



Lenovo XClarity Integrator for Nagios Installation and User's Guide



Version 1.0.1

Note

Before using this information and the product it supports, read the information in Appendix A “Notices” on page 7.

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About this publication

This book provides instructions for installing and using Lenovo XClarity Integrator for Nagios.

Lenovo XClarity Integrator for Nagios is a plugin for Nagios that allows status and alert monitoring of the devices that are managed by Lenovo XClarity Administrator. These insights can help systems administrators find potential problems in their environment

Conventions and terminology

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

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

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

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

PDF and web resources

Information about Lenovo XClarity Integrator for Nagios is available in Portable Document Format (PDF) files.

The following product publications are available in PDF format. To view a PDF file, you need Adobe Reader. You can download it at no charge from the [Adobe Acrobat website](#).

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Installation and User's Guide

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Installation and User's Guide

Use the following links to learn more about Lenovo XClarity Integrator for Nagios and related resources.

- [Lenovo XClarity Integrator for Nagios Support webpage](#)
- [Nagios webpage](#)
- [Lenovo XClarity Administrator online documentation](#)

What's new in version 1.0.1

This section provides an overview of features that are new to Lenovo XClarity Integrator for Nagios, v1.0.1.

New software requirements

Python 2.7.12 with specific PIP packages is required for Lenovo XClarity Integrator for Nagios v1.0.1 and later (see Software requirements).

Chapter 1. Lenovo XClarity Integrator for Nagios

Lenovo XClarity Integrator for Nagios is a plugin for Nagios that allows status and alert monitoring of the devices that are managed by Lenovo XClarity Administrator. These insights can help systems administrators find potential problems in their environment

XClarity Integrator for Nagios supports the following features.

- View hardware status and alerts for Lenovo hardware that is managed by XClarity Administrator
XClarity Integrator for Nagios supports all device types that are supported by XClarity Administrator, including servers, storage, and switches.
- Sends an email to an administrator when a new alert is asserted or de-asserted
- Works with other variations, such as Check_MK

Note: Device status and alerts *are not* provided in real-time. The frequency in which alerts and status is retrieved based 1.5 times the check-interval setting that is configured in Nagios.

Chapter 2. Planning and setting up Lenovo XClarity Integrator for Nagios

Use this procedure to plan for and set up Lenovo XClarity Integrator for Nagios.

Software requirements

The following requirements must be met.

- Lenovo XClarity Administrator v2.0 or later
- Nagios core
- Python v2.7.12 with the following PIP packages:
 - keyring 18.0.1
 - keyrings.alt 3.1.1
 - requests 2.21.0
 - SecretStorage 2.3.1

Supported devices

Lenovo XClarity Integrator for Nagios supports all device types that are supported by Lenovo XClarity Administrator, including servers, storage, and switches.

For more information, see [Supported devices](#) in the XClarity Administrator documentation.

Setting up Lenovo XClarity Integrator for Nagios

Use these steps to setup Lenovo XClarity Integrator for Nagios.

Before you begin

Ensure that Nagios can connect to the target Lenovo XClarity Administrator.

Ensure that ports to the SMTP server are open.

Ensure that XClarity Administrator manages one or more devices that have alerts so that you can verify the setup.

By default, XClarity Integrator for Nagios uses python **sendmail** for sending emails. You can also choose to use the standard email plugin that you use for all other plugins by configuring the email function in XClarity Integrator for Nagios script or use the standard Nagios e-mail function which is defined in the `commands.cfg` file.

Important: When copying code snippets from this topic, pay special attention to the end-of-line characters, as they are different in Windows and Linux.

Procedure

To set up XClarity Integrator for Nagios, complete the following steps.

- Step 1. Download XClarity Integrator for Nagios (**xclarity_integrator_check.py**) to the `/usr/local/nagios/libexec` directory

Note: You can download XClarity Integrator for Nagios from the [Nagios Exchange website](#) or [Lenovo Support website](#).

Step 2. Optional: Edit the `xclarity_integrator_check.py` Python script, and modify the location of the `log_alerts`, `log_nodes`, `log_mail` and `certificate.pem`.

By default, the script creates and saves these files in the `/home/nagios/logs` directory.

Step 3. Run the `xclarity_integrator_check.py generate_credentials` command to set up XClarity Integrator for Nagios (for example `/usr/local/nagios/libexec/xclarity_integrator_check.py generate_credentials`).

Important: You must run this command as the user that runs the Nagios instance.

Step 4. When prompted, specify the user name, password and URL to the LXCA instance (URL example: `https://192.0.2.0`) to use to authenticate with XClarity Administrator.

Step 5. Update the Nagios configuration files in the `/usr/local/nagios/etc/objects` directory to add the new plugin.

- **commands.cfg**

Add the following definitions for the XClarity Integrator for Nagios plugin to send emails and verify the target XClarity Administrator.

Important: The options that are specified for the `command_line` function in the following definitions are appended with two dashes.

```
define command{
    command_name    notify-by-email
    command_line    $USER1$/xclarity_integrator_check.py --notificationtype '$NOTIFICATIONTYPE$'
                   --servicedesc '$SERVICEDESC$' --hostaddress '$HOSTADDRESS$' --servicestate '$SERVICESTATE$'
                   --longdatettime '$LONGDATETIMES$' --longserviceoutput '$LONGSERVICEOUTPUT$'
                   --hostalias '$HOSTALIAS$'
}
```

```
define command {
    command_name xclarity_integrator_check
    command_line $USER1$/xclarity_integrator_check.py --lxca system
}
```

- **localhost.cfg**

Add the following definition for the XClarity Integrator for Nagios plugin.

```
define service{
    use                local-service
    host_name          localhost
    service_description xclarity_integrator_check
    check_command      xclarity_integrator_check
    notifications_enabled 1
}
```

- **contacts.cfg**

Add the following definitions to define the email address of the contact or contact group that is to receive emails notifications.

```
define contact{
    contact_name      John
    use                generic-contact
    alias             John Doe
    service_notification_commands notify-by-email
    email             JOHN_D@company.com
}
```

Where:

- **contact_name**. Short name for the contact
- **use**. Always set this value to “generic-contact”
- **alias**. Full name for the contact
- **service_notification_commands**. To use Mailx for sending and receiving emails, set this parameter to the value of the **command_name** parameter in the `commands.cfg` file (for example, `notify-by-email`). To use the standard Nagios email plugin, omit this parameter.
- **email**. Contact email address

Step 6. Restart Nagios for the changes to take effect.

Step 7. From the Nagios portal, verify that “xclarity_integrator_check” is listed as a service under localhost.

Limit Results: 100 ▼

Host	Service	Status	Last Check	Duration	Attempt	Status Ir
localhost	Current Load	OK	08-16-2018 10:57:44	2d 2h 33m 20s	1/4	OK - load
	Current Users	OK	08-16-2018 10:58:18	2d 2h 32m 42s	1/4	USERS C
	HTTP	WARNING	08-16-2018 10:58:52	2d 2h 32m 5s	4/4	HTTP WA
	PING	OK	08-16-2018 10:54:23	2d 2h 31m 27s	1/4	PING OK
	Root Partition	OK	08-16-2018 10:55:00	2d 2h 30m 50s	1/4	DISK OK
	SSH	OK	08-16-2018 10:55:32	2d 2h 30m 12s	1/4	SSH OK -
	Swap Usage	OK	08-16-2018 10:56:05	2d 2h 29m 35s	1/4	SWAP OF
	Total Processes	OK	08-16-2018 10:56:38	2d 2h 28m 57s	1/4	PROCS C
	Xclarity_integrator_check	OK	08-16-2018 10:59:13	0d 2h 35m 14s	1/4	Cezar7

Step 8. Click **xclarity_integrator_check** to display the current status, and verify the status is “OK.”

Step 9. Create an alert condition in the target XClarity Administrator. Verify that an email is sent to the specified contacts, for example:

***** Nagios *****

Notification Type: PROBLEM

Service: xclarity_integrator_check
 Host: localhost
 Address: 192.0.2.0
 State: CRITICAL

Date/Time: Wed Jul 25 08:15:54 EDT 2018

Additional Information:

 Node: SR530 with IP: 192.0.2.10, 192.0.2.11, is in Critical state with the following alerts:
 All CPUs have failed with ERROR.

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Processor speed indicates the internal clock speed of the microprocessor; other factors also affect application performance.

When referring to processor storage, real and virtual storage, or channel volume, KB stands for 1 024 bytes, MB stands for 1 048 576 bytes, and GB stands for 1 073 741 824 bytes.

When referring to hard disk drive capacity or communications volume, MB stands for 1 000 000 bytes, and GB stands for 1 000 000 000 bytes. Total user-accessible capacity can vary depending on operating environments.

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