE183",
"hostname": "XCC-SR665",
"ipAddresses": ["10.241.53.125","fd55:faaf:e1ab:21bb::125","fe80::a94:efff:feaa:9393"],
"machineType": "7D2W",
"managementPorts": [{
  "enabled": false,
  "port": 5988,
  "protocol": "cimxml-http"
},
{
  "enabled": true,
  "port": 443,
  "protocol": "https"
}],
"managementProcessor": "lenovo-xclarity-controller",
"model": "RCZ000",
"name": "Steel-AMD-53-125",
"securityDescriptor": {
  "managedAuthEnabled": true,
  "managedAuthSupported": true,
  "publicAccess": false,
  "roleGroups": [],
  "uri": "nodes/ABC31213310B11EAAC96A252EC8212C0"
},
"serialNumber": "1234567890",
"server-type": "Rack-Tower Server",
"status": {
  "manageable": true,
  "message": "Unmanaged",
  "name": "UNMANAGED"
}

```

```

    },
    "subType": "",
    "type": "server",
    "uuid": "ABC31213310B11EAAC96A252EC8212C0"
  },
  "_ui": {
    "overallHealthStateKey": "Unknown",
    "powerStatusKey": "Off"
  }
}

```

---

## /api/v1/boarding/discovery

Use this REST API to directly discover manageable Lenovo devices with or without baseboard management controllers.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### HTTP methods

GET

### POST /api/v1/boarding/discovery

Use this method to directly discover manageable Lenovo devices with or without baseboard management controllers by specifying an individual IP addresses or hostname, range of IP addresses, or subnet.

A job is created to complete this request. The response header returns the URI for the job in the **Location** field.

A successful response code indicates that the job was successfully transmitted and accepted by the orchestrator. It does not indicate that the operation that is associated with the job was successful. If a job was not successfully started, refer to the response code and response body for details.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### Authentication

Authentication with user name and password is required.

### Resource URI

POST `https://[{orchestrator_server_IP}]/api/v1/boarding/discovery`

### Query parameters

None

### Request body

Attributes	Re-quired / Optional	Type	Description
hosts	Optional	Array of objects	Information about each individual IP address or hostname
host	Required	String	IPv4 address, IPv6 address, or hostname
managerID	Required	String	Resource manager ID

Attributes	Re-quired / Optional	Type	Description
ranges	Optional	Array of objects	Information about each range of IP addresses
start	Required	String	First IPv4 or IPV6 address in the range
end	Required	String	Last IPv4 or IPV6 address in the range
managerID	Required	String	Resource manager ID
subnets	Optional	Array of objects	Information about each subnet
ipAddress	Required	String	IPv4 or IPV6 address
mask	Required	String	Subnet mask (for IPv4) or a routing prefix length (for IPv6)
managerID	Required	String	Resource manager ID

The following example example discovers devices using individual IP address, individual hostname, range of IP addresses, and subset.

```
{
  "hosts": [{
    "host": "10.241.54.10",
    "managerID": "48331a223bf34fba90732b379b837b9c"
  },
  {
    "host": "id-lxc.labs.lenovo.com",
    "managerID": "48331a223bf34fba90732b379b837b9c"
  }
  ],
  "ranges": [{
    "start": "10.241.54.10",
    "end": "10.241.54.15",
    "managerID": "48331a223bf34fba90732b379b837b9c"
  }
  ],
  "subnets": [{
    {
      "ipAddress": "10.241.55.15",
      "mask": "255.255.255.0",
      "managerID": "48331a223bf34fba90732b379b837b9c"
    }
  ]
}
```

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
401	Unauthorized	The user cannot be authenticated. Authentication has not been provided or has failed. A descriptive error message is returned in the response body.
403	Forbidden	The orchestrator server was prevented from fulfilling the request. A descriptive error message is returned in the response body.

## Response header

The URI and ID of the root job are returned in the **Location** and **JobID** fields respectively, for example:

Location: /api/v1/jobs-management/jobs/56?childrenLevels=-1

jobID: 56

## Response body

Attributes	Type	Description
{message_attributes}	varies	Status messages (see <a href="#">Status messages</a> )

---

## /api/v1/boarding/discoverySettings

Use this REST API to return or modify the discovery settings.

### HTTP methods

GET, PUT

## GET /api/v1/boarding/discoverySettings

Use this method to return the discovery settings.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET `https://{orchestrator_server_IP}/api/v1/boarding/discoverySettings`

### Query parameters

None

### Request body

None

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
500	Internal Server Error	An internal error occurred. A descriptive error message is returned in the response body.

### Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).



Attributes	Type	Description
autoDiscoveryEnabled	Boolean	<p>Indicates whether you can automatically discover baseboard management controllers using the SLP discovery method. This can be one of the following values.</p> <ul style="list-style-type: none"> <li>• <b>true</b>. (default) Automatic discovery using SLP is enabled.XClarity Orchestrator attempts to discover new devices every 15 minutes and at every user login.</li> <li>• <b>false</b>. Automatic discovery using SLP is disabled.</li> </ul>
encapsulationEnabled	Boolean	<p>Indicates whether encapsulation is enabled during device management. This can be one of the following values.</p> <ul style="list-style-type: none"> <li>• <b>true</b>. Encapsulation is enabled.When the global encapsulation setting is enabled and the device supports encapsulation, XClarity Orchestrator communicates with the device (through the resource manager) during the management process to change the device encapsulation mode to <b>encapsulationLite</b> and to change the firewall rules on the device to limit incoming requests to those only from the resource manager that was chosen to manage the device.</li> </ul> <p><b>Attention:</b> If encapsulation is enabled and the resource manager that was chosen to manage the device becomes unavailable before a device is unmanaged, necessary steps must be taken to disable encapsulation to establish communication with the device.</p> <ul style="list-style-type: none"> <li>• <b>false</b>. (default) Encapsulation is disabled.The global encapsulation setting is disabled by default. When disabled, the device encapsulation mode is set to <b>normal</b> and the firewall rules are not changed as part of the management process.</li> </ul>
offlineDevicesCleanup	Boolean	<p>Indicates whether Lenovo XClarity Orchestrator automatically unmanages devices that are offline for a specific amount of time. This can be one of the following values.</p> <ul style="list-style-type: none"> <li>• <b>true</b>. Enables automatic unmanagement of offline devices.XClarity Orchestrator checks for offline devices every hour. If a device is offline for at least the amount of time specified by <b>offlineDevicesTimeout</b>, XClarity Orchestrator automatically unmanages that device.</li> <li>• <b>false</b>. (default) Disables automatic unmanagement of offline devices.</li> </ul>
offlineDevicesTimeout	Boolean	<p>Amount of time, in hours, that devices must be offline before they are automatically unmanaged This value can be from <b>1 – 24</b> hours. The default is <b>24</b> hours.</p>
registerRequestEnabled	Boolean	<p>Indicates whether Lenovo XClarity Administrator resource managers accept discovery requests from a baseboard management controller when the management controller uses DNS to find Lenovo XClarity Administrator instances.</p> <ul style="list-style-type: none"> <li>• <b>true</b>. (default) Management controller can register with Lenovo XClarity Administrator instances as a discovered device.</li> <li>• <b>false</b>. Management controller cannot register with Lenovo XClarity Administrator instances as a discovered device.</li> </ul>
_links	Object	Resource URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "autoDiscoveryEnabled": true,
  "offlineDevicesCleanup": true,
```

```
"offlineDevicesTimeout": 24,
"encapsulationEnabled": true,
"registerRequestEnabled": true,
"_links": {
  "rel": "self",
  "uri": "/api/v1/boarding/discoverySettings"
}
}
```

## PUT /api/v1/boarding/discoverySettings

Use this method to modify the discovery settings.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### Authentication

Authentication with user name and password is required.

### Resource URI

PUT [https://{orchestrator\\_server\\_IP}/api/v1/boarding/discoverySettings](https://{orchestrator_server_IP}/api/v1/boarding/discoverySettings)

### Query parameters

None

### Request body

This PUT request updates the entire resource. To clear a value, set the attribute to null (if applicable). If an array of objects is specified, the entire array is replaced. If an optional attribute is not specified, that attribute is not changed. If an immutable (unchangeable) attribute is specified, it is ignored.

Attributes	Re-quired / Optional	Type	Description
autoDiscoveryEnabled	Optional	Boolean	<p>Indicates whether you can automatically discover baseboard management controllers using the SLP discovery method. This can be one of the following values.</p> <ul style="list-style-type: none"> <li>• <b>true</b>. (default) Automatic discovery using SLP is enabled.XClarity Orchestrator attempts to discover new devices every 15 minutes and at every user login.</li> <li>• <b>false</b>. Automatic discovery using SLP is disabled.</li> </ul> <p><b>Note:</b> The SLP Discovery setting that you choose in XClarity Orchestrator overrides any SLP discovery setting chosen for Lenovo XClarity Administrator instances that are managed by XClarity Orchestrator. If the SLP Discovery setting is changed in Lenovo XClarity Administrator, it will be synchronized with XClarity Orchestrator.</p>
offlineDevicesCleanup	Optional	Boolean	<p>Indicates whether Lenovo XClarity Orchestrator automatically unmanages devices that are offline for a specific amount of time. This can be one of the following values.</p> <ul style="list-style-type: none"> <li>• <b>true</b>. Enables automatic unmanagement of offline devices.XClarity Orchestrator checks for offline devices every hour. If a device is offline for at least the amount of time specified by <b>offlineDevicesTimeout</b>, XClarity Orchestrator automatically unmanages that device.</li> <li>• <b>false</b>. (default) Disables automatic unmanagement of offline devices.</li> </ul>
offlineDevicesTimeout	Optional	Boolean	<p>Amount of time, in hours, that devices must be offline before they are automatically unmanaged This value can be from <b>1 – 24</b> hours. The default is <b>24</b> hours.</p>

Attributes	Re-quired / Optional	Type	Description
encapsulationEnabled	Optional	Boolean	<p>Indicates whether encapsulation is enabled during device management. This can be one of the following values.</p> <ul style="list-style-type: none"> <li>• <b>true.</b> Encapsulation is enabled. When the global encapsulation setting is enabled and the device supports encapsulation, XClarity Orchestrator communicates with the device (through the resource manager) during the management process to change the device encapsulation mode to <b>encapsulationLite</b> and to change the firewall rules on the device to limit incoming requests to those only from the resource manager that was chosen to manage the device.</li> </ul> <p><b>Attention:</b> If encapsulation is enabled and the resource manager that was chosen to manage the device becomes unavailable before a device is unmanaged, necessary steps must be taken to disable encapsulation to establish communication with the device.</p> <ul style="list-style-type: none"> <li>• <b>false.</b> (default) Encapsulation is disabled. The global encapsulation setting is disabled by default. When disabled, the device encapsulation mode is set to <b>normal</b> and the firewall rules are not changed as part of the management process.</li> </ul>
registerRequestEnabled	Optional	Boolean	<p>Indicates whether Lenovo XClarity Administrator resource managers accept discovery requests from a baseboard management controller when the management controller uses DNS to find Lenovo XClarity Administrator instances.</p> <ul style="list-style-type: none"> <li>• <b>true.</b> (default) Management controller can register with Lenovo XClarity Administrator instances as a discovered device.</li> <li>• <b>false.</b> Management controller cannot register with Lenovo XClarity Administrator instances as a discovered device.</li> </ul>

The following example modifies the discovery settings.

```
{
  "autoDiscoveryEnabled": true,
  "offlineDevicesCleanup": true,
  "offlineDevicesTimeout": 24,
  "encapsulationEnabled": true,
  "registerRequestEnabled": true
}
```

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.

Code	Description	Comments
401	Unauthorized	The user cannot be authenticated. Authentication has not been provided or has failed. A descriptive error message is returned in the response body.
403	Forbidden	The orchestrator server was prevented from fulfilling the request. A descriptive error message is returned in the response body.

### Response body

Attributes	Type	Description
{message_attributes}	varies	Status messages (see <a href="#">Status messages</a> )

---

## /api/v1/boarding/management

Use this REST API to directly manage or unmanage Lenovo devices with or without baseboard management controllers.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### HTTP methods

POST, DELETE

## POST /api/v1/boarding/management

Use this method to directly manage discovered devices with or without baseboard management controllers.

When you manage a chassis, all devices in the chassis are managed. You cannot manage individual devices in a chassis.

**Attention:** Before managing a device, the devices must have been previously discovered using the [POST /api/v1/boarding/discovery](#) method.

A job is created to complete this request. The response header returns the URI for the job in the **Location** field.

A successful response code indicates that the job was successfully transmitted and accepted by the orchestrator. It does not indicate that the operation that is associated with the job was successful. If a job was not successfully started, refer to the response code and response body for details.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### Authentication

Authentication with user name and password is required.

### Resource URI

POST `https://{orchestrator_server_IP}/api/v1/boarding/management`

### Query parameters

None

## Request body

Attributes		Re-quired / Optional	Type	Description
chassis		Optional	Object	Information about the chassis to be managed
	config	Required	Object	Information about chassis configuration
	forceManage	Optional	Boolean	<p>Indicates whether to force management of the chassis. This can be one of the following values.</p> <ul style="list-style-type: none"> <li>• <b>true.</b> Force management.</li> <li>• <b>false.</b> (default) Do not force management.</li> </ul> <p><b>Note:</b> Use the force-management option only if you previously attempted to manage the device and management was not successful due to one of the following error conditions.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• If the managing resource manager failed and cannot be recovered.If the replacement resource manager instance uses the same IP address as the failed resource manager, you can manage the device again using the RECOVERY_ID account and password (if applicable) and the Force management option.</li> <li>• If the managing resource manager was taken down before the devices were unmanaged.</li> <li>• If the devices were not unmanaged successfully.</li> </ul> <p><b>Attention:</b> Devices can be managed by only one resource manager at a time. Management by multiple resource manager is not supported. If a device is managed by one resource manager, and you want to manage it with another resource manager, you must first unmanage the device from the original resource manager, and then manage it with the new resource manager.</p>
	newPassword	Optional	String	(Chassis and servers only) New password to be used for managed authentication
	password	Required	String	Current password to access the chassis
	recoveryPassword	Required	String	Recovery password to be used for the chassis
	username	Required	String	User ID to be used to access the chassis
	ids	Optional	Array of strings	List of IDs of chassis to be managed
	managerId	Optional	String	Manager identifier
	resourceId	Optional	String	Resource identifier
servers		Optional	Object	Information about the servers to be managed
	config	Required	Object	Information about server configuration

Attributes		Re-quired / Optional	Type	Description
	forceManage	Optional	Boolean	<p>Indicates whether to force management of the servers. This can be one of the following values.</p> <ul style="list-style-type: none"> <li>• <b>true.</b> Force management.</li> <li>• <b>false.</b> (default) Do not force management.</li> </ul> <p><b>Note:</b> Use the force-management option only if you previously attempted to manage the device and management was not successful due to one of the following error conditions.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• If the managing resource manager failed and cannot be recovered.If the replacement resource manager instance uses the same IP address as the failed resource manager, you can manage the device again using the RECOVERY_ID account and password (if applicable) and the Force management option.</li> <li>• If the managing resource manager was taken down before the devices were unmanaged.</li> <li>• If the devices were not unmanaged successfully.</li> </ul> <p><b>Attention:</b> Devices can be managed by only one resource manager at a time. Management by multiple resource manager is not supported. If a device is managed by one resource manager, and you want to manage it with another resource manager, you must first unmanage the device from the original resource manager, and then manage it with the new resource manager.</p>
	newPassword	Optional	String	(Chassis and servers only) New password to be used for managed authentication
	password	Required	String	Current password to access the servers
	recoveryPassword	Optional	String	Recovery password to be used for the servers
	username	Required	String	User ID to be used to access the servers
	ids	Optional	Array of strings	List of IDs of servers to be managed
	managerId	Optional	String	Manager identifier
	resourceId	Optional	String	Resource identifier
	storage	Optional	Object	Information about the storage devices to be managed
	config	Required	Object	Information about storage-device configuration

Attributes		Re-quired / Optional	Type	Description
	forceManage	Optional	Boolean	<p>Indicates whether to force management of the storage device. This can be one of the following values.</p> <ul style="list-style-type: none"> <li>• <b>true.</b> Force management.</li> <li>• <b>false.</b> (default) Do not force management.</li> </ul> <p><b>Note:</b> Use the force-management option only if you previously attempted to manage the device and management was not successful due to one of the following error conditions.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• If the managing resource manager failed and cannot be recovered. If the replacement resource manager instance uses the same IP address as the failed resource manager, you can manage the device again using the RECOVERY_ID account and password (if applicable) and the Force management option.</li> <li>• If the managing resource manager was taken down before the devices were unmanaged.</li> <li>• If the devices were not unmanaged successfully.</li> </ul> <p><b>Attention:</b> Devices can be managed by only one resource manager at a time. Management by multiple resource manager is not supported. If a device is managed by one resource manager, and you want to manage it with another resource manager, you must first unmanage the device from the original resource manager, and then manage it with the new resource manager.</p>
	password	Required	String	Current password to access the storage device
	username	Required	String	User ID to be used to access the storage device
	ids	Optional	Array of strings	List of IDs of storage devices to be managed
	managerId	Optional	String	Manager identifier
	resourceId	Optional	String	Resource identifier

The following example manages multiple devices.

```
{
  "chassis": {
    "config": {
      "forceManage": false,
      "newPassword": "*****",
      "password": "*****",
      "recoveryPassword": "*****",
      "username": " User1"
    },
    "ids": [
      {
        "managerId": "823CC2575E0DABAAC6C1D45CD2221CB87",
        "resourceId": "FBB43C13D103511E785F2E4A2CED78753"
      }
    ]
  },
},
```



```

"servers": {
  "config": {
    "forceManage": false,
    "newPassword": "*****",
    "password": "*****",
    "recoveryPassword": "*****",
    "username": "User1"
  },
  "ids": [
    {
      "managerId": "1CB64754EA1543E0AAAA46C1D45CD549",
      "resourceId": "3015DE7E2B6011E881940A94EF5F5B65"
    }
  ],
}
"storage": {
  "forceManage": false,
  "password": "*****",
  "username": "User1"
},
"ids": [
  {
    "managerId": "754EA1543E0BDACCB6C1D45CD5491CB6",
    "resourceId": "2376F7C628FB11E1B72B5CF3FC3C1448"
  }
],
}
}

```

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
401	Unauthorized	The user cannot be authenticated. Authentication has not been provided or has failed. A descriptive error message is returned in the response body.
403	Forbidden	The orchestrator server was prevented from fulfilling the request. A descriptive error message is returned in the response body.

### Response header

The URI and ID of the root job are returned in the **Location** and **JobID** fields respectively, for example:

Location: /api/v1/jobs-management/jobs/56?childrenLevels=-1

jobID: 56

### Response body

Attributes	Type	Description
{message_attributes}	varies	Status messages (see <a href="#">Status messages</a> )

## DELETE /api/v1/boarding/management

Use this method to unmanage devices.

When you unmanage a chassis, all devices in the chassis are unmanaged. You cannot unmanage individual devices in a chassis.

A job is created to complete this request. The response header returns the URI for the job in the **Location** field.

A successful response code indicates that the job was successfully transmitted and accepted by the orchestrator. It does not indicate that the operation that is associated with the job was successful. If a job was not successfully started, refer to the response code and response body for details.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### Authentication

Authentication with user name and password is required.

### Resource URI

DELETE `https://{orchestrator_server_IP}/api/v1/boarding/management`

### Query parameters

Parameters	Re-quired / Optional	Description
<code>ids=<i>{uuids}</i></code>	Required	List of UUIDs of devices to be unmanaged, separated by a comma
<code>force=<i>{Boolean}</i></code>	Optional	Indicates whether to force the unmanagement operation. This can be one of the following values. <ul style="list-style-type: none"> <li><b>true.</b> Force unmanagment even if the device is not reachable.</li> <li><b>false.</b> (default) Do not force unmanagement.</li> </ul>

The following example unmanages multiple devices without force.

DELETE `https://{management_server_IP}/api/v1/boarding/management?ids=fbb43c13103511e785f2e4a2ced78753,48331a223bf34fba90732b379b837b9c`

### Request body

None

### Response codes

Code	Description	Comments
200	OK	The request completed successfully. If a single query parameter is specified and the value of that parameter has no matches, the response body returns default values. If a list of query parameters is specified and the value of at least one parameter has no matches, the response body returns only what matches.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
401	Unauthorized	The user cannot be authenticated. Authentication has not been provided or has failed. A descriptive error message is returned in the response body.
403	Forbidden	The orchestrator server was prevented from fulfilling the request. A descriptive error message is returned in the response body.

## Response body

Attributes	Type	Description
{message_attributes}	varies	Status messages (see <a href="#">Status messages</a> )

---

## /api/v1/boarding/managementSettings

Use this REST API to retrieve and save the UDS Portal credentials, to return the credentials, or to delete the credentials.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### HTTP methods

GET, PUT, DELETE

## GET /api/v1/boarding/managementSettings

Use this method to return the UDS Portal credentials.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET `https://{orchestrator_server_IP}/api/v1/boarding/managementSettings`

### Query parameters

None

### Request body

None

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.

## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
udsClientId	String	Client ID If the client ID is not saved, this value is null.
udsClientSecret	Boolean	Indicates whether the secret exists. This can be one of the following values. <ul style="list-style-type: none"><li>• <b>true</b>. The client secret exists.</li><li>• <b>false</b>. The client secret does not exist.</li></ul>

The following example is returned if the request is successful.

```
{
  udsClientId: "EDGE-ISG-BridgeAccount",
  udsClientSecret: "true"
}
```

## PUT /api/v1/boarding/managementSettings

Use this method to retrieve and verify the UDS Portal credentials, and then save the credentials in the vault.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### Authentication

Authentication with user name and password is required.

### Resource URI

PUT `https://{orchestrator_server_IP}/api/v1/boarding/managementSettings`

### Query parameters

None

### Request body

Attributes	Re-quired / Optional	Type	Description
udsClientId	Required	String	Client ID
udsClientSecret	Required	String	Client secret

The following example retrieves and saves the UDS Portal credentials.

```
{
  udsClientId: "EDGE-ISG-BridgeAccount",
  udsClientSecret: "rbDeFX05ll3SmEh4yR70qhTz07W1m6M7"
}
```

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.

### Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
{message_attributes}	varies	Status messages (see <a href="#">Status messages</a> )

## DELETE /api/v1/boarding/managementSettings

Use this method to delete the stored UDS Portal credentials.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

## Authentication

Authentication with user name and password is required.

## Resource URI

DELETE `https://{orchestrator_server_IP}/api/v1/boarding/managementSettings`

## Query parameters

None

## Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully.

## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
<code>{message_attributes}</code>	<i>varies</i>	Status messages (see <a href="#">Status messages</a> )

---

## /api/v1/connector/managers

Use this REST API to return a list of all resource managers, connect resource managers, or update credentials for one or more resource managers.

**Attention:** This REST API will be deprecated in a future release.

## HTTP methods

GET, POST, PUT

## GET /api/v1/connector/managers

Use this method to return a list of all resource managers.

**Attention:** This REST API will be deprecated in a future release. Use [GET /api/v1/managers-management/managers](#) instead.

## Authentication

Authentication with user name and password is required.

## Resource URI

GET `https://{orchestrator_server_IP}/api/v1/connector/managers`

## Query parameters

This REST API supports query parameters for paginating, scoping, filtering, sorting, including data, and excluding data in the response. For more information about these common query parameters, see

[Paginating, scoping, filtering, sorting, including data, and excluding data in responses](#). For a list of supported attributes, see [GET /api/v1/connector/managers/{id}](#).

The following example returns a list of all resource managers.

```
GET https://192.0.2.0/api/v1/connector/managers
```

The following example returns a list of all unhealthy resource managers.

```
GET https://192.0.2.0/api/v1/connector/managers
?filterNotEquals[][attributes]=healthState&filterNotEquals[][values]=Normal
```

The following example returns a list of all resource managers running version 1.0.

```
GET https://192.0.2.0/api/v1/connector/managers
?filterEquals[][attributes]=updateMetadata.components.version.number&filterEquals[][values]=1.0
```

## Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully. If a single query parameter is specified and the value of that parameter has no matches, the response body returns default values. If a list of query parameters is specified and the value of at least one parameter has no matches, the response body returns only what matches.
206	Partial Content	Partial content was returned for a multi-part response. The response header includes a content-range header field indicating the range that is included in the response body for each part.
408	Request Timeout	The orchestrator server did not receive a required request in a specific amount of time. A descriptive error message is returned in the response body.
500	Internal Server Error	An internal error occurred. A descriptive error message is returned in the response body.

## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
results	Array of objects	Information about each resource manager
id	String	Resource manager ID
connectTimestamp	String	Timestamp when the resource manager was registered with XClarity Orchestrator This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
healthState	String	Health state (translated). This can be one of the following values.
healthStateKey	String	Health state key. This can be one of the following values.
name	String	Resource manager name <b>Note:</b> For Lenovo XClarity Administrator, this is the IP address of the management server.

Attributes	Type	Description
type	String	Type of resource manager. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Management Hub</b></li> <li>• <b>XClarity Administrator</b></li> <li>• <b>XClarity Orchestrator</b></li> <li>• <b>Schneider EcoStruxure IT</b></li> <li>• <b>VMware vRealize Operations Manager</b></li> </ul>
_links	String	Resource manager URI (see <a href="#">Links</a> )
_metadata	Object	Request metadata (see <a href="#">Metadata</a> )

The following example is returned if the request is successful.

```
{
  "results": [{
    "id": "00000000000000000000000000000000",
    "healthState": "Normal",
    "healthStateKey": "Normal",
    "name": "XClarity Orchestrator",
    "type": "XClarity Orchestrator",
    "_links": {
      "rel": "self",
      "uri": "/api/v1/connector/managers/00000000000000000000000000000000"
    }
  }],
  {
    "id": "23C87F0A2CB6491097489193447A655C",
    "connectTimestamp": "2022-04-25T15:13:43.833Z",
    "healthState": "Normal",
    "healthStateKey": "Normal",
    "name": "xhmc194.labs.lenovo.com",
    "type": "XClarity Administrator",
    "_links": {
      "rel": "self",
      "uri": "/api/v1/connector/managers/23C87F0A2CB6491097489193447A655C"
    }
  }
],
  "_metadata": {...}
}
```

## POST /api/v1/connector/managers

Use this method to connect (register) one or more resource managers.

**Attention:** This REST API will be deprecated in a future release. Use [POST /api/v1/managers-management/managers](#) instead.

A job is created to complete this request. The response header returns the URI for the job in the **Location** field.

A successful response code indicates that the job was successfully transmitted and accepted by the orchestrator. It does not indicate that the operation that is associated with the job was successful. If a job was not successfully started, refer to the response code and response body for details.

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

### Authentication

Authentication with user name and password is required.

## Resource URI

POST `https://{{orchestrator_server_IP}}/api/v1/connector/managers`

## Query parameters

None

## Request body

Table 1. Lenovo XClarity Administrator resource managers

Attributes	Re-quired / Optional	Type	Description
managers	Required	Array of objects	Information about each resource manager
authentication	Required	Object	Information about authentication settings
password	Required	String	Password to use for basic authentication
type	Required	String	Authentication type. This is always <b>basic</b> .
username	Required	String	User name to use for basic authentication
connection	Required	Object	Information about connection settings
hostname	Required	String	Resource manager host name
port	Required	Integer	Resource manager port
options	Required	Object	Information about options
enableDriveAnalyticsData	Required	Boolean	Indicates whether drive analytics data collection is enabled. This can be one of the following values. <ul style="list-style-type: none"><li>• <b>true</b>. Drive analytics data collection is enabled.</li><li>• <b>false</b>. Drive analytics data collection is disabled.</li></ul> <b>Note:</b> This attribute is supported by XClarity Administrator v3.3 and later.
type	Required	String	Type of resource manager. This is always <b>XClarity Administrator</b> .

Table 2. Schneider Electric EcoStruxure IT Expert resource managers

Attributes	Re-quired / Optional	Type	Description
managers	Required	Array of objects	Information about each resource manager
authentication	Required	Object	Information about authentication settings
token	Required	String	Token value
type	Required	String	Authentication type. This is always <b>token</b> .
connection	Optional	Object	Information about connection settings
url	Optional	String	Resource manager URL
name	Required	String	Resource manager name
type	Required	String	Type of resource manager. This is always <b>Schneider EcoStruxure IT</b> .



Table 3. VMware vRealize Operations Manager resource managers

Attributes	Re-quired / Optional	Type	Description
managers	Required	Array of objects	Information about each resource manager
authentication	Required	Object	Information about authentication settings
password	Required	String	Password to use for basic authentication
username	Required	String	User name to use for basic authentication
authSource	Optional	String	Name of the authentication source for users and groups To obtain a list of available authorization sources, use <a href="#">GET /api/v1/connector/vrealizeAuthSources</a> .
connection	Required	Object	Information about connection settings
hostname	Required	String	Resource manager host name
port	Required	Integer	Resource manager port
type	Required	String	Type of resource manager. This is always <b>vRealize Operations Manager</b>

The following example connects to XClarity Administrator, EcoStruxure IT Expert, and vRealize Operations Manager resource manager.

```
{
  "managers": [{
    "authentication": {
      "password": "CME44len",
      "type": "basic",
      "username": "USERID"
    },
    "connection": {
      "hostname": "10.241.54.102",
      "port": 443
    },
    "options": {
      "enableDriveAnalyticsData": true
    },
    "type": "XClarity Administrator"
  }],
  {
    "authentication": {
      "token": "AK1/2sixskmmc06wj/1i6v3epcz5c25rc29jv1t00hce1pjahyobux63 ",
      "type": "token"
    },
    "connection": {
      "url": "https://api.ecostruxureit.com/rest/v1/organizations"
    },
    "name": "Croco 1",
    "type": "Schneider EcoStruxure IT"
  },
  {
    "authentication": {
      "password": "*****",
      "username": "USERID"
    },
    "authSource": "All vCenter Servers",
  }
}
```

```

    "connection": {
      "hostname": "10.241.54.100",
      "port": 443
    },
    "type": "vRealize Operations Manager"
  }
}

```

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
401	Unauthorized	The user cannot be authenticated. Authentication has not been provided or has failed. A descriptive error message is returned in the response body.
403	Forbidden	The orchestrator server was prevented from fulfilling the request. A descriptive error message is returned in the response body.

### Response header

The URI and ID of the root job are returned in the **Location** and **JobID** fields respectively, for example:

Location: /api/v1/jobs-management/jobs/56?childrenLevels=-1

jobID: 56

### Response body

Attributes	Type	Description
{message_attributes}	varies	Status messages (see <a href="#">Status messages</a> )

---

## /api/v1/connector/managers/{id}

Use this REST API to return information about, modify, or disconnect a specific resources manager.

**Attention:** This REST API will be deprecated in a future release.

### HTTP methods

GET, PATCH, DELETE

### GET /api/v1/connector/managers/{id}

Use this method to return information about a specific resource manager.

**Attention:** This REST API will be deprecated in a future release. Use [GET /api/v1/managers-management/managers/{id}](#) instead.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET https://{orchestrator\_server\_IP}/api/v1/connector/managers/{id}

## Query parameters

None

## Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully.
401	Unauthorized	The user cannot be authenticated. Authentication has not been provided or has failed. A descriptive error message is returned in the response body.
403	Forbidden	The orchestrator server was prevented from fulfilling the request. A descriptive error message is returned in the response body.

## Response body

The returned attributes vary depending on the type of resource manager.

- [Lenovo XClarity Orchestrator resource managers](#)
- [Lenovo XClarity Administrator resource managers](#)
- [Schneider Electric EcoStruxure IT Expert resource managers](#)
- [VMware vRealize Operations Manager resource managers](#)

Table 4. *Lenovo XClarity Orchestrator resource managers*

Attributes	Type	Description
id	String	Resource manager ID
connectDate	String	Timestamp when the resource manager was registered with XClarity Orchestrator This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
connection	Object	Information about connection settings
hostname	String	Resource manager host name
port	Integer	Resource manager port
details	Object	Information about the resource manager properties
build	String	Resource manager build number
buildNumber	String	Resource manager build number
uuid	String	Resource manager UUID
version	String	Resource manager version
versionNumber	String	Resource manager version number
groups	Array of object	Information about each group in which this resource manager is a member
id	String	Group ID
name	String	Group name
type	String	Group type. This value is always <b>ManagerGroup</b> .

Table 4. Lenovo XClarity Orchestrator resource managers (continued)

Attributes	Type	Description
uri	String	Group URI
healthState	String	Health state (translated). This can be one of the following values.
healthStateKey	String	Health state (translated). This can be one of the following values.
issues	Array of strings	Reason for an unhealthy status If <b>healthState</b> is <b>Normal</b> , this attribute is set to null. If <b>healthState</b> is not <b>Normal</b> , this attribute can be one of the following values. <ul style="list-style-type: none"> <li>• <b>InvalidCredentials</b></li> <li>• <b>ConnectionProblems</b></li> </ul>
lastInventorySyncTimestamp	String	Timestamp when XClarity Orchestrator last refreshed the inventory for the resource manager This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
lastSyncDate	String	Timestamp when XClarity Orchestrator last refreshed the information about the resource manager This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
name	String	Resource manager name
type	String	Type of resource manager. This is always XClarity Orchestrator.
_links	Object	Resource manager URI (see <a href="#">Links</a> )

The following example is returned if the request is successful for XClarity Orchestrator.

```
{
  "id": "00000000000000000000000000000000",
  "connectDate": null,
  "connection": null,
  "details": {
    "build": "186",
    "buildNumber": 186,
    "uuid": "21A727A22EECA0B85DCE38F16C7CEB1F",
    "version": "1.6.0",
    "versionNumber": 160
  },
  "groups": [],
  "healthState": "Normal",
  "healthStateKey": "Normal",
  "issues": [],
  "lastInventorySyncDate": null,
  "lastSyncDate": null,
  "name": "XClarity Orchestrator",
  "type": "XClarity Orchestrator",
  "_links": {
    "rel": "self",
    "uri": "/api/v1/connector/managers/00000000000000000000000000000000"
  }
}
```

Table 5. Lenovo XClarity Administrator resource managers

Attributes	Type	Description
id	String	Resource manager ID
connectTimestamp	String	Timestamp when the resource manager was registered with XClarity Orchestrator This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
connection	Object	Information about connection settings
hostname	String	Resource manager host name
port	Integer	Resource manager port
details	Object	Information about the resource manager properties
build	String	Resource manager build number
buildNumber	String	Resource manager build number
forwarderID	String	ID of the event forwarder in XClarity Administrator that pushes events to this XClarity Orchestrator instance
metricsSubscriptionID	String	ID of the metrics subscription in XClarity Administrator that pushes metrics to this XClarity Orchestrator instance
networkSettings	Object	Information about network settings for the resource manager
domainName	String	Domain
hostname	String	Host name
ipv4Addresses	Array of strings	List of IPv4 addresses
ipv6Addresses	Array of strings	List of IPv6 addresses
uuid	String	Resource manager UUID
version	String	Resource manager version
versionNumber	String	Resource manager version number
groups	Array of object	Information about each group in which this resource manager is a member
id	String	Group ID
name	String	Group name
type	String	Group type. This value is always <b>ManagerGroup</b> .
uri	String	Group URI
healthState	String	Health state (translated). This can be one of the following values.
healthStateKey	String	Health state (translated). This can be one of the following values.
issues	Array of strings	Reason for an unhealthy status If <b>healthState</b> is <b>Normal</b> , this attribute is set to null. If <b>healthState</b> is not <b>Normal</b> , this attribute can be one of the following values. <ul style="list-style-type: none"> <li>• <b>InvalidCredentials</b></li> <li>• <b>ConnectionProblems</b></li> </ul>

Table 5. Lenovo XClarity Administrator resource managers (continued)

Attributes	Type	Description
lastInventorySyncTimestamp	String	Timestamp when XClarity Orchestrator last refreshed the inventory for the resource manager This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
lastSyncTimestamp	String	Timestamp when XClarity Orchestrator last refreshed the information about the resource manager This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
name	String	Resource manager name
options	Object	Information about options
enableDriveAnalyticsData	Boolean	Indicates whether drive analytics-data collection is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li><b>true</b>. Drive analytics data collection is enabled.</li> <li><b>false</b>. Drive analytics data collection is disabled.</li> </ul>
type	String	Type of resource manager. This is always XClarity Administrator.
updates	Object	(XClarity Administrator and EcoStruxure IT Expert only) Information about the update history for the resource manager
identifier	String	Update ID
components	Array of objects	Information about each update component
componentID	String	Component ID
name	String	Component name
targetVersion	Object	Information about the target update for the component based on the assigned policy If a policy is not assigned, this value is null.
identifier	String	Version ID
number	String	Version number
releaseTimestamp	String	Timestamp when the version was released This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
upgradeable	Boolean	Indicates whether the component can be updated. This can be one of the following values. <ul style="list-style-type: none"> <li><b>true</b>. The component can be updated.</li> <li><b>false</b>. The component cannot be updated.</li> </ul>
version	Object	Information about the update that is currently installed for the component
identifier	String	Version ID
number	String	Version number

Table 5. Lenovo XClarity Administrator resource managers (continued)

Attributes	Type	Description
releaseTimestamp	String	Timestamp when the version was released This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
policy	Object	Information about the update-compliance policy that is assigned to this device If a policy is not assigned, this value is null.
id	String	Policy ID
name	String	Policy name
policyState	String	Policy state (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>No Policy Assigned</b></li> <li>• <b>Policy Assigned</b></li> </ul>
policyStateKey	String	Policy state key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>No Policy Assigned</b></li> <li>• <b>Policy Assigned</b></li> </ul>
_links	Object	Resource manager URI (see <a href="#">Links</a> )

The following example is returned if the request is successful for XClarity Administrator.

```
{
  "id": "23C87F0A2CB6491097489193447A655C",
  "connectTimestamp": "2022-04-25T15:13:43.833Z",
  "connection": {
    "hostname": "10.243.2.107",
    "port": 443
  },
  "details": {
    "build": "41",
    "buildNumber": 41,
    "forwarderID": "1650899611143",
    "metricsSubscriptionID": "6266baa3fac263b8917b9181",
    "networkSettings": {
      "domainName": "labs.lenovo.com",
      "hostname": "xhmc194",
      "ipv4Addresses": ["10.243.2.107"],
      "ipv6Addresses": ["fd55:faaf:e1ab:2021:5054:ff:fec4:df97","fe80:0:0:0:5054:ff:fec4:df97"]
    },
    "uuid": "23C87F0A2CB6491097489193447A655C",
    "version": "3.6.0",
    "versionNumber": 360
  },
  "groups": [],
  "healthState": "Normal",
  "healthStateKey": "Normal",
  "issues": [],
  "lastInventorySyncTimestamp": "2022-04-25T15:14:33.480Z",
  "lastSyncTimestamp": "2022-04-25T15:13:43.833Z",
  "name": "xhmc194.labs.lenovo.com",
  "options": {
    "enableDriveAnalyticsData": true
  },
  "type": "XClarity Administrator",
  "updates": {
```

```

    "identifier": "lxca",
    "components": [{
      "componentID": "lxca",
      "name": "Lenovo XClarity Administrator 3.6.0",
      "targetVersion": null,
      "upgradeable": true,
      "version": {
        "identifier": "41",
        "number": "3.6.0",
        "releaseTimestamp": null
      }
    }
  ]},
  "policy": {
    "id": null,
    "name": "No Assignment"
  },
  "policyState": "No Policy Assigned",
  "policyStateKey": "NoPolicyAssigned",
},
"_links": {
  "rel": "self",
  "uri": "/api/v1/connector/managers/23C87F0A2CB6491097489193447A655C"
}
}

```

Table 6. Schneider Electric EcoStruxure IT Expert resource managers

Attributes	Type	Description
id	String	Resource manager ID
connectTimestamp	String	Timestamp when the resource manager was registered with XClarity Orchestrator This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
connection	Object	Information about connection settings
url	String	Resource manager URL
details	Object	Information about the resource manager properties
build	String	Resource manager build number
uuid	String	Resource manager UUID
version	String	Resource manager version
versionNumber	String	Resource manager version number
groups	Array of object	Information about each group in which this resource manager is a member
id	String	Group ID
name	String	Group name
type	String	Group type. This value is always <b>ManagerGroup</b> .
uri	String	Group URI
healthState	String	Health state (translated). This can be one of the following values.
healthStateKey	String	Health state (translated). This can be one of the following values.



Table 6. Schneider Electric EcoStruxure IT Expert resource managers (continued)

Attributes	Type	Description
issues	Array of strings	Reason for an unhealthy status If <b>healthState</b> is <b>Normal</b> , this attribute is set to null. If <b>healthState</b> is not <b>Normal</b> , this attribute can be one of the following values. <ul style="list-style-type: none"> <li>• <b>InvalidCredentials</b></li> <li>• <b>ConnectionProblems</b></li> </ul>
lastInventorySyncTimestamp	String	Timestamp when XClarity Orchestrator last refreshed the inventory for the resource manager This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
lastSyncTimestamp	String	Timestamp when XClarity Orchestrator last refreshed the information about the resource manager This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
name	String	Resource manager name
type	String	Type of resource manager. This is always Schneider EcoStruxure IT.
updates	Object	Information about the update history for the resource manager
identifier	String	Update ID
components	Array of objects	Information about each update component
componentID	String	Component ID
name	String	Component name
targetVersion	Object	Information about the target update for the component based on the assigned policy If a policy is not assigned, this value is null.
identifier	String	Version ID
number	String	Version number
releaseTimestamp	String	Timestamp when the version was released This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
upgradeable	Boolean	Indicates whether the component can be updated. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The component can be updated.</li> <li>• <b>false</b>. The component cannot be updated.</li> </ul>
version	Object	Information about the update that is currently installed for the component
identifier	String	Version ID
number	String	Version number
releaseTimestamp	String	Timestamp when the version was released This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .

Table 6. Schneider Electric EcoStruxure IT Expert resource managers (continued)

Attributes	Type	Description
policy	Object	Information about the update-compliance policy that is assigned to this device If a policy is not assigned, this value is null.
id	String	Policy ID
name	String	Policy name
policyState	String	Policy state (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>No Policy Assigned</b></li> <li>• <b>Policy Assigned</b></li> </ul>
policyStateKey	String	Policy state key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>No Policy Assigned</b></li> <li>• <b>Policy Assigned</b></li> </ul>
_links	Object	Resource manager URI (see <a href="#">Links</a> )

The following example is returned if the request is successful for an Schneider Electric EcoStruxure IT Expert.

```
{
  "id": "b17c3accece1e2a94e28b108ed757a6705c77066d",
  "connectTimestamp": "2021-02-16T12:36:40.809Z",
  "connection": {
    "url": "https://api.ecostruxureit.com/rest/v1/organizations"
  },
  "details": {
    "build": null,
    "uuid": null,
    "version": null,
    "versionNumber": null
  },
  "groups": [],
  "healthState": "Normal",
  "healthStateKey": "Normal",
  "issues": [],
  "lastInventorySyncTimestamp": null,
  "lastSyncTimestamp": "2021-02-16T12:36:40.809Z",
  "name": "Demo Ecox manager1",
  "type": "Schneider EcoStruxure IT",
  "updates": null,
  "_links": {
    "rel": "self",
    "uri": "/api/v1/connector/managers/b17c3accece1e2a94e28b108ed757a6705c77066d"
  }
}
```

Table 7. VMware vRealize Operations Manager resource managers

Attributes	Type	Description
id	String	Resource manager ID
authSource	String	Name of the authentication source for users and groups

Table 7. VMware vRealize Operations Manager resource managers (continued)

Attributes	Type	Description
connectTimestamp	String	Timestamp when the resource manager was registered with XClarity Orchestrator This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
connection	Object	Information about connection settings
hostname	String	Resource manager host name
port	Integer	Resource manager port
details	Object	Information about the resource manager properties
build	String	Resource manager build number
uuid	String	Resource manager UUID
version	String	Resource manager version
versionNumber	String	Resource manager version number
groups	Array of object	Information about each group in which this resource manager is a member
id	String	Group ID
name	String	Group name
type	String	Group type. This value is always <b>ManagerGroup</b> .
uri	String	Group URI
healthState	String	Health state (translated). This can be one of the following values.
healthStateKey	String	Health state (translated). This can be one of the following values.
issues	Array of strings	Reason for an unhealthy status If <b>healthState</b> is <b>Normal</b> , this attribute is set to null. If <b>healthState</b> is not <b>Normal</b> , this attribute can be one of the following values. <ul style="list-style-type: none"> <li>• <b>InvalidCredentials</b></li> <li>• <b>ConnectionProblems</b></li> </ul>
lastInventorySyncTimestamp	String	Timestamp when XClarity Orchestrator last refreshed the inventory for the resource manager This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
lastSyncTimestamp	String	Timestamp when XClarity Orchestrator last refreshed the information about the resource manager This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
name	String	Resource manager name
type	String	Type of resource manager. This is always VMware vRealize Operations Manager.
_links	Object	Resource manager URI (see <a href="#">Links</a> )

The following example is returned if the request is successful for a VMware vRealize Operations Manager.

```

{
  "id": "b17c3accec1e2a94e28b108ed757a6705c77066d",

  "authSource": "",
  "connectTimestamp": null,
  "connection": {
    "hostname": "10.243.2.107",
    "port": 443
  },
  "details": {
    "build": "41",
    "uuid": "21A727A22EECA0B85DCE38F16C7CEB1F",
    "version": "1.4.0",
    "versionNumber": 140
  },
  "groups": [],
  "healthState": "Normal",
  "healthStateKey": "Normal",
  "issues": [],
  "lastInventorySyncDate": null,
  "lastSyncTimestamp": null,
  "name": "vRO",
  "type": "VMware vRealize Operations Manager",
  "_links": {
    "rel": "self",
    "uri": "/api/v1/connector/managers/b17c3accec1e2a94e28b108ed757a6705c77066d"
  }
}

```

## PATCH /api/v1/connector/managers/{id}

Use this method to modify authentication and connection settings for a resource manager.

**Attention:** This REST API will be deprecated in a future release.

**Note:** This REST API requires Lenovo XClarity Orchestrator v1.2.0 or later.

### Authentication

Authentication with user name and password is required.

### Resource URI

PATCH `https://{orchestrator_server_IP}/api/v1/connector/managers/{id}`

where `{id}` is the ID of the resource manager. To obtain the resource manager IDs, use [GET /api/v1/connector/managers](#).

### Query parameters

None

## Request body

Attributes	Required / Optional	Type	Description
op	Required	String	Action to take. This can be the following value. <ul style="list-style-type: none"><li>• <b>replace</b>. Replaces the entire attribute value with the specified value.</li></ul>
path	Required	String	Name of the attribute to be modified. This can be one of the following values. <ul style="list-style-type: none"><li>• <b>authentication</b>. Modifies authentication settings.</li><li>• <b>connection</b>. Modifies connection settings.</li><li>• <b>options.enableDriveAnalyticsData</b>. Enables or disables drive analytics-data collection for XClarity Administrator resource managers.</li></ul>
value	Required	String	Attribute value, depending on the data type

The following example modifies the authentication and connection settings for an XClarity Administrator resource manager.

```
[
  { "op": "replace", "path": "authentication", "value": { "username": "USERID",
                                                       "password": "CME44len",
                                                       "type": "basic" }
  },
  { "op": "replace", "path": "connection", "value": { "hostname": "10.241.54.113",
                                                       "port": 443 }
  },
  { "op": "replace", "path": "options.enableDriveAnalyticsData", "value": true
  }
]
```

## Response codes

Code	Description	Comments
200	OK	The request completed successfully.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

## Response body

Attributes	Type	Description
<i>{message_attributes}</i>	<i>varies</i>	Status messages (see <a href="#">Status messages</a> )

## DELETE /api/v1/connector/managers/{id}

Use this method to disconnect (remove) a specific resource manager.

**Attention:** This REST API will be deprecated in a future release. Use [DELETE /api/v1/managers-management/managers/{id}](#) instead.

A job is created to complete this request. The response header returns the URI for the job in the **Location** field.

A successful response code indicates that the job was successfully transmitted and accepted by the orchestrator. It does not indicate that the operation that is associated with the job was successful. If a job was not successfully started, refer to the response code and response body for details.

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

### Authentication

Authentication with user name and password is required.

### Resource URI

DELETE `https://{orchestrator_server_IP}/api/v1/connector/managers/{id}`

where *{id}* is the ID of the resource manager. To obtain the resource manager IDs, use [GET /api/v1/connector/managers](#).

### Query parameters

None

### Request body

None

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

### Response header

The URI and ID of the root job are returned in the **Location** and **JobID** fields respectively, for example:

Location: `/api/v1/jobs-management/jobs/56?childrenLevels=-1`  
jobID: 56

### Response body

Attributes	Type	Description
<i>{message_attributes}</i>	<i>varies</i>	Status messages (see <a href="#">Status messages</a> )

---

## /api/v1/connector/vrealizeAuthSources

Use this REST API to return a list of authorization sources for a specific VMware vRealize Operations Manager resource manager.

**Note:** This REST API requires Lenovo XClarity Orchestrator v1.3.0 or later.

### HTTP methods

GET

## GET /api/v1/connector/vrealizeAuthSources

Use this method to return a list of authorization sources for a specific VMware vRealize Operations Manager resource manager.

**Note:** This REST API requires Lenovo XClarity Orchestrator v1.3.0 or later.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET `https://{orchestrator_server_IP}/api/v1/connector/vrealizeAuthSources`

### Query parameters

Parameters	Re-quired / Optional	Description
<code>ipAddress={ipAddress}</code>	Required	IP address of the vRealize Operations Manager resource manager

The following example returns the authorization sources for a specific vRealize Operations Manager resource manager.

GET `https://192.0.2.0/api/v1/connector/vrealizeAuthSources?ipAddress=192.0.2.0`

### Request body

None

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

### Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
<code>authSources</code>	Array of strings	List of names of authorization sources
<code>_links</code>	Object	Resource URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "authSources": ["All vCenter Servers", "vcenter-1975"],
  "_links": {
    "rel": "self",
    "uri": "/api/v1/connector/vrealizeAuthSources"
  }
}
```

---

## /api/v1/data/deviceInfo

Use this REST API to return general information about a specific device.

### HTTP methods

GET

### GET /api/v1/data/deviceInfo?deviceID={id}

Use this method to return general information about a specific device.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET `https://{orchestrator_server_IP}/api/v1/data/deviceInfo?deviceID={id}`

### Query parameters

Parameters	Re-quired / Optional	Description
deviceID={id}	Required	Returns general information about a device, specified by the ID To obtain the device IDs, use <a href="#">GET /api/v1/data/devices</a>

The following example returns general information about a specific device.

```
GET https://192.0.2.0/api/v1/data/deviceInfo?deviceID=3015DE7E2B6011E881940A94EF5F5B65-C7199530FEDE4FE09540DFC3D75FC56C
```

### Request body

None

### Response codes

Code	Description	Comments
200	OK	The request completed successfully. If a query parameter is specified and the value of that parameter has no matches, the response body returns default values.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

### Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
domainName	String	Domain name
groupNames	Array of strings	List of names of the groups to which the device belongs



Attributes	Type	Description
healthStatus	String	Health state of the device (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
healthStatusKey	String	Health state key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
hostname	String	Hostname
ipv4Addresses	Array of strings	List of IPv4 addresses
ipv6Addresses	Array of strings	List of IPv6 addresses
location	Object	Information about the location of the device
location	String	Location description
lowestRackUnit	String	Lowest rack unit
rack	String	Rack name
room	String	Room name
machineType	String	Device machine type
manager	Object	Information about the resource manager that manages this device
domainName	String	Fully qualified domain name
hostname	String	Host name
inContextHref	String	In context URI
ipv4Addresses	Array of strings	IPv4 addresses
ipv6Addresses	Array of strings	IPv6 addresses
model	String	Device model
powerStatus	String	Power status (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Standby</b></li> <li>• <b>Unknown</b></li> </ul>
powerStatusKey	String	Power status key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Standby</b></li> <li>• <b>Unknown</b></li> </ul>
productName	String	Device product name
serialNumber	String	Device serial number
userDefinedName	String	User-defined name for the device

Attributes	Type	Description
uuid	String	Device UUID
_links	Object	Device URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "domainName": "labs.lenovo.com",
  "groupNames": [],
  "healthStatus": "Warning",
  "healthStatusKey": "Warning",
  "hostname": "XCC-7Y02-0123456789",
  "ipv4Addresses": ["10.243.0.235", "169.254.95.118"],
  "ipv6Addresses": ["fd55:faaf:e1ab:2021:a94:efff:fe4f:5635", "fe80::a94:efff:fe4f:5635"],
  "location": {
    "location": "elephante",
    "lowestRackUnit": 33,
    "rack": "Snufflaluffagus",
    "room": "pacaderm"
  },
  "machineType": "7Y02",
  "manager": {
    "domainName": "",
    "hostname": "localhost",
    "inContextHref": "/ui/index.html#/compDetails/Rack-Tower Server/8151C5148B4411E791329DD935F1CD89/",
    "ipv4Addresses": ["10.243.17.164"],
    "ipv6Addresses": ["0::0", "fe80:0:0:0:215:5dff:fe0c:d156"]
  },
  "model": "RCZ000",
  "powerStatus": "On",
  "powerStatusKey": "On",
  "productName": "ThinkSystem SR570",
  "serialNumber": "0123456789",
  "userDefinedName": "",
  "uuid": "8151C5148B4411E791329DD935F1CD89",
  "_links": {
    "rel": "self",
    "uri": "/api/v1/data/devices/C7199530FEDE4FE09540DFC3D75FC56C"
  }
}
```

---

## /api/v1/data/devices

Use this REST API to return a list of all managed devices.

### HTTP methods

GET

### GET /api/v1/data/devices

Use this method to return a list of all managed devices.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET [https://{orchestrator\\_server\\_IP}/api/v1/data/devices](https://{orchestrator_server_IP}/api/v1/data/devices)

## Query parameters

This REST API supports query parameters for paginating, scoping, filtering, sorting, including data, and excluding data in the response. For more information about these common query parameters, see [Paginating, scoping, filtering, sorting, including data, and excluding data in responses](#). For a list of supported attributes, see [GET /api/v1/data/devices/{id}](#).

The following example returns a list of all managed devices.

```
GET https://192.0.2.0/api/v1/data/devices
```

The following example returns a list of all devices that are managed by a specific resource manager.

```
GET https://192.0.2.0/api/v1/data/devices
?filterEquals[][attributes]=lxcaUUID&filterEquals[][values]=AAAAAAAAAAAAAAAAAAAAAAAAAAAA
```

The following example returns a list of all managed IBM servers and includes the manufacturer in the response.

```
GET https://192.0.2.0/api/v1/data/devices
?filterContains[0][attributes]=typeKey&filterContains[0][values]=server
&filterEquals[1][attributes]=manufacturer&filterEquals[1][values]=IBM
&includeAttributes=id,deviceName,ipv4Addresses,ipv6Addresses,lxcaUUID,productName,manufacturer
```

The following example returns a list of all managed servers.

```
GET https://192.0.2.0/api/v1/data/devices
?filterContains[0][attributes]=typeKey&filterContains[0][values]=server
```

The following example returns a list of all managed ThinkSystem servers.

```
GET https://192.0.2.0/api/v1/data/devices
?filterContains[0][attributes]=typeKey&filterContains[0][values]=server
&filterContains[1][attributes]=productName&filterContains[1][values]=ThinkSystem
```

The following example returns a list of all managed chassis.

```
GET https://192.0.2.0/api/v1/data/devices
?filterContains[][attributes]=typeKey&filterContains[][values]=chassis
```

The following example returns a list of all managed storage devices.

```
GET https://192.0.2.0/api/v1/data/devices
?filterContains[][attributes]=typeKey&filterContains[][values]=storage
```

The following example returns a list of all managed switches.

```
GET https://192.0.2.0/api/v1/data/devices
?filterContains[][attributes]=typeKey&filterContains[][values]=switch
```

The following example returns warranty information for all devices in a specific group with expired warranties.

```
GET https://192.0.2.0/api/v1/data/devices
?filterContains[1][attributes]=statusKey&filterContains[1][values]=Expired
&groupIDs=G_136FAA46D0754FE5B5A493F454EC5551
&includeAttributes=id,name,machineType,model,serialNumber,warranty
```

## Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully. If a single query parameter is specified and the value of that parameter has no matches, the response body returns default values. If a list of query parameters is specified and the value of at least one parameter has no matches, the response body returns only what matches.
206	Partial Content	Partial content was returned for a multi-part response. The response header includes a content-range header field indicating the range that is included in the response body for each part.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
408	Request Timeout	The orchestrator server did not receive a required request in a specific amount of time. A descriptive error message is returned in the response body.

## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
results	Array of objects	Information about each managed device
id	String	Device ID <b>Tip:</b> The device ID includes the UUID of the device and the UUID of the resource manager that manages the device, separated by a dash ( <i>deviceUUID–managerUUID</i> ).
deviceName	String	Name that is displayed in the user interface for this device
ipv4Addresses	Array of strings	List of IPv4 addresses
ipv6Addresses	Array of strings	List of IPv6 addresses
lxcaUUID	String	Resource manager UUID
name	String	Device name
overallHealthState	String	Highest severity of all alerts. This can be one of the following values.
powerStatus	String	Power status. This can be one of the following values. <ul style="list-style-type: none"><li>• <b>Off</b></li><li>• <b>On</b></li><li>• <b>Standby</b></li><li>• <b>Unknown</b></li></ul>
productName	String	Product name
_links	String	Device URI (see <a href="#">Links</a> )
_metadata	Object	Request metadata (see <a href="#">Metadata</a> )

The following example is returned if the request is successful.

```
{
  "results": [{
    "id": "00632D78DE644E23B712E200FE449787-7AF5D198CECF431AAEC674C7CA5A29B5",
```

```

    "deviceName": "Kong-SB",
    "ipv4Addresses": ["10.243.0.165"],
    "ipv6Addresses": ["fe80::e61f:13ff:fed9:367d"],
    "lxcUUID": "7AF5D198CECF431AAEC674C7CA5A29B5",
    "name": "Kong-SB",
    "overallHealthState": "Normal",
    "powerStatus": "On",
    "productName": "System x3750 M4",
    "_links": {
      "rel": "self",
      "uri": "/api/v1/data/devices/00632D78DE644E23B712E200FE449787-7AF5D198CECF431AAEC674C7CA5A29B5"
    }
  },
  "_metadata": {...}
}

```

---

## **/api/v1/data/devices/{id}**

Use this REST API to return information about a specific managed device.

### **HTTP methods**

GET

### **GET /api/v1/data/devices/{id}**

Use this method to return information about a specific managed device.

### **Authentication**

Authentication with user name and password is required.

### **Resource URI**

GET `https://{orchestrator_server_IP}/api/v1/data/devices/{id}`

where *{id}* is the UUID or ID of the device. To obtain the device UUID and IDs, use [GET /api/v1/data/devices](#).

### **Query parameters**

None

### **Request body**

None

### **Response codes**

Code	Description	Comments
200	OK	The request completed successfully.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.
408	Request Timeout	The orchestrator server did not receive a required request in a specific amount of time. A descriptive error message is returned in the response body.

## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
id	String	Device ID <b>Tip:</b> The device ID is made up of the UUID of the device and the UUID of the resource manager that manages the device, separated by a dash.
accessState	String	Access state of the device (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Online</b></li> <li>• <b>Offline</b></li> <li>• <b>Offline Managed</b></li> <li>• <b>Partial</b></li> <li>• <b>Pending</b></li> <li>• <b>Unknown</b></li> </ul>
accessStateKey	String	Access state of the server key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Online</b></li> <li>• <b>Offline</b></li> <li>• <b>Offline Managed</b></li> <li>• <b>Partial</b></li> <li>• <b>Pending</b></li> <li>• <b>Unknown</b></li> </ul>
accessStateRecords	Array of objects	Information about access state records
health	String	
ipAddress	String	
messageBundle	String	
messageDisplay	String	
messageID	String	
messageParameter	String	
protocol	String	
username	String	
timestamp	Long	
trusted		
accountLockoutPeriod	Integer	
accurateHealth	Boolean	Indicates whether the health status is accurate. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The <b>accessState</b> is Offline Managed, Online, or partial.</li> <li>• <b>false</b>. The <b>accessState</b> is Offline, Pending, or Unknown.</li> </ul>
activationKeys	Array of objects	List of installed Feature On Demand (FoD) keys
description	String	FoD key description
keyExpirationDate	String	Date when the FoD key expires

Attributes		Type	Description
	keyFeatureType	Integer	FoD feature type
	keyIdentifierList	Array of objects	FoD associative identifier list
	keyIdentifier	String	Identifier key value
	keyIdentifierType	String	Identifier key type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ASIC.</b></li> <li>• <b>MAC.</b> MAC address</li> <li>• <b>MT.</b> Machine type</li> <li>• <b>UNKNOWN</b></li> </ul>
	keyStatus	String	Status of the FoD key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>UNKNOWN</b></li> <li>• <b>OTHER</b></li> <li>• <b>VALID</b></li> <li>• <b>INVALID</b></li> <li>• <b>INPROCESS</b></li> <li>• <b>EXPIRED</b></li> <li>• <b>LIMIT_REACHED</b></li> <li>• <b>NEED_VALID_ELSEWHERE</b></li> <li>• <b>KEY_NOT_FOUND</b></li> </ul>
	keyUseCount	Integer	Key usage count
	keyUseLimit	Integer	Key usage limit
	uuid	String	Unique identifier for the FoD key
	addinCards	Array of objects	Information about add-in cards <b>Note:</b> Multiple instances of the same adapter card with different data (such as the pciFunctionNumber) might be returned in this response. In the UI, only one instance of each adapter card (only the first function number) is listed.
	class	String	Class
	firmware	Array of objects	Information about add-in card firmware
	build	String	Firmware build
	classifications	Array of integers	Firmware type codes
	date	String	Firmware date
	deviceTypeKey	String	
	name	String	Firmware name
	revision	String	Firmware revision
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID		Firmware ID
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>

Attributes		Type	Description
	type	String	Firmware type, such as UEFI, MP, or DSA
	version	String	Firmware version
	fodUniqueID	String	FoD unique ID
	FRU	String	Add-in card FRU part number
	fruSerialNumber	String	
	isAddOnCard	Boolean	Identifies whether the device is an add-in card. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The device is an add-on card</li> <li>• <b>false</b>. The device is not an add-on card</li> </ul>
	isAgentless	Boolean	Identifies whether the device is agentless. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The device is agentless.</li> <li>• <b>false</b>. The device is not agentless.</li> </ul> <b>Note:</b> If <b>isAgentless</b> is false, some inventory values might be empty.
	isPLDMUpdateSupported	Boolean	Identifies whether the Platform Level Data Model updates are supported. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. PLDM update is supported.</li> <li>• <b>false</b>. PLDM update is not supported.</li> </ul>
	manufacturer	String	Add-in card manufacturer
	name	String	Add-in card description
	partNumber	String	Add-in card part number
	pciBusNumber	String	PCI bus number
	pciDeviceNumber	String	PCI device number
	pciFunctionNumber	String	PCI function number
	pciRevision	String	PCI revision number
	pciSubID	String	PCI subsystem ID
	pciSubVendorID	String	PCI sub-vendor ID
	portInfo	Object	Information about the port
	physicalPorts	Array of objects	Information about the physical port
	portType	String	Physical port type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ATM</b></li> <li>• <b>ETHERNET</b></li> <li>• <b>FC</b></li> <li>• <b>FDDI</b></li> <li>• <b>FRAMERELAY</b></li> <li>• <b>IB</b></li> <li>• <b>OTHER</b></li> <li>• <b>TOKENRING</b></li> <li>• <b>UNKNOWN</b></li> </ul>
	portNumber	Integer	Number of the physical port
	logicalPorts	Array of objects	List of associated logical ports



Attributes					Type	Description
				logicalPortIndex	Integer	Number of logical ports
				portType	String	Logical port type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ATM</b></li> <li>• <b>BLUETOOTH</b></li> <li>• <b>ETHERNET</b></li> <li>• <b>FC</b></li> <li>• <b>FDDI</b></li> <li>• <b>FRAMERELAY</b></li> <li>• <b>IB</b></li> <li>• <b>INFRARED</b></li> <li>• <b>OTHER</b></li> <li>• <b>TOKENRING</b></li> <li>• <b>UNKNOWN</b></li> <li>• <b>WIRELESSLAN</b></li> </ul>
				portNumber	Integer	Number of the logical port
				addresses	Array of Strings	Assigned addresses
				vnicMode	Boolean	Identifies whether this is a vNIC port. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. This is a vNIC port.</li> <li>• <b>false</b>. This is not a vNIC port.</li> </ul>
				peerBay	Integer	Peer I/O Module bay
				physicalPortIndex	Integer	Number of physical ports
				posID	String	Device ID
				productName	String	Product name
				slotName	String	Name for add-in card slot
				slotNumber	String	Number for add-in card slot
				slotSupportsHotPlug	Boolean	Indicates whether the add-in card supports hot plug. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. Hot plug is supported.</li> <li>• <b>false</b>. Hot plug is not supported.</li> </ul>
				vpdID	String	VPD ID
				addinCardSlots	Integer	Slot number for the add-in card
				agentVersion	String	(ThinkEdge Client devices only) Version of the UDC agent that is running on the device If set to null, the UDC agent agent is not installed.
				arch	String	Architecture. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ia64</b></li> <li>• <b>ppc</b></li> <li>• <b>ppc64</b></li> <li>• <b>x86</b></li> <li>• <b>x86_64</b></li> <li>• <b>Unknown</b></li> </ul>
				assetTag	String	(ThinkSystem rack servers only) Name or Tag that represents the server or other physical enclosure
				attachedNodes	Array of objects	(Switches only)

Attributes	Type	Description
bladeState	Integer	State of the server. This can be one of the following values. <ul style="list-style-type: none"> <li>• 0. Initializing</li> <li>• 1. Active</li> <li>• 2. Discovering</li> <li>• 3. Provisioning</li> <li>• 4. Provision passed</li> <li>• 5. Provision failed</li> <li>• 6. Provisioning failed with isolate</li> <li>• 7. Pre initialization</li> <li>• 8. SDR load</li> <li>• 9. POST initialization</li> <li>• 10. Communications error</li> <li>• 11. Init failed</li> <li>• 12. Kernel mode</li> <li>• 13. Maintenance mode</li> <li>• 14. Fire hose dump mode</li> <li>• 15. Flashing</li> <li>• 16. No power</li> <li>• 17. Unknown</li> </ul>
bmuParamObject	String	
canisters	Array of objects	(Storage devices only) Information about each canister in the device
id	String	Canister ID
cmmDisplayName	String	(Chassis only) Chassis name
cmmHealthState	String	(Chassis only) Health state (translated). This can be one of the following values.
cmms	Array of objects	(Chassis only) Information about each CMM
accessState	String	Access state (translated) of the chassis. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Online</b></li> <li>• <b>Offline</b></li> <li>• <b>Offline Managed</b></li> <li>• <b>Partial</b></li> <li>• <b>Pending</b></li> <li>• <b>Unknown</b></li> </ul>
accessStateKey	String	Access state key of the chassis. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Online</b></li> <li>• <b>Offline</b></li> <li>• <b>Offline Managed</b></li> <li>• <b>Partial</b></li> <li>• <b>Pending</b></li> <li>• <b>Unknown</b></li> </ul>
accurateHealth	Boolean	Indicates whether the health status is accurate. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The <b>accessState</b> is Offline Managed, Online, or partial.</li> <li>• <b>false</b>. The <b>accessState</b> is Offline, Pending, or Unknown.</li> </ul>

Attributes		Type	Description
	backedBy	String	Indicates whether the data is from a real or demo server. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>real</b>. The inventory describes real hardware.</li> <li>• <b>demo</b>. The inventory describes demo (mock) hardware.</li> <li>• <b>proxy</b>. A proxy is temporarily serving to provide the inventory.</li> </ul>
	cmmDisplayName	String	Display name provided by the CMM
	cmmHealthState	String	Health summary that corresponds to the highest event severity of all the devices. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	dataHandle	Long	Time stamp of the last status update
	description	String	Description that was provided by the CMM
	deviceTypeKey	String	
	domainName	String	User-defined domain name
	dnsHostnames	Array of strings	
	errorFields	Array of objects	Error code. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>FETCH_SUCCESS</b></li> <li>• <b>FETCH_FAILED</b></li> <li>• <b>NO_CONNECTOR</b></li> <li>• <b>FATAL_EXCEPTION</b></li> <li>• <b>NETWORK_FAIL</b></li> </ul>
	excludedHealthState	String	Highest severity alert with exclusions. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	firmware	Array of objects	Information about CMM firmware
	build	String	Firmware build
	classifications	Array of integers	Firmware type codes
	date	String	Firmware date
	name	String	Firmware name
	deviceTypeKey	String	
	revision	String	Firmware revision
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID	String	Firmware ID

Attributes		Type	Description
	status	String-Boolean	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type, such as UEFI, MP, or DSA
	version	String	Firmware version
	FRU	String	CMM FRU part number
	fruSerialNumber	String	CMM FRU serial number
	hostConfig	Array of objects	Information about host configuration
	DDNSenabled	Boolean	Identifies whether dynamic DNS enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. Dynamic DNS is enabled.</li> <li>• <b>false</b>. Dynamic DNS is disabled.</li> </ul>
	DNSenabled	Boolean	Identifies whether DNS enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. DNS is enabled.</li> <li>• <b>false</b>. DNS is disabled.</li> </ul>
	IPversionPriority	String	IP version priority. This can be one of the following values <ul style="list-style-type: none"> <li>• <b>IPv6ThenIPv4</b></li> <li>• <b>IPv4ThenIPv6</b></li> </ul>
	priIPv4userDNSserver	String	Primary user assigned IPv4 DNS server
	priIPv6userDNSserver	String	Primary user assigned IPv6 DNS server
	secIPv4userDNSserver	String	Secondary user assigned IPv4 DNS server
	secIPv6userDNSserver	String	Secondary user assigned IPv6 DNS server
	terIPv4userDNSserver	String	Tertiary user assigned IPv4 DNS server
	terIPv6userDNSserver	String	Tertiary user assigned IPv6 DNS server
	hostname	String	User-defined hostname
	ipInterfaces	Array of objects	Information about each IP interface
	IPv4assignments	Array of objects	Information about each IPv4 assignment
	id	Integer	IPv4 assignment ID
	address	String	IPv4 address
	deviceTypeKey	String	
	gateway	String	IPv4 gateway
	subnet	String	IPv4 subnet mask
	type	String	Type of the IPv4 assignment. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>INUSE</b></li> <li>• <b>CONFIGURED</b></li> <li>• <b>ALIAS</b></li> <li>• <b>UNKNOWN</b></li> </ul>

Attributes		Type	Description
	IPv4DHCPmode	String	IP address assignment method. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>STATIC_ONLY</b></li> <li>• <b>DHCP_ONLY</b></li> <li>• <b>DHCP_THEN_STATIC</b></li> <li>• <b>UNKNOWN</b></li> </ul>
	IPv4enabled	Boolean	Identifies whether IPv4 is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv4 is enabled.</li> <li>• <b>false</b>. IPv4 is disabled.</li> </ul>
	IPv6assignments	Array of objects	Information about each IPv6 assignment
	id	Integer	IPv6 assignment ID
	address	String	IPv6 address
	gateway	String	IPv6 gateway
	prefix	Integer	IPv6 prefix
	scope	String	Scope of the IPv6 assignment. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Global</b></li> <li>• <b>LinkLocal</b></li> <li>• <b>Unknown</b></li> </ul>
	source	String	Source of the IPv6 assignment. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>DHCP</b></li> <li>• <b>Stateless</b></li> <li>• <b>Static</b></li> <li>• <b>Other</b></li> <li>• <b>Unknown</b></li> </ul>
	type	String	Type of the IPv6 assignment. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>INUSE</b></li> <li>• <b>CONFIGURED</b></li> <li>• <b>ALIAS</b></li> <li>• <b>UNKNOWN</b></li> </ul>
	IPv6DHCPenabled	Boolean	Identifies whether IPv6 DHCP is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv6 DHCP is enabled.</li> <li>• <b>false</b>. IPv6 DHCP is disabled.</li> </ul>
	IPv6enabled	Boolean	Identifies whether IPv6 is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv6 is enabled.</li> <li>• <b>false</b>. IPv6 is disabled.</li> </ul>
	IPv6statelessEnabled	Boolean	Identifies whether IPv6 stateless is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv6 stateless is enabled.</li> <li>• <b>false</b>. IPv6 stateless is disabled.</li> </ul>
	IPv6staticEnabled	Boolean	Identifies whether IPv6 static is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv6 static is enabled.</li> <li>• <b>false</b>. IPv6 static is disabled.</li> </ul>

Attributes		Type	Description
	label	String	Label
	name	String	Name
	ipv4Addresses	Array of strings	List of IPv4 addresses
	ipv6Addresses	Array of strings	List of IPV6 addresses
	leds	Array of objects	Information about server LEDs
	color	String	LED color. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Red</b></li> <li>• <b>Amber</b></li> <li>• <b>Yellow</b></li> <li>• <b>Green</b></li> <li>• <b>Blue</b></li> <li>• <b>Unknown</b></li> </ul>
	location	String	LED location. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Front panel</b></li> <li>• <b>Lightpath Card</b></li> <li>• <b>Planar</b></li> <li>• <b>FRU</b></li> <li>• <b>Rear Panel</b></li> <li>• <b>Unknown</b></li> </ul>
	name	String	LED name
	state	String	LED state. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Blinking</b></li> <li>• <b>Unknown</b></li> </ul>
	macAddresses	Array of strings	List of MAC addresses
	machineType	String	Server machine type
	manufacturer	String	Manufacturer
	manufacturerId	String	Manufacturer ID
	mgmtProclPAddress	String	IP address used by XClarity Orchestrator to manage this resource
	model	String	CMM model
	name	String	Name that is displayed in the user interface for this device
	overallHealthState	String	Highest severity of all alerts. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	overallHealthStateKey	String	Highest severity key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>

Attributes		Type	Description
	parent	Object	Information about the parent device
	uri	String	Parent URI
	uuid	String	Parent UUID
	partNumber	String	CMM part number
	powerAllocation	Object	
	maximumAllocatedPower	Long	Maximum power that is allocated
	minimumAllocatedPower	Long	Minimum power that is allocated
	powerStatus	String	
	powerStatusKey	String	
	productId	String	CMM product ID
	role	String	Role of the CMM. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>primary</b></li> <li>• <b>backup</b></li> </ul>
	serialNumber	String	CMM serial number
	slots	Array of integers	CMM primary slot
	type	String	Resource type. This value is always <b>CMM</b> .
	userDefinedName	String	User-defined name for the device
	userDescription	String	Description that was defined by the user
	uri	String	CMM URI
	uuid	String	CMM UUID
	configCompliance	Array of objects	Information about the server-configuration compliance
	addressPresent	Boolean	Identifies whether address pools are used. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. Address pools are used.</li> <li>• <b>false</b>. Address pools are not used.</li> </ul>
	complianceStatus	String	Compliance status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>valid</b>. Server settings are compliant with the profile</li> <li>• <b>invalid</b>. Server settings are Non-compliant with the profile</li> <li>• <b>none</b>. Compliance has not been calculated because pattern is still activated, pending or inactive</li> </ul>
	managementPatternPresent	Boolean	Identifies whether a management-interface pattern is used. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. A management-interface pattern is used.</li> <li>• <b>false</b>. A management-interface pattern is not used.</li> </ul>
	profileName	String	Name of the server profile

Attributes		Type	Description
	profileStatus	String	Current status of the profile. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ASSIGNED</b>. The profile is assigned to the server.</li> <li>• <b>UNASSIGNED</b>. The profile is not assigned to any server.</li> <li>• <b>PENDING_ACTIVATION</b>. The profile is created and targeted to a server but has not been activated yet.</li> <li>• <b>ACTIVATING</b>. The profile is currently being activated on the targeted server.</li> <li>• <b>ERROR_ACTIVATING</b>. There was an error while activating the profile on the targeted server.</li> </ul>
	templateId	String	ID of the server pattern that was used to create the profile
	type	String	Internal use only
	contact	String	Contact (assigned in Lenovo XClarity Administrator)
	contacts	Object	Information about support contacts for this device (assigned in XClarity Orchestrator)
	primary	Object	Information about the primary contact
	id	String	Contact ID
	fullName	String	Contact name
	companyName	String	Company name
	contactEmail	String	Email address
	contactPhone	String	Phone number
	streetAddress	String	Street address
	city	String	City
	stateProvince	String	State or province
	postalCode	String	Country or region
	country	String	Postal code
	preferredContactMethod	String	Preferred contact method. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>any</b></li> <li>• <b>phone</b></li> <li>• <b>email</b></li> </ul>
	uri	String	Contact URI
	secondary	Array of strings	Information about each secondary contact
	id	String	Contact ID
	fullName	String	Contact name
	companyName	String	Company name
	contactEmail	String	Email address
	contactPhone	String	Phone number
	streetAddress	String	Street address
	city	String	City



Attributes		Type	Description
	stateProvince	String	State or province
	postalCode	String	Country or region
	country	String	Postal code
	preferredContactMethod	String	Preferred contact method. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>any</b></li> <li>• <b>phone</b></li> <li>• <b>email</b></li> </ul>
	uri	String	Contact URI
	dataHandle	Long	Time stamp of the last status update
	description	String	
	deviceDrivers	Array of objects	Information about the device drivers
	displayName	String	Display name
	driverClass	String	Class
	driverClassId	String	Class ID
	driverFiles	Array of objects	Information about the device-driver files
	path	String	File path
	version	String	File version
	installDate	String	Installation date
	instID	String	Installation ID
	localInfName	String	Local INF file name
	name	String	Name
	releaseDate	String	Release date
	version	String	Version
	deviceInfo	Object	Information about the device
	domainName	String	Domain name
	entitledSerialNumber	String	Entitled serial number
	groupNames	Array of strings	List of names for groups that include this device
	healthStatus	String	Highest severity of all alerts (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>

Attributes		Type	Description
	healthStatusKey	String	Severity key of highest severity of all alerts. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>
	hostname	String	Hostname
	ipv4Addresses	Array of strings	List of IPv4 addresses
	ipv6Addresses	Array of strings	List of IPV6 addresses
	location	Object	Information about the location of the server or Flex System storage device
	location	String	Location
	lowestRackUnit	Integer	Lowest rack unit
	rack	String	Rack
	room	String	Room
	machineType	String	Machine type
	manager	Object	Information about the resource manager that manages this device
	id	String	Resource manager ID
	domainName	String	Fully qualified domain name
	hostname	String	Host name
	inContextHref	String	In context URI
	ipv4Addresses	Array of strings	IPv4 addresses
	ipv6Addresses	Array of strings	IPv6 addresses
	model	String	Device model
	powerStatus	String	Power status (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Standby</b></li> <li>• <b>Unknown</b></li> </ul>
	powerStatusKey	String	Power status key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Standby</b></li> <li>• <b>Unknown</b></li> </ul>
	productName	String	Product name
	serialNumber	String	Device serial number
	userDefinedName	String	User-defined name for the device

Attributes	Type	Description
uuid	String	Device UUID
deviceName	String	Device name
deviceType	String	Device type (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Chassis</b></li> <li>• <b>Server</b></li> <li>• <b>Storage</b></li> <li>• <b>Switch</b></li> </ul>
deviceTypeKey	String	Device type key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>chassis</b></li> <li>• <b>server</b></li> <li>• <b>storage</b></li> <li>• <b>switch</b></li> </ul>
discoveryTimestamp	String	Timestamp when the device was discovered This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
diskDriveSensorInfo	Array of strings	List of hard-driver sensor names
dnsHostnames	Array of string	
domainName	String	Domain name
driveBays	Integer	Number of drive bays
drives	Array of objects	Drive details
bay	Integer	Drive bay
blockSize	Integer	Block size
capacity	Long	Drive capacity
description	String	Description
deviceTypeKey	String	
diskState	String	Disk-drive state
encryptionStatus	String	Indicates whether the disk drive is encrypted. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>unencrypted</b>. The drive is not encrypted.</li> <li>• <b>locked</b>. The drive is encrypted, and the host is power off.</li> <li>• <b>unlocked</b>. The drive is encrypted, and the host is power on.</li> </ul>
firmware	Array of objects	Information about add-in card firmware
build	String	Firmware build
classifications	Array of integers	Firmware type codes
date	String	Firmware date
name	String	Firmware name

Attributes		Type	Description
	revision	String	Firmware revision
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID	String	Firmware ID
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type, such as UEFI, MP, or DSA
	version	String	Firmware version
	FRU	String	FRU
	healthState	String	Health state (translated) that corresponds to the highest event severity of all disk drives in the device. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	healthStateKey	String	Health state key that corresponds to the highest event severity of all disk drives in the device. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>
	hotSpareType	String	Type of hot spare drive. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Global</b></li> <li>• <b>None</b></li> </ul>
	interfaceType	String	(ThinkServer servers only) Drive interface type
	largestAvailableSize	Integer	
	m2Location	String	(M.2 drives only) Location of M.2 drive and bay
	manufacturer	String	Manufacturer
	mediaType	String	Media type
	model	String	Model
	name	String	Drive name
	numberOfBlocks	Integer	Number of blocks
	partNumber	String	Part number
	remainingLife	Integer	Indicate the amount of life that remains for a solid-state drive (SSD). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>0 - 100</b>. The percent of remaining life</li> <li>• <b>-1</b>. Unknown (default)</li> <li>• <b>-2</b>. Information is not available</li> <li>• <b>-3</b>. The drive is not an SSD</li> </ul>

Attributes	Type	Description
serialNumber	String	Serial number
temperature	String	Device temperature
uuid	String	Storage device UUID
drivesInstalled	Integer	(Storage devices only) Number of installed drives
encapsulation	Object	Information about encapsulation
encapsulationMode	String	Encapsulation (firewall settings) mode. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>NOT_SUPPORTED</b>. Encapsulation is not supported for this device.</li> <li>• <b>NORMAL</b>. Encapsulation is disabled for this device. The global encapsulation setting is disabled by default. When disabled, the device encapsulation mode is set to “normal” and the firewall rules are not changed as part of the management process.</li> <li>• <b>ENCAPSULATION_LIGHT</b>. Encapsulation is enabled for this device. When the global encapsulation setting is enabled and the device supports encapsulation, XClarity Administrator communicates with the device during the management process to change the device encapsulation mode to “encapsulationLite” and to change the firewall rules on the device to limit incoming requests to those only from XClarity Administrator.</li> </ul>
excludedHealthState	String	Highest severity alert with exclusions. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
expansionCards	Array of objects	Information about expansion cards
fodUniqueID	String	Feature on demand (FoD) unique ID
isAddOnCard	Boolean	Identifies whether the device is an add-on card. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The device is an add-on card</li> <li>• <b>false</b>. The device is not an add-on card</li> </ul>
isAgentless	Boolean	Identifies whether the device is agentless. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The device is agentless.</li> <li>• <b>false</b>. The device is not agentless.</li> </ul>
name	String	Description
pciBusNumber	String	PCI bus number
pciDeviceNumber	String	PCI device number
pciFunctionNumber	String	PCI function number
pciSubID	String	PCI subsystem ID
pciSubVendorID	String	PCI sub-vendor ID
portInfo	Object	Information about the ports

Attributes				Type	Description
			physicalPorts	Array of objects	Information about the physical ports
			logicalPorts	Array of objects	List of associated logical ports
			addresses	Array of Strings	Assigned addresses
			logicalPortIndex	Integer	Number of logical ports
			portNumber	Integer	Number of the logical port
			portType	String	Logical port type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ATM</b></li> <li>• <b>BLUETOOTH</b></li> <li>• <b>ETHERNET</b></li> <li>• <b>FC</b></li> <li>• <b>FDDI</b></li> <li>• <b>FRAMERELAY</b></li> <li>• <b>IB</b></li> <li>• <b>INFRARED</b></li> <li>• <b>OTHER</b></li> <li>• <b>TOKENRING</b></li> <li>• <b>UNKNOWN</b></li> <li>• <b>WIRELESSLAN</b></li> </ul>
			vnicMode	Boolean	Identifies whether this is a vNIC port. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. This is a vNIC port.</li> <li>• <b>false</b>. This is not a vNIC port.</li> </ul>
			physicalPortIndex	Integer	Number of physical ports
			portType	String	Physical port type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ATM</b></li> <li>• <b>ETHERNET</b></li> <li>• <b>FC</b></li> <li>• <b>FDDI</b></li> <li>• <b>FRAMERELAY</b></li> <li>• <b>IB</b></li> <li>• <b>OTHER</b></li> <li>• <b>TOKENRING</b></li> <li>• <b>UNKNOWN</b></li> </ul>
			portNumber	Integer	Number of the physical port
			peerBay	Integer	Peer I/O module bay
			posID	String	Device ID
			vpdID	String	VPD ID
			expansionCardSlots	Integer	Expansion card slots
			expansionProducts	Array of strings	(Servers with blade expanders installed only) List of expansion hardware. This can be one or more of the following values. <ul style="list-style-type: none"> <li>• <b>expansionProducts</b></li> <li>• <b>expansionCards</b></li> <li>• <b>addinCards</b></li> <li>• <b>pciExpressCards</b></li> </ul>

Attributes	Type	Description
expansionProductType	String	Expansion product type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>SEN.</b> StorageExpansionNode</li> <li>• <b>PEN.</b> PciExpansionNode</li> <li>• <b>Expansion card</b></li> <li>• <b>Addin Card</b></li> <li>• <b>PCI Express Card</b></li> <li>• <b>Unknown</b></li> </ul>
fans	Array of objects	Information about each fan in the device
description	String	Fan description
healthState	String	Fan health state (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
healthStateKey	String	Fan health state key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>
name	String	Fan name
slot	Integer	Fan slot
slots	Integer	Fan slot
speed	Integer	Fan speed
status	String	Fan status
featuresOnDemand		Information about features on demand (FOD)
features	Array of string	List of active features on demand
tierLevel	Integer	(ThinkSystem only) Tier level of the Lenovo XClarity Controller feature key that is installed. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>0.</b></li> <li>• <b>1.</b> Lenovo XClarity Controller Standard</li> <li>• <b>2.</b> Lenovo XClarity Controller Advanced</li> <li>• <b>3.</b> Lenovo XClarity Controller Enterprise</li> </ul>
firmware	Array of objects	Information about each firmware
build	String	Firmware build
classifications	Array	Firmware type codes
date	String	Firmware date
deviceTypeKey	String	
name	String	Firmware name

Attributes		Type	Description
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type, such as UEFI, MP, or DSA
	version	String	Firmware version
firmwareCompliance		Object	Information about the firmware compliance
	status	String	Compliance status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>compliant</b>. The device is compliant with their server profile.</li> <li>• <b>notCompliant</b>. The device is not compliant with their server profile.</li> <li>• <b>noPolicyAssigned</b>. The device is not assigned a server profile.</li> <li>• <b>unsupportedCompliance</b>. Configuration is not supported for the device.</li> </ul>
flashStorage		Array of objects	Information about flash storage
	defaultBlockSize	Long	Flash storage device block size
	description	String	Flash storage description
	serialNumber	String	Flash storage serial number
firmware		Array of objects	Flash storage firmware properties
	build	String	Firmware build
	classifications	Array of integers	Firmware type codes
	date	String	Firmware date
	name	String	Firmware name
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID	String	Firmware identifier
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type, such as UEFI, MP, or DSA
	version	String	Firmware version
manufacturer		String	Flash storage manufacturer
maxMediaSize		Long	Flash storage device media size



Attributes		Type	Description
	name	String	Flash storage description
	partNumber	String	Flash storage part number
	slotNumber	Integer	Flash storage slot number
	uuid	String	Flash storage UUID
	FQDN	String	Fully qualified domain name
	FRU	String	
	fruSerialNumber	String	
	groups	Array of objects	Information about each group in which this device is a member
	id	String	Group ID
	name	String	Group name
	type	String	Group type. This value is always "DeviceGroup."
	uri	String	Group URI
	hasOS	String	Identifies whether an operating system is installed. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. Operating system is installed.</li> <li>• <b>false</b>. Operating system is not installed.</li> </ul>
	height	Integer	(Rack Server only) Height of the server
	hostname	String	Hostname
	inProcessing	String	
	ipInterfaces	Array of objects	Information about each IP interface
	IPv4assignments	Array of objects	Information about each IPv4 assignment
	id	Integer	IPv4 assignment ID
	address	String	IPv4 address
	deviceTypeKey	String	
	gateway	String	IPv4 gateway
	subnet	String	IPv4 subnet mask
	type	String	Type of the IPv4 assignment. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>INUSE</b></li> <li>• <b>CONFIGURED</b></li> <li>• <b>ALIAS</b></li> <li>• <b>UNKNOWN</b></li> </ul>
	IPv4DHCPmode	String	IP address assignment method. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>STATIC_ONLY</b></li> <li>• <b>DHCP_ONLY</b></li> <li>• <b>DHCP_THEN_STATIC</b></li> <li>• <b>UNKNOWN</b></li> </ul>

Attributes		Type	Description
	IPv4enabled	Boolean	Identifies whether IPv4 is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv4 is enabled.</li> <li>• <b>false</b>. IPv4 is disabled.</li> </ul>
	IPv6assignments	Array of objects	Information about each IPv6 assignment
	id	Integer	IPv6 assignment ID
	address	String	IPv6 address
	gateway	String	IPv6 gateway
	prefix	Integer	IPv6 prefix
	scope	String	Scope of the IPv6 assignment. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Global</b></li> <li>• <b>LinkLocal</b></li> <li>• <b>Unknown</b></li> </ul>
	source	String	Source of the IPv6 assignment. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>DHCP</b></li> <li>• <b>Stateless</b></li> <li>• <b>Static</b></li> <li>• <b>Other</b></li> <li>• <b>Unknown</b></li> </ul>
	type	String	Type of the IPv6 assignment. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>INUSE</b></li> <li>• <b>CONFIGURED</b></li> <li>• <b>ALIAS</b></li> <li>• <b>UNKNOWN</b></li> </ul>
	IPv6DHCPEnabled	Boolean	Identifies whether IPv6 DHCP is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv6 DHCP is enabled.</li> <li>• <b>false</b>. IPv6 DHCP is disabled.</li> </ul>
	IPv6enabled	Boolean	Identifies whether IPv6 is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv6 is enabled.</li> <li>• <b>false</b>. IPv6 is disabled.</li> </ul>
	IPv6statelessEnabled	Boolean	Identifies whether IPv6 stateless is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv6 stateless is enabled.</li> <li>• <b>false</b>. IPv6 stateless is disabled.</li> </ul>
	IPv6staticEnabled	Boolean	Identifies whether IPv6 static is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. IPv6 static is enabled.</li> <li>• <b>false</b>. IPv6 static is disabled.</li> </ul>
	label	String	Label
	name	String	Name
	ipv4Addresses	Array of strings	List of IPv4 addresses

Attributes	Type	Description
ipv6Addresses	Array of strings	List of IPV6 addresses
isEmbedded	Boolean	
isITME	Boolean	Indicates whether the server is a Flex System compute node. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The node is a compute node.</li> <li>• <b>false</b>. The node is not a compute node.</li> </ul>
isRemotePresenceEnabled	Boolean	Indicates whether remote presence is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. Remote presence is enabled</li> <li>• <b>false</b>. Remote presence is disabled</li> </ul>
isScalable	Boolean	Indicates whether this is a scalable device. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b></li> <li>• <b>false</b></li> </ul>
isITME	Boolean	Indicates whether this device is a compute node in a chassis. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b></li> <li>• <b>false</b></li> </ul>
lanOverUsb	String	Identifies whether LAN over USB is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>enabled</b>. LAN over USB is enabled.</li> <li>• <b>disabled</b>. LAN over USB is disabled.</li> </ul>
lanOverUsbPortForwardingModes	Array of objects	Ethernet-over-USB port forwarding mode
deviceTypeKey	String	
externalIPAddress	String	IP address of the port
state	String	Identifies whether the Ethernet over USB port forwarding mode is enabled or disabled. This can be one of the following values <ul style="list-style-type: none"> <li>• <b>enabled</b></li> <li>• <b>disabled</b></li> </ul>
type	String	Type of LAN over USB port. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>OSDeploy</b></li> </ul>
lastSyncTimestamp	String	Timestamp when this data was last refreshed from the resource manager This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
lastUpdateTimestamp	String	Timestamp when this data was last updates from the resource manager This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
leds	Array of objects	Information about server LEDs

Attributes	Type	Description
color	String	LED color. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Red</b></li> <li>• <b>Amber</b></li> <li>• <b>Yellow</b></li> <li>• <b>Green</b></li> <li>• <b>Blue</b></li> <li>• <b>Unknown</b></li> </ul>
location	String	LED location. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Front panel</b></li> <li>• <b>Lightpath Card</b></li> <li>• <b>Planar</b></li> <li>• <b>FRU</b></li> <li>• <b>Rear Panel</b></li> <li>• <b>Unknown</b></li> </ul>
name	String	LED name
state	String	LED state. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Blinking</b></li> <li>• <b>Unknown</b></li> </ul>
location	Object	Information about the location of the server or Flex System storage device
location	String	Location
lowestRackUnit	Integer	Lowest rack unit
rack	String	Rack
room	String	Room
ixcaOverallHealthState	String	Resource manager health state. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
ixcaUUID	String	Resource manager UUID
m2Presence	Boolean	Indicates whether the device contains M.2 storage. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. M.2 storage is present.</li> <li>• <b>false</b>. M.2 storage is not present.</li> </ul>
macAddresses	Array of strings	List of MAC addresses
machineType	String	Server machine type
manager	Object	Information about the resource manager that manages this device
id	String	Resource manager ID
domainName	String	Fully qualified domain name
groups	Array of objects	Information about groups in which the manager is a member

Attributes		Type	Description
	id	String	Group ID
	name	String	Group name
	type	String	Group type. This value is always <b>ManagerGroup</b> .
	uri	String	Group URI
	hostname	String	Host name
	inContextHref	String	In context URI
	ipv4Addresses	Array of strings	IPv4 addresses
	ipv6Addresses	Array of strings	IPv6 addresses
	uri	Array of strings	Resource manager URI
	manufacturer	String	Manufacturer
	manufacturerID	String	Manufacturer ID
	memoryModules	Array of objects	Information about memory modules
	capacity	Long	Capacity
	deviceTypeKey	String	
	displayName	String	Display name
	fruPartNumber	String	
	healthState	String	Health state (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	healthStateKey	String	Health state key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>
	manufacturer	String	Manufacturer
	model	String	Model
	operatingMemoryMode	Array of strings	
	partNumber	String	Part number
	present	Boolean	
	serialNumber	String	Serial number
	slot	Integer	Slot
	speed	Long	Number of data-transfer operations that occur in each second, in MT/s (megatransfers per second)

Attributes		Type	Description
	speedMBs	Long	Amount of data that is transferred in each second, in MB/s (megabytes per second)
	type	String	Type
	mgmtProclPAddress	String	IP address used by XClarity Orchestrator to manage this resource
	mgmtProcType	String	Type of management controller. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>FSP</b></li> <li>• <b>IMM2</b></li> <li>• <b>XCC</b></li> <li>• <b>XCC2</b></li> <li>• <b>UNKNOWN</b></li> </ul>
	model	String	Server model
	mtrn	String	Machine type and model, separate by a forward slash (for example, 8387/AC1)
	name	String	Name that is displayed in the user interface for this device
	onboardPciDevices	Array of objects	Information about onboard PCI device
	class	String	Class
	firmware	Array of objects	Information about add-in card firmware
	build	String	Firmware build
	classifications	Array of integers	Firmware type codes
	date	String	Firmware date
	deviceTypeKey	String	
	name	String	Firmware name
	revision	String	Firmware revision
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID	String	Firmware ID
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type
	version	String	Firmware version
	FRU	String	Add-in card FRU part number
	isAddOnCard	Boolean	Identifies whether the device is an add-in card. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The device is an add-on card</li> <li>• <b>false</b>. The device is not an add-on card</li> </ul>

Attributes		Type	Description
	isAgentless	Boolean	Identifies whether the device is agentless. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The device is agentless.</li> <li>• <b>false</b>. The device is not agentless.</li> </ul> <b>Note:</b> If <b>isAgentless</b> is false, some inventory values might be empty.
	isPLDMUpdateSupported	Boolean	Identifies whether the Platform Level Data Model updates are supported. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. PLDM update is supported.</li> <li>• <b>false</b>. PLDM update is not supported.</li> </ul>
	name	String	Add-in card description
	pciBusNumber	String	PCI bus number
	pciDeviceNumber	String	PCI device number
	pciFunctionNumber	String	PCI function number
	pciRevision	String	PCI revision number
	pciSubID	String	PCI subsystem ID
	pciSubVendorID	String	PCI sub-vendor ID
	portInfo	Object	Information about the port
	physicalPorts	Array of objects	Information about the physical port
	portType	String	Physical port type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ATM</b></li> <li>• <b>ETHERNET</b></li> <li>• <b>FC</b></li> <li>• <b>FDDI</b></li> <li>• <b>FRAMERELAY</b></li> <li>• <b>IB</b></li> <li>• <b>OTHER</b></li> <li>• <b>TOKENRING</b></li> <li>• <b>UNKNOWN</b></li> </ul>
	portNumber	Integer	Number of the physical port
	logicalPorts	Array of objects	List of associated logical ports
	logicalPortIndex	Integer	Number of logical ports
	portType	String	Logical port type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ATM</b></li> <li>• <b>BLUETOOTH</b></li> <li>• <b>ETHERNET</b></li> <li>• <b>FC</b></li> <li>• <b>FDDI</b></li> <li>• <b>FRAMERELAY</b></li> <li>• <b>IB</b></li> <li>• <b>INFRARED</b></li> <li>• <b>OTHER</b></li> <li>• <b>TOKENRING</b></li> <li>• <b>UNKNOWN</b></li> <li>• <b>WIRELESSLAN</b></li> </ul>
	portNumber	Integer	Number of the logical port

Attributes					Type	Description
				addresses	Array of strings	Assigned addresses
				vnicMode	Boolean	Identifies whether this is a vNIC port. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. This is a vNIC port.</li> <li>• <b>false</b>. This is not a vNIC port.</li> </ul>
				peerBay	Integer	Peer I/O module bay
				physicalPortIndex	Integer	Number of physical ports
				posID	String	Device ID
				vpdID	String	VPD ID
				osInfo	Object	Information about the operating system that is installed on the device
				description	String	Operating system name and version
				hostname	String	Hostname or IP address of the operating system
				os_country	String	(ThinkEdge Client devices only) Country where the operating system is installed
				os_language	String	(ThinkEdge Client devices only) Operating system language
				os_name	String	(ThinkEdge Client devices only) Operating system name
				os_version	String	(ThinkEdge Client devices only) Operating system version
				storedCredential	String	URI of the stored-credential account that is used to access the operating system (for example, storedCredentials/2653)
				osProfiles	Object	Information about the operating-system profile for the server
				applicableStatus	String	Profile status (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Assigned</b>. An OS profile is assigned to this device.</li> <li>• <b>No Profile Assigned</b>. An OS profile is not assigned to this device.</li> </ul>
				applicableStatusKey	String	Profile status key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>assigned</b>. An OS profile is assigned to this device.</li> <li>• <b>noProfileAssigned</b>. An OS profile is not assigned to this device.</li> </ul>
				assigned	Object	Information about the assigned profile
				id	String	Profile ID
				name	String	Profile name
				uri	String	Profile URI
				deployStatus	String	OS profile deployment status (translated). This can be one of the following values.
				deployStatusKey	String	OS profile deployment status key. This can be one of the following values.



Attributes	Type	Description
overallHealthState	String	Highest severity of all devices (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
overallHealthStateKey	String	Highest severity key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>
parent	Object	Information about the parent of the server or Flex System storage device, if applicable
uri	String	Parent URI
uuid	String	Parent UUID
partNumber	String	Part number
patterns	Object	Information about the sever-configuration pattern that is assigned to this device
assigned	Object	Information about the assigned pattern
id	String	Pattern ID
name	String	Pattern name
complianceStatus	String	Compliance status (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Compliant</b></li> <li>• <b>Failed Deployment</b></li> <li>• <b>No Pattern Assigned</b></li> <li>• <b>Not Compliant</b></li> <li>• <b>Pending Compliance Check</b></li> <li>• <b>Pending Deployment</b></li> <li>• <b>Pending Restart</b></li> </ul>
complianceStatusKey	String	Compliance status key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>compliant</b></li> <li>• <b>failedDeployment</b></li> <li>• <b>noPatternAssigned</b></li> <li>• <b>notCompliant</b></li> <li>• <b>pendingComplianceCheck</b></li> <li>• <b>pendingDeployment</b></li> <li>• <b>pendingRestart</b></li> </ul>
pciDevices	Array of objects	Information about PCI devices

Attributes		Type	Description
	class	String	Class (basic function) of the PCI device. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Bridge</b></li> <li>• <b>Communication</b> controller</li> <li>• <b>Coprocessor</b></li> <li>• <b>Display</b> controller</li> <li>• <b>Docking</b> station</li> <li>• <b>Encryption controller</b></li> <li>• <b>Generic system peripheral</b></li> <li>• <b>Input device controller</b></li> <li>• <b>Intelligent controller</b></li> <li>• <b>Mass storage controller</b></li> <li>• <b>Memory controller</b></li> <li>• <b>Multimedia controller</b></li> <li>• <b>Network controller</b></li> <li>• <b>Non-Essential Instrumentation</b></li> <li>• <b>Processing accelerators</b></li> <li>• <b>Processor</b></li> <li>• <b>Satellite communications controller</b></li> <li>• <b>Serial bus controller</b></li> <li>• <b>Signal processing controller</b></li> <li>• <b>Unassigned class</b></li> <li>• <b>Unclassified device</b></li> <li>• <b>Unknown device</b></li> <li>• <b>Wireless controller</b></li> </ul>
	firmware	Array of objects	Flash storage firmware properties
	build	String	Firmware build
	classifications	Array of integers	Firmware type codes
	date	String	Firmware date
	deviceTypeKey	String	
	name	String	Firmware name
	revision	String	Firmware revision
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID	String	Firmware ID
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type, such as UEFI, MP, or DSA
	version	String	Firmware version
	fodUniqueID	String	FoD unique ID
	FRU	String	
	fruSerialNumber	String	

Attributes				Type	Description
			isAddOnCard	Boolean	Identifies whether the device is an add-on card. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The device is an add-on card</li> <li>• <b>false</b>. The device is not an add-on card</li> </ul>
			isAgentless	Boolean	Identifies whether the device is agentless. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The device is agentless.</li> <li>• <b>false</b>. The device is not agentless.</li> </ul>
			isPLDMUpdateSupported	Boolean	Identifies whether the Platform Level Data Model updates are supported. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. PLDM update is supported.</li> <li>• <b>false</b>. PLDM update is not supported.</li> </ul>
			manufacturer	String	Manufacturer
			name	String	Description
			partNumber	String	Part number
			pciBusNumber	String	PCI bus number
			pciDeviceNumber	String	PCI device number
			pciFunctionNumber	String	PCI function number
			pciRevision	String	PCI revision
			pciSubID	String	PCI subsystem ID
			pciSubVendorID	String	PCI sub-vendor ID
			portInfo	Object	Information about the ports
			physicalPorts	Array of objects	Information about the physical ports
			logicalPorts	Array of objects	List of associated logical ports
			addresses	Array of Strings	Assigned addresses
			logicalPortIndex	Integer	Number of logical ports
			portNumber	Integer	Number of the logical port
			portType	String	Logical port type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ATM</b></li> <li>• <b>BLUETOOTH</b></li> <li>• <b>ETHERNET</b></li> <li>• <b>FC</b></li> <li>• <b>FDDI</b></li> <li>• <b>FRAMERELAY</b></li> <li>• <b>IB</b></li> <li>• <b>INFRARED</b></li> <li>• <b>OTHER</b></li> <li>• <b>TOKENRING</b></li> <li>• <b>UNKNOWN</b></li> <li>• <b>WIRELESSLAN</b></li> </ul>

Attributes				Type	Description
			vnicMode	Boolean	Identifies whether this is a vNIC port. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. This is a vNIC port.</li> <li>• <b>false</b>. This is not a vNIC port.</li> </ul>
			peerBay	Integer	Peer Flex switch bay
			physicalPortIndex	Integer	Number of physical ports
			portNumber	Integer	Number of the physical port
			portType	String	Physical port type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ATM</b></li> <li>• <b>ETHERNET</b></li> <li>• <b>FC</b></li> <li>• <b>FDDI</b></li> <li>• <b>FRAMERELAY</b></li> <li>• <b>IB</b></li> <li>• <b>OTHER</b></li> <li>• <b>TOKENRING</b></li> <li>• <b>UNKNOWN</b></li> </ul>
			speed	Long	Link speed, in Gbps (for example, 2.5)
			status	String	Link status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>up</b></li> <li>• <b>down</b></li> <li>• <b>unknown</b></li> </ul>
			posID	String	
			productName	String	
			slotName	String	
			slotNumber	String	
			slotSupportsHotPlug	String	
			vpdID	String	
			ports	Array of objects	Port information
			ioModuleBay	Integer	Attached IO module bay number
			portNumber	Integer	Port number
			posID	String	Device ID
			powerAllocation	Object	Information about power allocation
			maximumAllocatedPower	Long	Maximum power allocated to the server
			minimumAllocatedPower	Long	Minimum power allocated to the server
			powerCappingPolicy	Object	(Rack Server only)
			cappingACorDCMode	String	Capping AC or DC mode. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>AC</b></li> <li>• <b>DC</b></li> <li>• <b>Unknown</b></li> </ul>

Attributes	Type	Description
cappingPolicy	String	Capping policy. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>OFF</b></li> <li>• <b>STATIC</b></li> <li>• <b>UNKNOWN</b></li> </ul>
currentPowerCap	Long	Current power cap
maximumPowerCappingHotPlugLevel	Long	Maximum power capping hot plug level
maxPowerCap	Long	Maximum power capping level
minimumHardCapLevel	Long	Minimum hard capping level
minimumPowerCappingHotPlugLevel	Long	Minimum power capping hot plug level
minPowerCap	Long	Minimum power capping level
powerCappingAllocUnit	String	Power capping allocation unit
powerStatus	String	Power status (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Standby</b></li> <li>• <b>Unknown</b></li> </ul>
powerStatusKey	String	Power status key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Standby</b></li> <li>• <b>Unknown</b></li> </ul>
powerSupplies	Array of objects	(Rack servers only) Information about power supplies
cmmDisplayName	String	Assigned component name
cmmHealthState	String	Health state (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
dataHandle	Long	Time stamp of the last status update
description	String	Assigned component description
deviceTypeKey	String	
excludedHealthState	String	Highest severity alert with exclusions. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
firmware	Array of objects	Information about firmware
build	String	Firmware build
classifications	Array of integers	Firmware type codes

Attributes		Type	Description
	date	String	Firmware date
	deviceTypeKey	String	
	name	String	Firmware name
	revision	String	Firmware revision
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID	String	Firmware ID
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type, such as UEFI, MP, or DSA.
	version	String	Firmware version
	FRU	String	FRU part number
	fruSerialNumber	String	FRU serial number
	hardwareRevision	String	Hardware revision
	healthState	String	Health state (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	healthStateKey	String	Health state key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>
	inputVoltageIsAC	Boolean	Identifies whether the input voltage is ac or dc. This can be one of the following values. The value is valid only if <b>inputVoltageMin</b> and <b>inputVoltageMax</b> are valid. <ul style="list-style-type: none"> <li>• <b>true</b>. ac</li> <li>• <b>false</b>. dc</li> </ul>
	inputVoltageMax	Integer	Maximum input voltage A value of -1 mean it has not been set yet.
	inputVoltageMin	Integer	Minimum input voltage A value of -1 means it has not been set yet.
	leds	Array of objects	Information about power-supply LEDs.
	color	String	LED color. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Red</b></li> <li>• <b>Amber</b></li> <li>• <b>Yellow</b></li> <li>• <b>Green</b></li> <li>• <b>Blue</b></li> <li>• <b>Unknown</b></li> </ul>

Attributes		Type	Description
	location	String	LED location. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Front panel</b></li> <li>• <b>Lightpath Card</b></li> <li>• <b>Planar</b></li> <li>• <b>FRU</b></li> <li>• <b>Rear Panel</b></li> <li>• <b>Unknown</b></li> </ul>
	name	String	LED name
	state	String	LED state. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Blinking</b></li> <li>• <b>Unknown</b></li> </ul>
	machineType	String	Machine type
	manufactureDate	String	Manufacture date
	manufacturer	String	Manufacturer name
	manufacturerId	String	Manufacturer ID
	model	String	Power-supply model
	name	String	User-defined name, if available. Otherwise, this is one of the following values. <ul style="list-style-type: none"> <li>• component name</li> <li>• serial number</li> <li>• UUID</li> </ul>
	overallHealthState		Highest severity of all power supplies(translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	overallHealthStateKey		Highest severity key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	parent	Object	Information about the parent device, if applicable
	uri	String	Parent URI
	uuid	String	Parent UUID
	partNumber	String	Part number
	posID	String	Position ID
	powerAllocation	Object	Information about the power allocation
	totalInputPower	Long	Total input power
	totalOutputPower	Long	Total output power

Attributes	Type	Description
powerState	String	Current power state of the power supply. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>ShuttingDown</b></li> <li>• <b>Standby</b></li> <li>• <b>Hibernate</b></li> <li>• <b>Unknown</b></li> </ul>
productId	String	Product ID
productName	String	Product name
serialNumber	String	Serial number
slots	Array	Power-supply primary slot
type	String	Resource type. This value is always <b>PowerSupply</b>
uri	String	URI
userDescription	String	User description
uuid	String	UUID
vpdID	String	VPD ID
primary	Boolean	
processorIntelSpeedSelect	Object	Information about the Intel processor speed setting
currentValue	String	Current setting from the baseboard management controller
possibleValues	Array of strings	List of possible values
processors		Information about processors
cores	Integer	Number of cores
displayName	String	Display name
family	String	Family
healthState	String	Health state (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
healthStateKey	String	Health state key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>
manufacturer	String	Manufacturer
maxSpeedMHZ	Integer	Maximum processor speed
partNumber	String	
present	Boolean	
productVersion	String	Product version



Attributes		Type	Description
	serialNumber	String	
	slot	Integer	Slot
	socket	String	Socket information. For servers, this is the socket number (for example, "Socket 1"). For scalable complexes, this is the node and socket number (for example, "Node 1 Socket 1").
	speed	Double (float)	Speed
	tdpWatts	Integer	
	processorSlots	Integer	Number of processor slots
	productId	String	Product ID
	productName	String	Product name
	protectedMode	String	
	raidSettings	Array	Information about RAID devices
	batteryData	Array	
	description	String	RAID devices description
	diskDrives	Array of objects	Information about disk drives
	bay	Integer	Bay or slot number
	blockSize	Long	Block size
	capacity	Integer	(M.2 drives only) Storage capacity, in KB
	description	String	Description
	diskState	String	Disk-drive state
	encryptionStatus	String	Indicates whether the disk drive is encrypted. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>unencrypted.</b> The drive is not encrypted.</li> <li>• <b>locked.</b> The drive is encrypted, and the host is power off.</li> <li>• <b>unlocked.</b> The drive is encrypted, and the host is power on.</li> </ul>
	firmware	Array of objects	(M.2 and NVM3 drives only) Information about firmware
	build	String	Firmware build.
	classifications	Array of integers	Firmware type codes
	date	String	Firmware date.
	deviceTypeKey	String	
	name	String	Firmware name.
	revision	String	Firmware revision

Attributes		Type	Description
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID	String	Firmware ID
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type, such as UEFI, MP, or DSA
	version	String	Firmware version.
	FRU	String	FRU
	healthState	String	Health state (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	healthStateKey	String	Health state key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>normal</b></li> <li>• <b>warning</b></li> <li>• <b>critical</b></li> <li>• <b>unknown</b></li> </ul>
	hotSpareType	String	Type of hot spare drive. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Global</b></li> <li>• <b>None</b></li> </ul>
	interfaceType	String	Interface type
	largestAvailableSize	Integer	Largest available size
	m2Location	String	(M.2 drives only) Location of M.2 drive and bay
	manufacturer	String	Manufacturer
	mediaType	String	Media type
	model	String	Model
	name	String	Drive name
	numberOfBlocks	Long	Number of blocks
	partNumber	String	Part number
	remainingLife	Integer	Indicate the amount of life that remains for a solid-state drive (SSD). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>0 - 100</b>. Percent of remaining life</li> <li>• <b>-1</b>. Unknown (default)</li> <li>• <b>-2</b>. Information is not available</li> <li>• <b>-3</b>. Drive is not an SSD</li> </ul>
	serialNumber	String	Serial number
	temperature	Integer	Device temperature
	uuid	String	UUID

Attributes		Type	Description
	firmware	Array of objects	Information about firmware
	build	String	Firmware build
	classifications	Array of integers	Firmware type codes
	date	String	Firmware date
	name	String	Firmware name
	revision		Firmware revision
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID		Firmware ID
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type, such as UEFI, MP, or DSA
	version	String	Firmware version
	isAddOnCard	Boolean	Identifies whether the RAID adapter is an add-on card. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The RAID adapter is an add-on adapter.</li> <li>• <b>false</b>. The RAID adapter is an on-board adapter.</li> </ul>
	model	String	Model
	name	String	RAID devices name
	pciFirmware	Array of objects	
	slotNumber	String	RAID adapter slot number If the RAID adapter is an on-board adapter, this value is null.
	storagePools	Array of objects	Information about each storage pool
	arrayUid	String	Storage array ID
	arrayStatus	String	Storage array status
	combinedRaidLevel	String	Combined RAID level. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>0</b>. Striping</li> <li>• <b>1</b>. Mirroring</li> <li>• <b>5</b>. Distributed dual-parity</li> <li>• <b>6</b>. Striping with-parity</li> <li>• <b>10</b>. Disk mirroring and disk striping (1+0)</li> <li>• <b>50</b>. Distributed parity and disk striping (5+0)</li> <li>• <b>60</b>. Distributed dual-parity and disk striping (6+0)</li> <li>• <b>00</b>.</li> </ul> <p><b>Note:</b> RAID level 0, 1, or 5 are supported on all serves. RAID level 6, 10, 50, 60, and 00 are supported only on ThinkSystem servers with XCC version 2.1 and later. (ThinkSystem SR950 requires XCC version 1.4 or later).</p>

Attributes				Type	Description
			diskDrives	Array of objects	Information about each disk drive in the storage pool
			bay	Integer	Bay
			blockSize	Integer	Block size
			capacity	Long	Storage capacity
			description	String	Drive description
			diskState	String	Drive state
			firmware	Array of objects	Information about disk-drive firmware
			build	String	Firmware build
			classifications	Array of integers	Firmware type codes
			date	String	Firmware date
			name	String	Firmware name
			revision	String	Firmware revision
			role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
			softwareID	String	Firmware ID
			status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
			type	String	Firmware type, such as UEFI, MP, or DSA
			version	String	Firmware version
			FRU	String	Drive FRU
			healthState	String	Drive health status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
			interfaceType	String	Drive interface type
			largestAvailableSize	Integer	Largest available size
			m2Location	String	M.2 location
			manufacturer	String	Drive manufacturer
			mediaType	String	Media type
			model	String	Drive model
			name	String	Drive name
			numberOfBlocks	Long	Number of blocks

Attributes		Type	Description
	remainingLife	Integer	Indicate the amount of life that remains for a solid-state drive (SSD). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>0 - 100</b>. Percent of remaining life</li> <li>• <b>-1</b>. Unknown (default)</li> <li>• <b>-2</b>. Information is not available</li> <li>• <b>-3</b>. Drive is not an SSD</li> </ul>
	partNumber	String	Drive part number
	serialNumber	String	Drive serial number
	uuid	String	Drive UUID
	description	String	Storage description
	name	String	Storage name
	raidLevel	Integer	RAID level
	remainingSpace	Integer	Remaining space
	totalManagedSpace	Long	
	storageVolumes	Array of objects	Information about each storage volume
	accessPermission	String	
	blockSize	Integer	
	bootable	Boolean	
	description	String	
	driveIndex	Integer	
	health	String	
	isSDRAID	String	
	LUN	Integer	
	name	String	
	numberOfBlocks	Long	
	primaryPartition	Integer	
	removable	Boolean	
	stripeSize	Integer	
	targetType	String	
	volumeID	String	
	volumeStatus	String	
	volumeType	String	
	volumeOwner	String	
	volumeUID	String	
	uuid	String	RAID device UUID
	releaseName	String	Release name

Attributes	Type	Description
securityDescriptor	Object	Information about the authentication enablement and support the associated stored credentials for a managed device
identityManagementSystemEnabled	Boolean	Indicates whether to use an identity-management system for authentication. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. An identity-management system is to authenticate this device.</li> <li>• <b>false</b>. An identity-management system is not used to authenticate this device. In this case, either manually entered credentials or stored credentials must be used.</li> </ul> <p><b>Note:</b> Identity management systems can be used to authenticate only ThinkSystem and ThinkAgile servers.</p>
managedAuthEnabled	Boolean	Indicates whether the device uses managed authentication. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The device uses managed authentication.</li> <li>• <b>false</b>. The device uses local authentication.</li> </ul>
managedAuthSupported	Boolean	Indicates whether the device supports the ability to choose whether managed authentication is to be used. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. This device supports the ability to choose managed authentication.</li> <li>• <b>false</b>. This device does not support the ability to choose managed authentication.</li> </ul>
publicAccess	Boolean	Indicates whether the device can be accessed by all role groups. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The resource is can be access by all role group.</li> <li>• <b>false</b>. The resource is restricted to specific role groups.</li> </ul>
roleGroups	Array of strings	List of role groups that are permitted to view and manage this device
storedCredentials	object	Information about the stored credential that is associated with this device, if applicable
id	String	Description of the stored credential
description	String	ID of the stored credential
userName	String	Name of the stored credential
uri	String	URI of the device
securityMode	String	Security Mode. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>NIST SP 800-131A</b></li> <li>• <b>Compatibility Security</b></li> <li>• <b>Standard Security</b></li> <li>• <b>Strict Security</b></li> </ul>
selLog	Boolean	Indicates whether the SEL log is supported and present on this server. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. SEL log is supported.</li> <li>• <b>false</b>. SEL log is not supported.</li> </ul>
serialNumber	String	Device serial number
slots	Array of integers	List of occupied slots

Attributes	Type	Description
ssoEnabled	Boolean	Indicates whether single sign-on is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. Single sign-on is enabled.</li> <li>• <b>false</b>. Single sign-on is disabled.</li> </ul>
subSlots	String	Information about management status
systemBoard	Object	Information about the system board
machineType	String	Device machine type
model	String	Device model
productName	String	Product name
serialNumber	String	Device serial number
uuid	String	Device UUID
techTipsCount	Integer	Number of tech tips that are associated with this device For information about each tech tip, use <a href="#">GET /api/v1/data/techTips</a> .
thinkServerFru	Array of Strings	(ThinkServer servers only)
type	String	Resource type (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>chassis</b></li> <li>• <b>server</b></li> <li>• <b>storage</b></li> <li>• <b>switch</b></li> </ul>
typeKey	String	Resource type key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>chassis</b></li> <li>• <b>server</b></li> <li>• <b>storage</b></li> <li>• <b>switch</b></li> </ul>
updates	Object	(XClarity Administrator only) Information about the update history for the resource manager
identifier	String	Update ID
components	Array of objects	Information about each update component
componentID	String	Component ID
cveDetails	Object	Information about available CVEs for this component
availableFixes	Integer	Total number of CVEs available for this component
cveList	Array of strings	List of CVEs that are available for the component
id	String	
fixedVersion	Object	
identifier	String	
number	String	
releaseTimestamp	String	

Attributes				Type	Description
			name	String	CVE name
			publishDate	String	Timestamp when the CVE was published
			severity	String	Highest severity (translated) of all CVEs for the component. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Critical.</b> Devices with one or more critical CVEs</li> <li>• <b>Noncritical.</b> Devices with one or more high, medium, and low CVEs</li> <li>• <b>Protected.</b> Devices with no CVEs</li> </ul>
			_link	Object	CVE link (see <a href="#">Links</a> )
			fixedVersion	Object	
			identifier	String	
			number	String	
			releaseTimestamp	String	
			severity	String	Highest severity (translated) of all CVEs for the component. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Critical.</b> Devices with one or more critical CVEs</li> <li>• <b>Noncritical.</b> Devices with one or more high, medium, and low CVEs</li> <li>• <b>Protected.</b> Devices with no CVEs</li> </ul>
			severityKey	String	Highest severity key of all CVEs for the component. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>critical.</b> Devices with one or more critical CVEs</li> <li>• <b>noncritical.</b> Devices with one or more high, medium, and low CVEs</li> <li>• <b>protected.</b> Devices with no CVEs</li> </ul>
			severity	Object	Information about the severity weight
			name	String	Highest severity key of all CVEs for the component. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>critical.</b> Devices with one or more critical CVEs</li> <li>• <b>noncritical.</b> Devices with one or more high, medium, and low CVEs</li> <li>• <b>protected.</b> Devices with no CVEs</li> </ul>
			weight	Integer	Weight of the severity
			firmwareActivationStatus	ri	
			firmwareActivationStatusKey	ri	
			mainComponentName	String	Main component name
			name	String	Component name
			policyState	String	Policy state (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>No Policy Assigned</b></li> <li>• <b>Policy Assigned</b></li> </ul>
			policyStateKey	String	Policy state key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>NoPolicyAssigned</b></li> <li>• <b>PolicyAssigned</b></li> </ul>
			targetVersion	Object	Information about the target update for the component based on the assigned policy If a policy is not assigned, this value is null.



Attributes			Type	Description
		identifier	String	Version ID
		number	String	Version number
		releaseTimestamp	String	Timestamp when the version was released This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
		upgradeable	Boolean	Indicates whether the component can be updated. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The component can be updated.</li> <li>• <b>false</b>. The component cannot be updated.</li> </ul>
		version	Object	Information about the update that is currently installed for the component
		identifier	String	Version ID
		number	String	Version number
		releaseTimestamp	String	Timestamp when the version was released This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
		cveDetails	Object	Information about available CVEs for the update
		availableFixes	Integer	Total number of CVEs available for the update
		severity	String	Highest severity (translated) of all CVEs in the the update. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Critical</b>. Devices with one or more critical CVEs</li> <li>• <b>Noncritical</b>. Devices with one or more high, medium, and low CVEs</li> <li>• <b>Protected</b>. Devices with no CVEs</li> </ul>
		severityKey	String	Highest severity key of all CVEs in the the update. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Critical</b>. Devices with one or more critical CVEs</li> <li>• <b>Noncritical</b>. Devices with one or more high, medium, and low CVEs</li> <li>• <b>Protected</b>. Devices with no CVEs</li> </ul>
		policy	Object	Information about the update-compliance policy that is assigned to this device If a policy is not assigned, this value is null.
		id	String	Policy ID
		name	String	Policy name
		policyState	String	Policy state (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>No Policy Assigned</b></li> <li>• <b>Policy Assigned</b></li> </ul>
		policyStateKey	String	Policy state key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>NoPolicyAssigned</b></li> <li>• <b>PolicyAssigned</b></li> </ul>
		userDefinedName	String	User-defined name for the device
		userDescription	String	User description

Attributes	Type	Description
uuid	String	UUID
vnicMode	String	VNIC mode. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>enabled</b></li> <li>• <b>disabled</b></li> </ul>
vpdID	String	VPD ID
warranty	Object	Information about the warranty for this device
endTimeStamp	String	Warranty expiration date This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
number	String	Warranty number. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>3PL</b></li> <li>• <b>3XL</b></li> </ul>
startTimeStamp	String	Warranty start date This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
statusKey	String	Warranty status key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Expired</b></li> <li>• <b>Retrieving Data</b></li> <li>• <b>null</b></li> </ul>
_links	Object	Device URI (see <a href="#">Links</a> )
_rawType	String	

The following example is returned if the request is successful.

```
{
  "id": "1704AB261AAF11E88226DBCFB1D57FE1-8AD149979FA54990B9969A80FA918223",
  "accessState": "Online",
  "accessStateKey": "Online",
  "accessStateRecords": [{
    "health": "OFFLINE",
    "ipAddress": "10.243.16.93",
    "messageBundle": "com.lenovo.lxca.inventory.base.bundle.connections.messages",
    "messageDisplay": "Connection failure occurred due to Unable to test connection to the server due to (Base.1.12.GeneralError) A general error has occurred. See ExtendedInfo for more information. [HTTP/1.1 401 Unauthorized].",
    "messageID": "0509",
    "messageParameter": "Unable to test connection to the server due to (Base.1.12.GeneralError) A general error has occurred. See ExtendedInfo for more information. [HTTP/1.1 401 Unauthorized]",
    "protocol": "REDFISH",
    "username": "SYSMGR_OFLOGOIGS",
    "timestamp": 1666103929530,
    "trusted": true
  }],
  "accountLockoutPeriod": 60,
  "accurateHealth": true,
  "activationKeys": [],
  "addinCards": [{
    "class": "Network controller",
    "firmware": [{
```

```

        "build": "0",
        "classifications": [13],
        "date": "",
        "deviceTypeKey": "software bundle",
        "name": "Software Bundle",
        "revision": "0",
        "role": "",
        "softwareID": "17AA4160",
        "status": "Active",
        "type": "Software Bundle",
        "version": "N/A"
    }],
    "fodUniqueID": "",
    "FRU": "00YK535",
    "fruSerialNumber": "R2CQ6CF0018",
    "isAddOnCard": true,
    "isAgentless": false,
    "isPLDMUpdateSupported": false
    "manufacturer": "Broadcom Limited",
    "name": "Broadcom NX-E PCIe 10Gb 2-Port Base-T Ethernet Adapter",
    "partNumber": "SN30L27797",
    "pciBusNumber": "248",
    "pciDeviceNumber": "0",
    "pciFunctionNumber": "1",
    "pciRevision": "0",
    "pciSubID": "4160",
    "pciSubVendorID": "17aa",
    "portInfo": {},
    "posID": "16d8",
    "productName": "Broadcom NX-E PCIe 10Gb 2-Port Base-T Ethernet Adapter",
    "slotName": "PCIe 1",
    "slotNumber": "1",
    "slotSupportsHotPlug": "false",
    "vpdID": "14e4",
}],
"addinCardSlots": 0,
"arch": "x86",
"assetTag": "",
"bladeState": 0,
"bmuParamObject": null,
"cimEnabled": false,
"contact": "",
"dataHandle": 1666097831821,
"description": "This resource is used to represent a chassis or other physical enclosure for a Redfish implementation.",
"deviceDrivers": null,
"deviceInfo": {
    "domainName": null,
    "entitleSerialNumber": null,
    "groupNames": [],
    "healthStatus": "Warnung",
    "healthStatusKey": "Warnung",
    "hostname": "XCC-7X12-SN",
    "ipv4Addresses": ["10.243.16.93", "169.254.95.118"],
    "ipv6Addresses": ["fd55:faaf:e1ab:2021:a94:efff:fe62:4541", "fe80::a94:efff:fe62:4541", "fe80::a94:efff:fe62:4542"],
    "location": {
        "location": "",
        "lowestRackUnit": 0,
        "rack": "",
        "room": ""
    }
}

```

```

    },
    "machineType": "7X12",
    "manager": {
      "id": "8AD149979FA54990B9969A80FA918223",
      "domainName": "",
      "hostname": null,
      "inContextHref": "/ui/index.html#/compDetails/Rack-Tower Server/1704AB261AAF11E88226DBCFB1D57FE1/",
      "ipv4Addresses": ["10.243.2.107"],
      "ipv6Addresses": ["fe80:0:0:0:5054:ff:fee1:1b04"]
    },
    "model": "ABC1WW",
    "powerStatus": "On",
    "powerStatusKey": "On",
    "productName": "ThinkSystem SR950",
    "serialNumber": "01CV976",
    "userDefinedName": "fishlegs-SR950",
    "uuid": "1704AB261AAF11E88226DBCFB1D57FE1"
  },
  "deviceName": "fishlegs-SR950",
  "deviceType": "Server",
  "deviceTypeKey": "server",
  "discoveryTimestamp": "2022-10-04T15:07:01.477Z",
  "diskDriveSensorInfo": ["M2 Drive 0","M2 Drive 1","Drive 0","Drive 1","Drive 2","Drive 3",
    "Drive 4","Drive 5","Drive 6","Drive 7","Drive 8","Drive 9","Drive 10",
    "Drive 11","Drive 12","Drive 13","Drive 14","Drive 15","Drive 16",
    "Drive 17","Drive 18","Drive 19","Drive 20","Drive 21","Drive 22",
    "Drive 23","Ext Drive","Drive Mismatch","Drive Overtemp"],

  "domainName": "",
  "driveBays": 1,
  "drives": [{
    "bay": 255,
    "blockSize": 512,
    "capacity": 600127266816,
    "description": "600GB 10K 12Gbps SAS 2.5 HDD (SED)",
    "deviceTypeKey": "firmware",
    "diskState": "JBOD",
    "encryptionStatus": "Unencrypted",
    "firmware": [{
      "build": "0",
      "date": "",
      "classifications": [ 10 ],
      "name": "HUC101860CS420EX",
      "revision": "0",
      "role": "",
      "softwareID": "HUC101860CS420EX",
      "status": "Active",
      "type": "Firmware",
      "version": "N5H2",
    }
  ]},
  "FRU": "00NA372",
  "healthState": "Critical",
  "healthStateKey": "Critical",
  "hotSpareType": "None",
  "interfaceType": "SAS",
  "largestAvailableSize": 512,
  "m2Location": "",
  "manufacturer": "IBM-ESXS",
  "mediaType": "HDD",
  "model": "HUC101860CS420EX",
  "name": "Disk.255",

```

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    "numberOfBlocks": 1172123568,
    "partNumber": "00NA375",
    "remainingLife": null,
    "serialNumber": "03G07J1H",
    "temperature": null,
    "uuid": "",
  }],
  "encapsulation": {
    "encapsulationMode": "normal"
  },
  "expansionCards": [],
  "expansionCardSlots": 0,
  "expansionProducts": [],
  "expansionProductType": "",
  "fans": [{
    "description": "Fan Fan 3 Tach",
    "healthState": "Normal",
    "healthStateKey": "Normal",
    "name": "Fan 3 Tach",
    "slot": "3",
    "slots": 3,
    "speed": 6016,
    "status": "OK"
  }],
  ...,
  {
    "description": "Fan Fan 11 Tach",
    "healthState": "Normal",
    "healthStateKey": "Normal",
    "name": "Fan 11 Tach",
    "slot": "11",
    "slots": 11,
    "speed": 6720,
    "status": "OK"
  }],
  "featuresOnDemand": {
    "features": ["RDOC","REMOTE MEDIA","REMOTE CONTROL & USERS"],
    "tierLevel": 3
  },
  "firmware": [{
    "build": "DVI399T",
    "classifications": [],
    "date": "2022-06-28T00:00:00Z",
    "deviceTypeKey": "xcc",
    "firmwareActivationStatus": "Active",
    "firmwareActivationStatusKey": "Active",
    "name": "XClarity Controller",
    "revision": "6.28",
    "role": "Primary",
    "status": "Active",
    "type": "XCC",
    "version": "6.28"
  }],
  ...,
  {
    "build": "*",
    "classifications": [],
    "deviceTypeKey": "lxpmwindowsdriver",
    "date": "",
    "firmwareActivationStatus": "Active",
    "firmwareActivationStatusKey": "Active",

```

```

    "name": "Lenovo XClarity Provisioning Manager Windows Drivers",
    "type": "LXPMWindowsDriver",
    "revision": "*",
    "role": "Primary",
    "status": "Active",
    "version": "*"
  }],
  "flashStorage": [],
  "FQDN": "XCC-7X12-SN",
  "groups": [
    {
      "id": "G_E8B54172BE21497FA83C485E23B788A9",
      "name": "Group_1",
      "type": "DeviceGroup",
      "uri": "/api/v1/knowledge/resourceGroups/G_E8B54172BE21497FA83C485E23B788A9"
    }
  ],
  "hasOS": false,
  "height": 4,
  "hostname": "XCC-7X12-SN",
  "inProcessing": null,
  "ipInterfaces": [{
    "IPv4assignments": [{
      "id": 0,
      "address": "10.243.16.93",
      "deviceTypeKey": "inuse",
      "gateway": "10.243.0.1",
      "subnet": "255.255.224.0",
      "type": "INUSE"
    }
  ]},
  "IPv4DHCPmode": "STATIC_ONLY",
  "IPv4enabled": true,
  "IPv6assignments": [{
    "id": 0,
    "address": "fe80:0:0:0:a94:efff:fe62:4541",
    "deviceTypeKey": "inuse",
    "gateway": "0:0:0:0:0:0:0:0",
    "prefix": 64,
    "scope": "LinkLocal",
    "source": "Other",
    "type": "INUSE"
  }
  ],
  ...,
  {
    "id": 0,
    "scope": "LinkLocal",
    "gateway": "0:0:0:0:0:0:0:0",
    "source": "Other",
    "address": "fe80:0:0:0:a94:efff:fe62:4542",
    "prefix": 64,
    "type": "INUSE",
    "deviceTypeKey": "inuse"
  }
  ],
  "IPv6DHCPenabled": false,
  "IPv6enabled": true,
  "IPv6statelessEnabled": true,
  "IPv6staticEnabled": false,
  "label": "unknown",
  "name": "Manager Ethernet Interface"
},
{

```

```

"IPv4assignments": [],
"IPv4DHCPmode": "UNKNOWN",
"IPv4enabled": false,
"IPv6assignments": [{
  "id": 0,
  "address": "fe80:0:0:0:a94:efff:fe62:4542",
  "deviceTypeKey": "inuse",
  "gateway": "0:0:0:0:0:0:0:0",
  "prefix": 64,
  "scope": "LinkLocal",
  "source": "Other",
  "type": "INUSE"
}],
"IPv6DHCPenabled": false,
"IPv6enabled": false,
"IPv6statelessEnabled": false,
"IPv6staticEnabled": false,
"label": "unknown",
"name": "Manager Ethernet Over USB Interface"
}],
"ipv4Addresses": ["10.243.16.93","169.254.95.118"],
"ipv6Addresses": ["fd55:faaf:e1ab:2021:a94:efff:fe62:4541","fe80::a94:efff:fe62:4541",
  "fe80::a94:efff:fe62:4542"],
"isEmbedded": false,
"isRemotePresenceEnabled": true,
"isScalable": false,
"isITME": false,
"lanOverUsb": "enabled",
"lanOverUsbPortForwardingModes": [{
  "deviceTypeKey": "osdeploy",
  "externalIPAddress": "",
  "state": "disabled",
  "type": "OSDeploy"
}],
"lastSyncTimestamp": "2022-10-18T15:28:04.350Z",
"lastUpdateTimestamp": "2022-10-18T15:28:04.124Z",
"leds": [{
  "color": "Yellow",
  "location": "FRU",
  "name": "DIMM 77",
  "state": "Off"
}],
...
{
  "color": "Yellow",
  "location": "FRU",
  "name": "DIMM 96",
  "state": "Off"
}],
"location": {
  "location": "",
  "lowestRackUnit": 0,
  "rack": "",
  "room": ""
},
"lxcaOverallHealthState": "Normal",
"lxcaUUID": "8AD149979FA54990B9969A80FA918223",
"m2Presence": false,
"machineType": "7X12",
"manager": {
  "id": "8AD149979FA54990B9969A80FA918223",

```

```

    "groups": [],
    "hostname": null,
    "domainName": "",
    "inContextHref": "/ui/index.html#/compDetails/Rack-Tower Server/1704AB261AAF11E88226DBCFB1D57FE1/",
    "ipv4Addresses": ["10.243.2.107"],
    "ipv6Addresses": ["fe80:0:0:0:5054:ff:fee1:1b04"],
    "uri": "/api/v1/connector/managers/8AD149979FA54990B9969A80FA918223"
  },
  "manufacturer": "Lenovo",
  "manufacturerId": "Lenovo",
  "memoryModules": [{
    "capacity": 32,
    "deviceTypeKey": "ddr4",
    "displayName": "DIMM 8",
    "fruPartNumber": "",
    "healthState": "NA",
    "healthStateKey": "NA",
    "manufacturer": "SK Hynix",
    "model": "DDR4",
    "operatingMemoryMode": ["Volatile"],
    "partNumber": "HMA84GR7AFR4N-VK",
    "present": false,
    "serialNumber": "51CF2D1A",
    "slot": 8,
    "speed": 2666,
    "speedMBs": 0,
    "type": "DDR4"
  },
  ...,
  {
    "capacity": 32,
    "deviceTypeKey": "ddr4",
    "displayName": "DIMM 92",
    "fruPartNumber": "",
    "healthState": "NA",
    "healthStateKey": "NA",
    "manufacturer": "SK Hynix",
    "model": "DDR4",
    "operatingMemoryMode": ["Volatile"],
    "partNumber": "HMA84GR7AFR4N-VK",
    "present": false,
    "serialNumber": "51CF371C",
    "slot": 92,
    "speed": 2666,
    "speedMBs": 0,
    "type": "DDR4"
  }],
  "mgmtProcIpAddress": "10.243.16.93",
  "mgmtProcType": "XCC",
  "model": "ABC1WW",
  "mtm": "7X12/ABC1WW",
  "name": "fishlegs-SR950",
  "onboardPciDevices": [],
  "osInfo": {
    "description": "",
    "hostname": "",
    "storedCredential": ""
  },
  "osProfiles": {
    "applicableStatus": "No Profile Assigned",
    "applicableStatusKey": "NoProfileAssigned",

```



```

    "assigned": {
      "id": null,
      "name": "No Assignment",
      "uri": null
    },
    "deployStatus": "Ready",
    "deployStatusKey": "ready"
  },
  "overallHealthState": "Warning",
  "overallHealthStateKey": "Warning",
  "parent": {
    "uuid": "",
    "uri": "cabinet/"
  },
  "partNumber": "SB27A00829",
  "patterns": {
    "assigned": {
      "id": null,
      "name": "No Assignment"
    },
    "complianceStatus": "No Pattern Assigned",
    "complianceStatusKey": "NoPatternAssigned"
  },
  "pciDevices": [{
    "class": "Network controller",
    "firmware": [{
      "build": "0",
      "classifications": [13],
      "date": "",
      "deviceTypeKey": "software bundle",
      "name": "Software Bundle",
      "revision": "0",
      "role": "",
      "softwareID": "17AA4160",
      "status": "Active",
      "type": "Software Bundle",
      "version": "N/A",
    }],
    "fodUniqueID": "",
    "FRU": "00YK535",
    "fruSerialNumber": "R2CQ6CF0018",
    "isAddOnCard": true,
    "isAgentless": false,
    "isPLDMUpdateSupported": false,
    "manufacturer": "Broadcom Limited",
    "name": "Broadcom NX-E PCIe 10Gb 2-Port Base-T Ethernet Adapter",
    "partNumber": "SN30L27797",
    "pciBusNumber": "248",
    "pciDeviceNumber": "0",
    "pciFunctionNumber": "1",
    "pciRevision": "0",
    "pciSubID": "4160",
    "pciSubVendorID": "17aa",
    "portInfo": {},
    "posID": "16d8",
    "productName": "Broadcom NX-E PCIe 10Gb 2-Port Base-T Ethernet Adapter",
    "slotName": "PCIe 1",
    "slotNumber": "1",
    "slotSupportsHotPlug": "false",
    "vpdID": "14e4",
  }],

```

```

"ports": [],
"posID": "",
"powerAllocation": {
  "maximumAllocatedPower": 2640,
  "minimumAllocatedPower": 0
},
"powerCappingPolicy": {
  "cappingACorDCMode": "AC",
  "cappingPolicy": "OFF",
  "currentPowerCap": 0,
  "maximumPowerCappingHotPlugLevel": -1,
  "maxPowerCap": 2640000,
  "minimumHardCapLevel": 1243000,
  "minimumPowerCappingHotPlugLevel": -1,
  "minPowerCap": 0
  "powerCappingAllocUnit": "watts*10^-3",
},
"powerStatus": "On",
"powerStatusKey": "On",
"powerSupplies": [{
  "cmmDisplayName": "PSU2",
  "cmmHealthState": "Unknown",
  "dataHandle": 0,
  "description": "PSU2",
  "deviceTypeKey": "powersupply",
  "excludedHealthState": "Normal",
  "firmware": [{
    "build": null,
    "classifications": [10],
    "date": "",
    "deviceTypeKey": "firmware",
    "name": "PSU2",
    "role": "OK",
    "softwareID": "PSUARTE6600",
    "status": "OK",
    "type": "Firmware",
    "version": "4.53"
  ]
}],
"FRU": "",
"fruSerialNumber": "",
"hardwareRevision": "",
"healthState": "Normal",
"healthStateKey": "Normal",
"inputVoltageIsAC": true,
"inputVoltageMax": -1,
"inputVoltageMin": -1,
"leds": [],
"machineType": "",
"manufactureDate": "",
"manufacturer": "ARTE",
"manufacturerId": "",
"model": "",
"name": "PSU2",
"overallHealthState": "Normal",
"overallHealthStateKey": "Normal",
"parent": {
  "uuid": "",
  "uri": "chassis/"
},
"partNumber": "SP57A03100",
"posID": "",

```

```

    "powerAllocation": {
      "totalInputPower": 0,
      "totalOutputPower": 1100
    },
    "powerState": "Unknown",
    "productId": "",
    "productName": "",
    "serialNumber": "P3ZS75B0003",
    "slots": [2],
    "type": "PowerSupply",
    "uri": "powerSupply/",
    "userDescription": "",
    "uuid": "",
    "vpdID": ""
  }],
  "primary": false,
  "processorIntelSpeedSelect": {
    "currentValue": "",
    "possibleValues": []
  },
  "processors": [{
    "cores": 28,
    "displayName": "Genuine Intel(R) CPU 0000%@",
    "family": "INTEL_R_XEON_TM",
    "healthState": "NA",
    "healthStateKey": "NA",
    "manufacturer": "Intel(R) Corporation",
    "maxSpeedMHZ": 3800,
    "partNumber": "",
    "present": false,
    "productVersion": "Genuine Intel(R) CPU 0000%@",
    "serialNumber": "",
    "slot": 1,
    "socket": "",
    "speed": 2.5,
    "tdpWatts": 205
  },
  ...,
  {
    "cores": 28,
    "displayName": "Genuine Intel(R) CPU 0000%@",
    "family": "INTEL_R_XEON_TM",
    "healthState": "NA",
    "healthStateKey": "NA",
    "manufacturer": "Intel(R) Corporation",
    "maxSpeedMHZ": 3800,
    "partNumber": "",
    "present": false,
    "productVersion": "Genuine Intel(R) CPU 0000%@",
    "serialNumber": "",
    "slot": 8,
    "socket": "",
    "speed": 2.5,
    "tdpWatts": -1
  }],
  "processorSlots": 0,
  "productId": "664A00",
  "productName": "ThinkSystem SR950",
  "raidSettings": [{
    "batteryData": [],
    "description": "ThinkSystem RAID 930-16i 4GB Flash",

```

```

"diskDrives": [{
  "bay": 255,
  "blockSize": 512,
  "capacity": 600127266816,
  "description": "600GB 10K 12Gbps SAS 2.5 HDD (SED)",
  "diskState": "JBOD",
  "encryptionStatus": "Unencrypted",
  "firmware": [{
    "build": "0",
    "classifications": [10],
    "date": "",
    "deviceTypeKey": "firmware",
    "name": "HUC101860CS420EX",
    "revision": "0",
    "role": "",
    "softwareID": "HUC101860CS420EX",
    "status": "Active",
    "type": "Firmware",
    "version": "N5H2"
  ]},
  "FRU": "00NA372",
  "healthState": "Critical",
  "healthStateKey": "Critical",
  "hotSpareType": "None",
  "interfaceType": "SAS",
  "largestAvailableSize": 512,
  "m2Location": "",
  "manufacturer": "IBM-ESXS",
  "mediaType": "HDD",
  "model": "HUC101860CS420EX",
  "name": "Disk.255",
  "numberOfBlocks": 1172123568,
  "partNumber": "00NA375",
  "remainingLife": null,
  "serialNumber": "03G07J1H",
  "temperature": null,
  "uuid": "",
}],
"firmware": [{
  "build": "0",
  "classifications": [],
  "date": "",
  "name": "",
  "revision": "0",
  "role": "",
  "softwareID": "",
  "status": "",
  "type": "",
  "version": "50.0.1-0374"
}],
"isAddOnCard": true,
"model": "SAS3516",
"name": "ThinkSystem RAID 930-16i 4GB Flash",
"pciFirmware": [],
"slotNumber": "18",
"storagePools": [],
"storageVolumes": [],
"uuid": "0000000000000000500062B202A8D1C0",
}],
"releaseName": "purley_gp_22b",
"securityMode": null,

```

```

"selLog": true,
"serialNumber": "01CV976",
"slots": [],
"ssoEnabled": true,
"subSlots": [],
"systemBoard": {
  "machineType": "7X12",
  "model": "ABC1WW",
  "productName": "ThinkSystem SR950",
  "serialNumber": "01CV976",
  "uuid": "1704AB261AAF11E88226DBCFB1D57FE1"
},
"techTipsCount": 0,
"type": "server",
"updates": {
  "identifier": "7X12",
  "components": [{
    "componentID": "XCC",
    "cveDetails": {
      "availableFixes": 817,
      "cveList": [{
        "id": "CVE-2021-41617",
        "fixedVersion": {
          "identifier": "psi346m",
          "number": "2.51",
          "releaseTimestamp": "2022-08-01T23:05:29.000Z"
        },
        "name": "CVE-2021-41617",
        "publishDate": "2021-09-26T19:15:00.000Z",
        "severity": "High",
        "_link": {
          "rel": "self",
          "uri": "https://nvd.nist.gov/vuln/detail/CVE-2021-41617"
        }
      }
    },
    "name": "CVE-2021-41617",
    "publishDate": "2021-09-26T19:15:00.000Z",
    "severity": "High",
    "_link": {
      "rel": "self",
      "uri": "https://nvd.nist.gov/vuln/detail/CVE-2021-41617"
    }
  }
}],
...,
{
  "id": "CVE-2017-5710",
  "fixedVersion": {
    "identifier": "psi346m",
    "number": "2.51",
    "releaseTimestamp": "2022-08-01T23:05:29.000Z"
  },
  "name": "CVE-2017-5710",
  "publishDate": "2017-11-21T14:29:00.000Z",
  "severity": "High",
  "_link": {
    "rel": "self",
    "uri": "https://nvd.nist.gov/vuln/detail/CVE-2017-5710"
  }
}
}],
"fixedVersion": {
  "number": "2.51",
  "identifier": "psi346m",
  "releaseDate": "2022-08-01T23:05:29.000Z"
},
"severity": "Critical",
"severityKey": "critical",
"_severity": {
  "name": "critical",
  "weight": 40
}

```

```

    },
    "firmwareActivationStatus": "Active",
    "firmwareActivationStatusKey": "Active",
    "mainComponentName": "XClarity Controller",
    "name": "XClarity Controller",
    "policyState": "No Policy Assigned",
    "policyStateKey": "NoPolicyAssigned",
    "targetVersion": null,
    "upgradeable": true,
    "version": {
      "number": "6.28",
      "identifier": "DVI399T",
      "releaseDate": "2022-06-28T00:00:00Z"
    }
  },
  ...,
  {
    "componentID": "17AA4160-13",
    "cveDetails": null,
    "mainComponentName": "Software Bundle",
    "name": "Broadcom NX-E PCIe 10Gb 2-Port Base-T Ethernet Adapter",
    "policyState": "No Policy Assigned",
    "policyStateKey": "NoPolicyAssigned",
    "targetVersion": null,
    "upgradeable": true,
    "version": {
      "number": "N/A",
      "identifier": "0",
      "releaseDate": null
    }
  }
}],
"cveDetails": {
  "availableFixes": 889,
  "severity": "Critical",
  "severityKey": "critical"
},
"policy": {
  "id": null,
  "name": "No Assignment"
},
"policyState": "No Policy Assigned",
"policyStateKey": "NoPolicyAssigned"
},
"userDefinedName": "fishlegs-SR950",
"userDescription": "",
"uuid": "1704AB261AAF11E88226DBCFB1D57FE1",
"vnicMode": "disabled",
"vpdID": "",
"_links": {
  "rel": "self",
  "uri": "/api/v1/data/devices/1704AB261AAF11E88226DBCFB1D57FE1-8AD149979FA54990B9969A80FA918223"
},
"_rawType": "Rack-Tower Server"
}

```

---

## **/api/v1/data/devices/{id}/fans**

Use this REST API to return fan information for a specific device.

## HTTP methods

GET

## GET /api/v1/data/devices/{id}/fans

Use this method to return fan information for a specific device.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET `https://orchestrator_server_IP/api/v1/data/devices/{id}/fans`

where `{id}` is the ID of the device. To obtain the device IDs, use [GET /api/v1/data/devices](#).

### Query parameters

None

### Request body

None

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

### Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
fans	Array of objects	Information about each fan in the device
description	String	Fan description
healthState	String	Fan health state (translated). This can be one of the following values.
healthStateKey	String	Fan health state key. This can be one of the following values.
name	String	Fan name
slots	Integer	Fan slot
speed	Integer	Fan speed
status	String	Fan status
_links	Object	Device URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "fans": [{
```

```

    "description": "Logical Device for fan / cooling device 1",
    "healthState": "Normal",
    "healthStateKey": "Normal",
    "name": "Fan 1",
    "slots": 1,
    "speed": 0,
    "status": "OK"
  },
  ...,
  {
    "description": "Logical Device for fan / cooling device 7",
    "healthState": "Normal",
    "healthStateKey": "Normal",
    "name": "Fan 7",
    "slots": 7,
    "speed": 0,
    "status": "OK"
  }
},
"_links": {
  "rel": "self",
  "uri": "/api/v1/data/devices/C7199530FEDE4FE09540DFC3D75FC56C/fans"
}
}

```

---

## **/api/v1/data/devices/{id}/memoryModules**

Use this REST API to return memory information about a specific device.

### **HTTP methods**

GET

### **GET /api/v1/data/devices/{id}/memoryModules**

Use this method to return memory-module information about a specific device.

### **Authentication**

Authentication with user name and password is required.

### **Resource URI**

GET `https://{orchestrator_server_IP}/api/v1/data/devices/{id}/memoryModules`

where *{id}* is the ID of the device. To obtain the device IDs, use [GET /api/v1/data/devices](#).

### **Query parameters**

None

### **Request body**

None

### **Response codes**

Code	Description	Comments
200	OK	The request completed successfully.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.



## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
memoryModules	Array of objects	Information about each memory module in the device
capacity	Integer	Capacity
displayName	String	Display name
manufacturer	String	Manufacturer
model	String	Model
partNumber	String	Part number
serialNumber	String	Serial number
slot	Integer	Slot
speed	Integer	Number of data-transfer operations that occur in each second, in MT/s (megatransfers per second)
speedMBs	Integer	Amount of data that is transferred in each second, in MB/s (megabytes per second)
type	String	Type
_links	Object	Device URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "memoryModules": [{
    "capacity": 2,
    "displayName": "DIMM 21",
    "manufacturer": "Micron Technology",
    "model": "DDR3",
    "partNumber": "9KSF25672PZ-1G4M1",
    "serialNumber": "377B770D",
    "slot": 21,
    "speed": 1333,
    "speedMBs": 0,
    "type": "DDR3"
  },
  ...,
  {
    "capacity": 2,
    "displayName": "DIMM 20",
    "manufacturer": "Micron Technology",
    "model": "DDR3",
    "partNumber": "9KSF25672PZ-1G4M1",
    "serialNumber": "377B7719",
    "slot": 20,
    "speed": 1333,
    "speedMBs": 0,
    "type": "DDR3"
  }
],
  "_links": {
    "rel": "self",
    "uri": "/api/v1/data/devices/C7199530FEDE4FE09540DFC3D75FC56C/memoryModules"
  }
}
```

```
}  
}
```

---

## **/api/v1/data/devices/{id}/pciDevices**

Use this REST API to return PCI-device information for a specific device.

### **HTTP methods**

GET

## **GET /api/v1/data/devices/{id}/pciDevices**

Use this method to return PCI-device information for a specific device.

### **Authentication**

Authentication with user name and password is required.

### **Resource URI**

GET `https://{orchestrator_server_IP}/api/v1/data/devices/{id}/pciDevices`

where *{id}* is the ID of the device. To obtain the device IDs, use [GET /api/v1/data/devices](#).

### **Query parameters**

None

### **Request body**

None

### **Response codes**

Code	Description	Comments
200	OK	The request completed successfully.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

### **Response body**

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes		Type	Description
pciDevices		Array of objects	Information about each PCI device
	class	String	Class (basic function) of the PCI device. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Bridge</b></li> <li>• <b>Communication controller</b></li> <li>• <b>Coprocessor</b></li> <li>• <b>Display controller</b></li> <li>• <b>Docking station</b></li> <li>• <b>Encryption controller</b></li> <li>• <b>Generic system peripheral</b></li> <li>• <b>Input device controller</b></li> <li>• <b>Intelligent controller</b></li> <li>• <b>Mass storage controller</b></li> <li>• <b>Memory controller</b></li> <li>• <b>Multimedia controller</b></li> <li>• <b>Network controller</b></li> <li>• <b>Non-Essential Instrumentation</b></li> <li>• <b>Processing accelerators</b></li> <li>• <b>Processor</b></li> <li>• <b>Satellite communications controller</b></li> <li>• <b>Serial bus controller</b></li> <li>• <b>Signal processing controller</b></li> <li>• <b>Unassigned class</b></li> <li>• <b>Unclassified device</b></li> <li>• <b>Unknown device</b></li> <li>• <b>Wireless controller</b></li> </ul>
firmware		Array of objects	Flash storage firmware properties
	build	String	Firmware build
	classifications	Array of integers	Firmware type codes
	date	String	Firmware date
	name	String	Firmware name
	revision	String	Firmware revision
	role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
	softwareID	String	Firmware ID
	status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
	type	String	Firmware type, such as UEFI, MP, or DSA
	version	String	Firmware version
fodUniqueID		String	FoD unique ID

Attributes		Type	Description
	isAddOnCard	Boolean	Identifies whether the device is an add-on card. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The device is an add-on card</li> <li>• <b>false</b>. The device is not an add-on card</li> </ul>
	isAgentless	Boolean	Identifies whether the device is agentless. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The device is agentless.</li> <li>• <b>false</b>. The device is not agentless.</li> </ul>
	isPLDMUpdateSupported	Boolean	Identifies whether the Platform Level Data Model updates are supported. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. PLDM update is supported.</li> <li>• <b>false</b>. PLDM update is not supported.</li> </ul>
	name	String	Description
	pciBusNumber	String	PCI bus number
	pciDeviceNumber	String	PCI device number
	pciFunctionNumber	String	PCI function number
	pciRevision	String	PCI revision
	pciSubID	String	PCI subsystem ID
	pciSubVendorID	String	PCI sub-vendor ID
	portInfo	Object	Information about the ports
	physicalPorts	Array of objects	Information about the physical ports
	logicalPorts	Array of objects	List of associated logical ports
	addresses	String	Assigned addresses
	logicalPortIndex	Integer	Number of logical ports
	portNumber	Integer	Number of the logical port
	portType	String	Logical port type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ATM</b></li> <li>• <b>BLUETOOTH</b></li> <li>• <b>ETHERNET</b></li> <li>• <b>FC</b></li> <li>• <b>FDDI</b></li> <li>• <b>FRAMERELAY</b></li> <li>• <b>IB</b></li> <li>• <b>INFRARED</b></li> <li>• <b>OTHER</b></li> <li>• <b>TOKENRING</b></li> <li>• <b>UNKNOWN</b></li> <li>• <b>WIRELESSLAN</b></li> </ul>
	vnicMode	Boolean	Identifies whether this is a vNIC port. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. This is a vNIC port.</li> <li>• <b>false</b>. This is not a vNIC port.</li> </ul>
	peerBay	Integer	Peer Flex switch bay

Attributes		Type	Description
	physicalPortIndex	Integer	Number of physical ports
	portNumber	Integer	Number of the physical port
	portType	String	Physical port type. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>ATM</b></li> <li>• <b>ETHERNET</b></li> <li>• <b>FC</b></li> <li>• <b>FDDI</b></li> <li>• <b>FRAMERELAY</b></li> <li>• <b>IB</b></li> <li>• <b>OTHER</b></li> <li>• <b>TOKENRING</b></li> <li>• <b>UNKNOWN</b></li> </ul>
	speed	Long	Link speed, in Gbps (for example, 2.5)
	status	String	Link status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>up</b></li> <li>• <b>down</b></li> <li>• <b>unknown</b></li> </ul>
	posID	String	Device ID
	vpdID	String	VPD ID
_links		Object	Device URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "pciDevices": [{
    "class": "Network controller",
    "firmware": [{
      "build": "0",
      "classifications": [32773],
      "date": "",
      "name": "Combined Option ROM Image",
      "revision": "0",
      "role": "Primary",
      "softwareID": "8086000A",
      "status": "Active",
      "type": "Boot ROM",
      "version": "1.1638.0"
    }],
    "fodUniqueID": "N/A",
    "isAddOnCard": true,
    "isAgentless": true,
    "isPLDMUpdateSupported": false
    "name": "Intel X710 2x10GbE SFP+ Adapter",
    "pciBusNumber": "91",
    "pciDeviceNumber": "0",
    "pciFunctionNumber": "1",
    "pciRevision": "1",
    "pciSubID": "0",
    "pciSubVendorID": "8086",
    "portInfo": {
      "physicalPorts": [{
        "logicalPorts": [{
          "addresses": "6805CA7F5AE3",
          "logicalPortIndex": 1,
          "portNumber": 1,

```

```

        "portType": "ETHERNET",
        "vnicMode": false
    }],
    "peerBay": 0,
    "physicalPortIndex": 2,
    "portNumber": 74,
    "portType": "ETHERNET",
    "speed": 0,
    "status": ""
    }]
},
"posID": "1572",
"vpdID": "8086"
}],
"_links": {
    "rel": "self",
    "uri": "/api/v1/data/devices/C7199530FEDE4FE09540DFC3D75FC56C/pciDevices"
}
}

```

---

## **/api/v1/data/devices/{id}/processors**

Use this REST API to return processor information for a specific device.

### **HTTP methods**

GET

### **GET /api/v1/data/devices/{id}/processors**

Use this method to return processor information for a specific device.

### **Authentication**

Authentication with user name and password is required.

### **Resource URI**

GET `https://{orchestrator_server_IP}/api/v1/data/devices/{id}/processors`

where *{id}* is the ID of the device. To obtain the device IDs, use [GET /api/v1/data/devices](#).

### **Query parameters**

None

### **Request body**

None

### **Response codes**

Code	Description	Comments
200	OK	The request completed successfully.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
processors	Array of objects	Information about each processor in the device
cores	Integer	Number of cores
displayName	String	Display name
family	String	Family
manufacturer	String	Manufacturer
productVersion	String	Product version
slot	Integer	Slot
socket	String	Socket information For servers, this is the socket number (for example, "Socket 1"). For scalable complexes, this is the node and socket number (for example, "Node 1 Socket 1").
speed	String	Speed
_links	Object	Device URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "processors": [{
    "cores": 6,
    "displayName": "Intel(R) Xeon(R) CPU E5-2630L 0 @ 2.00GHz",
    "family": "INTEL_R_XEON_TM",
    "manufacturer": "Intel(R) Corporation",
    "productVersion": "Intel(R) Xeon(R) CPU E5-2630L 0 @ 2.00GHz",
    "slot": 1,
    "socket": "",
    "speed": 2,
  },
  {
    "cores": 6,
    "displayName": "Intel(R) Xeon(R) CPU E5-2630L 0 @ 2.00GHz",
    "family": "INTEL_R_XEON_TM",
    "manufacturer": "Intel(R) Corporation",
    "productVersion": "Intel(R) Xeon(R) CPU E5-2630L 0 @ 2.00GHz",
    "slot": 2,
    "socket": "",
    "speed": 2,
  }],
  "_links": {
    "rel": "self",
    "uri": "/api/v1/data/devices/C7199530FEDE4FE09540DFC3D75FC56C/processors"
  }
}
```

---

## /api/v1/data/devices/{id}/powerSupplies

Use this REST API to return power-supply information about a specific device.

## HTTP methods

GET

## GET /api/v1/data/devices/{id}/powerSupplies

Use this method to return power-supply information about a specific device.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET `https://{orchestrator_server_IP}/api/v1/data/devices/{id}/powerSupplies`

where *{id}* is the ID of the device. To obtain the device IDs, use [GET /api/v1/data/devices](#).

### Query parameters

None

### Request body

None

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

### Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
powerSupplies	Array of objects	(Rack servers only) Information about power supplies
cmmDisplayName	String	Assigned component name
cmmHealthState	String	Health state (translated). This can be one of the following values.
dataHandle	Long	Time stamp of the last status update
description	String	Assigned component description
excludedHealthState	String	
firmware	Array of objects	Power-supply firmware details
build	String	Firmware build
classifications	String	Firmware type codes
date	String	Firmware date
name	String	Firmware name



Attributes		Type	Description
	revision	String	Firmware revision
	role	String	Firmware role
	softwareID	String	Firmware ID
	status	String	Firmware status
	type	String	Firmware type
	version	String	Firmware version
	FRU	String	FRU part number
	fruSerialNumber	String	FRU serial number
	hardwareRevision	String	Hardware revision
	healthState	String	Health state (translated). This can be one of the following values.
	healthStateKey	String	Health state key. This can be one of the following values.
	inputVoltageIsAC	Boolean	Identifies whether the input voltage is AC or DC. This can be one of the following values. The value is valid only if <b>inputVoltageMin</b> and <b>inputVoltageMax</b> are valid. <ul style="list-style-type: none"> <li>• <b>true.</b> AC</li> <li>• <b>false.</b> DC</li> </ul>
	inputVoltageMax	Long	Maximum input voltage. A value of <b>-1</b> mean it has not been set yet.
	inputVoltageMin	Long	Minimum input voltage. A value of <b>-1</b> means it has not been set yet.
	leds	Array of objects	Information about power-supply LEDs
	color	String	LED color. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Red</b></li> <li>• <b>Amber</b></li> <li>• <b>Yellow</b></li> <li>• <b>Green</b></li> <li>• <b>Blue</b></li> <li>• <b>Unknown</b></li> </ul>
	location	String	LED location. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Front panel</b></li> <li>• <b>Lightpath Card</b></li> <li>• <b>Planar</b></li> <li>• <b>FRU</b></li> <li>• <b>Rear Panel</b></li> <li>• <b>Unknown</b></li> </ul>
	name	String	LED name
	state	String	LED state This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Blinking</b></li> <li>• <b>Unknown</b></li> </ul>
	machineType	String	Machine type
	manufacturer	String	Manufacture name
	manufactureDate	String	Manufacture date
	manufacturerId	String	Manufacturer ID

Attributes		Type	Description
	model	String	Power-supply model
	name	String	Name that is displayed in the user interface for this device
	overallHealthState	String	Highest severity of all power supplies(translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	overallHealthStateKey	String	Highest severity key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Normal</b></li> <li>• <b>Warning</b></li> <li>• <b>Critical</b></li> <li>• <b>Unknown</b></li> </ul>
	parent	Object	Information about the parent device
	uri	String	Parent URI
	uuid	String	Parent UUID
	posID	String	Position ID
	powerAllocation	Object	Information about power allocation
	totalInputPower	Long	Total input power
	totalOutputPower	Long	Total output power
	powerStatus	String	Power status (translated). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Standby</b></li> <li>• <b>Unknown</b></li> </ul>
	powerStatusKey	String	Power status key. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Off</b></li> <li>• <b>On</b></li> <li>• <b>Standby</b></li> <li>• <b>Unknown</b></li> </ul>
	productId	String	Product ID
	productName	String	Product name
	serialNumber	String	Serial number
	slots	Integer	Power-supply primary slot
	type	String	Resource type. This value is always <b>PowerSupplies</b> .
	uri	String	Power supply URI
	userDescription	String	User description
	uuid	String	UUID
	vpdID	String	VPD ID
	_links	Object	Device URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
```

```

"powerSupplies": [{
  "cmmDisplayName": "Power Supply 1",
  "cmmHealthState": "Unknown",
  "dataHandle": 0,
  "description": "",
  "excludedHealthState": "Normal",
  "firmware": [{
    "build": "0",
    "classifications": [10],
    "date": "",
    "name": "DETA Firmware",
    "revision": "0",
    "role": "Primary",
    "softwareID": "PSUDETA6500",
    "status": "Active",
    "type": "Firmware",
    "version": "3.50"
  ]},
  "FRU": "",
  "fruSerialNumber": "",
  "hardwareRevision": "",
  "healthState": "Normal",
  "healthStateKey": "Normal",
  "inputVoltageIsAC": true,
  "inputVoltageMax": -1,
  "inputVoltageMin": -1,
  "leds": [],
  "machineType": "",
  "manufacturer": "DETA",
  "manufactureDate": "",
  "manufacturerId": "",
  "model": "",
  "name": "Power Supply 1",
  "overallHealthState": "Normal",
  "overallHealthStateKey": "Normal",
  "parent": {
    "uri": "chassis/",
    "uuid": ""
  },
  "partNumber": "SP50L09198",
  "posID": "",
  "powerAllocation": {
    "totalInputPower": 0,
    "totalOutputPower": 750
  },
  "powerState": "Unknown",
  "powerStatus": "Unknown",
  "powerStatusKey": "Unknown",
  "productId": "",
  "productName": "",
  "serialNumber": "D1DG6CG009B",
  "slots": [1],
  "type": "PowerSupply",
  "uri": "powerSupply/",
  "userDescription": "",
  "uuid": "",
  "vpdID": ""
}],
"_links": {
  "rel": "self",
  "uri": "/api/v1/data/devices/C7199530FEDE4FE09540DFC3D75FC56C/powerSupplies"
}

```

```
}  
}
```

---

## /api/v1/data/devices/{id}/storage

Use this REST API to storage information for a specific device.

### HTTP methods

GET

## GET /api/v1/data/devices/{id}/storage

Use this method to return storage information for a specific device.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET `https://orchestrator_server_IP/api/v1/data/devices/{id}/storage`

where `{id}` is the ID of the device. To obtain the device IDs, use [GET /api/v1/data/devices](#).

### Query parameters

None

### Request body

None

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

### Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
bay	String	Bay or slot number
blockSize	Integer	Block size
capacity	Integer	(M.2 drives only) Storage capacity, in KB
description	String	Description
diskState	String	Disk-drive state
firmware	Array of objects	Information about add-in card firmware
build	String	Firmware build

Attributes	Type	Description
classifications	Array of integers	Firmware type codes
date	String	Firmware date
name	String	Firmware name
revision	String	Firmware revision
role	String	Firmware role. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Primary</b></li> <li>• <b>Backup</b></li> <li>• <b>Temporary</b></li> <li>• <b>Permanent</b></li> </ul>
softwareID		Firmware ID
status	String	Firmware status. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Active</b></li> <li>• <b>Inactive</b></li> </ul>
type	String	Firmware type, such as UEFI, MP, or DSA
version	String	Firmware version
FRU	String	FRU
healthState	String	Health state (translated) that corresponds to the highest event severity of all disk drives in the device. This can be one of the following values.
healthStateKey	String	Health state key that corresponds to the highest event severity of all disk drives in the device. This can be one of the following values.
interfaceType	String	Interface type
largestAvailableSize	Integer	
m2Location	String	(M.2 drives only) Location of M.2 drive and bay
manufacturer	String	Manufacturer
mediaType	String	Media type
model	String	Model
name	String	Drive name
numberOfBlocks	Integer	Number of blocks
partNumber	String	Part number
remainingLife	Integer	Indicate the amount of life that remains for a solid-state drive (SSD). This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>0 - 100</b>. The percent of remaining life</li> <li>• <b>-1</b>. Unknown (default)</li> <li>• <b>-2</b>. Information is not available</li> <li>• <b>-3</b>. The drive is not an SSD</li> </ul>
serialNumber	String	Serial number
temperature	Integer	Device temperature
uuid	String	Storage device UUID
_links	Object	Device URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "bay": 3,
  "blockSize": 512,
  "capacity": 1000204886000,
  "description": "ST1000NX0453",
  "diskState": "JBOD",
  "firmware": [{
    "name": "Drive",
    "date": "",
    "type": "Firmware",
    "build": "0",
    "version": "LD4B",
    "role": "Primary",
    "status": "Active",
    "classifications": [10],
    "revision": "0",
    "softwareID": "ST1000NX0453",
    "deviceTypeKey": "firmware"
  }],
  "FRU": "00YK023",
  "healthState": "Normal",
  "healthStateKey": "Normal",
  "interfaceType": "SAS",
  "largestAvailableSize": 512,
  "m2Location": "",
  "manufacturer": "LENOVO",
  "mediaType": "Rotational",
  "model": "ST1000NX0453",
  "name": "Disk 3_a",
  "numberOfBlocks": 1953525168,
  "partNumber": "D7A01872",
  "remainingLife": null,
  "serialNumber": "W470TAY4",
  "temperature": 34,
  "uuid": ""
},
...,
{
  "bay": 0,
  "blockSize": 512,
  "capacity": 1000204886000,
  "description": "ST1000NX0453",
  "diskState": "JBOD",
  "firmware": [{
    "name": "Drive",
    "date": "",
    "type": "Firmware",
    "build": "0",
    "version": "LD4B",
    "role": "Primary",
    "status": "Active",
    "classifications": [10],
    "revision": "0",
    "softwareID": "ST1000NX0453",
    "deviceTypeKey": "firmware"
  }],
  "FRU": "00YK023",
  "healthState": "Normal",
  "healthStateKey": "Normal",
  "interfaceType": "SAS",
```

```

    "largestAvailableSize": 512,
    "m2Location": "",
    "manufacturer": "LENOVO",
    "mediaType": "Rotational",
    "model": "ST1000NX0453",
    "name": "Disk 0_b",
    "numberOfBlocks": 1953525168,
    "partNumber": "D7A01872",
    "remainingLife": null,
    "serialNumber": "W470MBJD",
    "temperature": 33,
    "uuid": ""
  }
}

```

---

## **/api/v1/data/devices/{id}/systemBoard**

Use this REST API to return system-board information for a specific device.

### **HTTP methods**

GET

### **GET /api/v1/data/devices/{id}/systemBoard**

Use this method to return system-board information for a specific device.

### **Authentication**

Authentication with user name and password is required.

### **Resource URI**

GET `https://{{orchestrator_server_IP}}/api/v1/data/devices/{id}/systemBoard`

where *{id}* is the ID of the device. To obtain the device IDs, use [GET /api/v1/data/devices](#).

### **Query parameters**

None

### **Request body**

None

### **Response codes**

Code	Description	Comments
200	OK	The request completed successfully.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

### **Response body**

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
machineType	String	Device machine type
model	String	Device model
productName	String	Device product name
serialNumber	String	Device serial number
uuid	String	Device UUID
_links	Object	Device URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "machineType": "8737",
  "model": "AC1",
  "productName": "Flex System x240 Compute Node with embedded 10Gb Virtual Fabric",
  "serialNumber": "00008X7162",
  "uuid": "8E9768E2A8143660A24E01542802FEE7",
  "_links": {
    "rel": "self",
    "uri": "/api/v1/data/devices/C7199530FEDE4FE09540DFC3D75FC56C/systemBoard"
  }
}
```

---

## /api/v1/data/deviceStatus

Use this REST API to return status information for a specific device.

### HTTP methods

GET

### GET /api/v1/data/deviceStatus?deviceID={id}

Use this method to return status information for a specific device.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET [https://{orchestrator\\_server\\_IP}/api/v1/data/deviceStatus?deviceID={id}](https://{orchestrator_server_IP}/api/v1/data/deviceStatus?deviceID={id})

### Query parameters

Parameters	Re-quired / Optional	Description
deviceID={id}	Required	Returns status for a device, specified by the ID To obtain the device IDs, use <a href="#">GET /api/v1/data/devices</a>

The following example returns status information for a specific device.

```
GET https://192.0.2.0/api/v1/data/deviceStatus?deviceID=3015DE7E2B6011E881940A94EF5F5B65-C7199530FEDE4FE09540DFC3D75FC56C
```



## Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully. If a query parameter is specified and the value of that parameter has no matches, the response body returns default values.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
criticalAlerts	Integer	Number of critical alerts
faultLedStatus	String	Number of informational alerts
identityLedStatus	String	Fault LED status. This can be one of the following values. <ul style="list-style-type: none"><li>• <b>Off</b>. The LED is off.</li><li>• <b>On</b>. The LED is on.</li></ul>
informationalAlerts	Integer	Identity LED status. This can be one of the following values. <ul style="list-style-type: none"><li>• <b>Off</b>. The LED is off.</li><li>• <b>On</b>. The LED is on.</li></ul>
powerStatus	String	Power status. This can be one of the following values. <ul style="list-style-type: none"><li>• <b>Off</b></li><li>• <b>On</b></li><li>• <b>Standby</b></li><li>• <b>Unknown</b></li></ul>
warningAlerts	Integer	Number of warning alerts
_links	Object	Device URI (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "criticalAlerts": 0,
  "faultLedStatus": "Off",
  "identityLedStatus": "Off",
  "informationalAlerts": 0,
  "powerStatus": "Off",
  "warningAlerts": 1,
  "_links": {
    "rel": "self",
    "uri": "/api/v1/data/devices/C7199530FEDE4FE09540DFC3D75FC56C"
  }
}
```

---

## /api/v1/data/techTips

Use this REST API to return a list of tech tips that are associated with a specific device.

**Note:** This REST API requires Lenovo XClarity Orchestrator v1.3.0 or later.

## HTTP methods

GET

## GET /api/v1/data/techTips

Use this method to return a list of technical tips that are associated with a specific device.

**Note:** This REST API requires Lenovo XClarity Orchestrator v1.3.0 or later.

## Authentication

Authentication with user name and password is required.

## Resource URI

GET `https://{orchestrator_server_IP}/api/v1/data/techTips`

## Query parameters

Parameters	Re-quired / Optional	Description
deviceUUID={uuid}	Required	Device UUID To obtain the device UUIDs, use <a href="#">GET /api/v1/data/devices</a> .

The following example return a list of technical tips that are associated with a specific device.

GET `https://192.0.2.0/api/v1/data/techTips?deviceUUID=00632D78DE644E23B712E200FE449787`

## Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully.
400	Bad Request	A query parameter or request attribute is missing or not valid, or the operation is not supported. A descriptive error message is returned in the response body.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
results	Array of objects	Information about each tech tip
abstract	String	Tech tip abstract

Attributes	Type	Description
timestamp	String	Timestamp when the tech tip was created This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
tipID	String	Technical tip ID You can get detailed information for this tech tip from the web using the following URL: <a href="https://datacentersupport.lenovo.com/solutions/{techTipID}">https://datacentersupport.lenovo.com/solutions/{techTipID}</a>
_links	Object	Request metadata (see <a href="#">Links</a> )

The following example is returned if the request is successful.

```
{
  "results": [{
    "abstract": "System will hang at 'UEFI DXE INIT' when deploying iSCSI BOFM with QL45262
      adapter - Lenovo ThinkSystem",
    "timestamp": "2021-01-22T00:00:00.000Z",
    "tipID": "HT510220"
  },
  {
    "abstract": "'An Uncorrectable Error has occurred on CPUs' when memory in closed page mode
      - Lenovo ThinkAgile and Lenovo ThinkSystem",
    "timestamp": "2021-01-22T00:00:00.000Z",
    "tipID": "ht510558"
  }],
  "_links": {
    "rel": "self",
    "uri": "/api/v1/techTips/07389DD8C45D11E793557ED30AE53667-155B46F6F9064C25ACE5177C69F5E07F"
  }
}
```

---

## /api/v1/managers-management/managers

Use this REST API to return a list of all resource managers or to connect a resource manager.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### HTTP methods

GET, POST

## GET /api/v1/managers-management/managers

Use this method to return a list of all resource managers.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### Authentication

Authentication with user name and password is required.

### Resource URI

GET [https://{orchestrator\\_server\\_IP}/api/v1/managers-management/managers](https://{orchestrator_server_IP}/api/v1/managers-management/managers)

## Query parameters

This REST API supports query parameters for paginating, filtering, sorting, including data, and excluding data in the response. For more information about these common query parameters, see [Paginating, scoping, filtering, sorting, including data, and excluding data in responses](#). For a list of supported attributes, see [GET /api/v1/managers-management/managers/{id}](#).

The following example returns a list of all resource managers.

```
GET https://192.0.2.0/api/v1/managers-management/managers
```

The following example returns a list of all unhealthy resource managers.

```
GET https://192.0.2.0/api/v1/managers-management/managers
?filterNotEquals[][attributes]=healthState&filterNotEquals[][values]=Normal
```

## Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully. If a single query parameter is specified and the value of that parameter has no matches, the response body returns default values. If a list of query parameters is specified and the value of at least one parameter has no matches, the response body returns only what matches.
500	Internal Server Error	An internal error occurred. A descriptive error message is returned in the response body.

## Response body

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
results	Array of objects	Information about each resource manager
id	String	Manager ID
connectTimestamp	String	Timestamp when the resource manager was registered with the orchestrator server This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
healthState	String	Health state (translated). This can be one of the following values.
name	String	Resource manager name
type	String	Type of resource manager. This can be the following value. <ul style="list-style-type: none"><li>• <b>Management Hub</b></li><li>• <b>XClarity Administrator</b></li><li>• <b>XClarity Orchestrator</b></li><li>• <b>Schneider EcoStruxure IT</b></li><li>• <b>VMware vRealize Operations Manager</b></li></ul>
_links	Object	Resource URI (see <a href="#">Links</a> )
_ui	Object	Information about UI-specific attributes

Attributes	Type	Description
healthStateKey	String	Health state key. This can be one of the following values.
_metadata	Object	Request metadata (see <a href="#">Metadata</a> )

The following example is returned if the request is successful.

```
{
  "results": [{
    "id": "53788A673607458DA14766162020FDAD",
    "connectTimestamp": "2022-08-02T03:21:20.079Z",
    "healthState": "Normal",
    "name": "10.241.54.10",
    "type": "XClarity Administrator",
    "_links": {
      "rel": "self",
      "uri": "/api/v1/managers-management/managers/53788A673607458DA14766162020FDAD"
    },
    "_ui": {
      "healthStateKey": "Normal"
    }
  },
  ...,
  {
    "type": "XClarity Orchestrator",
    "healthState": "Normal",
    "id": "00000000000000000000000000000000",
    "name": "XClarity Orchestrator",
    "_links": {
      "rel": "self",
      "uri": "/api/v1/managers-management/managers/00000000000000000000000000000000"
    },
    "_ui": {
      "healthStateKey": "Normal"
    }
  }
  ],
  "_metadata": {...}
}
```

## POST /api/v1/managers-management/managers

Use this method to connect (register) one Management Hub resource manager, or connect one or more Schneider Electric EcoStruxure IT Expert, VMware vRealize Operations Manager, and Lenovo XClarity Administrator resource managers.

When connecting multiple managers, a job is created to complete this request. The response header returns the URI for the job in the **Location** field.

When connecting multiple managers, a successful response code indicates that the job was successfully transmitted and accepted by the orchestrator. It does not indicate that the operation that is associated with the job was successful. If a job was not successfully started, refer to the response code and response body for details.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### Authentication

Authentication with user name and password is required.

## Resource URI

POST `https://{orchestrator_server_IP}/api/v1/managers-management/managers`

## Query parameters

None

## Request body

Table 8. Management Hub resource managers

Attributes	Re-quired / Optional	Type	Description
registrationRequest	Required	String	Registration key that is generated by the Lenovo XClarity Management Hub

Table 9. EcoStruxure IT Expert resource managers

Attributes	Re-quired / Optional	Type	Description
managers	Required	Array of objects	Information about each resource manager
authentication	Required	Object	Information about authentication settings
token	Required	String	Token value
type	Required	String	Authentication type. This is always <b>token</b> .
connection	Optional	Object	Information about connection settings
url	Optional	String	Resource manager URL
name	Required	String	Resource manager name
type	Required	String	Type of resource manager. This is always <b>Schneider EcoStruxure IT</b> .

Table 10. vRealize Operations Manager resource managers

Attributes	Re-quired / Optional	Type	Description
managers	Required	Array of objects	Information about each resource manager
authentication	Required	Object	Information about authentication settings
authSource	Optional	String	Name of the authentication source for users and groups To obtain a list of available authorization sources, use <a href="#">GET /api/v1/connector/vrealizeAuthSources</a> .
password	Required	String	Password to use for basic authentication
type	Required	String	Authentication type. This is always <b>basic</b> .
username	Required	String	User name to use for basic authentication
connection	Required	Object	Information about connection settings



```

yZzZmMfgwR0p1Zk1YZE5hR25zK1Q4TXNVZ3YwU0o1MTY5L3dcbly2TnVTbXvVtM4Qly4Rn
lwUwXtYXQwaGt5M1lEMldhY2pnaU5tUUUyd0JaQWpqQ0tTL3pIYm1LVnQ4a3kvUlpcbmtza
ktsS2V4UUCvUnl6ZGVgaTREV2dzMVhkekJhNVFYnJYwcStwYmkwUVhtNDVNSGFqMnAv0VN2
Q2FBRLBhTUtcbk5qTkRCWkhYd0o0RTNpdLFXK3NTVkrqajJCbVY3bXZadTVOWkdDKzEydy9
xU2tVMW4vbdF0bHhUTStvV3pqrjBcbLBSZLgwVWZCbklSeUdaMGdpl1BHTUVtVLVZrMvY2Y1
BIQWhlMmLOZVVxTWxEZnVTS2xVeGUyM0hDaUZLL2ZOL2tcbLh3N2NyVgrL1daTnRkdXZUa
3hwUHovMVBil3k0cWQ3YThGeWVmTnNUYkLab0Vrb1LIc3A0Z1d5d2d6BFMOYXRcbjF5Sno3
bzNiUmVZcnNKRzLQeFY3V204b1hiSCtZTFlyY1FkM1hsbwg30WtyS0k0SELWRXo4SHNIOWY
zbWptTnlcblmLZLmVrFV0Vkdtd2t4aENVd0hKRdJ6cER6eS9qYkQzbVJnRnZ6RzLNR2p5eF
NlREhVM1M2NGUyaWw5TE5RQzVcbkFntUJBQudnQURBtkJna3Foa2LHOXcwQkFRc0ZBQU9DQ
WdFQUYxYmowS3libUjYr2VzWjRxyTFXODlkYkh6QVRcbnFGQVRacVpkdFoxylluS29HUMFG
YXgzC0tUTWJUzmgYaEtnQm1KMUZ3ZUX0eLFSQ3hqbHJOQzQ2cUs5S0JhQUNcbjRMQmxYWGp
tSmYyMDBzRkgyN3htL1NvSnLFR1UYW5jdkFZUCswZURUEJDD2ZpVmFIYWpJK1L3ZLNTYw
lNelZcbnJyMzU1ZHLxMFJMOEljNzU5S2VoTWZpTWhiTLF4U0k00UJPejNSMW9RQ2xblmZw
LLYS1FcCE1dnRibHpKZEhcBnN0cHU4ZE0YnY2Tm5iU0svT3U2Mm9SR3h5d1B6SUHRRWpQ
SfkrOHMwNXBqcnBibGRONLlJULwZEMxdw1PS1VcbjFQWCtoY2LLNnIOYzRnN2JicW91MEt
VNmdDUUxwMGJiZ0xDULdIYOo1Vk92T1Vrb044UWthb09Qa05aa1Jyck9cblLFSmEXQB5YT
Uwb0oreULTc05ENgtsdjFhS0xvWTLDaLV6KOpLYXVoNW04VVRmaFFuSFFkY09XNVF4dWLCY
U5cbmxjV0VON0xTMVivUjk4ekdq0XY4WEoxNnNKYUc1ajdaZuc30G1DazNERTRNdGJUZUpW
K2VwVStBaytWbWp6WDRcbmg1c1FdaGxLrm96NWVLL0MvQWfoakJLL2tHQ1h1T1k2S3dvU1B
OK0xLQTFOMFRrNnlyend3SEJIRHI4dkVCMjJcbkdzOVFqcjJZaVJGZjVwYnc2YVZVWFpXOE
1MdUpuRRHSSXMwdzhzdmP3dmFxenFzWUXsNnNRZDVLVjdZdmWTRcbnlPRjNEV21qK25na
mZtT0haS1hEckFTUXF4dDLZNTF2RnViMmlUTjLxSORZU2cxQWpJS2wySXVnNDRdQjB1aXFc
blNwNwo4dGJJcXB0ck50ND1cbi0tLS0tRU5EIEENFULRJRkLDQVRFIFJFUVVFU1Q1tLS0tLVx
uIiwicHVibGls2V5IjoilS0tLS1CRUdJTiBQVUJMSUMgS0VZLS0tLS1cbk1JUNJAKfOQm
drcWhraUc5dzBCQVFRkFBTONBZzHBTULJQ0NnSONBZ0VBeHhG60NsVwPkmFJLL0fMSXhpR
Stcbk9CNmdsdGhBZ1JCNzFWS3FnWELPWWY5UEtVYmVLZjAzdWtDU2hTWjFtZ0dXSmorUxLL
cXNSZDBVZHRjNCs5dmdcbkFSbW4ramZOaHFGbjVmMFPnZUNNbHcrcGh4S0h1ZHLVQUEyTCt
IMHBlenhZwVZDUkPwHduTzVGQXVqU3hieVJcbmNtVwt6eWRXtjQ00EdZUXdnYkRDMDBjb1
BBRGxsYXdrODV6MmIwK2NmZG1VbGU4VUD3dzh3L2L1zWmNUbFBqVkfcbk1FWGZodHFkYUhia
2pDZlh5eml6RnZtanJYdDRBbitwb1lmSGYvdGLWwMq1STBXaTbPNXR4d3pPwkvYtZvWHhc
bmXhSmtPMFN3bmlmUVIgyE9pVCttV1hTRWLTQ3pZMwtwbDg5RnorQUdYMExhTjJkNFFuWFJ
xclVmTmFhTLNpbVBcbLFzUDFxdGpQVDRxcjdWSHLMQ1drQjI0WjLOVzFHNGROVWVZMDJwa0
dJVVVwblwemR6UU1tOGZ5UHFQTLNQVFcblc2SEN5RWdwdzR2eDJESWNKWE84ZDRWUwXL
OgxTzU1Z0dYSGZ2Z1F1ekJUdEg0cU9uTWZ1WmxGQ3N4eStQbVZcbmNYUDRyWwU4cVBJRzdW
MjFCWEgydFhiNHkxZVpPUMzqa1E3TGw5ZmRudkFRYVgVmw8vQVRSNlpveFBTZEE5WXZcbnc
3UkpzeELIwmg1RUFzT1RadXJpczkYVORjZ1kwTnJSRFFJUKNNYU0xZGVSU0xSZTF6ZWRVbm
NpNwtYK0NIU1pcbmJHdVBBNWhPK3BEDnhQ0UQ4UkRSNWpJWDNTb21K0XNoNvpYa0NnakdmQ
WE4eU55a3k4dGdln3hYUVJ0SS5aUhcblm5U2FJMhpyb1Bjb1V1cEx5TkxKRkzQ0F3RUFB
UT09XG4tLS0tLUVORCBQVJMSUMgS0VZLS0tLS1cbij9",

```

```
}
```

The following example connects to a EcoStruxure IT Expert, vRealize Operations Manager, and XClarity Administrator resource manager.

```

{
  "managers": [{
    "authentication": {
      "token": "AK1/2sixskmmc06wj/i6v3epcz5c25rc29jv1t00hce1pjahyobux63 ",
      "type": "token"
    },
    "connection": {
      "url": "https://api.ecostruxureit.com/rest/v1/organizations"
    },
    "name": "Croco 1",
    "type": "Schneider EcoStruxure IT"
  }],
  {
    "authentication": {
      "authSource": "All vCenter Servers",
      "password": "*****",
      "type": "basic",

```



```

    "username": "USERID"
  },
  "connection": {
    "hostname": "10.241.54.100",
    "port": 443
  },
  "hubID": "B7DE58431234C23839398F3AD4873923",
  "type": "vRealize Operations Manager"
},
{
  "authentication": {
    "password": "CME44len",
    "type": "basic",
    "username": "USERID"
  },
  "connection": {
    "hostname": "10.241.54.102",
    "port": 443
  },
  "options": {
    "enableDriveAnalyticsData": true
  },
  "type": "XClarity Administrator"
}
}
}

```

### Response codes

Code	Description	Comments
200	OK	The request completed successfully.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

### Response header

When connecting multiple managers, the URI and ID of the root job are returned in the **Location** and **JobID** fields respectively, for example:

```

Location: /api/v1/jobs-management/jobs/56?childrenLevels=-1
jobID: 56

```

### Response body

For Management Hub resource managers, when the request is successful, the following attribute is returned. If the request fails, standard message attributes are returned. For all other resource managers, standard message attributes are always returned (see [Status messages](#)).

Attributes	Type	Description
registrationKey	String	Registration key that is generated by Lenovo XClarity Orchestrator to complete the connection to the Management Hub To complete the connection, import the registration key in the Management Hub by clicking <b>Administration → Hub Configuration</b> , and clicking <b>Install Registration Key</b> , entering the registration key, and then clicking <b>Submit</b> .

The following example is returned if the request is successful.

```

{
  "registrationKey": "0DF4-0110-E231",

```

}

---

## **/api/v1/managers-management/managers/{id}**

Use this REST API to return information about a specific resource manager or to delete a specific resource manager.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### **HTTP methods**

GET, DELETE

## **GET /api/v1/managers-management/managers/{id}**

Use this method to return information about a specific resource manager.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### **Authentication**

Authentication with user name and password is required.

### **Resource URI**

GET `https://{orchestrator_server_IP}/i/v1/managers-management/managers/{id}`

where *{id}* is the ID of the resource manager. To obtain the manager IDs, use [GET /api/v1/managers-management/managers](#).

### **Query parameters**

None

### **Request body**

None

### **Response codes**

Code	Description	Comments
200	OK	The request completed successfully.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

### **Response body**

When the request is successful, the following attributes are returned. If the request fails, standard message attributes are returned (see [Status messages](#)).

Attributes	Type	Description
id	String	Resource-manager ID
authenticationKey	String	(Lenovo XClarity Management Hub and Lenovo XClarity Administrator only) Authentication key

Attributes	Type	Description
authSource	String	(vRealize Operations Manager only) Name of the authentication source for users and groups To obtain a list of available authorization sources, use <a href="#">GET /api/v1/connector/vrealizeAuthSources</a> .
connectTimestamp	String	Timestamp when the manager was registered with the orchestrator server This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
connection	Object	Information about connection settings
hostname	String	Manager host name
port	Integer	Manager port number
url	Integer	(EcoStruxure IT Expert) Manager port number
groups	Array of objects	Information about each group in which this manager is a member
id	String	Group ID
name	String	Group name
type	String	Group type. This value is always <b>ManagerGroup</b> .
healthState	String	Health state (translated). This can be one of the following values.
hubID	String	(vRealize Operations Manager only) Management Hub ID to use to connect the resource manager
issues	Array of strings	Reason for an unhealthy status If <b>healthState</b> is <b>Normal</b> , this attribute is set to an empty array. If <b>healthState</b> is not Normal, this attribute can be one or more of the following values. <ul style="list-style-type: none"> <li>• <b>InvalidCredentials</b></li> <li>• <b>ConnectionProblems</b></li> </ul>
lastInventorySyncTimestamp	String	Timestamp when the portal last refreshed the inventory for the manager This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
lastSyncTimestamp	String	Timestamp when portal last refreshed the information about the manager This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
name	String	Resource manager name to use for basic authentication
options	Object	(Lenovo XClarity Management Hub and XClarity Administrator only) Information about applicable options
enableDriveAnalyticsData	Boolean	Indicates whether drive analytics-data collection is enabled. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The component can be updated.</li> <li>• <b>false</b>. The component cannot be updated.</li> </ul>
properties	Object	Information about the resource manager properties

Attributes		Type	Description
	build	Integer	Manager build number
	buildNumber	Integer	Manager build number
	forwarderID	String	(Lenovo XClarity Management Hub and XClarity Administrator only) ID of the event forwarder in XClarity Administrator that pushes events to this XClarity Orchestrator instance
	metricsSubscriptionID	String	(Lenovo XClarity Management Hub and XClarity Administrator only) ID of the metrics subscription in XClarity Administrator that pushes metrics to this XClarity Orchestrator instance
	networkSettings	Object	(Lenovo XClarity Management Hub and XClarity Administrator only) Manager network settings
	domainName	String	Manager domain name
	hostname	String	Manager host number
	ipv4Addresses	Array of strings	List of IPv4 addresses for the manager
	ipv6Addresses	Array of strings	List of IPv6 addresses for the manager
	uuid	String	Manager UUID
	version	String	Manager version number
	versionNumber	Integer	Manager version number
	type	String	Type of manager. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>Management Hub</b></li> <li>• <b>XClarity Administrator</b></li> <li>• <b>Schneider EcoStruxure IT</b></li> <li>• <b>VMware vRealize Operations Manager</b></li> </ul>
	updates	Object	(Lenovo XClarity Management Hub and XClarity Administrator only) Information about current software updates
	components	Array of objects	Information about updates on each component
	componentID	String	Component ID
	name	String	Component name
	targetVersion	Object	Information about the target update for the component based on the assigned policy If a policy is not assigned, this value is null.
	identifier	String	Version identifier
	number	String	Version number
	releaseTimestamp	String	Timestamp when the update was released This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
	upgradeable	Boolean	Indicates whether the component can be updated. This can be one of the following values. <ul style="list-style-type: none"> <li>• <b>true</b>. The component can be updated.</li> <li>• <b>false</b>. The component cannot be updated.</li> </ul>

Attributes		Type	Description
	version	Object	Information about current version
	identifier	String	Version identifier
	number	String	Version number
	releaseTimestamp	String	Timestamp when the update was released This timestamp is specified using ISO-8601 format (for example, 2019-05-02T19:28:14.000Z). For information about ISO-8601 format, see the <a href="#">W3C Date and Time Formats webpage</a> .
	identifier	String	Update identifier
	policy	Object	Information about the assigned update policy
	id	String	Policy ID If a policy is not assigned to the manager, this value is null.
	name	String	Policy name If a policy is not assigned to the manager, this value is <b>No Assignment</b> .
	policyState	String	Update policy state (translated) <ul style="list-style-type: none"> <li>• <b>No Policy Assigned</b></li> <li>• <b>Policy Assigned</b></li> </ul>
	policyStateKey	String	Update policy state key <ul style="list-style-type: none"> <li>• <b>NoPolicyAssigned</b></li> <li>• <b>PolicyAssigned</b></li> </ul>
	_links	Object	Resource URI (see <a href="#">Links</a> )
	_ui	Object	Information about UI-specific attributes
	healthStateKey	String	Health state key. This can be one of the following values.

The following example is returned if the request is successful for a Lenovo XClarity Management Hub resource manager.

```
{
  "id": "53788A673607458DA14766162020FDAD",
  "authenticationKey": "53788A673607458DA14766162020FDAD",
  "connectTimestamp": "2022-08-02T03:21:20.079Z",
  "connection": {
    "hostname": "10.241.54.10",
    "port": 443
  },
  "groups": [],
  "healthState": "Normal",
  "issues": [],
  "lastInventorySyncTimestamp": "2022-08-02T17:53:35.322Z",
  "lastSyncTimestamp": "2022-08-02T03:21:20.079Z",
  "name": "10.241.54.10",
  "options": {
    "enableDriveAnalyticsData": false
  },
  "properties": {
    "build": "108",
    "buildNumber": 108,
    "forwarderID": "1659410478081",
    "metricsSubscriptionID": "62e8982fcdd22d416d86f82e",
    "networkSettings": {
      "domainName": ""
    }
  }
}
```

```

        "hostname": "localhost",
        "ipv4Addresses": ["10.241.54.10"],
        "ipv6Addresses": ["fd64:30d9:58db:5bbc:0:0:0:1e10","fe80:0:0:0:250:56ff:fe8b:2320"]
    },
    "uuid": "53788A673607458DA14766162020FDAD",
    "version": "1.0.0",
    "versionNumber": 100
},
"type": "Lenovo XClarity Management
Hub",
"updates": {
    "components": [{
        "componentID": "lxca",
        "name": "Lenovo XClarity Management
Hub 1.0.0",
        "targetVersion": null,
        "upgradeable": true,
        "version": {
            "identifier": "108",
            "number": "1.0.0",
            "releaseTimestamp": null
        },
    }],
    "identifier": "lxca",
    "policy": {
        "id": null,
        "name": "No Assignment"
    },
    "policyState": "No Policy Assigned",
    "policyStateKey": "NoPolicyAssigned"
},
"_links": {
    "rel": "self",
    "uri": "/api/v1/managers-management/managers/53788A673607458DA14766162020FDAD"
},
"_ui": {
    "healthStateKey": "Normal"
}
}

```

The following example is returned if the request is successful for a EcoStruxure IT Expert resource manager.

```

{
    "id": "b17c3acce1e2a94e28b108ed757a6705c77066d",
    "connectTimestamp": "2021-02-16T12:36:40.809Z",
    "connection": {
        "url": "https://api.ecostruxureit.com/rest/v1/organizations"
    },
    "details": {
        "build": null,
        "uuid": null,
        "version": null,
        "versionNumber": null
    },
    "groups": [],
    "healthState": "Normal",
    "healthStateKey": "Normal",
    "issues": [],
    "lastInventorySyncTimestamp": null,
    "lastSyncTimestamp": "2021-02-16T12:36:40.809Z",
    "name": "Demo Ecox manager1",
    "type": "Schneider EcoStruxure IT",
}

```

```

    "updates": null,
    "_links": {
      "rel": "self",
      "uri": "/api/v1/connector/managers/b17c3acce1e2a94e28b108ed757a6705c77066d"
    }
  }
}

```

The following example is returned if the request is successful for a vRealize Operations Manager resource manager.

```

{
  "id": "b17c3acce1e2a94e28b108ed757a6705c77066d",
  "authSource": "",
  "connectTimestamp": null,
  "connection": {
    "hostname": "10.241.54.100",
    "port": 443
  },
  "groups": [],
  "healthState": "Normal",
  "hubID": "1234",
  "issues": [],
  "lastInventorySyncDate": null,
  "lastSyncTimestamp": null,
  "name": "vRealize Operations Manager",
  "properties": {
    "uuid": "21A727A22EECA0B85DCE38F16C7CEB1F",
    "build": "41",
    "buildNumber": 41,
    "version": "1.4.0",
    "versionNumber": 140
  },
  "type": "vRealize Operations Manager",
  "_links": {
    "rel": "self",
    "uri": "/api/v1/managers-management/managers/b17c3acce1e2a94e28b108ed757a6705c77066d"
  },
  "_ui": {
    "healthStateKey": "Normal"
  }
}

```

## DELETE /api/v1/managers-management/managers/{id}

Use this method to delete a specific resource manager.

A job is created to complete this request. The response header returns the URI for the job in the **Location** field.

A successful response code indicates that the job was successfully transmitted and accepted by the orchestrator. It does not indicate that the operation that is associated with the job was successful. If a job was not successfully started, refer to the response code and response body for details.

**Note:** This REST API requires Lenovo XClarity Orchestrator v2.0.0 or later.

### Authentication

Authentication with user name and password is required.

## Resource URI

DELETE `https://{orchestrator_server_IP}/api/v1/managers-management/managers/{id}`

where *{id}* is the ID of the resource manager. To obtain the manager IDs, use [GET /api/v1/managers-management/managers](#).

## Query parameters

None

## Request body

None

## Response codes

Code	Description	Comments
200	OK	The request completed successfully.
404	Not found	The resource cannot be found. A descriptive error message is returned in the response body.

## Response body

Attributes	Type	Description
<i>{message_attributes}</i>	<i>varies</i>	Status messages (see <a href="#">Status messages</a> )