



Clarius Automation Framework Getting Started Guide

Version 3.0.0

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Preface

This guide provides information to help you do the following:

- Install Clarius automation framework
- Install application(s) in Clarius automation framework
- Install Clarius SDK
- Activate the application license
- Run measurement and instrument services
- Log in to the Clarius
- Overview of the application controls and navigation panel
- Frequently asked questions

Getting help and support

Product documents

Use the product documents for more information about getting started with the Clarius, the application functions, and how to remotely use the application.

Table 1: Clarius automation framework and application documents

To learn about	Use this document
How to install the Clarius	Clarius Automation Framework Getting Started Guide
How to use the application	Clarius Compliance <App_Name> Application Help
How to automate using the API and SDK commands	Clarius Automation Framework (API and SDK) Programming Guide

Conventions

This application help uses the following conventions:

- The terms "Application" and "Software" refer to the Clarius compliance <App_Name> application.
- The term "target system" refers to the Computer/Laptop where the Clarius automation framework and application is installed.
- The acronym "DUT" is an abbreviation for Device Under Test.
- The term "select" refers choosing a screen item (button control or list item) using a mouse.
- A **Note** identifies important information.

Technical support

Tektronix values your feedback on our products. To help us serve you better, please send us your suggestions, ideas, or comments on your application or oscilloscope. Contact Tektronix through mail, telephone, or website. See [Contacting Tektronix](#) for more information.

When you contact Tektronix Technical Support, please include the following information (be as specific as possible):

General information

- All instrument model numbers
- Hardware options, if any
- Modules used
- Your name, company, mailing address, phone number, FAX number
- Please indicate if you would like to be contacted by Tektronix about your suggestions or comments.

Application specific information

- Software version number
- Description of the problem
- If possible, save the log file(s) and share it with the Tektronix support person to understand the problem and get it resolved.

System requirements

This section explains the recommended system requirements to install the Clarius automation framework and the application(s).

The recommended system requirements may change for the application(s) that will be installed in the Clarius automation framework. For the recommended system requirements of an application, refer to the application help document.

Requirement	Recommended requirements
Operating system	Windows 10 Enterprise and Pro (version 21H1 and above) or Windows 11 Enterprise and Pro (version 21H1 and above) Language: English (United States) only
CPU cores	As recommended in application help
RAM	As recommended in application help
Disk space	As recommended in application help
Network speed	1 Gbps
Browser	Microsoft Edge (default) or Google Chrome
Additional software	Python 3.12.x

Recommended deployment models

This section lists the supported deployment models for setting up Clarius automation framework and run the tests.

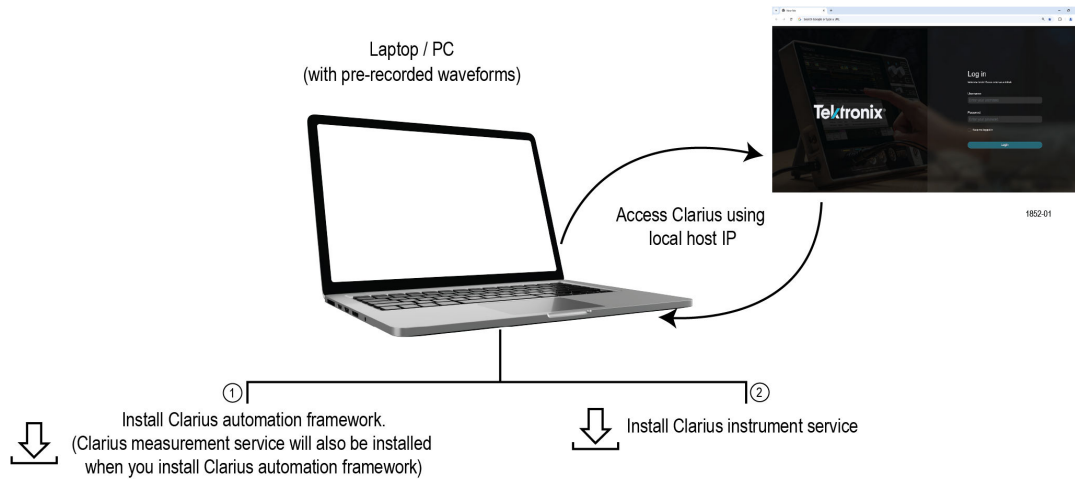


Figure 1: Deployment model 1: Single system deployment

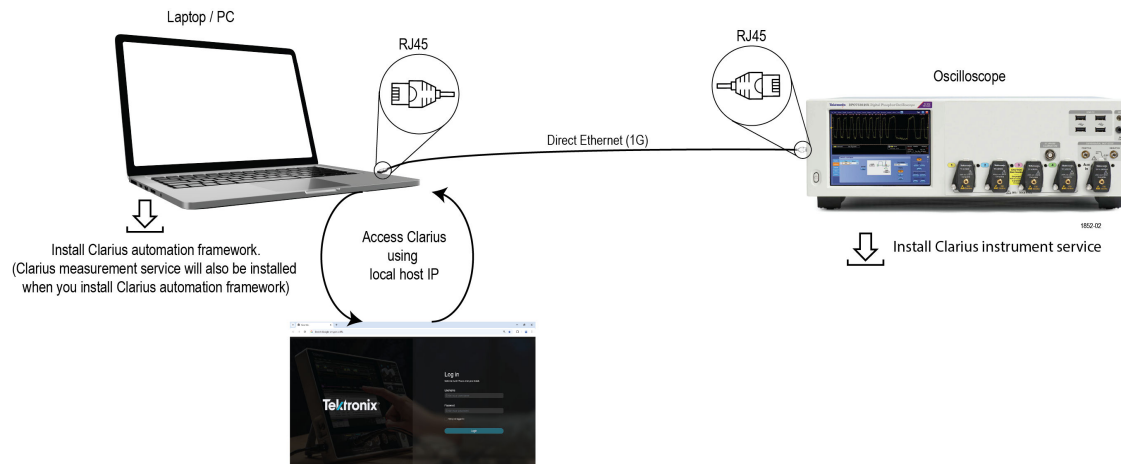


Figure 2: Deployment model 2: Peer to peer connection

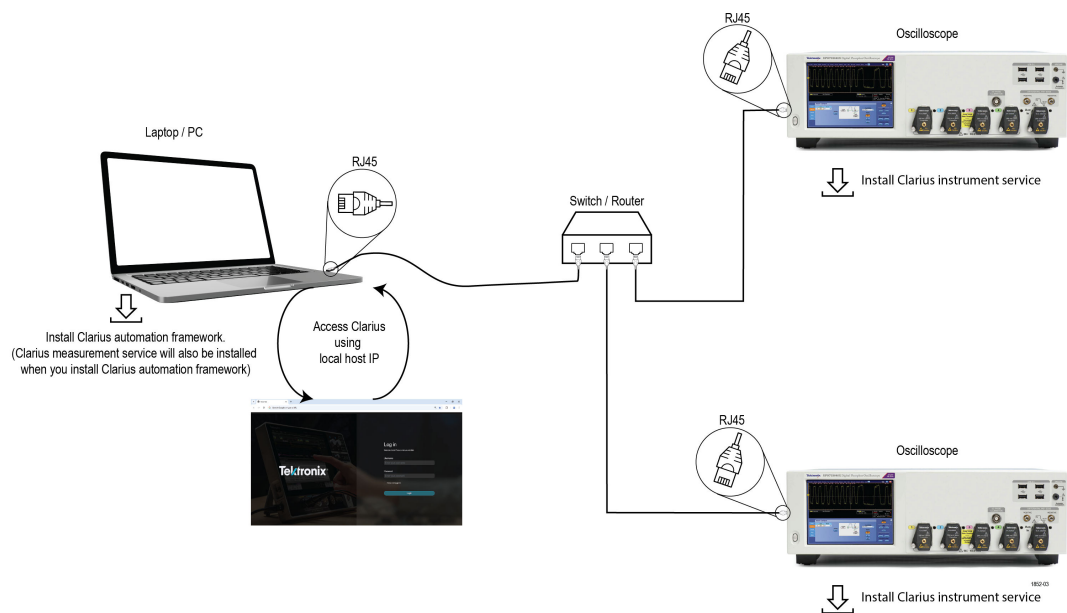


Figure 3: Deployment model 3: Private network setup via standard switch / router / hub

Enable ports to install Clarius automation framework

The installer checks for the first available port within the range incrementally and allocates the port of the services. If no ports are available within the range, installation will prompt user to enter their custom ports.

The following table lists the services and the port ranges.

Port name	Port range
Clarius user interface	4200:4209
Event communication with instruments	5672:5679
Programming interface	8443:8449
SSL certificates download interface	8080:8089
Large objects transfer interface	9001:9009

Dynamic memory and disk space allocation for the Clarius automation framework virtual machine

Dynamic memory allocation

The minimum RAM required to install the Clarius automation framework is 8 GB.

By default, the installer allocates 12 GB, if the 50% of available RAM is greater than 12 GB. You can also manually allocate RAM from 8 GB up to 50% of total available RAM.

Example

Total RAM available in the target system	64 GB
Minimum RAM required	8 GB
RAM allocated	12 GB (50% of 64 GB = 32 GB, you can choose from 8 GB to 32 GB)



Note: If the 50% of the total available RAM is less than 8 GB, then the installation will fail.

Disk space allocation

The maximum allocated disk space for Clarius automation framework installation is 90% of the available disk space.

Example

Total disk space available in the target system	300 GB
Minimum disk space required	20 GB
Maximum disk space required	90% of available storage

Installing Clarius automation framework

This section describes the instructions for installing the Clarius automation framework on a computer/laptop. The term **target system** used in this document will refer to the computer/laptop where the Clarius automation framework and application are installed.

Follow the steps to complete the installation:

1. [Enable Virtualization technology in BIOS¹](#)
2. [Configure power and sleep settings](#)
3. [Enable ports to install Clarius automation framework](#)
4. [Dynamic memory and disk space allocation for the Clarius automation framework virtual machine](#)
5. [Enable Hyper-V in the target system](#)
6. [Install Clarius automation framework in the target system](#)
7. [Install Clarius instrument service](#)

Enable Hyper-V on the target system

Hyper-V is a hardware virtualization tool that allows you to create and run a virtual machine on your system without affecting the host operating system. To enable Hyper-V on your computer, follow these steps:

1. Log in to the system with an administrator account.
2. Type **Control Panel** in the search box and press **Enter**.

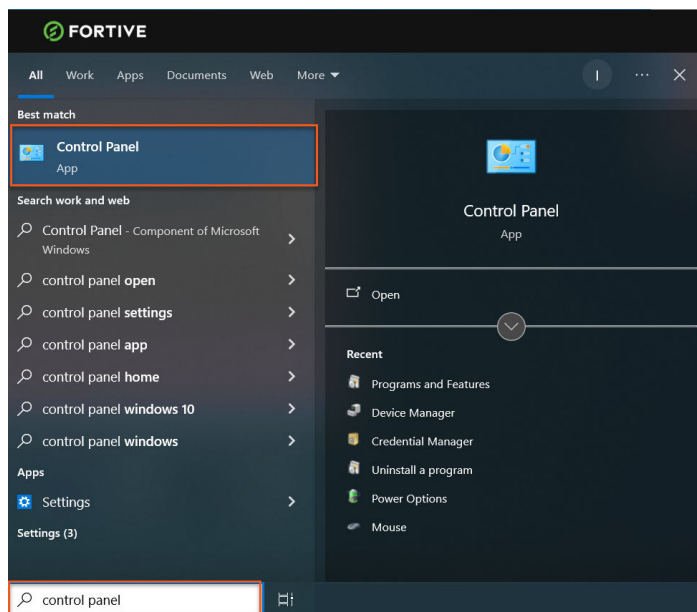


Figure 4: Control Panel

3. Select **Control Panel > Programs and Features**.

¹ Contact the IT team of your organization to enable the virtualization technology in your system.

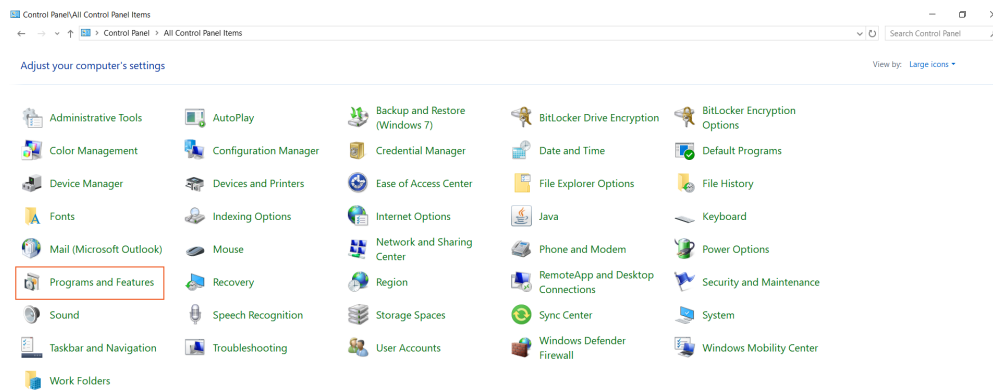


Figure 5: Programs and Features dialog

4. Select Turn Windows features on or off.

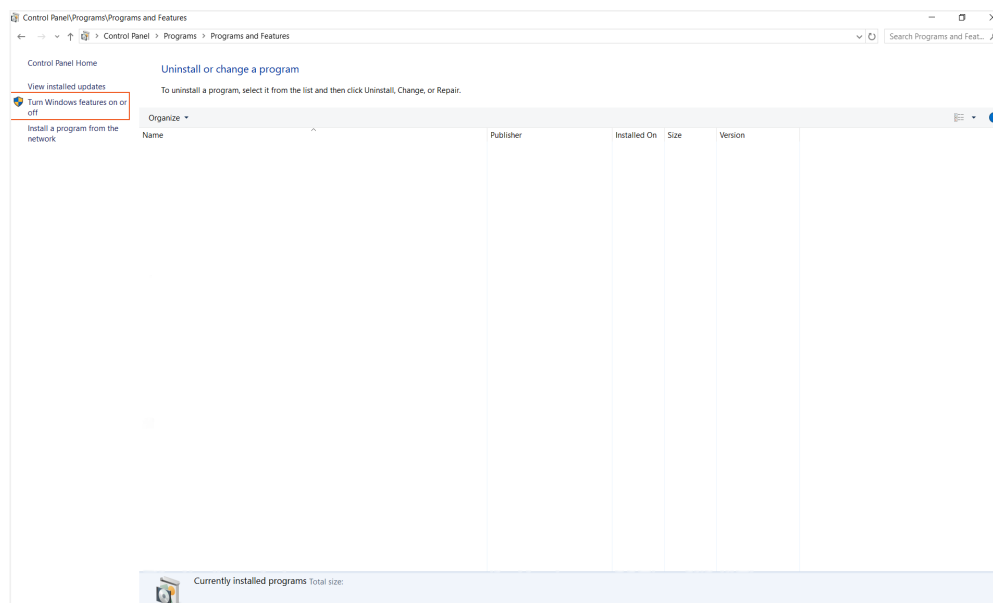


Figure 6: Turn Windows features on or off dialog

5. Select Hyper-V and its sub features.

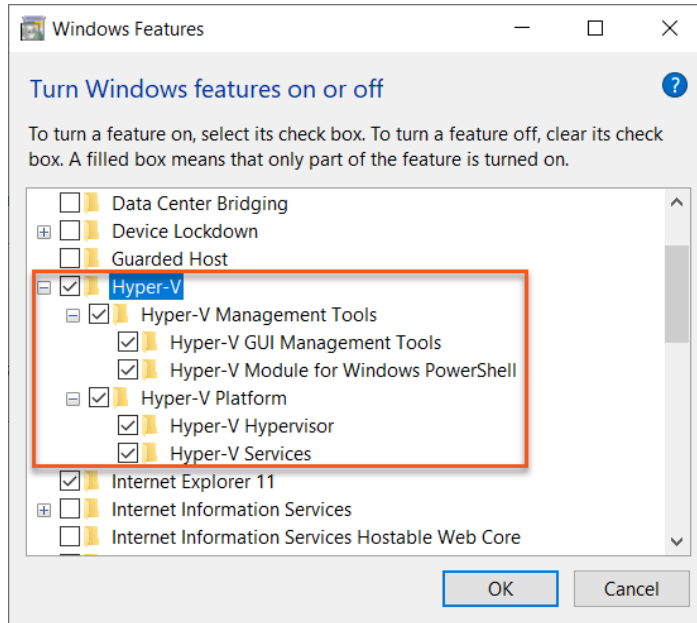


Figure 7: Enabling Hyper-V in the Windows Features dialog box

6. Select **OK** to install. You must restart the system when prompted.

Configure power and sleep settings

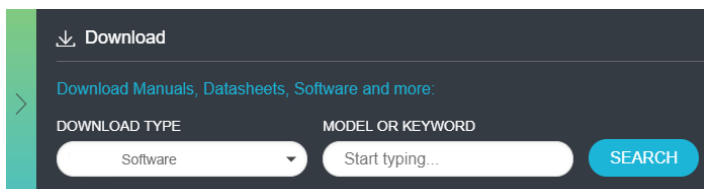
Configure the sleep settings to Never in the target system where Clarius automation framework will be installed. To configure the sleep settings, follow the steps:

1. In the **Windows Start** menu, click **Settings**.
2. Type power and sleep into the search box and select **Power & Sleep settings**.
3. Select **Never** for **When plugged in, PC goes to sleep after**.

Install Clarius automation framework

To install Clarius automation framework in the target system, follow the steps:

1. Go to www.tek.com.
2. Click **Download**. In the Downloads menu, select DOWNLOAD TYPE as Software and enter the application name in the MODEL OR KEYWORD field and click **SEARCH**.



3. Select the compatible version of Clarius automation framework and follow the instructions to download the software. Copy the installer package (.zip) to the target system² and extract the file.

² A PC/Laptop/Computer where the Clarius automation framework and application will be installed.

Note:



- Check the Release Notes for the version compatibility details of Clarius automation framework and application.
- To unzip the package, right-click, select **Extract All** and select **Extract**.

4. Double-click the Clarius installer (**clarius-automation-framework-<<version>>.exe**) from the extracted folder and select **Yes** on the User Account Control.

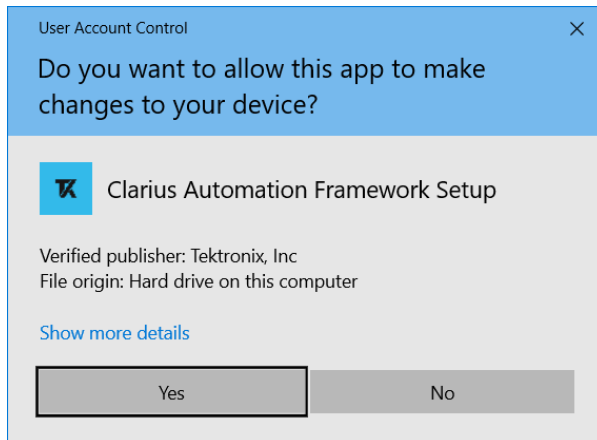


Figure 8: Clarius user account control dialog

5. Read the welcome instructions and select Next.

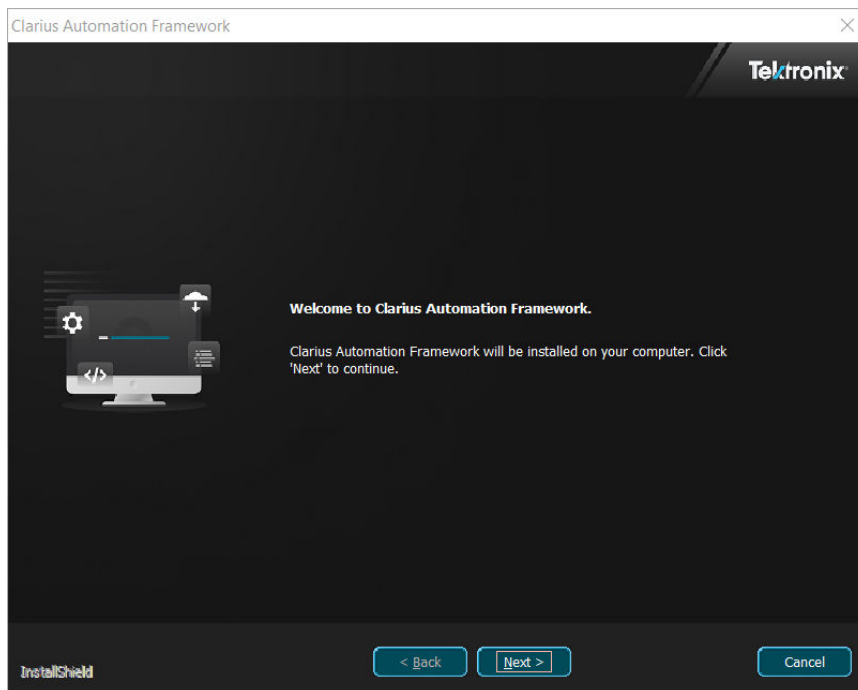


Figure 9: Clarius installer setup

6. Read the license agreement; accept the terms of the license agreement and select **Next**. Please wait until the prerequisites progress check is complete.

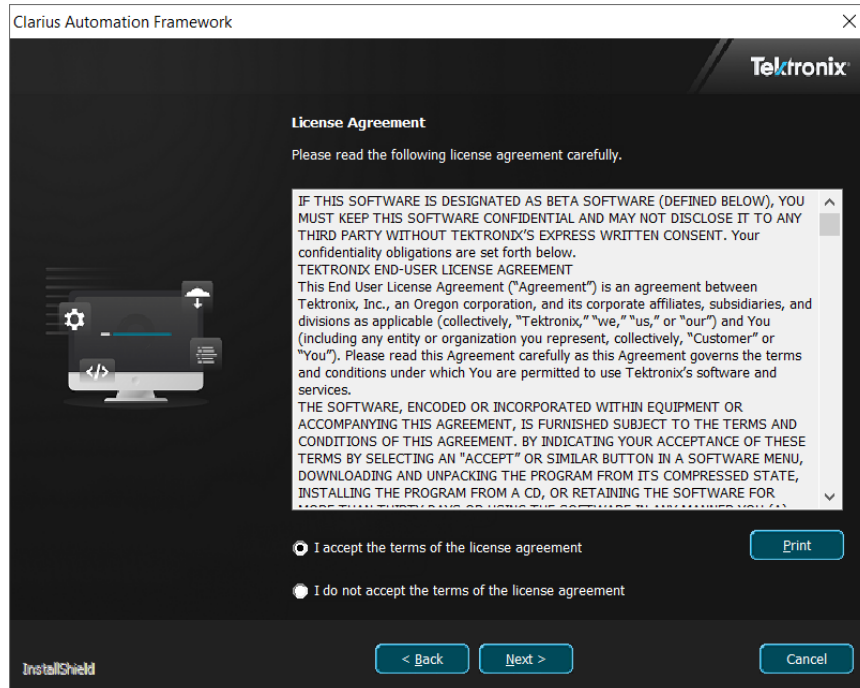


Figure 10: Clarius installer setup

7. Click **Browse**, select the path to install, and click **Next**. The default path is `C:\Program Files\Tektronix\Clarius\`.

You can select any local disk drive other than a network drive path for installation.

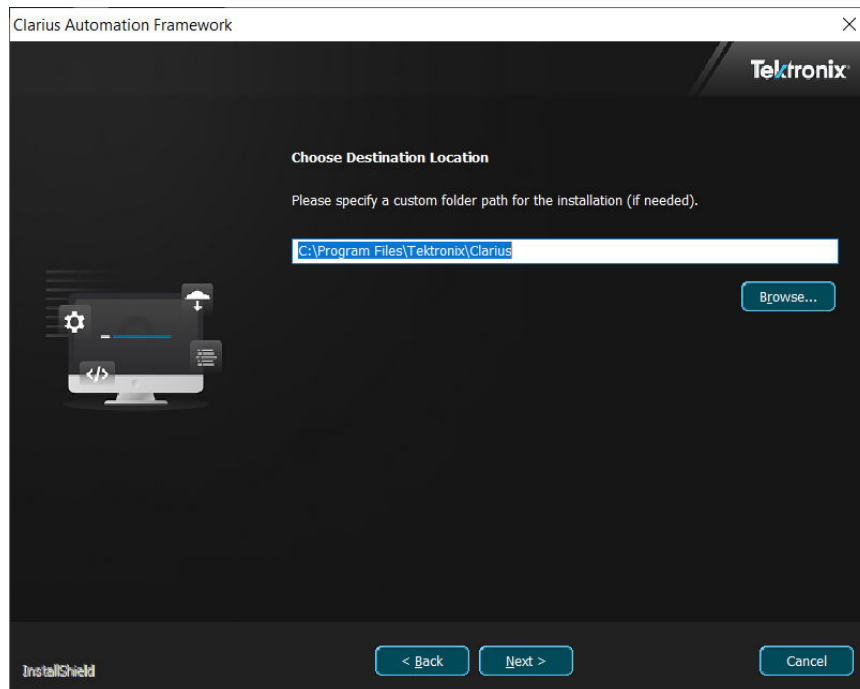


Figure 11: Clarius install path

8. Set the password for the Clarius automation framework matching the criteria and click **Next**. This password will be used to log in to the Clarius automation framework.

Figure 12: Clarius user information

Note:

- For details on Disk Storage allocation, [click here](#).
- It is recommended to configure the Disk storage in System Settings as 700 GB.
- For details on RAM allocation, [click here](#).



- **CPU cores allocation example:** The minimum logical CPU cores required is 2 and the maximum core is calculated as 75% of total logical CPU cores. By default, a midpoint value between the minimum and maximum cores will be added in the installation wizard field. If the allocated logical CPU cores is in decimal value, then the number after the decimal point will be discarded. For example, value 3.5 will be added as 3.

For details on recommended CPU cores to install, refer [System requirements](#) section.

9. By default, ports are configured. Click **Next** to proceed with the installation. Refer [Enable ports to install Clarius automation framework](#) for more information.

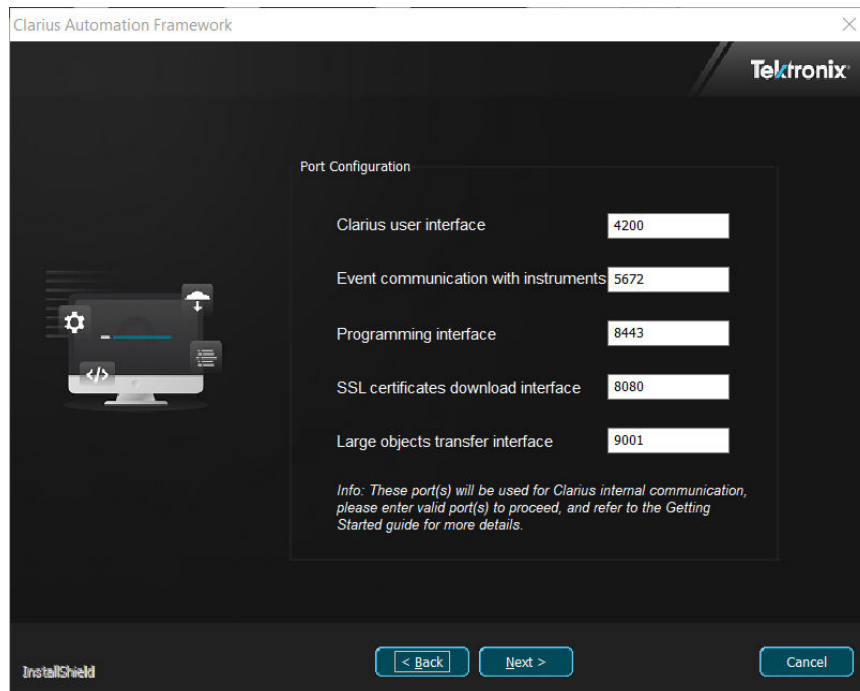


Figure 13: Port configuration

10. Select **Yes** to install the Instrument Service. This will create a local test bench(Clarius_PC) in the target system for pre-recorded waveform analysis.

Installing instrument service will also install Clarius SDK in an isolated Python environment.



Tip: If you skip the instrument service installation, you can refer [Install Clarius instrument service](#) section for the installation steps.

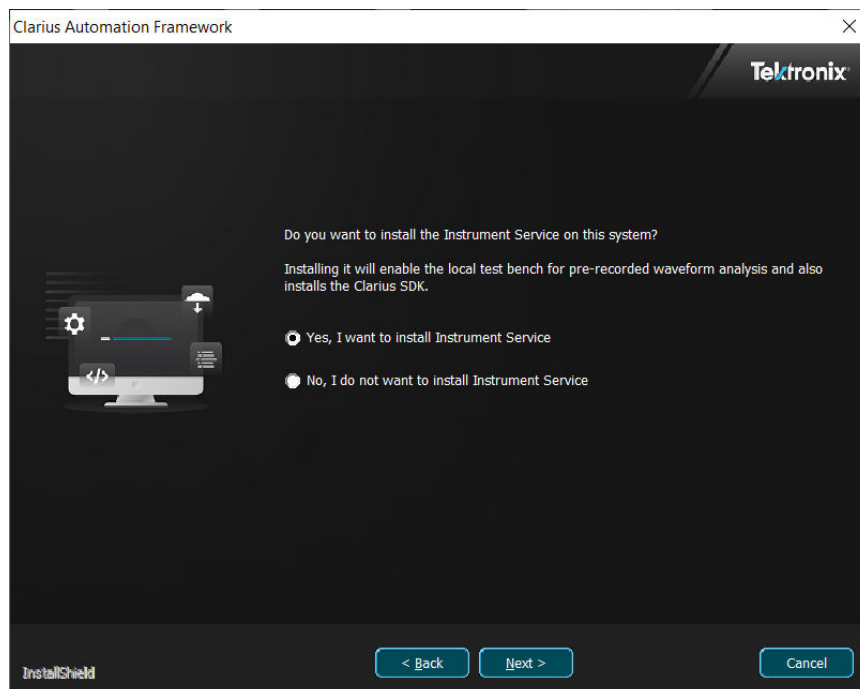


Figure 14: Install instrument service

11. Displayed only if [step 10](#) is selected No.

Select the **Automation SDK** checkbox to install the Clarius SDK and click **Next**.

You can install Clarius SDK in the following ways:

- Install Python in a global environment and then install SDK in that environment. If a supported Python version is detected, then select to install the SDK in that environment.
- Install Python in an isolated Python environment and install SDK in that environment.³

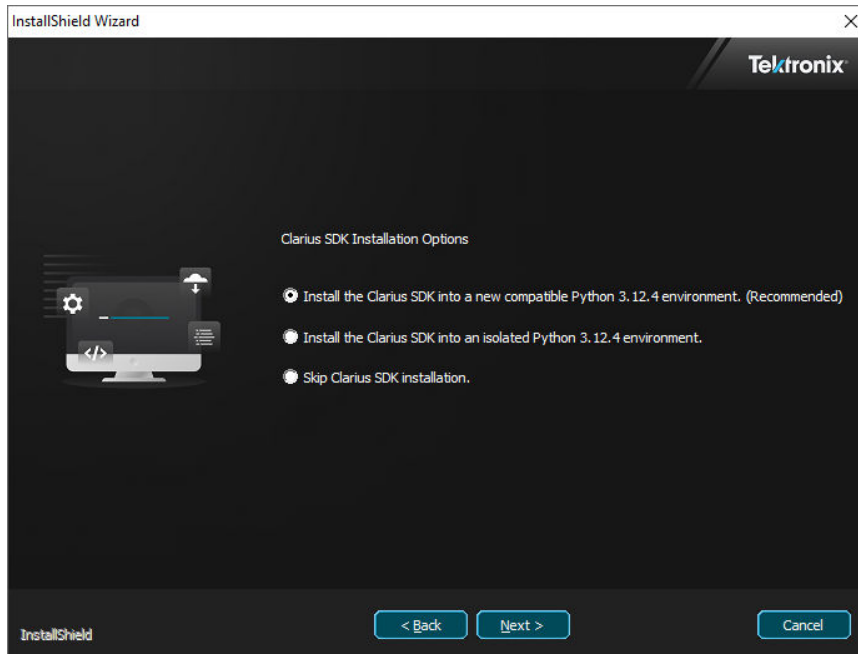


Figure 15: Install automation SDK

Note:



- Clarius SDK requires Python version 3.12.x.
- If you skipped the SDK installation, refer to the [Install Clarius SDK](#) section to install.

³ An isolated Python environment will have its own independent set of Python packages installed in its site directories.

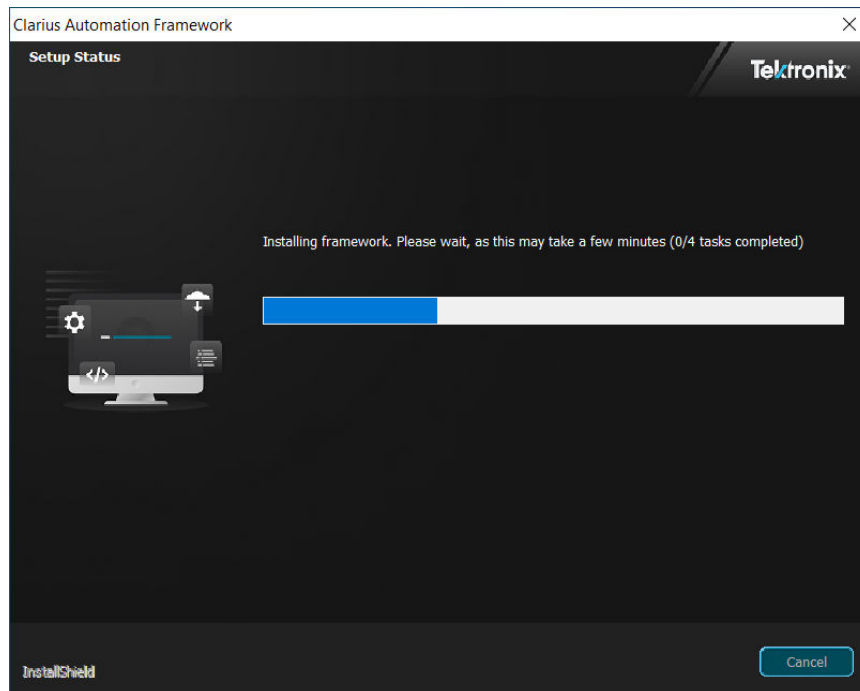


Figure 16: Installing Clarius automation framework

12. Select **Launch Clarius** checkbox to launch the Clarius automation framework. Select **Finish** to exit setup.

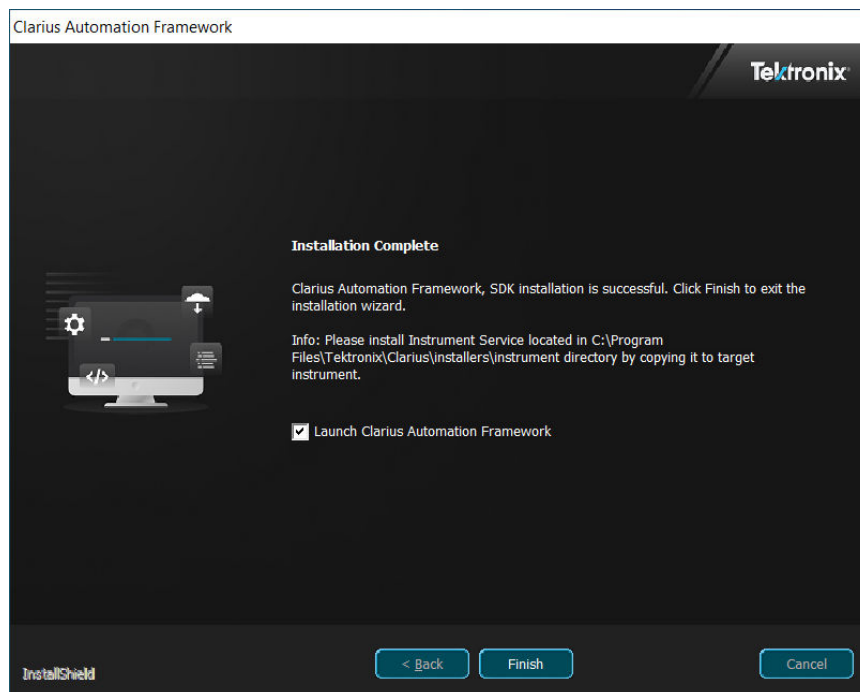


Figure 17: Launch Clarius

Note:



- By default, the Clarius automation framework will be launched in the Microsoft Edge browser.
- If the installation fails, check the installation logs at (C:\ProgramData\Tektronix\Clarius\logs)

for more details about the failure or contact a Tektronix field engineer for support.

The ProgramData folder is hidden by default. Enable **Show hidden files, folders, and drives** to view the folder path.

13. (Optional) Launch the Clarius automation framework from the desktop.



Note: You can access the Clarius automation framework from the target system using the local host URL `https://127.0.0.1:4200`⁴. To remotely access the Clarius automation framework, use the host name or IP address of the Clarius automation framework installed system.

Log in to the Clarius automation framework with the following credentials

- **Username:** admin
- **Password:** Enter the user configured password set during installation.

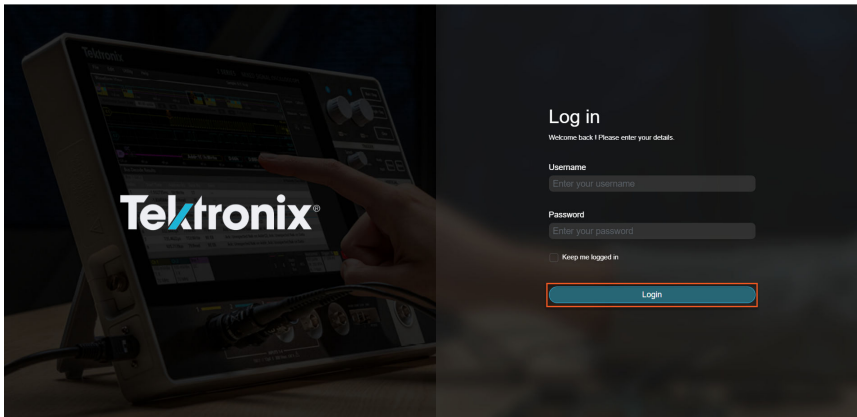


Figure 18: Clarius login page



Note: During installation, if port 4200 was already used, then the first available port within the range of 4200 to 4209 will be checked incrementally and allocated.

By default, no application(s) will be installed and the home screen will not display any data. To install the application, refer to [Install <App_Name> application](#) on page 34.

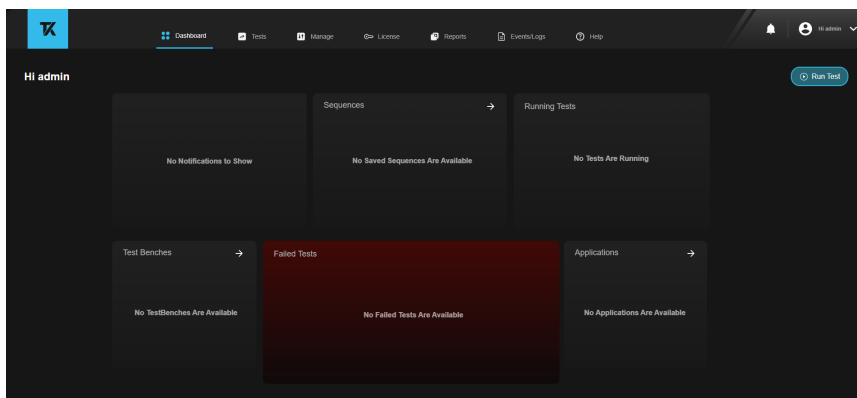


Figure 19: Clarius homepage

⁴ The default port allocated is 4200. If this port was not available during the installation, then the first available port within the range of 4200 to 4209 will be checked incrementally and allocated.

Install Clarius instrument service

Clarius instrument service sends the waveforms to the Clarius measurement service⁵ for analysis. Refer to [Network topology](#) diagram for more information on instrument service.

The instrument service can be installed by the following ways:

- [Install instrument service in the target system where pre-recorded waveforms are located.](#)
- [Install instrument service in the oscilloscope to use pre-recorded waveforms or live acquisitions.](#)

If you have skipped Clarius instrument service installation during the installation of the Clarius automation framework, follow the steps to install in the target system.

1. Navigate to the **installers** folder located in the Clarius automation framework installed path in the target system. The default path is `C:\Program Files\Tektronix\Clarius\installers`.

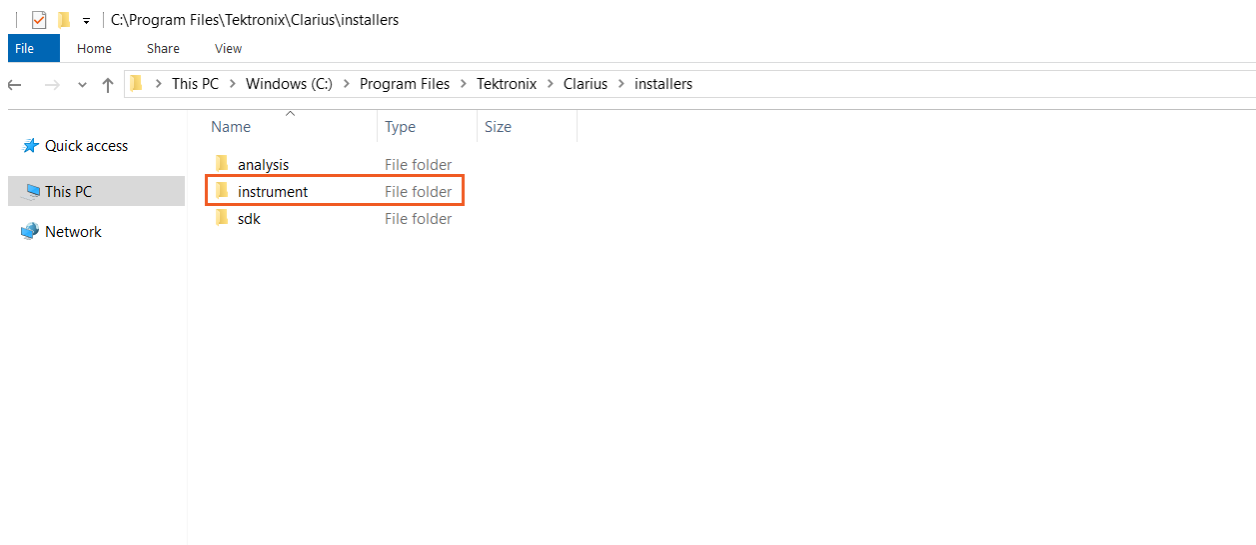


Figure 20: Instrument folder

2. Open the **Instrument** folder, double-click **clarius-instrument-service-<<version>>.exe**, and follow the steps to complete the installation.

⁵ Measurement service will be installed in the target system where Clarius automation framework is installed.

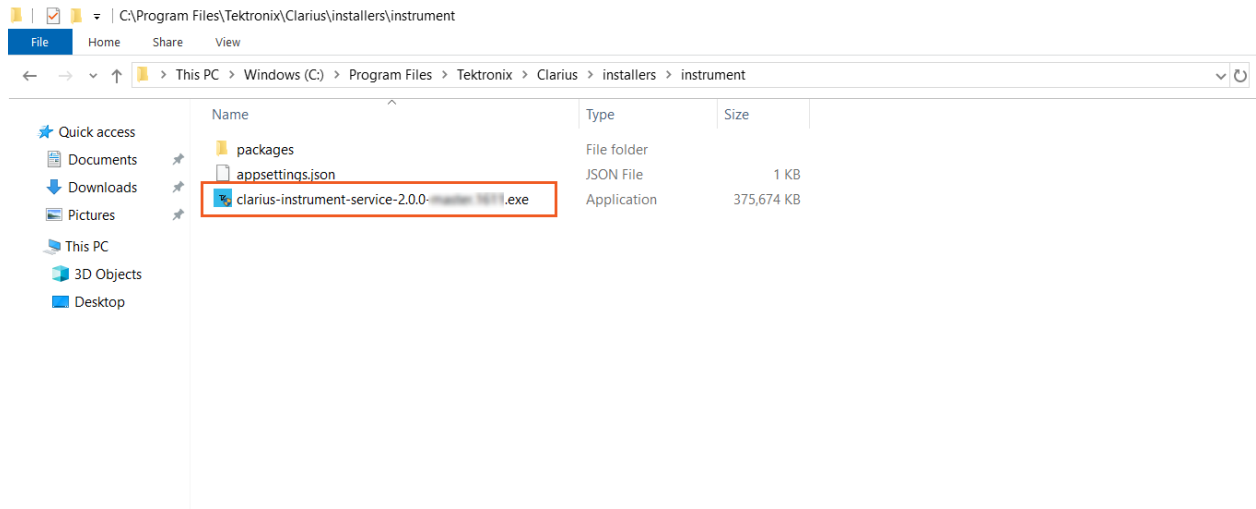


Figure 21: Clarius instrument service executable file in the target system

3. On successful installation of the Clarius instrument service, the **InstrumentServiceStart.bat** and **InstrumentServiceStop.bat** icons will be created on the desktop.

Follow the steps to install the Clarius instrument service in the oscilloscope:

1. In the target system where the Clarius automation framework is installed, navigate to the installed path. The default path is `C:\Program Files\Tektronix\Clarius\installers`.
2. Select and copy the **Instrument folder** and paste it in the downloads folder or folder of your choice in the oscilloscope.

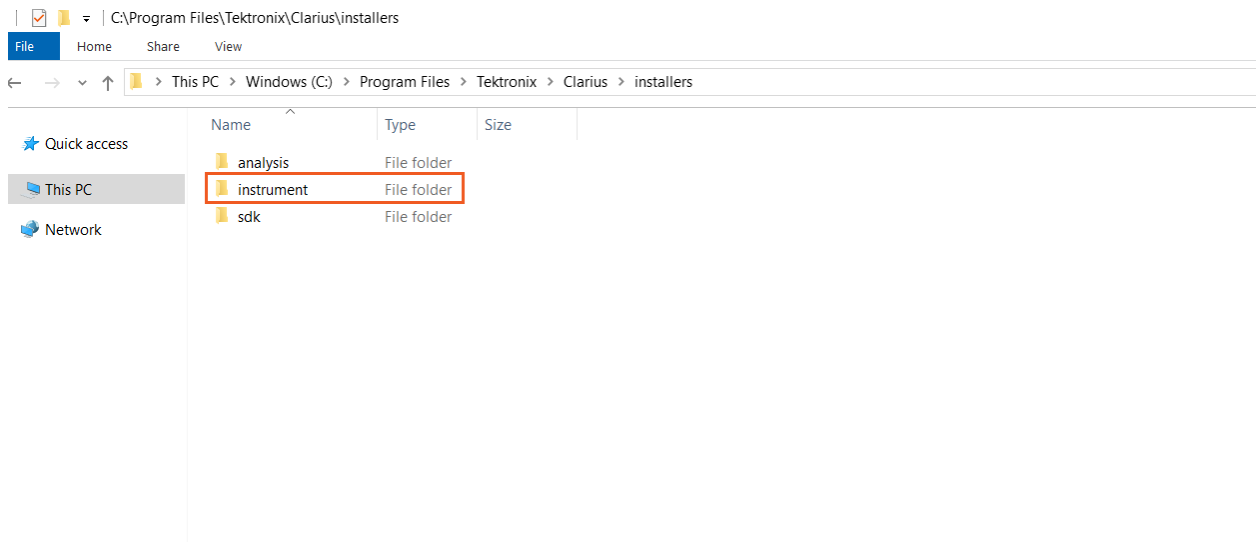


Figure 22: Instrument folder

3. Open the **Instrument folder**, double-click **clarius-instrument-service-<<version>>.exe**, and follow the steps to complete the installation.

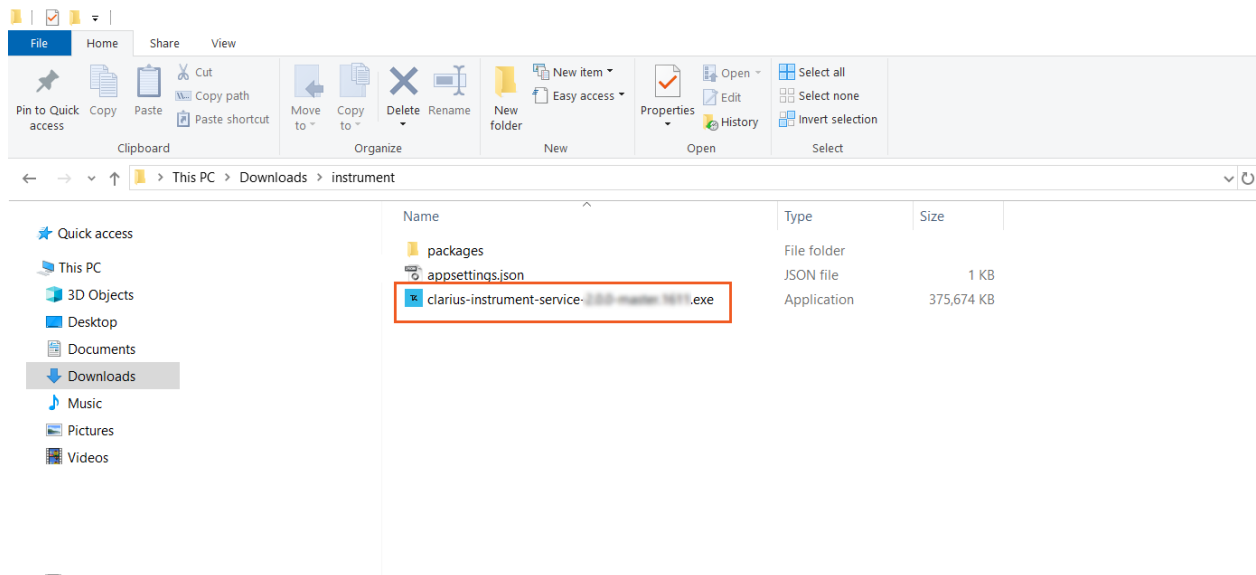


Figure 23: Clarius instrument service executable file in the oscilloscope

- On successful installation of the Clarius instrument service, the **InstrumentServiceStart.bat** and **InstrumentServiceStop.bat** icons will be created on the desktop.



Note: Installing instrument service will also install Clarius SDK. If a supported Python version is detected, Clarius SDK will be installed in that environment. Otherwise, Python 3.12.x will be installed in an isolated environment and Clarius SDK will be installed in that environment.

Upgrading Clarius automation framework

This section describes the instructions for upgrading the Clarius automation framework in a target system. Follow the steps to complete the installation.

1. [Upgrade Clarius automation framework](#)
2. [Upgrade Clarius instrument service](#)

Upgrade Clarius automation framework

This section describes the instructions for upgrading Clarius automation framework.

Table 2: Clarius automation framework version upgrade table

Version	Upgrade Support	Upgradable version(s)
3.0.0	Yes	<ul style="list-style-type: none">• 2.1.0• 2.0.0

Prerequisite:

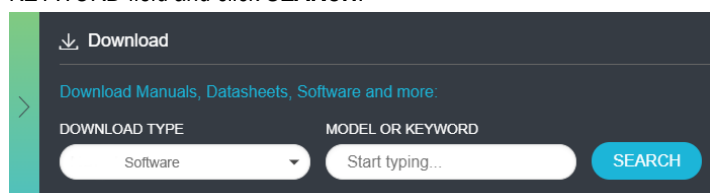
- You must have at least 30 GB of free disk storage available in Clarius virtual machine to upgrade the Clarius automation framework. You can check the available free disk storage from the admin console. Refer to [Admin Console and Monitoring](#) on page 46 section.



Note: Ensure that the PC does not shut down or restart during the upgrade process. If the PC is restarted or shut down, the upgrade will fail, and the Clarius automation framework will not roll back to the previous version.

To upgrade the Clarius automation framework in the target system, follow these detailed steps.

1. Go to www.tek.com.
2. Click **Download**. In the Downloads menu, select DOWNLOAD TYPE as Software and enter the application name in the MODEL OR KEYWORD field and click **SEARCH**.



3. Select the compatible version of Clarius automation framework and follow the instructions to download the software. Copy the install package (.zip) to the target install system and extract the zip file.
4. Double-click the installer and select **Yes** on the User Account Control.

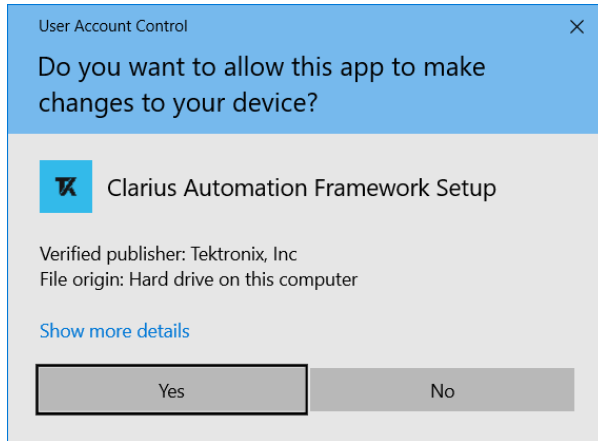


Figure 24: Clarius user account control

5. Read the welcome instructions and click **Update**.

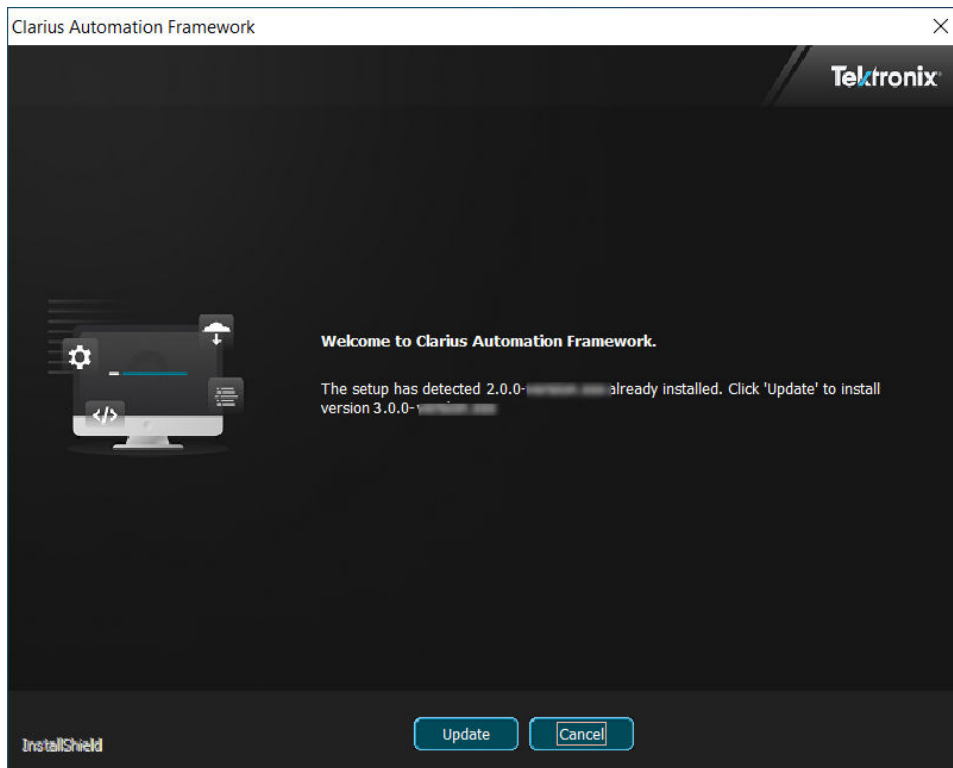


Figure 25: Upgrade Clarius installer setup

6. Accept the terms of the license agreement and click **Next**. Please wait until the upgrade process is complete.

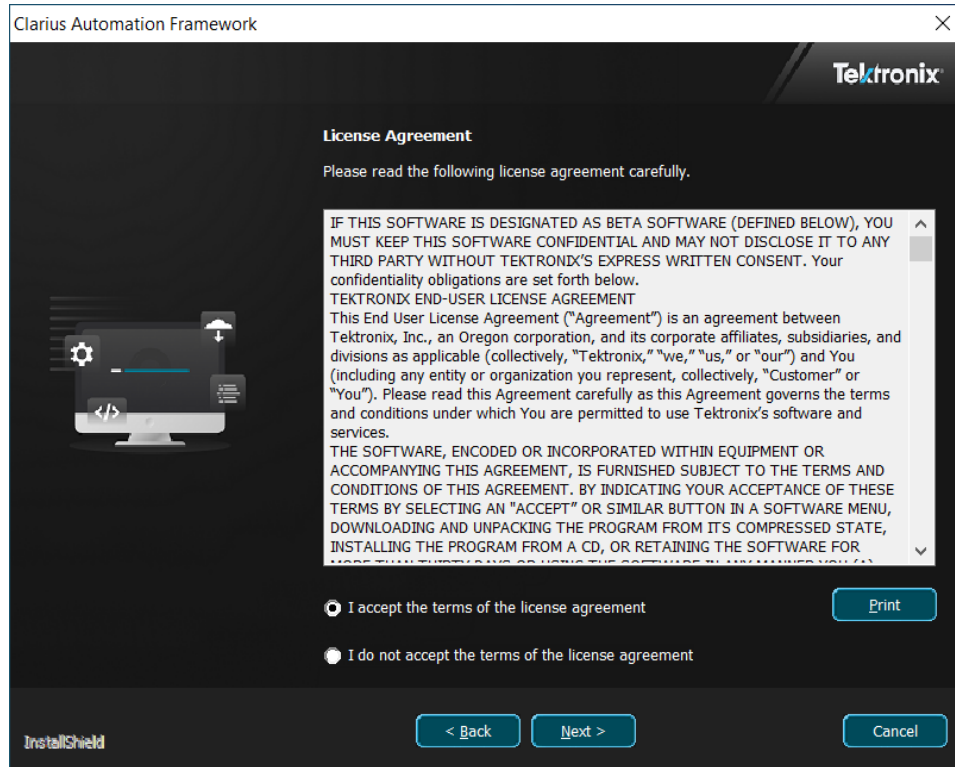


Figure 26: Clarius license agreement

7. Displayed only if Instrument Service is not installed in the previous version.

Select **Yes** to install the Instrument Service. This will create a local test bench in the target system for pre-recorded waveform analysis.

Installing instrument service will also install Clarius SDK in an isolated Python environment.



Tip: If you skip the instrument service installation, you can refer [Upgrade Clarius instrument service](#) section for the installation steps.

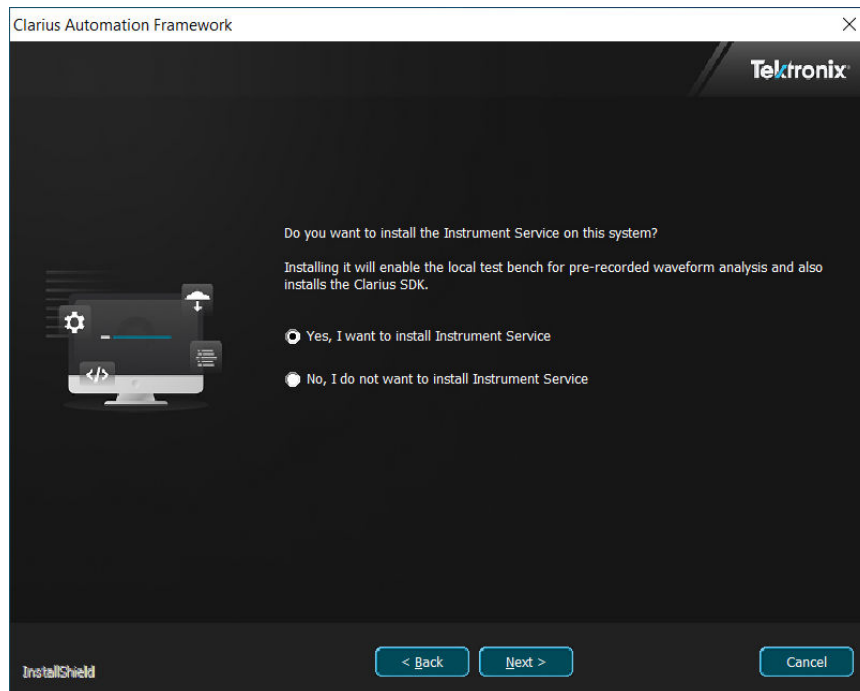


Figure 27: Install instrument service

8. The Clarius upgrade starts, please wait until the tasks and configuration process are complete.

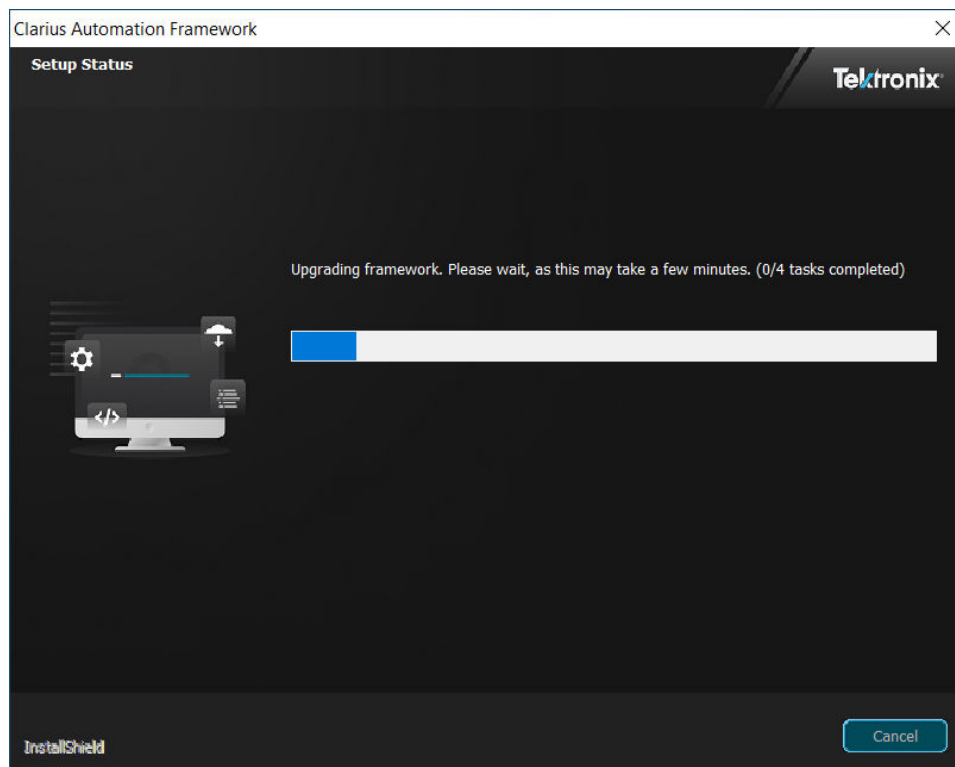


Figure 28: Upgrade Clarius

9. The Clarius upgrade is successful. Select the **Launch Clarius** checkbox to launch the Clarius compliance and click **Finish**. By default, the application will be launched in the Microsoft Edge browser.

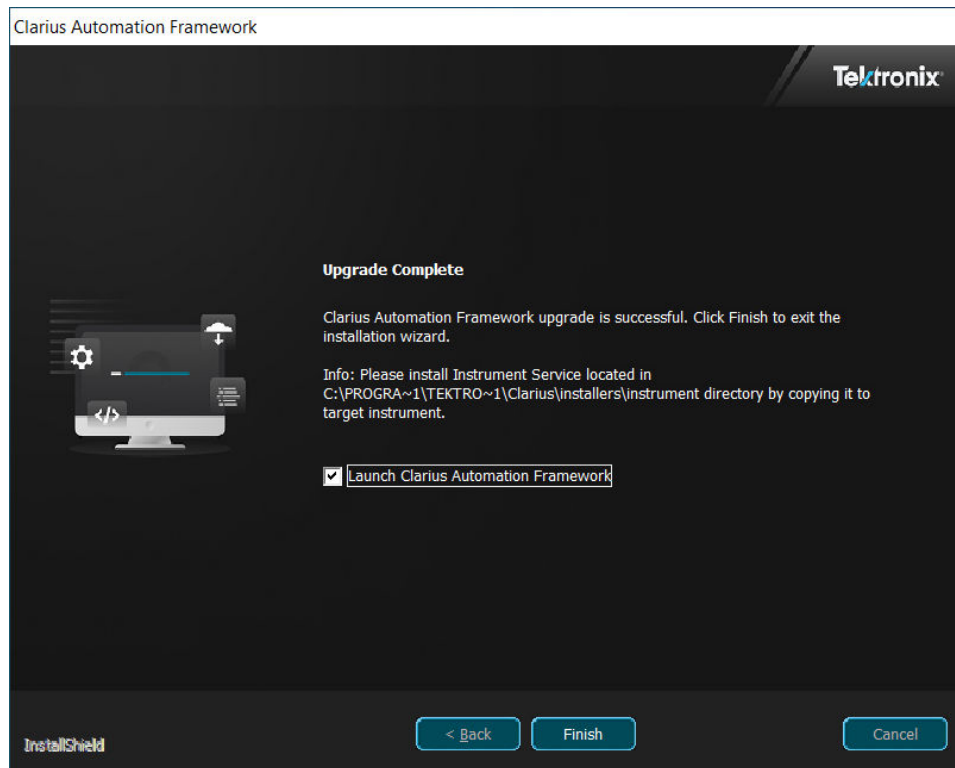


Figure 29: Launch Clarius



Note: Clear browser cache before launching the Clarius UI.

10. Log in to the Clarius automation framework with the following credentials.

- **Username:** admin
- **Password:** Enter the user configured password set during installation.

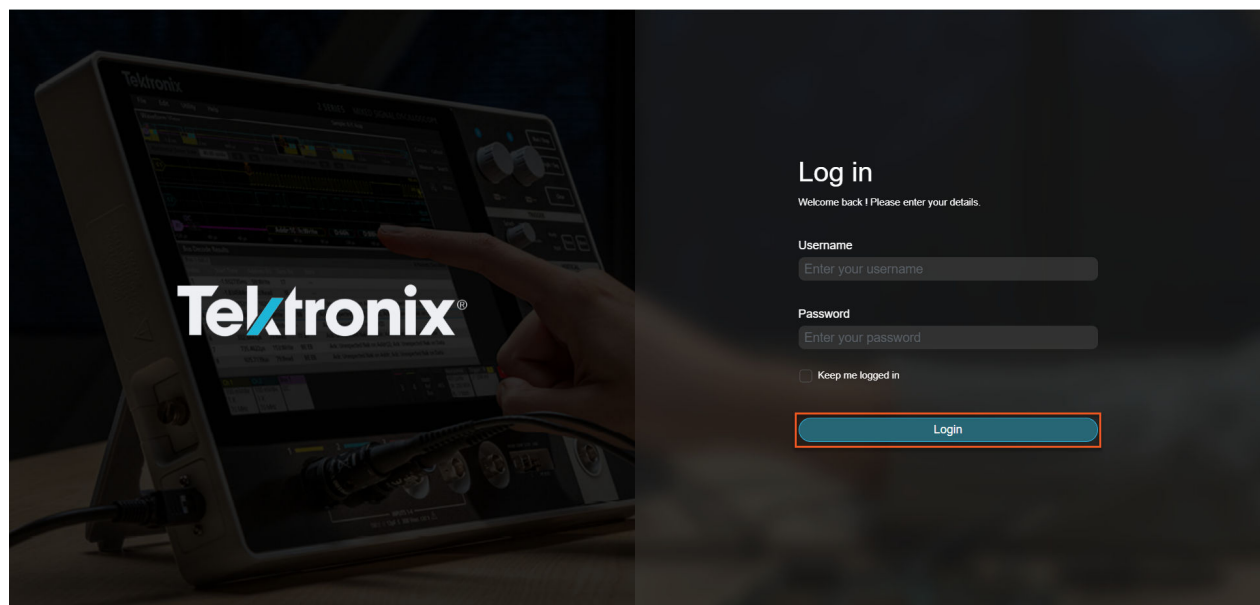


Figure 30: Clarius login page



Note: If the installation fails, please check the installation logs at (C:\ProgramData\Tektronix\Clarius\logs) for more details about the failure or contact Tektronix field engineer for support.

Clarius Automation Framework Upgrade Failure – Insufficient Disk Storage

If the upgrade aborts due to insufficient disk storage in the Clarius virtual machine, run the following commands in the command prompt.

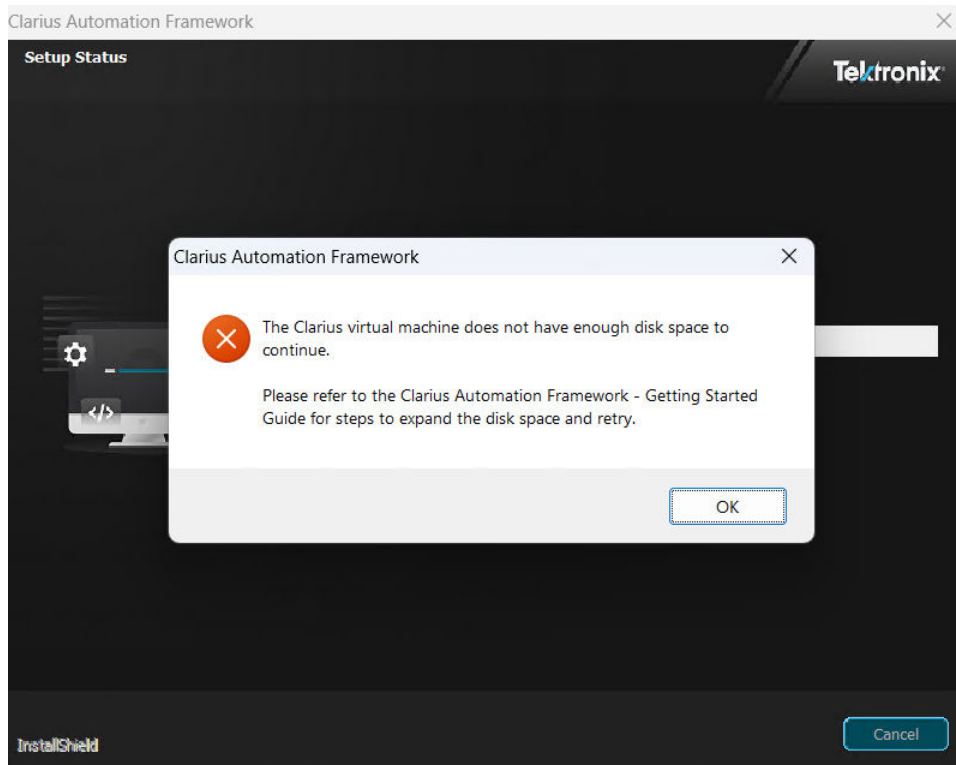


Figure 31: Clarius upgrade failed

1. Launch the command prompt in **Administrator** mode.
2. To view system information: `clarius --systeminfo view`.
3. To expand Clarius storage: `clarius --systeminfo manage --storage <value>`.

Example: `clarius --systeminfo manage --storage 125`

Note:



- By default, the Clarius virtual machine will stop during storage configuration and will start automatically once the storage space is successfully expanded.
- Once Clarius virtual machine storage is expanded, it cannot be shrunk.
- The storage value should be in GB and must be less than the available storage shown in `clarius --systeminfo view`.

After successfully expanding Clarius virtual machine storage, proceed the [Upgrade Clarius automation framework](#) steps.

Upgrade Clarius instrument service

This section describes the instructions for upgrading the Clarius instrument service.

Table 3: Clarius instrument service version upgrade table

Version	Upgrade Support	Upgradable version(s)
3.0.0	Yes	<ul style="list-style-type: none"> 2.1.0 2.0.0

To upgrade the Clarius instrument service in the oscilloscope, follow these detailed steps.

1. In the target system where the Clarius automation framework is installed, navigate to the installed path. The default path is `C:\Program Files\Tektronix\Clarius\installers`.

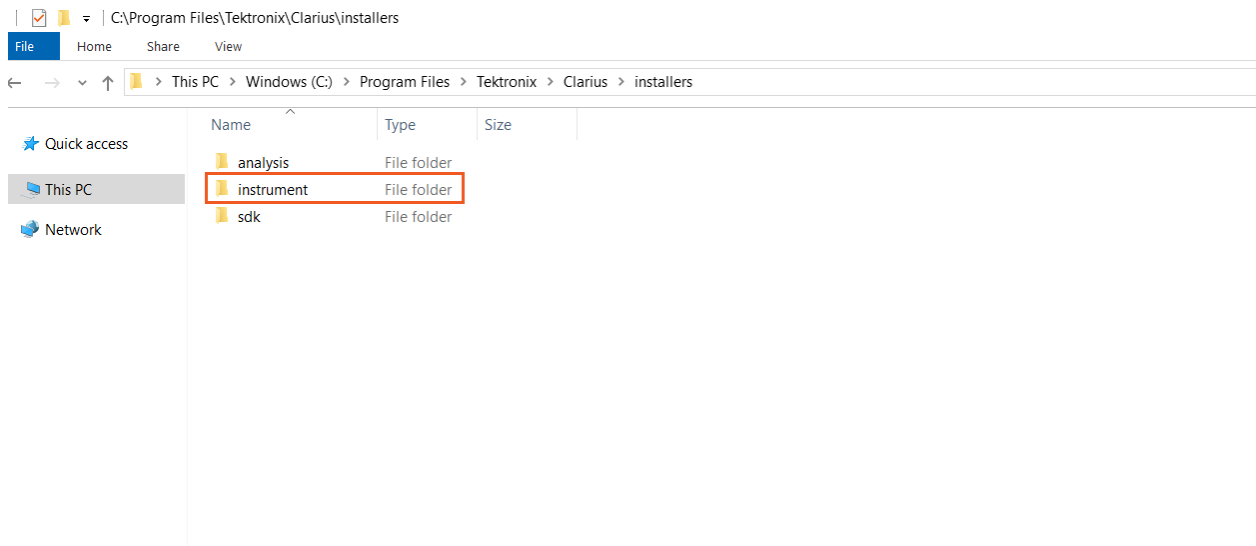


Figure 32: Instrument folder

2. Select and copy the **Instrument folder** and paste it in the downloads folder or folder of your choice in the oscilloscope.

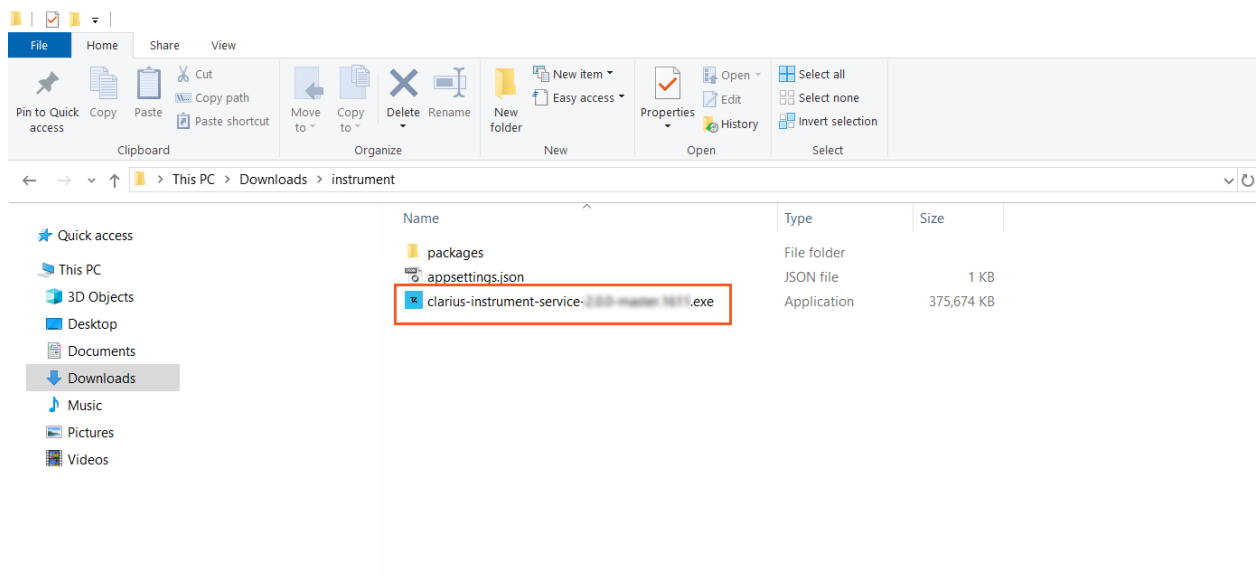


Figure 33: Clarius instrument service executable file in the oscilloscope

3. Double-click Clarius instrument service installer (**clarius-instrument-service-<<version>>.exe**) from the copied **Instrument folder** in the oscilloscope and select **Yes** on the User Account Control.

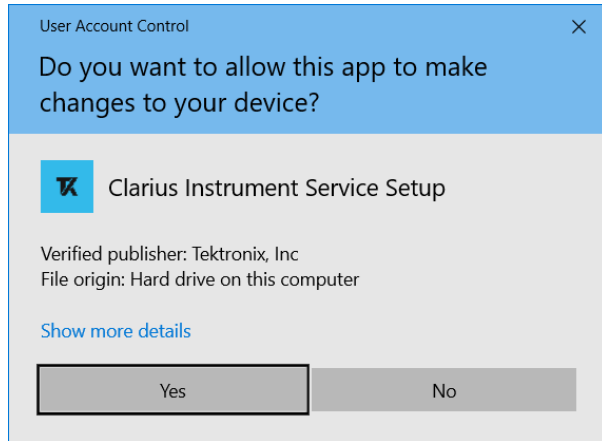


Figure 34: Clarius instrument service user account control dialog

4. Read the welcome instructions and select **Next**.

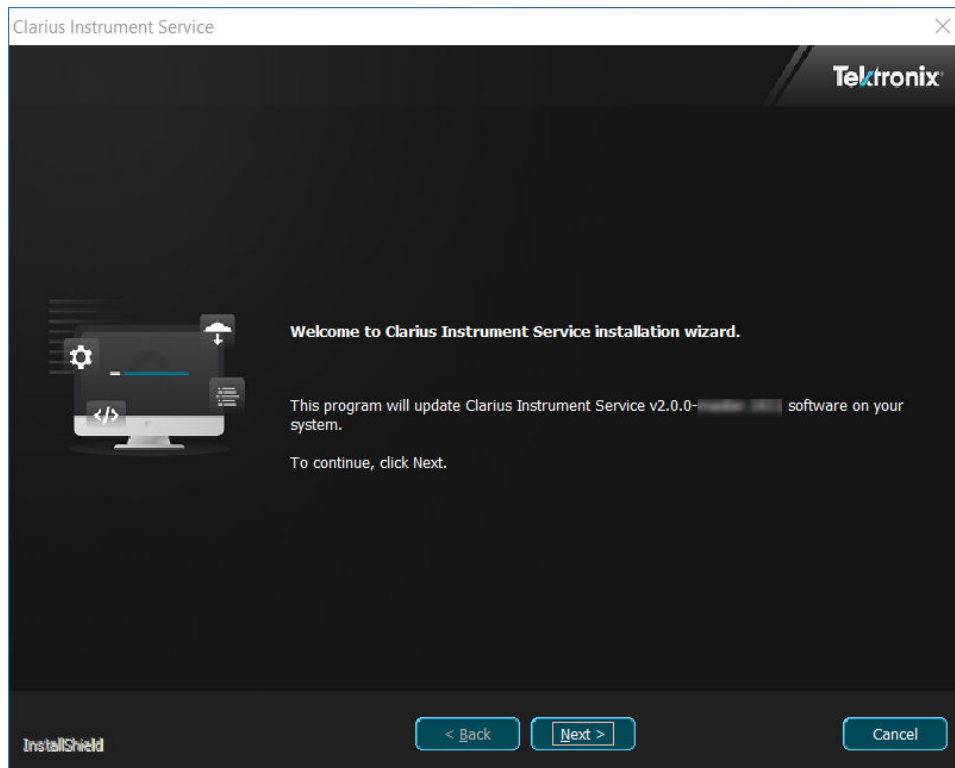


Figure 35: Clarius instrument service installer setup

5. Read the license agreement; accept the terms of the license agreement and select **Next**. Please wait until the prerequisites progress check is complete.

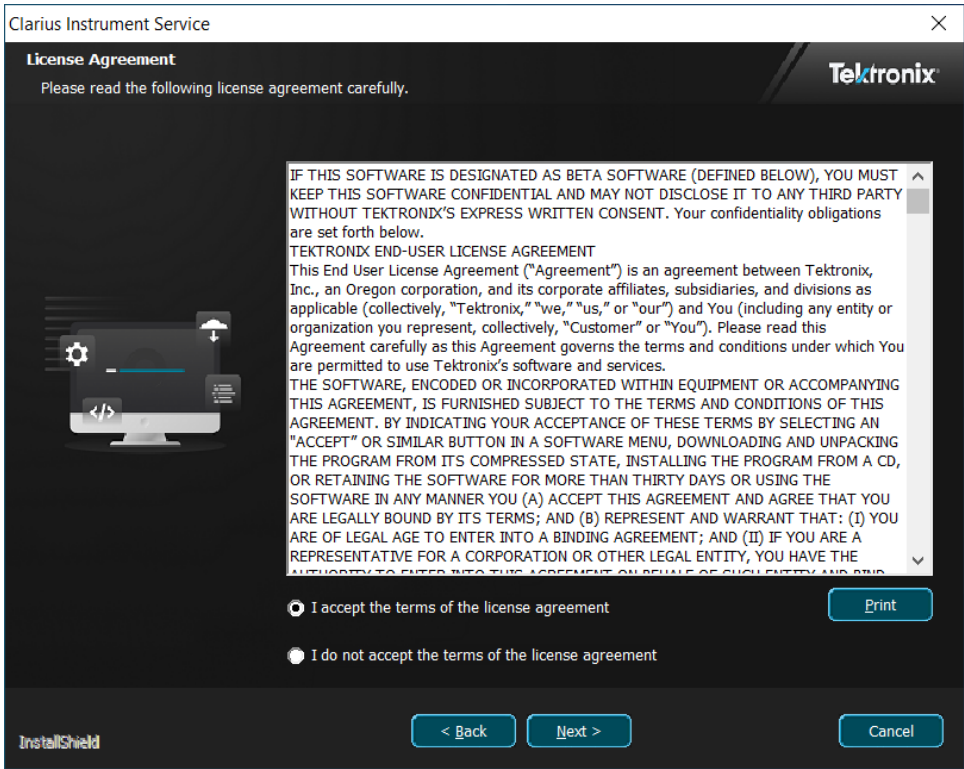


Figure 36: Clarius instrument service license agreement

6. The Clarius instrument service upgrade starts, please wait until the tasks and configuration process are complete.

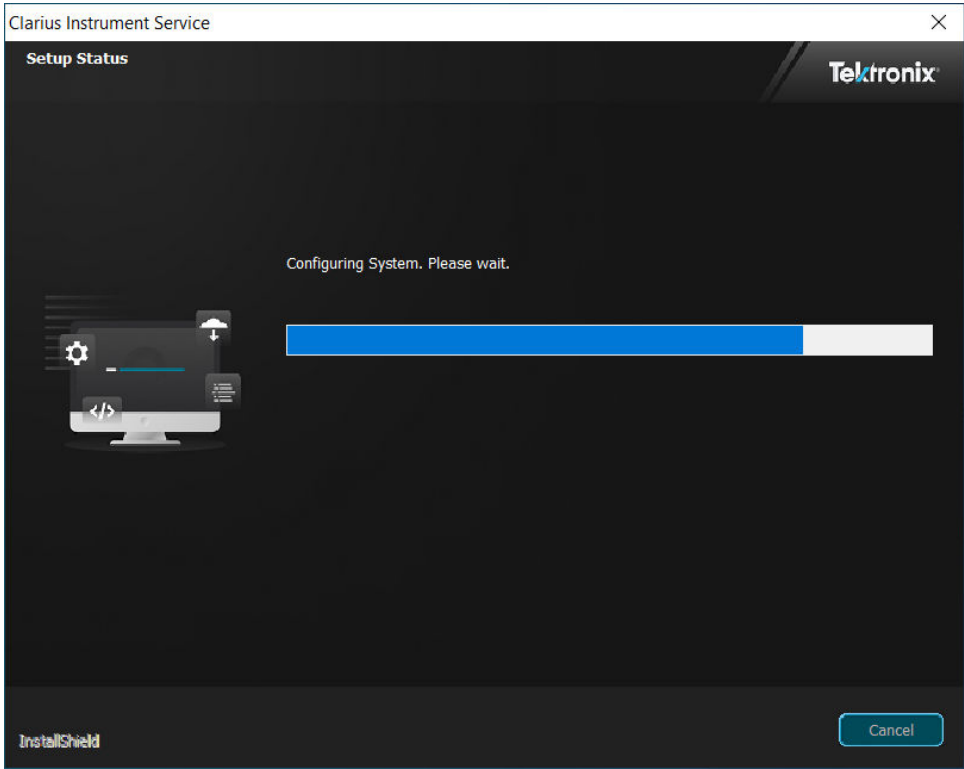


Figure 37: Installing Clarius instrument service

7. The Clarius instrument service upgrade is successful. Select the **Yes** checkbox to launch the Clarius instrument service and click **Finish**.

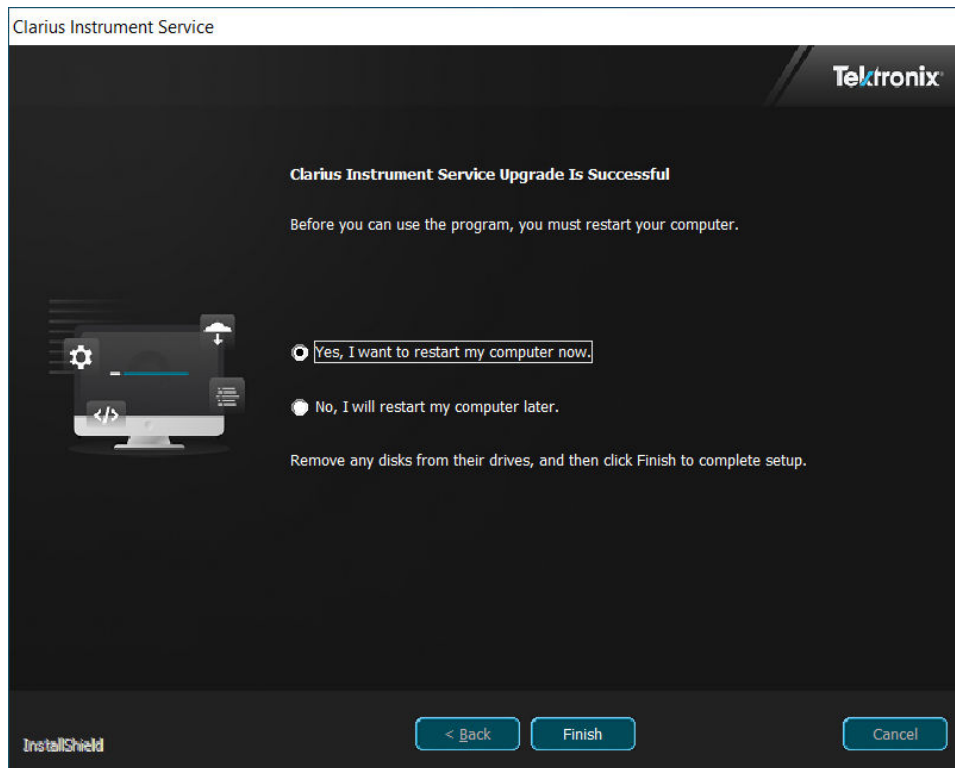


Figure 38: Launch Clarius instrument service

Installing application in Clarius automation framework

This section describes the instructions for installing a new <App_Name> application in a target system. Follow the steps to complete the installation.

1. [Install Clarius <App_Name> application](#)
2. [Install instrument service plug-in of <App_Name> application](#)

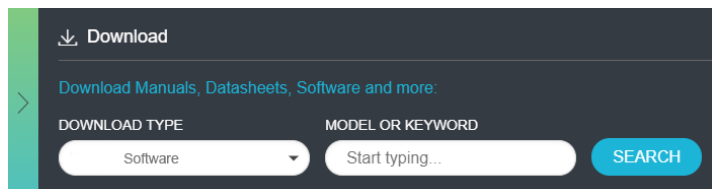
Install <App_Name> application

Prerequisite:

Compatible version of Clarius automation framework must be installed. Check [Install Clarius automation framework](#) section for installation steps.

To install the <App_Name> application in the target system, follow the steps:

1. Go to www.tek.com.
2. Click **Download**. In the Downloads menu, select DOWNLOAD TYPE as Software and enter the application name in the MODEL OR KEYWORD field and click **SEARCH**.



3. Select the latest version of software and follow the instructions to download. Copy the installer package to the target system⁶.
4. Double-click the <App_Name> installer and follow the instructions in the installation wizard to complete the installation process.

By default, the application license will not be activated in Clarius compliance and the home screen displays no data. Refer [Activate application license](#) on page 38 to activate the license.



Note: If the installation fails, check the installation logs (C:\ProgramData\Tektronix\Clarius\logs) for details about the failure or contact a Tektronix field engineer for support.

Install instrument service plug-in of the <App_Name> application

Install the instrument service plug-in of the application in the oscilloscope, where you have installed the Clarius instrument service. To install the Clarius instrument service, [click here](#).

Follow the steps to install the <App_Name> instrument service plug-in:

1. In the target system where the Clarius automation framework is installed, navigate to the installed path. The default path is C:\Program Files\Tektronix\Clarius\installers.
2. Select and copy the Instrument folder and paste in the oscilloscope, where you have installed the Clarius instrument service.
3. Open the folder, double-click the **clarius-compliance-<App_Name>-instrument-service-<<version>>.exe** and install the plug-in.

⁶ A PC/Laptop/Computer where the Clarius automation framework is installed.

Upgrading application in Clarius automation framework

This section describes the instructions for upgrading the latest version of the <App_Name> application in a target system. Follow the steps to complete the installation.

1. [Upgrade Clarius <App_Name> application](#)
2. [Upgrade instrument service plug-in of <App_Name> application](#)

Upgrade <App_Name> application

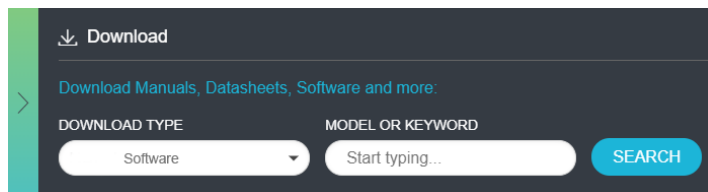
This section describes the instructions for upgrading the <App_Name> application.

Prerequisite:

Compatible version of Clarius automation framework must be installed. Check [Install Clarius automation framework](#) section for installation steps.

To upgrade the <App_Name> application in the target system, follow the steps:

1. Go to www.tek.com.
2. Click **Download**. In the Downloads menu, select DOWNLOAD TYPE as Software and enter the application name in the MODEL OR KEYWORD field and click **SEARCH**.



3. Select the latest version of software and follow the instructions to download. Copy the installer package to the target system⁷.
4. Double-click the <App_Name> installer and follow the instructions in the installation wizard to complete the installation process.



Note: If the installation fails, check the installation logs (C:\ProgramData\Tektronix\Clarius\logs) for details about the failure or contact a Tektronix field engineer for support.

Upgrade instrument service plug-in of the <App_Name> application

Upgrade the instrument service plug-in of the application in the oscilloscope, where you have installed the Clarius instrument service. To install the Clarius instrument service, [click here](#).

Follow the steps to upgrade the <App_Name> instrument service plug-in:

1. In the target system where the Clarius automation framework is installed, navigate to the installed path. The default path is C:\Program Files\Tektronix\Clarius\installers.
2. Select and copy the **Instrument folder** and paste in the oscilloscope, where you have installed the Clarius instrument service.
3. Open the copied **Instrument folder** in the oscilloscope, double-click the **clarius-compliance-<App_Name>-instrument-service-<<version>>.exe** and upgrade the plug-in.

⁷ A PC/Laptop/Computer where the Clarius automation framework is installed.

Clarius SDK

Install Clarius SDK (Software Development Kit) in the target system (where Clarius automation framework is installed) or in the oscilloscope where the Clarius instrument service is installed.

Clarius SDK can be installed in the following ways:

- Install Python in the global environment and then install Clarius SDK in that environment. If a supported Python version is detected, you can select to install the Clarius SDK in that environment.
- Install Python in an isolated Python environment⁸ and install Clarius SDK in that environment.

Install Clarius SDK

If you have skipped Clarius SDK installation during the installation of Clarius automation framework, follow the steps to install.

1. In the target system, where the Clarius automation framework is installed, navigate to the installed path. The default path is `C:\Program Files\Tektronix\Clarius\installers\sdk`.
2. Select and copy the **sdk** folder and paste it to the oscilloscope.
3. Open sdk folder, double-click **clarius-sdk-<<version>>.exe** and follow the steps to complete the installation.

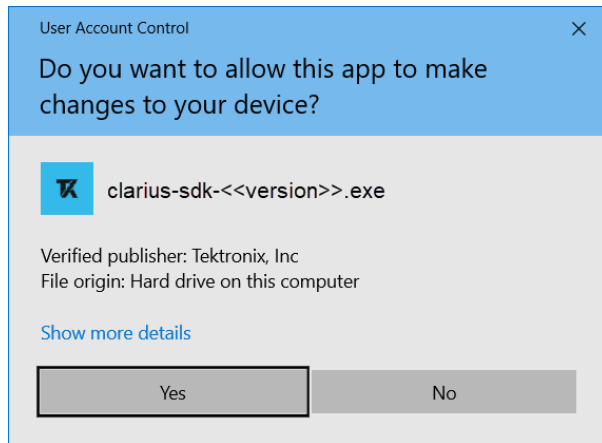


Figure 39: User account control dialog

⁸ An isolated Python environment will have its own independent set of Python packages installed in its site directories.

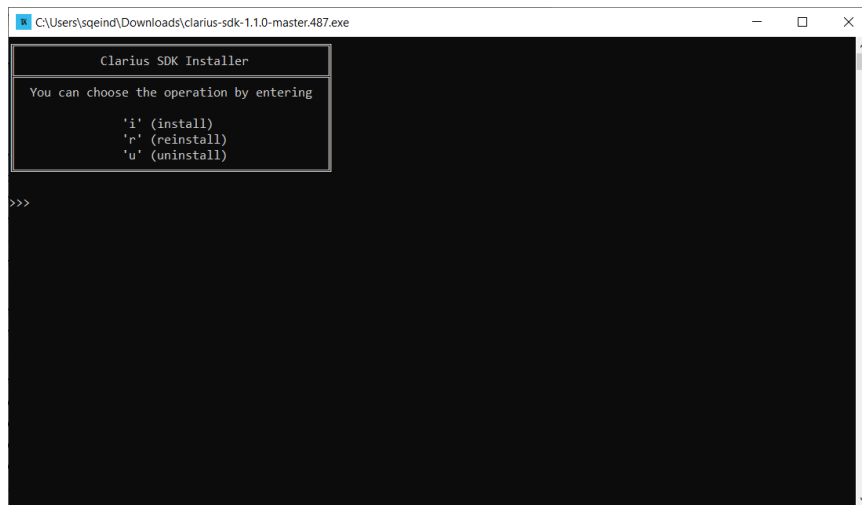



Figure 40: SDK installer setup

Activate application license

1. Double-click the **Clarius** icon from the desktop to launch the Clarius automation framework.
2. Log in using the **Username** as **admin** and the user configured password that was set during the installation.
3. Select the **License** tab and click  to copy the **Host ID**.

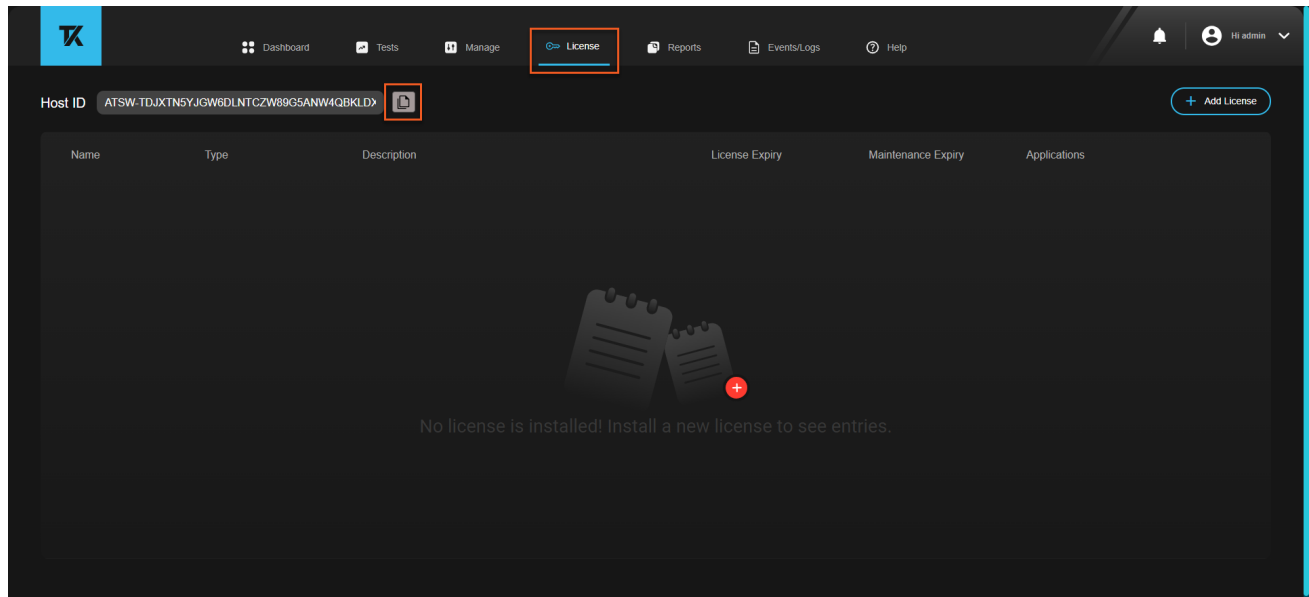


Figure 41: Copy Host ID for license request

4. Send the copied **Host ID** to the Tektronix application engineer and request for license file.
5. In the **License** tab, click **Add License**; browse and select the license file and click **Activate**.

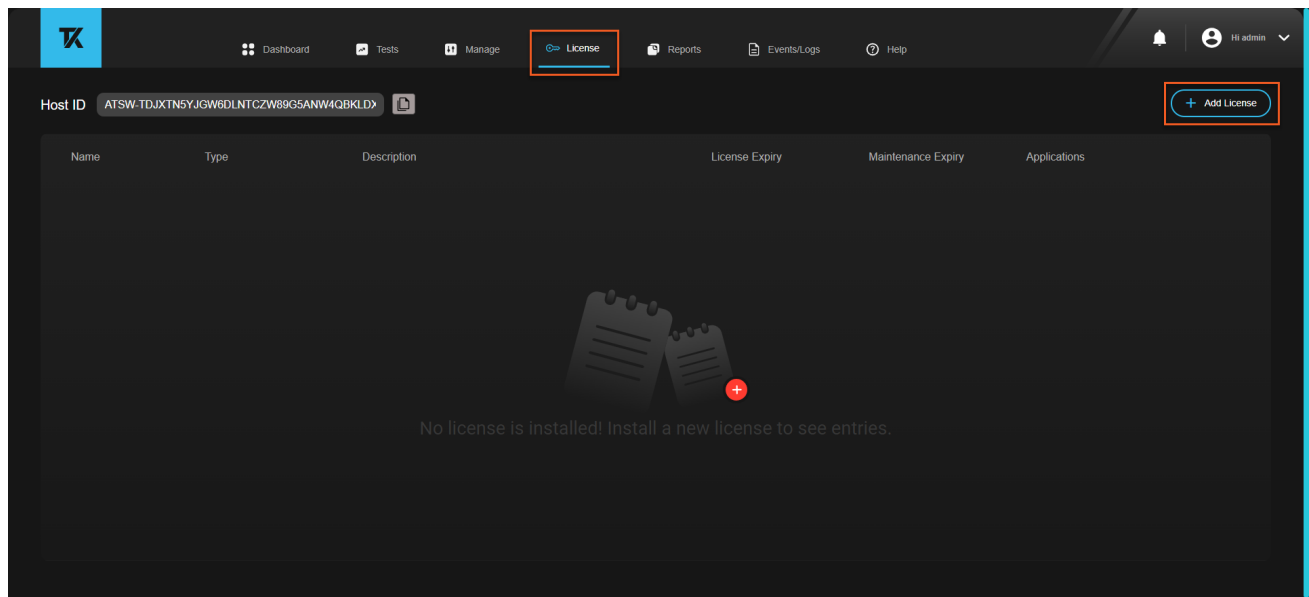


Figure 42: Add License

6. After successful activation, the application license details will be displayed in the license tab.

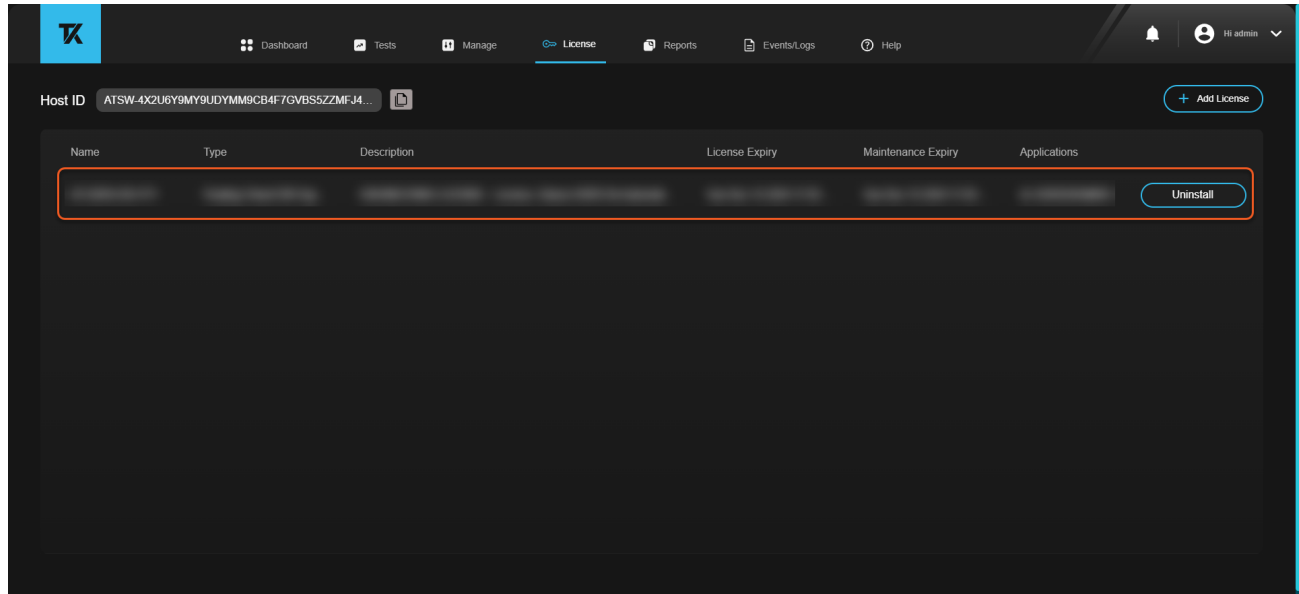


Figure 43: Installed application license in Clarius automation framework

Run the services

This section lists the services to run before performing tests in the Clarius automation framework. To perform testing within the Clarius automation framework, make sure all the installations are complete and all supporting services are running for the following scenarios.

- The [Clarius measurement service](#) must be up and running in the target system.
- The [Clarius instrument service](#) must be up and running in the system or oscilloscope from where the analysis of the waveform will be done.

Run Clarius measurement service

If the Clarius measurement service is running in the target system where Clarius automation framework is installed, you must see the Measurement service running status in [Admin Console](#).

If it is not running, restart the **Measurement Service** from the **Admin Console**.

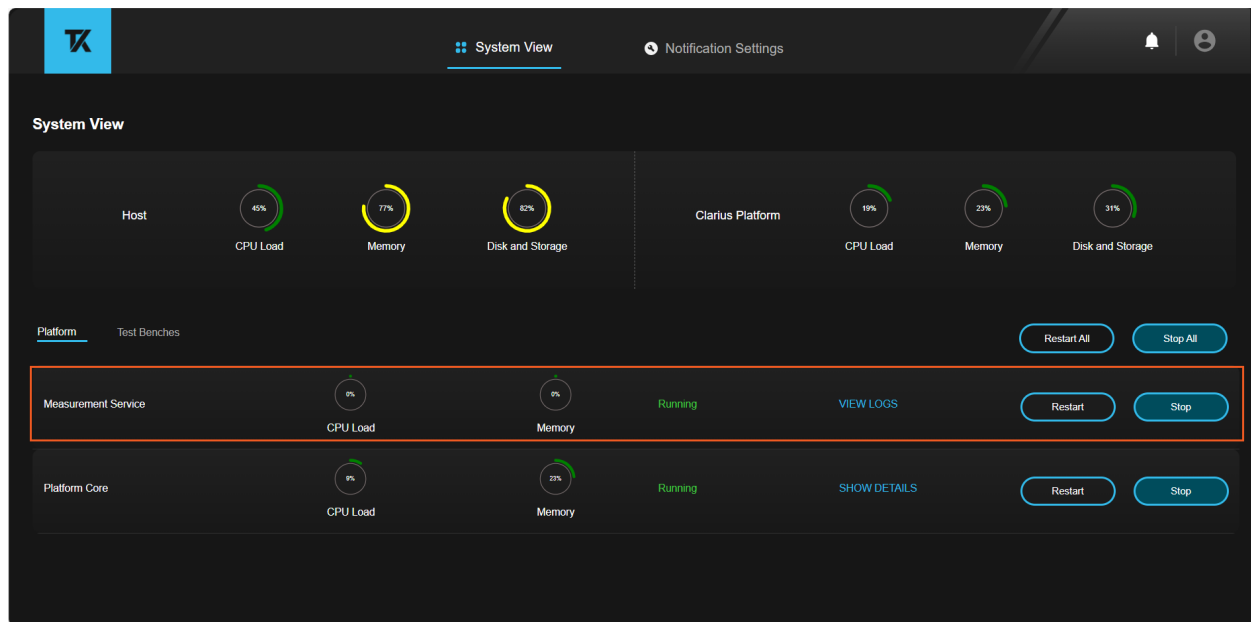



Figure 44: Clarius measurement service in Admin Console

You can also start, stop, check the status, and view the logs of the Measurement Service in the **Admin Console**.

Run Clarius instrument service

Clarius instrument service sends the waveform to the measurement service⁹ for analysis. To check if the instrument service is running, click the **Show hidden icons** arrow  in the task bar of Windows and check for Instrument Service.

If the instrument service is not running, double-click the **InstrumentServiceStart.bat** icon from the desktop and run the instrument service. This will run the instrument service and the automator.

⁹ Measurement service will be installed in the target system where Clarius automation framework is installed.

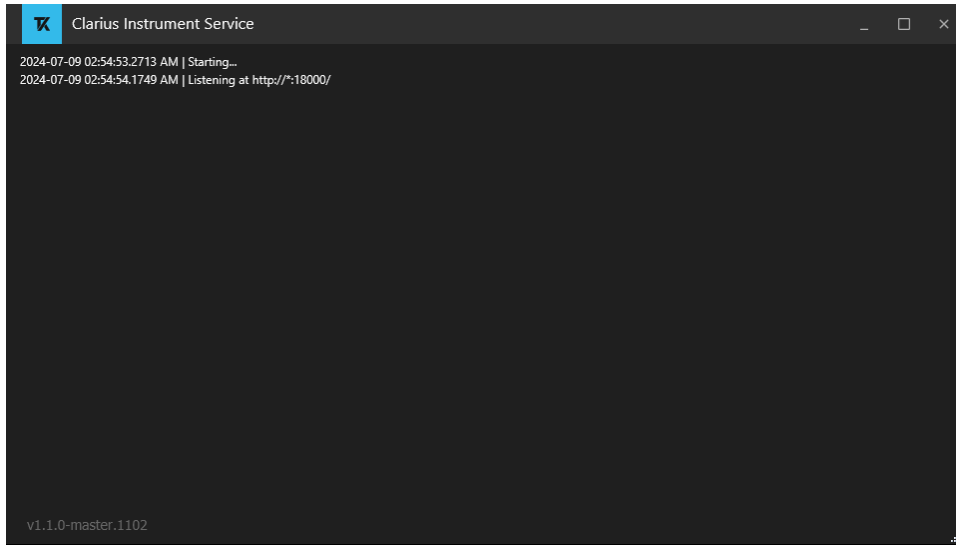


Figure 45: Clarius instrument service window

You can also run the instrument service by navigating to the installation path and double-click the **InstrumentServiceStart.bat**. The default installation path is `C:\Program Files\Tektronix\Clarius\lib\instrument\service`.

Application overview

This section describes the steps to log in to the Clarius automation framework, lists of the application controls, and the list of tabs that are in the navigation panel.

Start and log in to the application

1. Double-click the **Clarius** icon from desktop to launch Clarius automation framework.



Note: You can access the Clarius automation framework from the target system using the local host URL `https://127.0.0.1:4200`. To remotely access the Clarius automation framework, use the host name or IP address of Clarius automation framework installed system.

2. Log in to the application using the credentials.

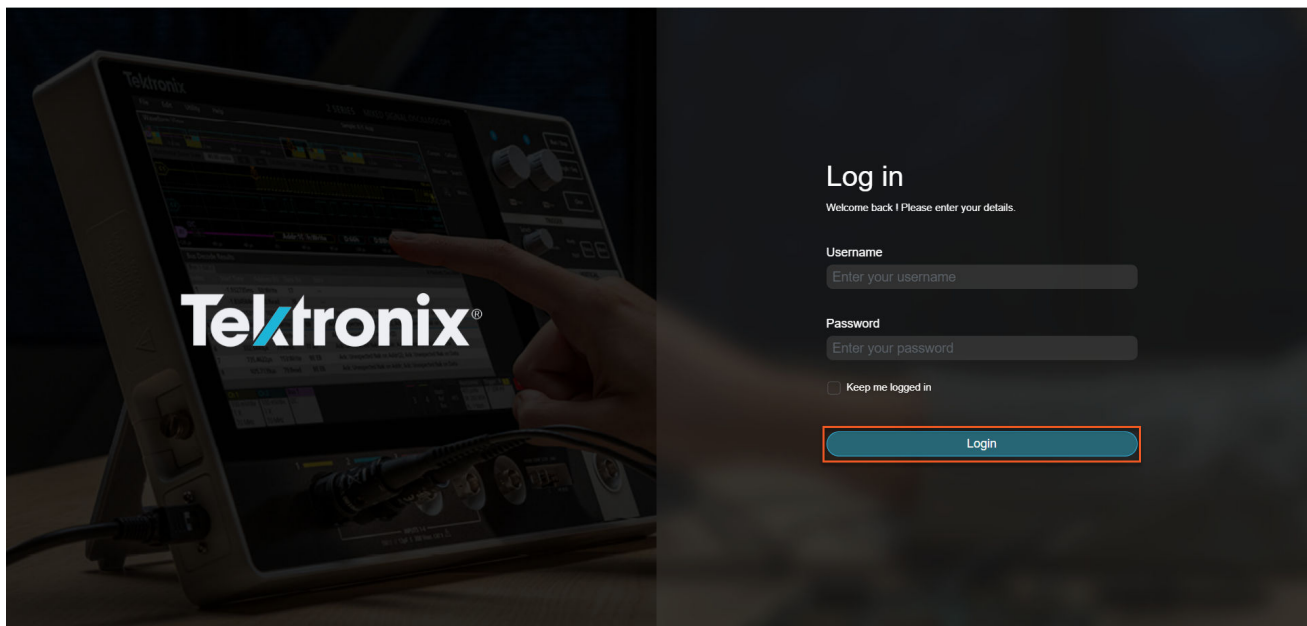


Figure 46: Clarius automation framework login page

After successful log in, you will be navigated to the home page. It displays the activated application(s), saved sequences of the application, test benches status, running tests, failed tests list, and notifications.

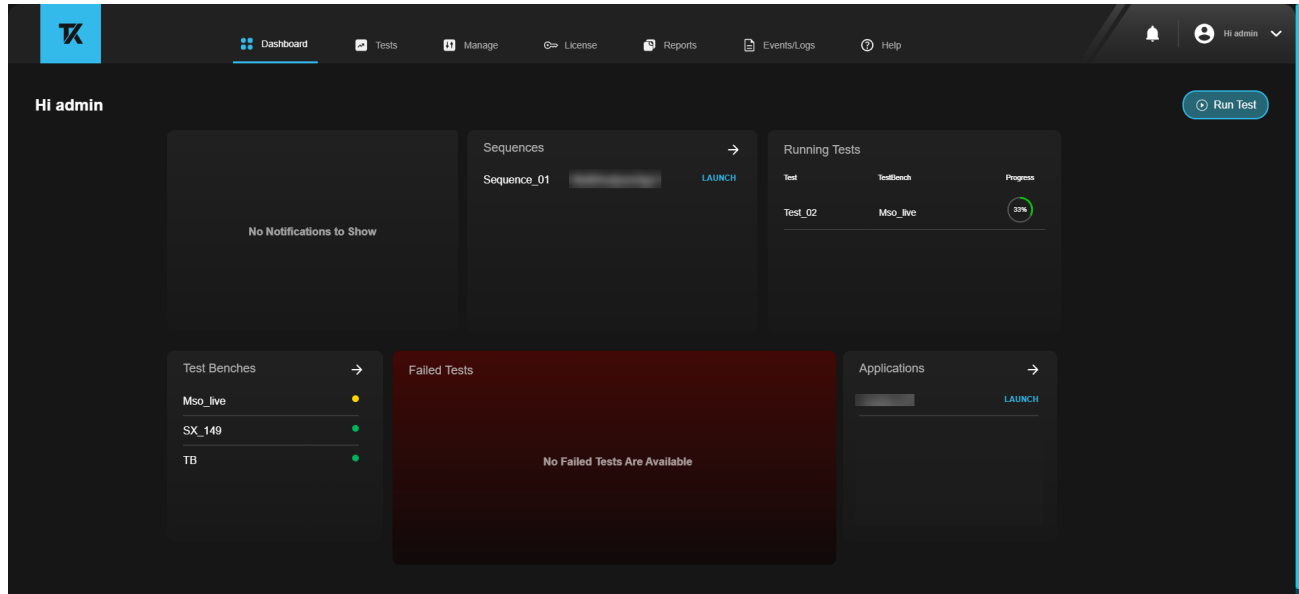


Figure 47: Clarius automation framework home page

Application controls

The Clarius automation framework uses the menus to group the related configurations, test, result, logs, and report settings. Click the respective menu to open the associated details.

A menu may have one or more tabs and frames that lists the selections available in that panel. Controls in a menu can change based on the settings made in that menu or another menu.

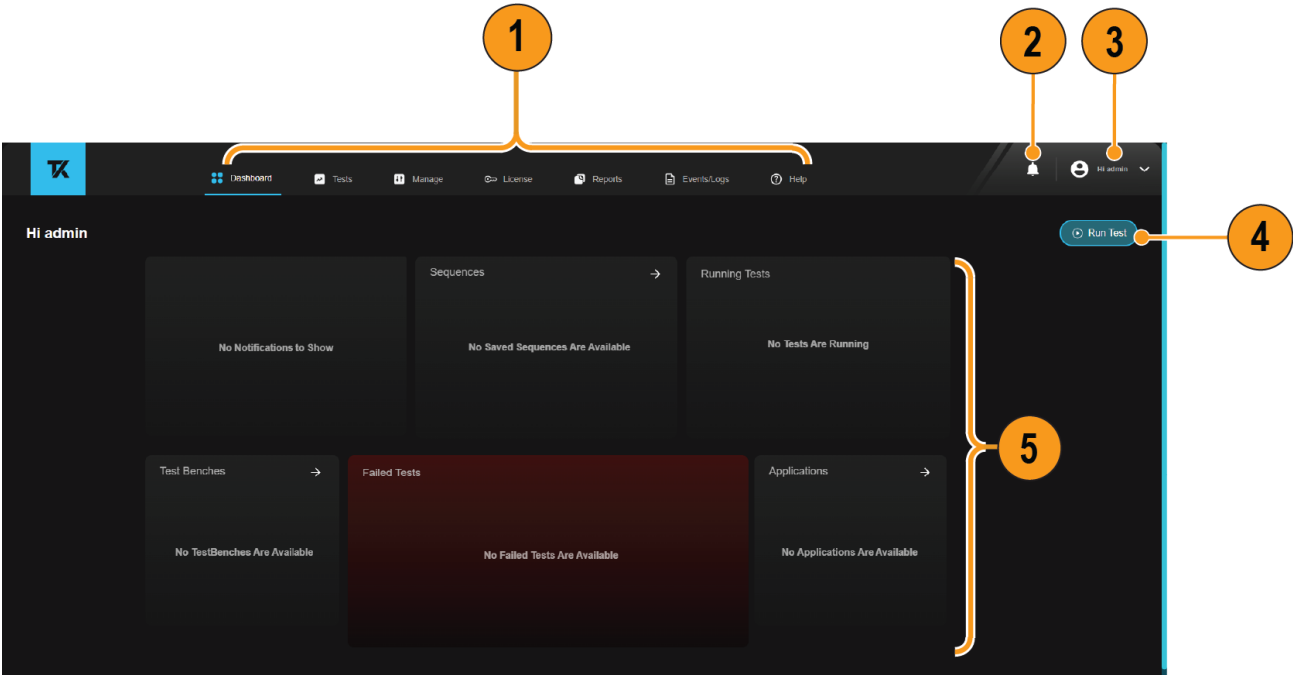


Figure 48: Application controls interface

Table 4: Application controls description

Identifier	Element	Description
1	Navigation panel	The navigation panel contains list of tabs that allows you to select the application, create and configure tests, create and configure test benches, and generate the test reports.
2	Notifications	Displays alerts when an event or action occurs in the application.
3	User profile	Displays the profile information and settings details of the account. You can view the version and user license agreement details in About menu.
4	Run Test	Click to perform a test by entering the required test information.
5	Widgets	An element of a graphical user interface that displays information or provides a specific details to the user to interact with the application.

Navigation panel

The navigation panel contains a list of tabs that allows you to select the application, create and configure tests, test bench, generate the test report, view the logs of the executed test, and the license information. Click the respective tab to open the associated panel.

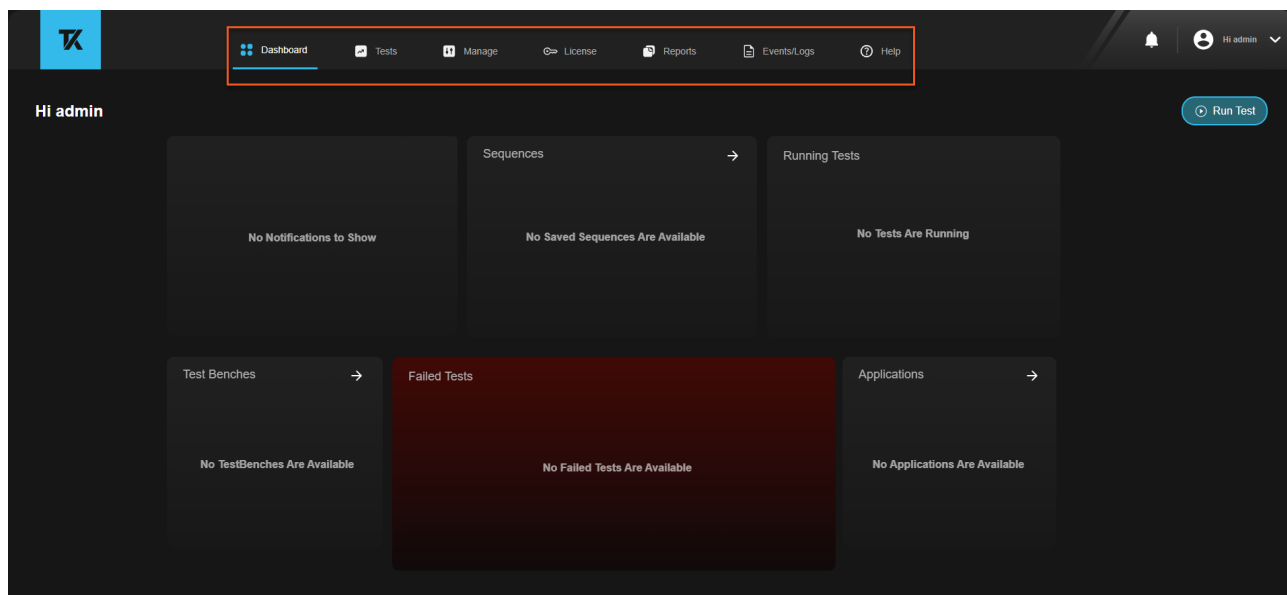


Figure 49: Clarius compliance navigation panel

Table 5: Navigation panel and tabs description

Tabs	Description
Dashboard	Displays the test data and test execution summary. It includes test progress, test notifications to view the status of each test, list of active applications, sequences, and test benches.
Tests	Allows you to create, configure, and run a new test. It also analyzes and displays the details of all executed tests.
Manage	Allows you to manage the application, test bench, and sequences that are created for the test execution.
License	Allows you to add license to the application and also view the licenses that are enabled.
Reports	Allows you to generate a test report and/or export a detailed test report for an executed test(s).
Events and logs	Displays the logs and events for a test.
Help	Allows you to open Help window to browse topics and read Help files.

Admin Console and Monitoring

The Monitoring and admin console provides a holistic view of the performance of the **Host** (Clarius installed PC) and the Clarius **Platform** (Virtual machine running critical services). This service allows users to monitor CPU load, memory usage, disk and storage status, ensuring optimal performance and facilitates troubleshooting.

Double-click Clarius **Admin Console** from the desktop to open the monitoring service.

System View

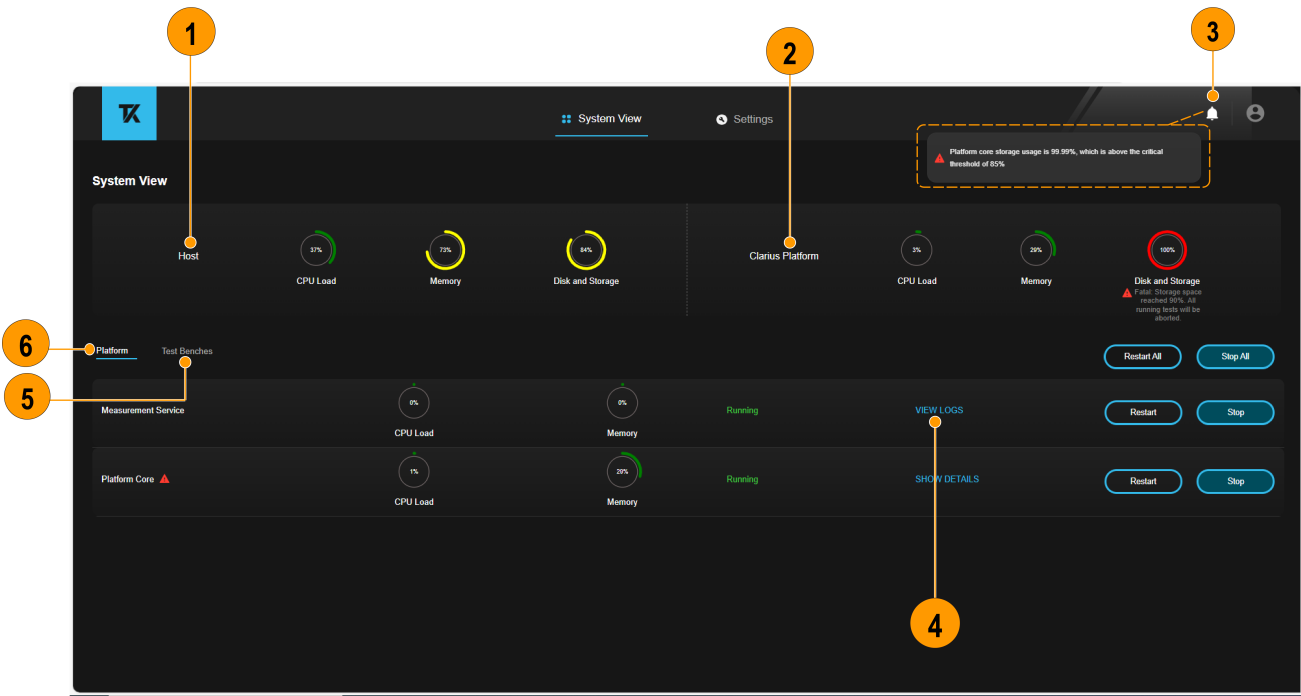



Figure 50: Clarius compliance monitoring service interface

Table 6: Components of monitoring service

Identifier	Element	Description
1	Host	The Host (Clarius installed PC) provides the hardware resources for the Clarius platform. You can view metrics related to CPU load, memory usage, disk and storage status for the host.
2	Clarius Platform	The Clarius platform is a virtual machine created on the host, running critical services essential for system operations. Metrics for the platform include CPU load, memory usage, disk and storage status.
3	Notifications	Warnings and alerts are displayed in the notification icon and Windows system tray, providing real-time updates on the system status. A red alert icon will be displayed next to the notification message for Memory, Storage and CPU if the threshold exceeds 90%. A yellow warning icon will be displayed next to the notification message for Memory, Storage and CPU if the threshold exceeds 70%.

Table continued...

Identifier	Element	Description
4	Logs	The logs screen displays detailed logs for each service.  Note: If there is any issue with the service, save the log file and share it with the Tektronix support person for troubleshooting.
5	Test Benches	Users can view the real-time status of the test benches, which includes CPU load and memory usage. The available status are <i>Available</i> , <i>Occupied</i> , <i>Unavailable</i> , and <i>Not Reachable</i> .
6	Platform	You can view the real-time status of Clarius services, which include CPU load and memory usage. The available status are Running, Not Running, and Exited.

Test bench status scenarios

The **Test Benches** tab in the monitoring service allows you to view the status of the test bench.

The following table explains the scenarios for using the test bench to perform a test.

Test bench status	Description
Available	If both instrument service and instrument service agent (ClariusISAgent) are running, but no test is executed on the test bench.
	If instrument service is running and instrument service agent (ClariusISAgent) is down; Technical difficulties to Restart or Stop the service.
Occupied	If instrument service and instrument service agent (ClariusISAgent) are running, and a test is being executed on the test bench.
Unavailable	If instrument service is down and instrument service agent (ClariusISAgent) is running; Use Start to bring up the setup.
Not Reachable	If both instrument service and instrument service agent (ClariusISAgent) are not reachable.

Note:



- You can check the status of instrument service agent (ClariusISAgent) from the **Services** window. Click **Start > Run** and then type services.msc to launch the Services window.
- Clarius Monitoring and Admin console is only accessible from the target system where the Clarius automation framework is installed.
- File Store Create Buckets service operates as an internal start-up service and will cease its operations post-initialization. It is not essential for the ongoing test procedures, and its absence will not affect the test runs or their outcomes.

Settings

The settings tab allows you to view the list of warnings and alerts in the notifications pane and the details of the TLS certificate.

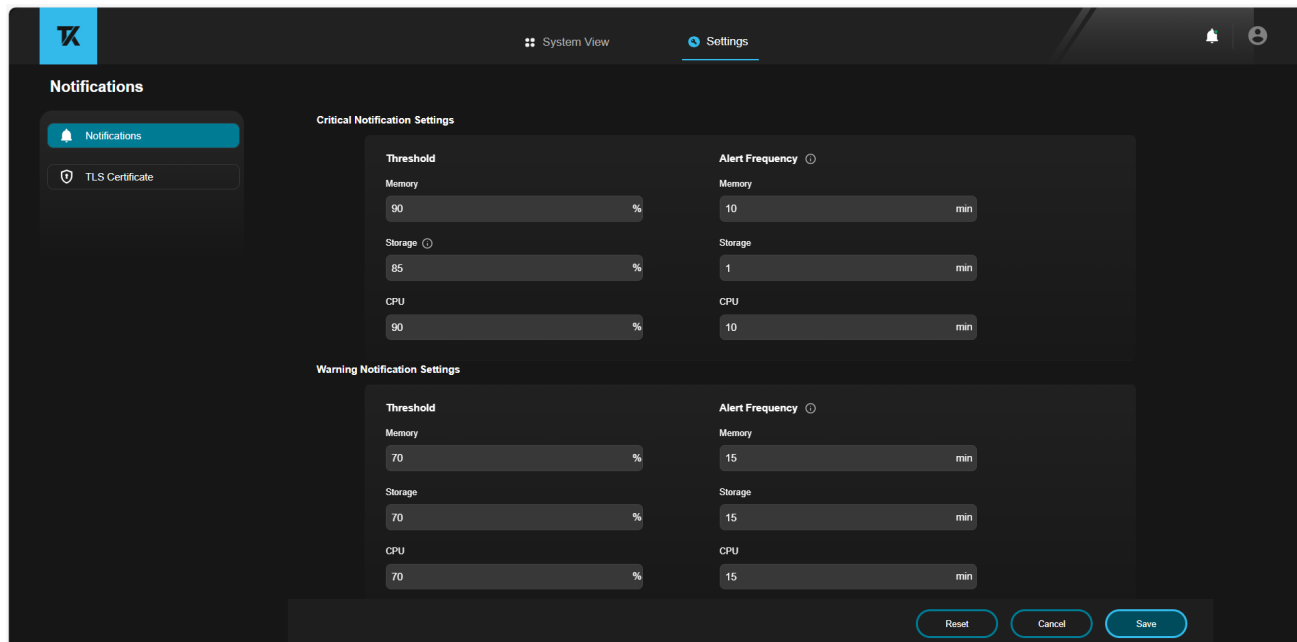


Figure 51: Settings tab: Notifications

Users can configure the values for Critical and Warning notifications, and click **Save** to apply the changes.

Warning Threshold: An alert is triggered when the metric exceeds the set value (For example, 70%)¹⁰.

Critical Threshold: A critical alert is triggered when the metric exceeds the set value (For example, 90%).

TLS/SSL Certificate

Transport Layer Security (TLS) encrypts information sent over network, ensuring **privacy** between a **client** and a **server** or **load balancer**. This section describes the steps to renew the TLS certificate of an admin (default user account) and view the status of the certificate. A default user is the user account that is created during the installation.

¹⁰ If the alert is from hard disk, delete old test data from **Tests > List of Tests** to free up the hard disk space.

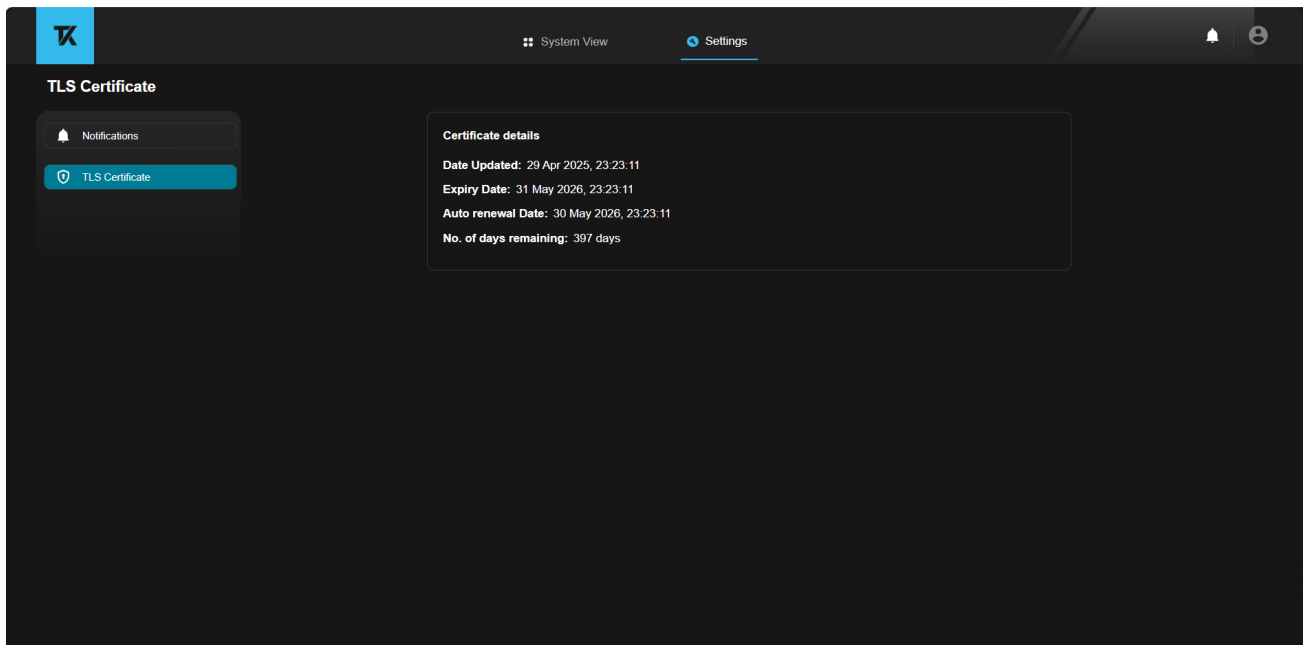


Figure 52: Settings tab: TLS certificate

The TLS certificate can be viewed from the **Admin Console** or by running the command **clarius sslcert -d** in the command prompt (Administrator mode).

To renew the TLS certificate, follow the steps:

1. Launch command prompt in **Administrator** mode.
2. Run the command **clarius sslcert -r**.
3. Close the **Clarius** tab in the browser, clear the cookies/ cache, and restart the browser once the certificate is renewed successfully.

Note:



1. Stop all running tests and close the browser before renewing the certificate.
2. If any services fail, you can restart the failed services from the **Admin console**.

Frequently asked questions

This section lists the frequently asked questions with the possible solutions.

Basics

1. What is the supported Operating System for Clarius software installations?

Refer to the [system requirements](#) section.

2. What is the recommended system configuration required to install Clarius software ?

Check the [system requirements](#) section.

3. Can I install Clarius automation framework with the Run as Administrator option?

Yes

4. Enabling virtualization technology from BIOS.

Contact the IT team of your organization to enable the virtualization technology in your system.

5. Where can I find the installation logs of Clarius automation framework?

The default path of Clarius installation logs is `C:\ProgramData\Tektronix\Clarius\logs\`.

6. Where can I find the Clarius compliance application installer logs?

The Clarius compliance application installer logs path is `Clarius C:\ProgramData\Tektronix\Clarius\logs\`.

7. What happens if we try to install the same version of the Clarius installer?

Re-installation is not allowed. The installer will prompt you to uninstall the existing version.

8. What happens to the already deployed application licenses while uninstalling the Clarius automation framework?

The installed licenses will be deleted during the Clarius uninstallation process.

Close all running services and all opened files of Clarius before you proceed with the uninstallation. Uninstalling the Clarius automation framework will also uninstall all the identified Clarius compliance application(s) along with the respective instrument service plug-ins, measurement service, and instrument service.

9. How do I uninstall Clarius automation framework from the target system?

Go to **Control Panel > Add or remove program** and uninstall **Clarius automation framework**.

Close all running services and all opened files of Clarius before you proceed with the uninstallation. Uninstalling the Clarius automation framework will also uninstall all the identified Clarius compliance application(s) along with the respective instrument service plug-ins, measurement service, and instrument service.

10. How to uninstall Clarius instrument service from the oscilloscope?

Go to **Control Panel > Add or remove program** and uninstall Clarius instrument service.

Close all services and all opened files from the install folder before proceeding with the uninstallation.

11. What is the log in credential for Clarius virtual machine using SSH client (putty)?

Use the below credentials to log in to the Clarius compliance virtual machine.

Default user: admin

Password: Enter the password that was set during the installation to log in to the UI.



Note: SSH can be done only in system where Clarius automation framework is installed.

During installation

1. Can I choose a network drive (other than internal drives) for installation?

No. Installation is supported in internal drives only.

2. Can we select a drive other than C: for Clarius installation?

Yes, you can select any local disk drive other than the network drive. The recommended drive for installing Clarius compliance is C:.

3. Can we select a drive other than C: for installing Clarius instrument service?

No. The Clarius instrument service can be installed only in C: drive.

The installation path for Clarius instrument service is:

- If Clarius instrument service is installed in an oscilloscope, then the installation path is C:\Program Files\Tektronix\Clarius.
- If Clarius instrument service is installed in the target system, then the installation path will be same as of Clarius automation framework.

4. Can I run the Clarius installer from the .zip file without unzipping it?

No. You must use Windows unzip only to extract the package.

5. How to troubleshoot windows update issue while installing Clarius automation framework.

Windows updates often cause the default switch in Hyper-V to become unreliable, leading to new instances failing to launch or existing ones timing out. This issue persists even after rebooting. To fix it, remove the default switch with the following command:

- `Get-HNSNetwork | ? Name -Like "Default Switch" | Remove-HNSNetwork`
- `restart-computer`

6. How do I check if a port is available for installing the Clarius automation framework?

In the powershell, run the command `Get-NetTCPConnection -State Listen | Where-Object { $_.LocalPort -eq <PortNumber> }`.

If the port is in use, the command will display a list showing the processes using it. If there is no output, it means the port is not currently in use.

Example: `Get-NetTCPConnection -State Listen | Where-Object { $_.LocalPort -eq 8080 }`

Post installation

1. What if I forgot the Clarius UI login password. How to reset it?

To reset the **admin** password, go to **command prompt** > `clarius resetpwd -p "new password"`

2. How to launch Clarius automation framework?

- Double-click the Clarius shortcut icon present on Desktop.
- You can also open the web browser and type `https://127.0.0.1:4200` in the address bar.

3. What to do if the Clarius is not launched after installation is complete?

Check if the Clarius is installed successfully. Go through the [installation logs](#) for more details.

Contact Tektronix field engineer for further queries.

4. Where can I find the user information in the Clarius automation framework?

Check the user profile on the top right corner of the Clarius automation framework.

5. Clarius throws an error as instrument service is not running although all the services are up and running.

Restart the system and check if the problem is resolved. If not, try restarting VM from Hyper-V and check. If the issue is still not resolved, contact a Tektronix field engineer for support.

6. If instrument service is not reachable from PC where Clarius automation framework is installed.

Check if port 18000 is available. If not, you can change the port value in appsettings.json located at C:\ProgramData\Tektronix\Clarius\instrument_service\conf\ as per your IT policies.

7. What happens if multiple browsers are present in the target system where Clarius is installed?

By default, Clarius will be launched on the Microsoft Edge browser. Only Chrome and Microsoft Edge browsers are supported.

8. How to get the Host ID from the user interface of the Clarius automation framework?

Check [Activate application license](#) section for steps to copy the Host ID and activating the license.

9. What to do if the application does not appear in the list of applications in the Clarius user interface?

Go through the [installation logs](#) for more details about the failure or contact Tektronix field engineer for support.

10. What to do when you click Login in Clarius automation framework, it does not navigate to the home page and no error message is displayed?

If the Login to Clarius automation framework is not successful and you do not see any error message or redirection, please follow these steps:

- a. Check if cookies are enabled in your browser.
- b. Make sure the setting to allow sites to save and read cookie data is selected.

Check the browser settings to enable cookies and to allow sites to save and read cookie data.

11. What if an error message is displayed as "One or more Instrument Service files were not found" when launching the Clarius Instrument Service?

Reinstall the Clarius Instrument Service, refer to [Install Clarius instrument service](#) on page 21.

12. Clarius throws an error as Clarius instrument service is occupied even though test is not running.

Save the Clarius instrument service logs and then restart the IS and check if the problem is resolved. If the issue is still not resolved, contact a Tektronix field engineer for support.