Web Guide

Document Information

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1. Scope

This document is only for Microsoft Windows Operating System.

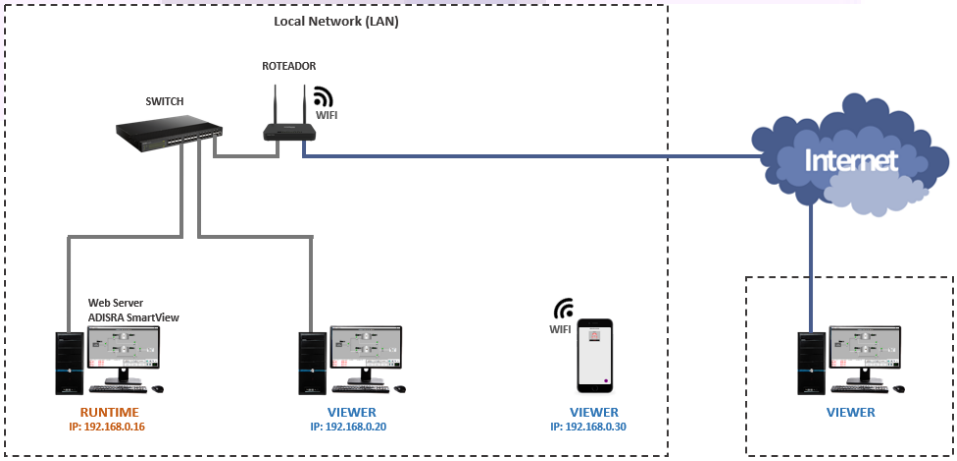
The ADISRA SmartView Web Guide details the steps to publish an application to the web. It will also explain how to change the port number, some possible errors the user might face and how to solve them.

2. Summary

Web server is a software that accepts client requests to deliver a web page. A web server must be configured for ADISRA SmartView to display an application on the web. It can be any web server, but in this document, we will use Microsoft Windows solution called Internet Information Services (IIS).

Besides allowing the user to display the application runtime through the ADISRA SmartView Viewer (locally and remotely), the user can also use commonly used web browsers to display it on the web. This can be achieved by using the ADISRA SmartView web viewer, which is configured to allow the execution of the project as HTTP or HTTPS.

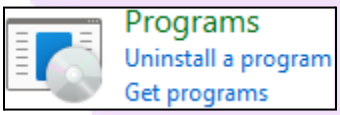
The way this functionality works involves saving the graphics created by the user as HTML and then using a web server to work as a viewer to display them similarly to how they are represented in the ADISRA SmartView Viewer. With the web viewer, you can set viewers in machines or smartphones connected to the same network as the runtime one.



3. Installing Internet Information Services (ISS)

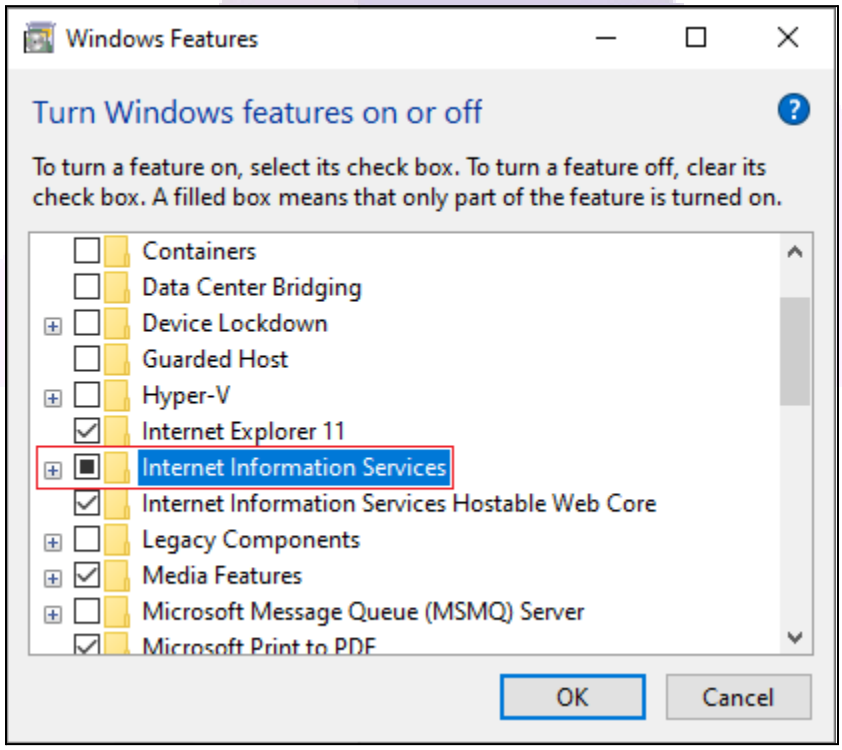
To install the ISS, follow the steps below:

1. First, access the 'Control Panel' and open the Program section by clicking the 'Programs' item.

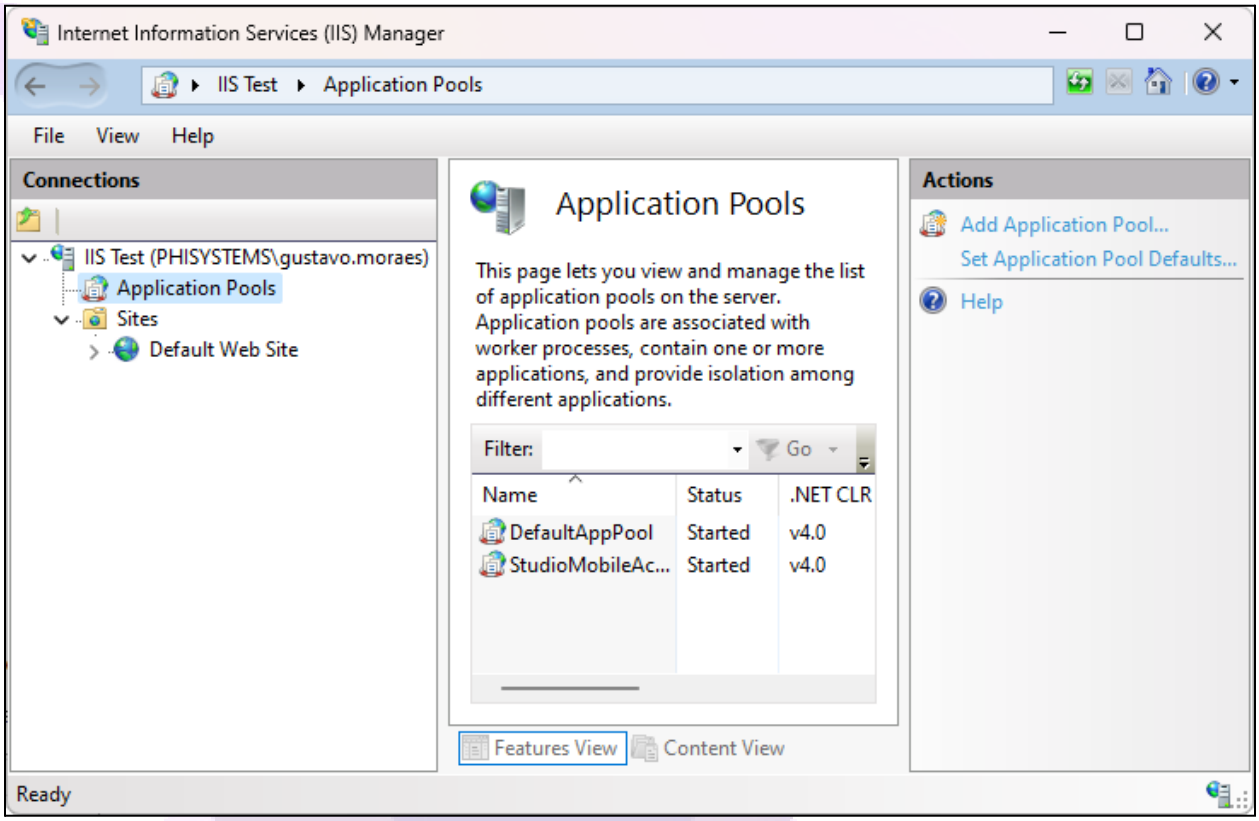


2. With the new section open, press the 'Turn Windows features on or off' to open the window that allows the user to enable and disable Windows features.

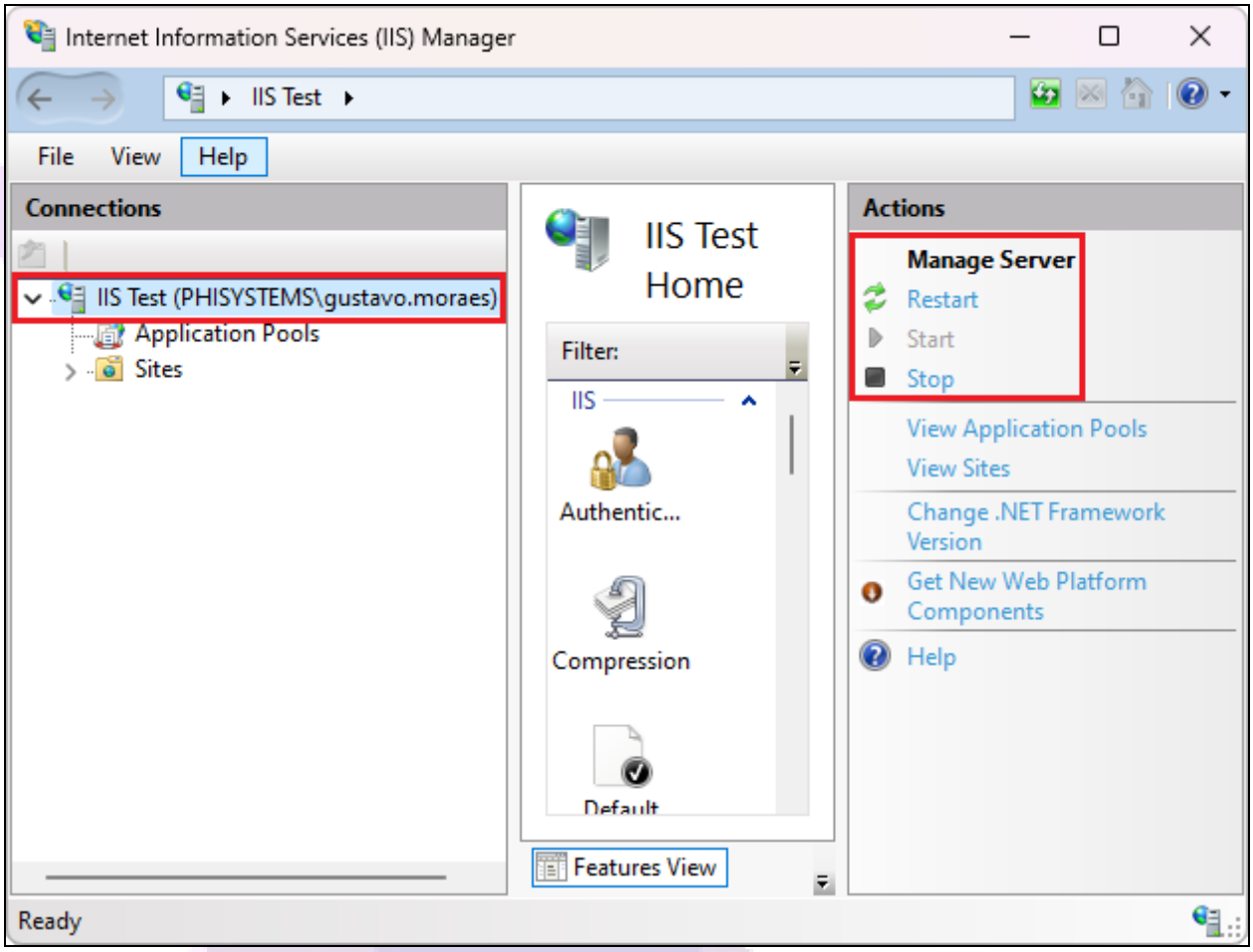
3. Search for the option "Internet Information Services" and enable it. With that option enabled, the IIS will be installed and available to use.



4. Once enabled, open the IIS Manager by searching for it in the Windows toolbar or hold the Windows key and press the R key to open the run window, write 'inetmgr' and press OK.

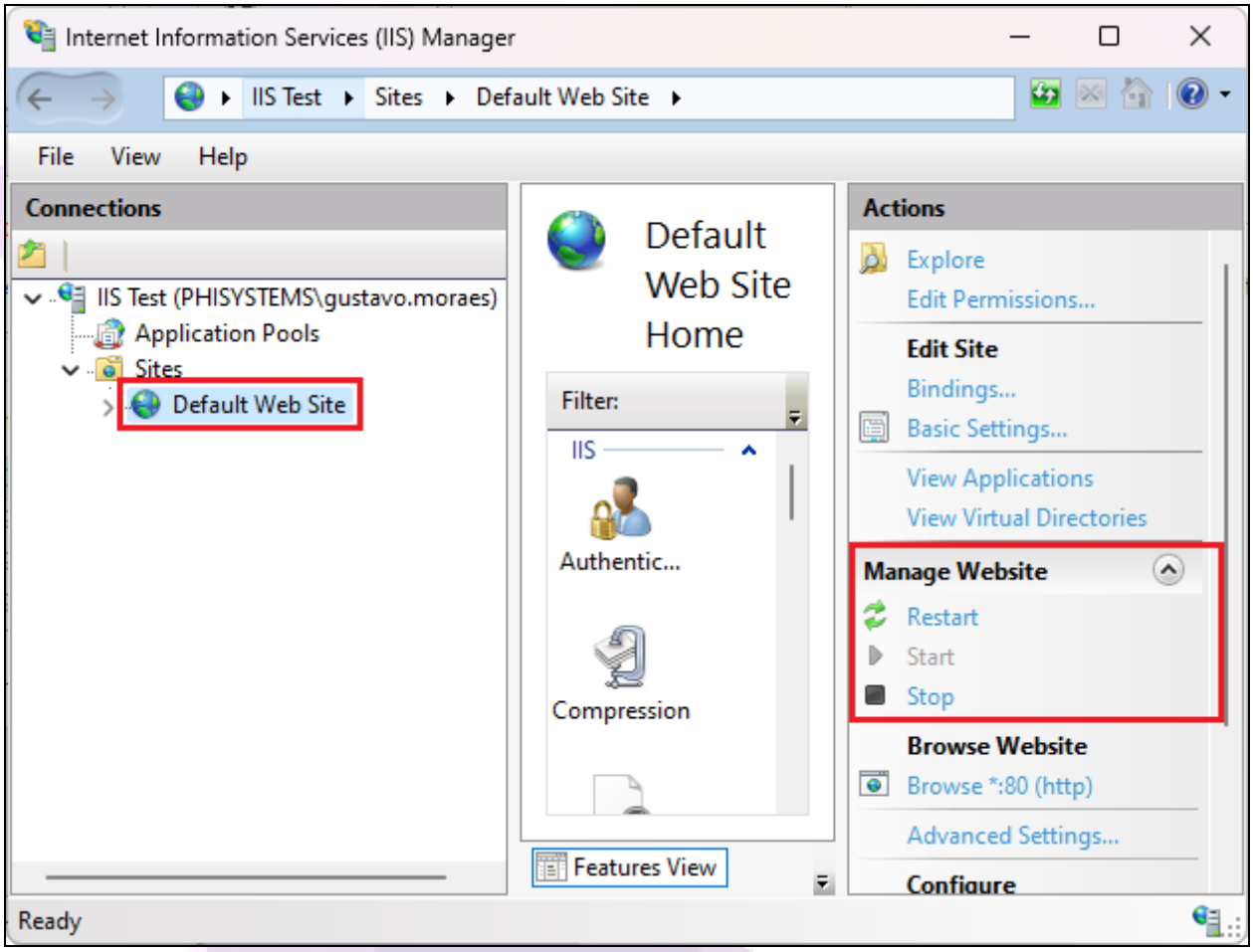


5. Select the first option and, on the menu to the right, press 'Start' to start the web server, if the option is not grayed out.



If you are not able to start the server, please check if the port 9003 is available. If not, please stop the application using the port 9003 to enable the server.

6. With the server enabled, access the 'Sites' folder and, if you want to use the default web server folder, select the 'Default Web Site' and press the 'Start' button on the menu to the right.



If you are not able to start the Default Web Site, please check if the port 80 is available. If not, please stop the application using the port 80 to enable the server.

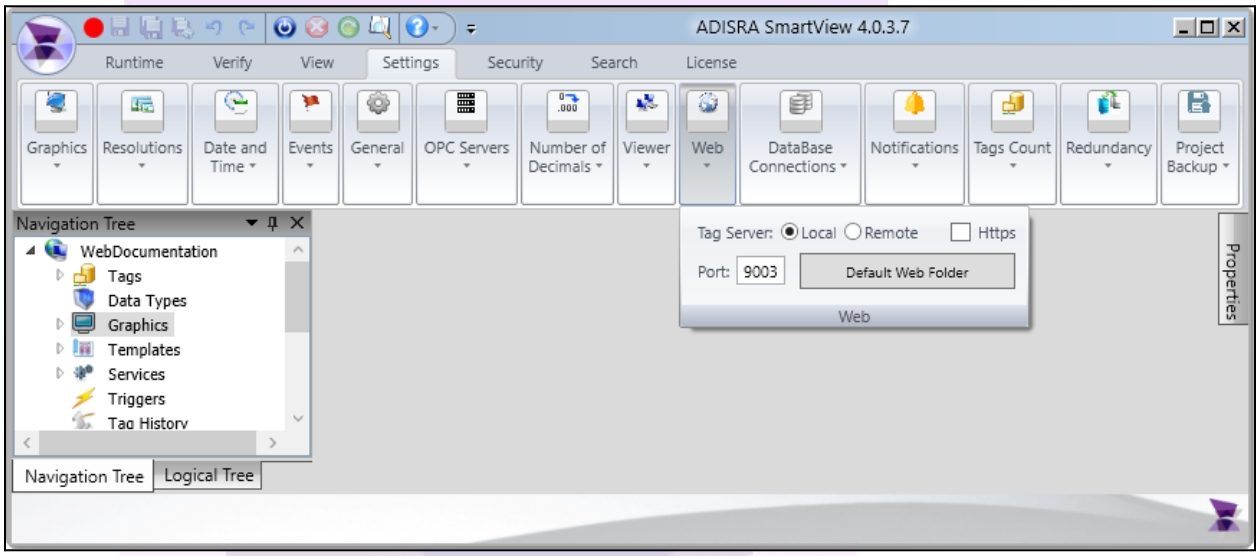
If you were able to follow all steps, the IIS was successfully enabled. Follow the topics below to learn how to configure the ADISRA SmartView to execute your application on the web viewer as HTTP or HTTPS.

4. Configuring the project to be displayed on web as HTTP

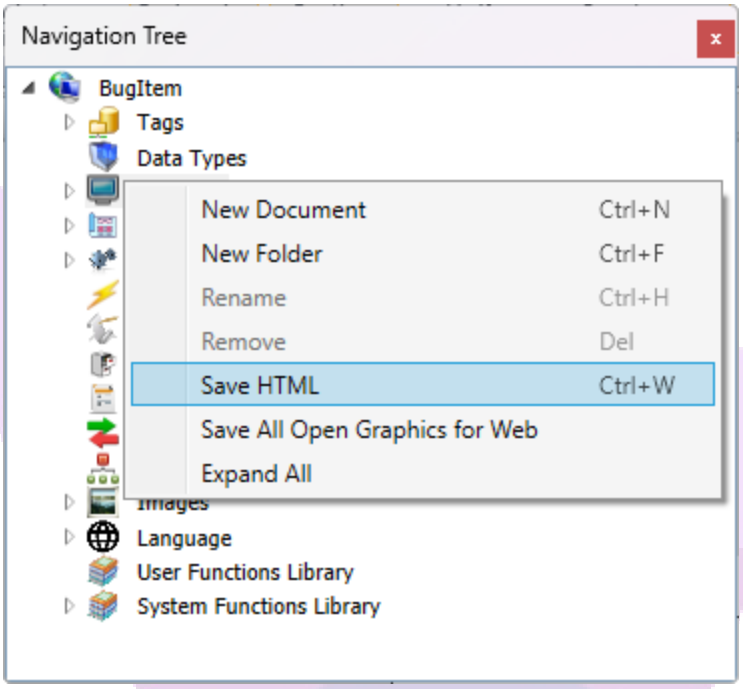
If you want your project to be displayed on the web with the HTTP protocol, follow the steps below.

1. Open the ADISRA SmartView engineering area with the project you want to display on a web viewer.

2. Access the 'Web' area and, if you want to set a different web folder for your project, click 'Default Web Folder' and set the new folder.

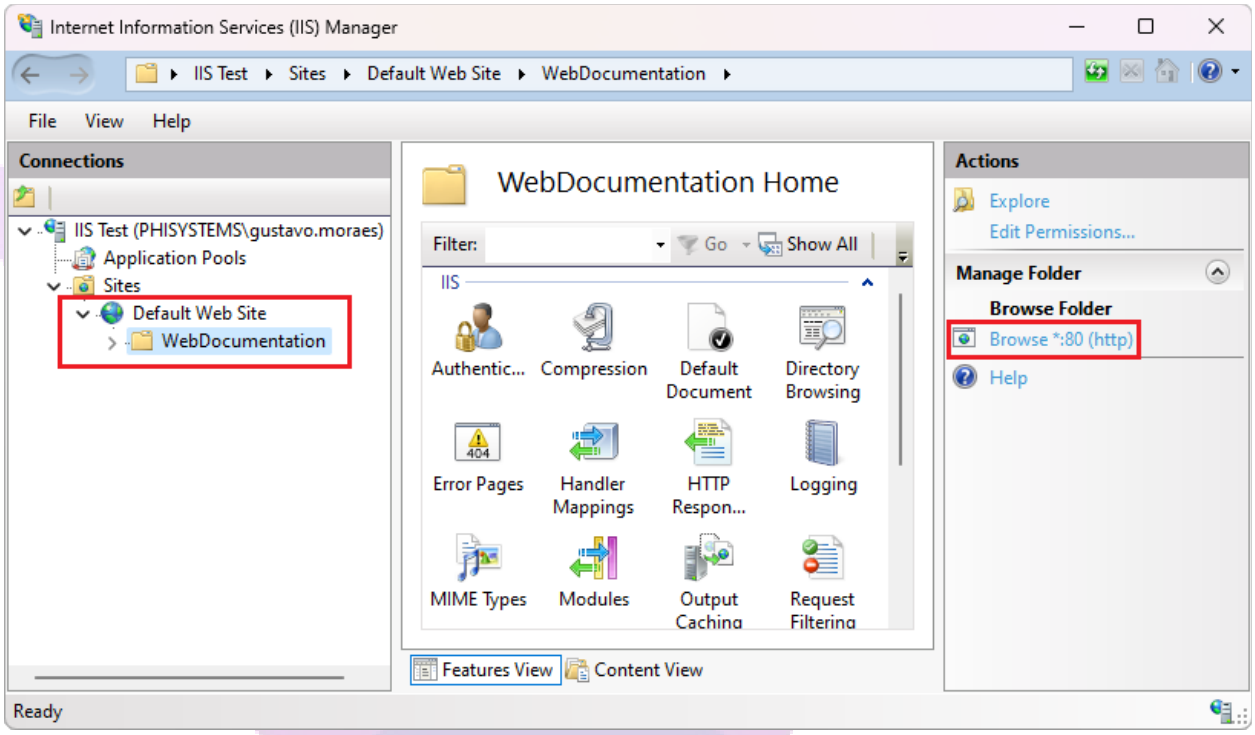


3. With the web folder configured, we will now save all graphic documents as HTML. Open the Navigation Tree, right-click the Graphics icon, and click "Save HTML" to save all graphic documents in the project as HTML. Alternatively, you can press the left Ctrl key + W key to save all graphics as HTML. Please note that if you make any modifications to a graphic document after saving it as HTML, you will need to save it as HTML again in order to update it on the web.

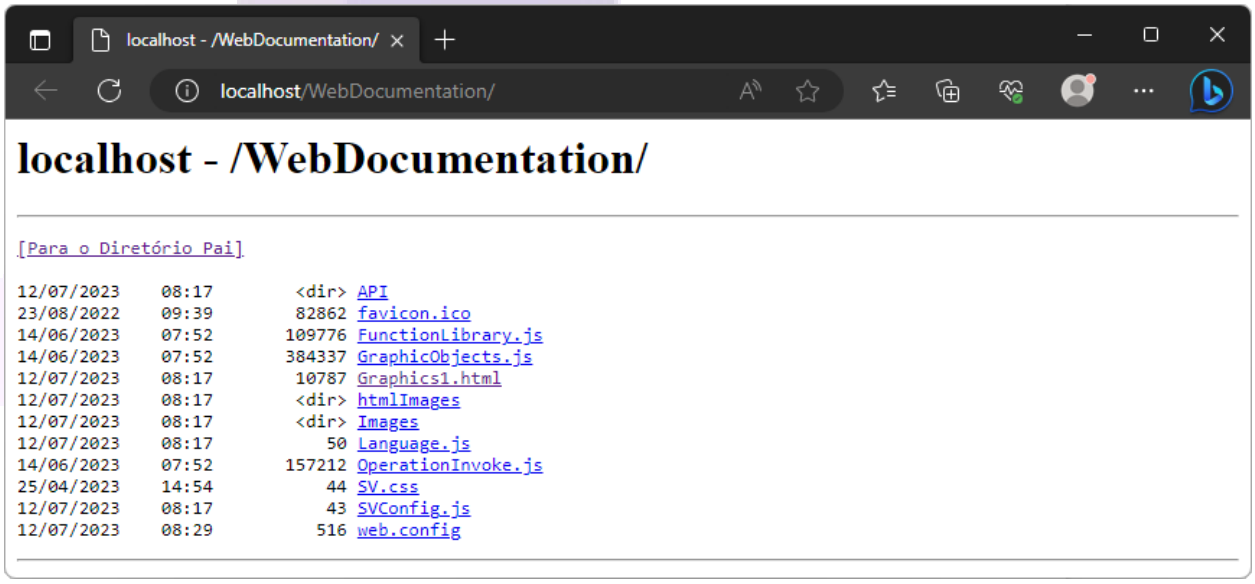


If you have already saved all the graphic documents as HTML and have made a modification to a specific document, to avoid spending time saving all the graphics as HTML again, you can right-click on the graphic document and select "Save as HTML" to indicate that you want to save it in that format.

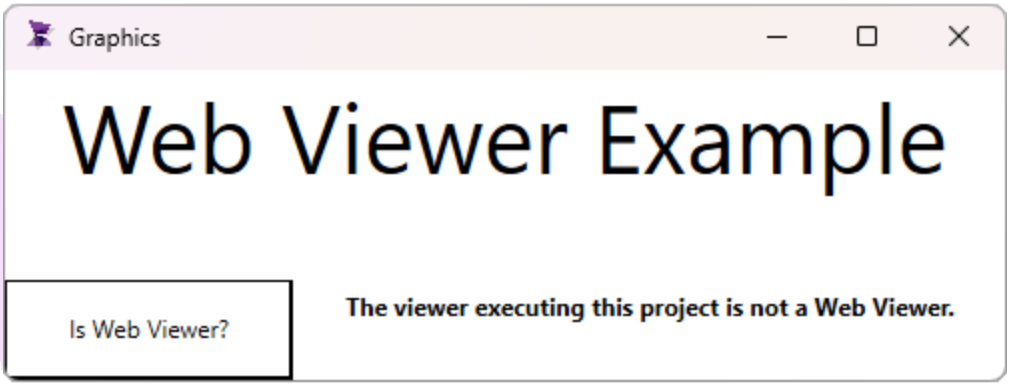
4. With all graphic documents saved as HTML, you are now ready to test the application on the web viewer. Start the application runtime, open the IIS Manager, expand the Default Web Site area, find and select the folder with the name of your project, and then press 'Browse *:80 (http).' The web viewer will open locally in the default web browser on your machine.



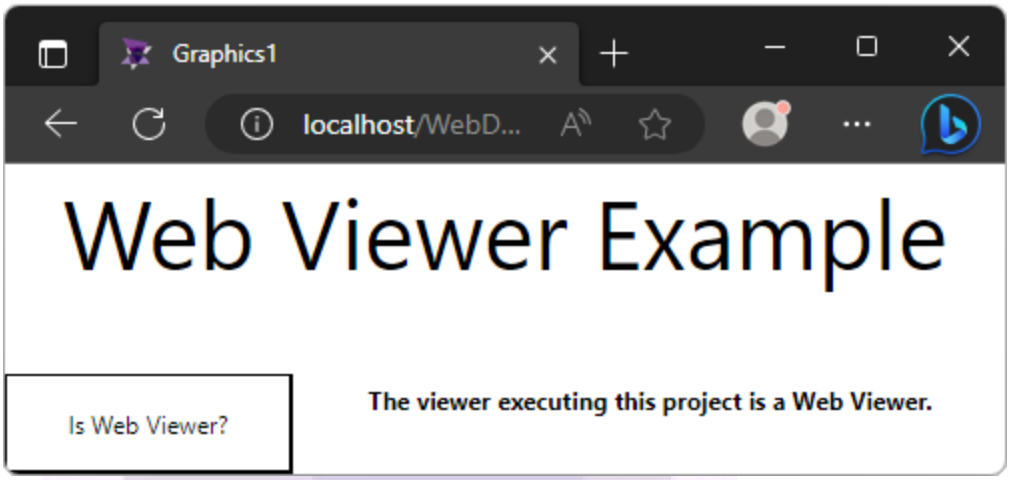
If the following page is opened, find the starting graphic of your application and press it.



Viewer



Web Viewer

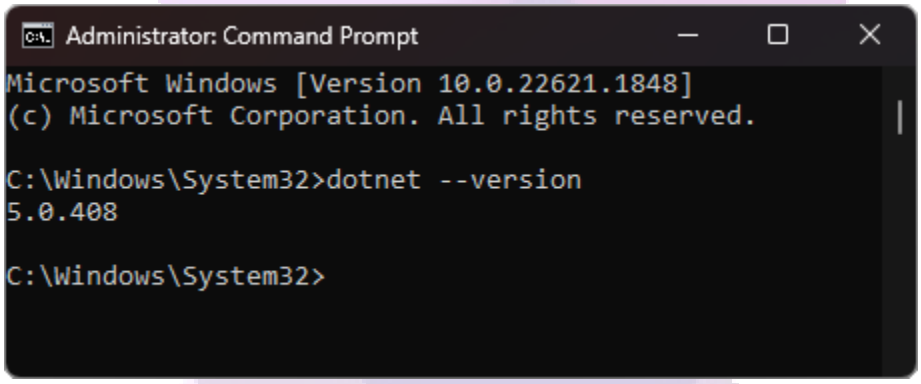


With the project correctly configured to run on the web using HTTP, you can also remotely access it with the web viewer.

5. Configuring the project to be displayed on web as HTTPS

To demonstrate the configuration using the HTTPS protocol, we will use a certificate that can be generated if you have the ASP.NET Core framework installed on your machine. However, if you have other valid certificates available for use, you can also use them in this example.

1. First, check if you have any version of the ASP.NET Core SDK installed on your machine. To do that, execute the following command: 'dotnet --version'. If it returns a number, the ASP.NET Core SDK is installed already in your machine.

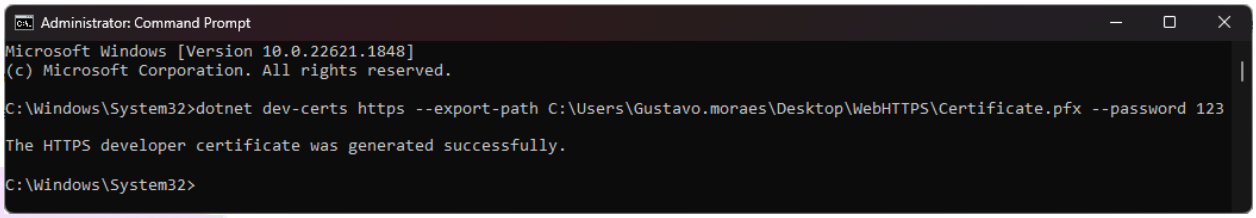


If the command didn't return a number, you will need to install it.

2. With it installed, we can now create a self-signed certificate specifically for development and testing purposes using the command prompt. However, please be reminded that this certificate should not be deployed somewhere; it should only be used to test your application on the web. Execute the following command in the Command Prompt with administrative privileges.

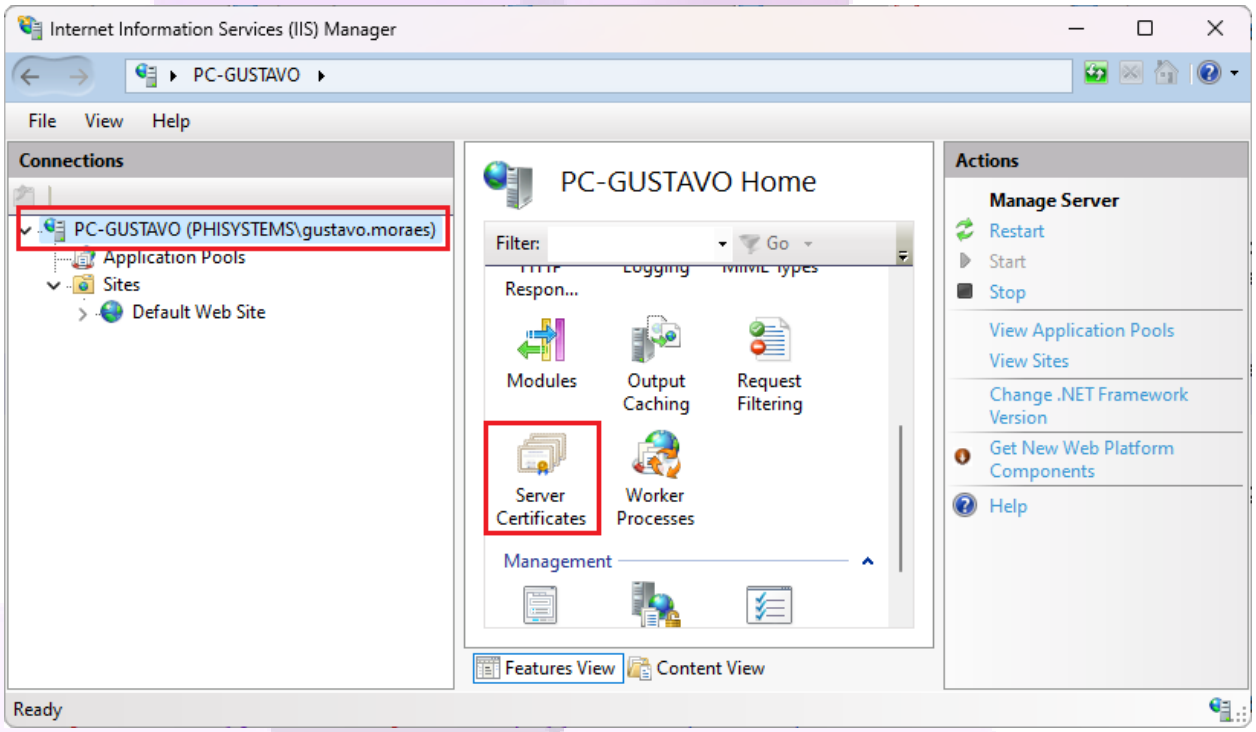
dotnet dev-certs https --export-path <path> --password <password>

Change the <path> to the location where you want the certificate .pfx file to be generated, and change the <password> to any value you want to use as the certificate's password.

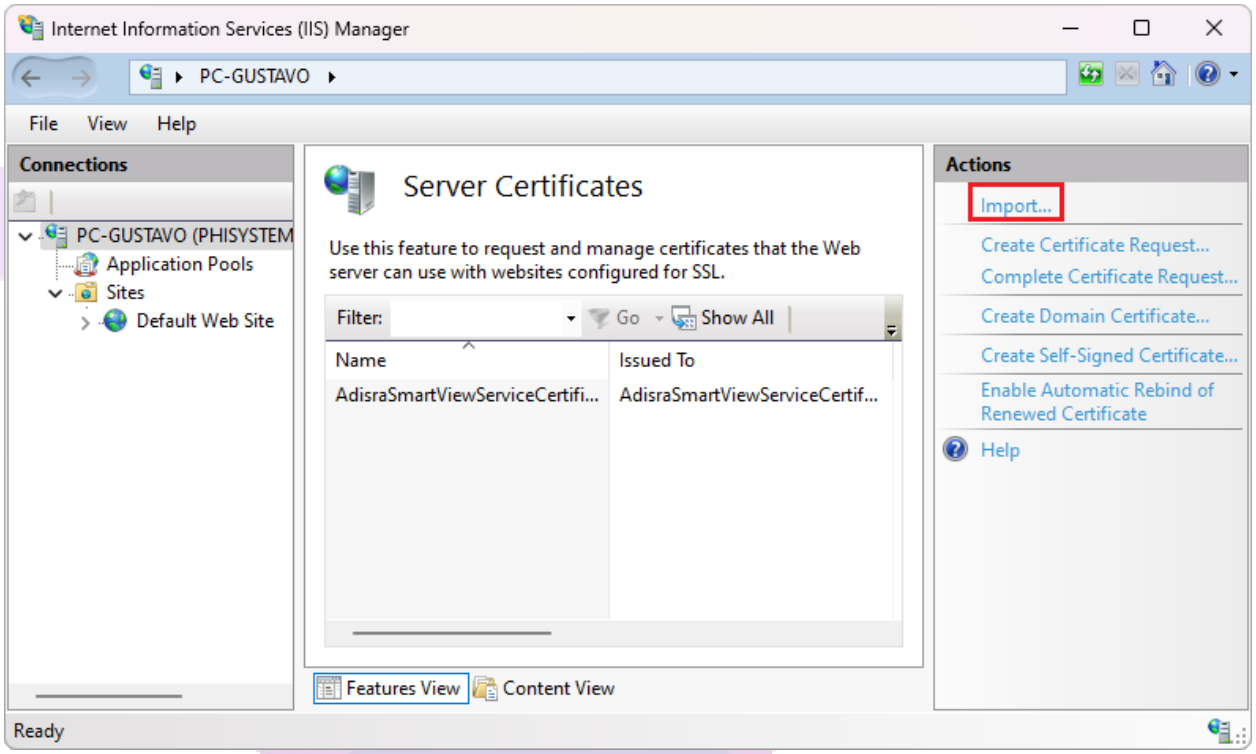


If a certificate already exists on your machine, execute the command 'dotnet dev-certs https --clean' to delete it, and then execute the previous command once again.

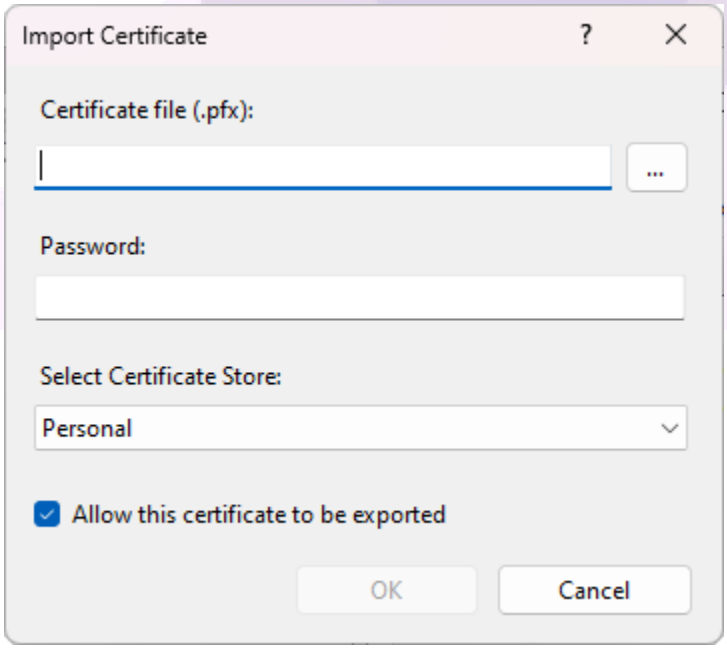
3. With the file created, open the IIS Manager, select the first item and access the 'Server Certificates'.



4. In the newly displayed area, press the 'Import...' button.

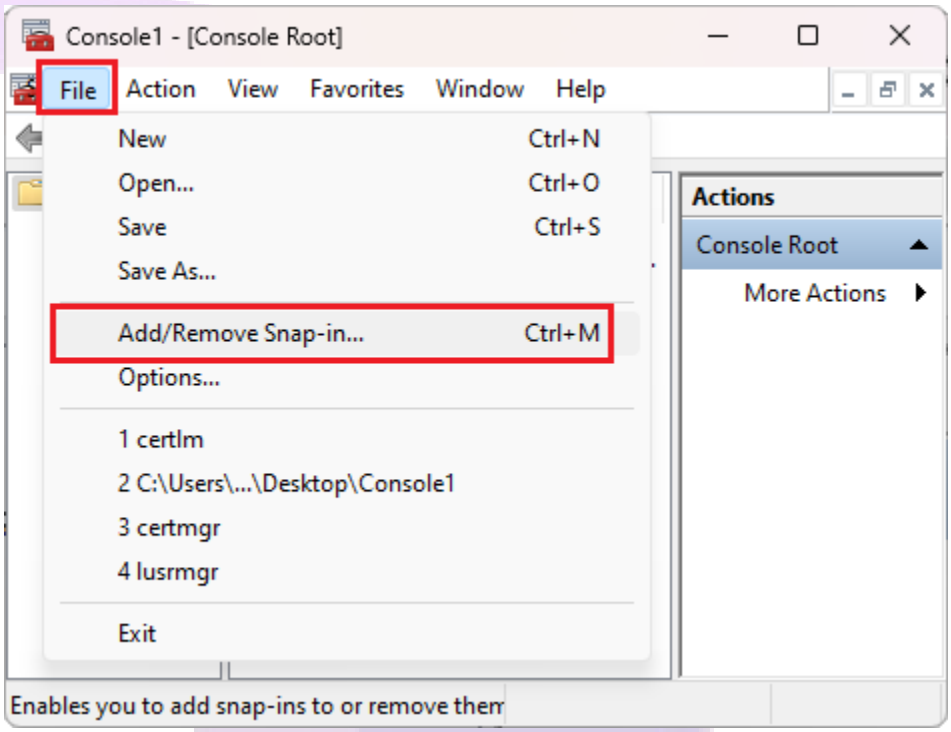


5. With that window, press the "..." button, find, and select the file we generated with the Command Prompt. In the password area, insert the one you set for the certificate file. With all information inserted, press the button OK and the certificate will be added to the IIS.



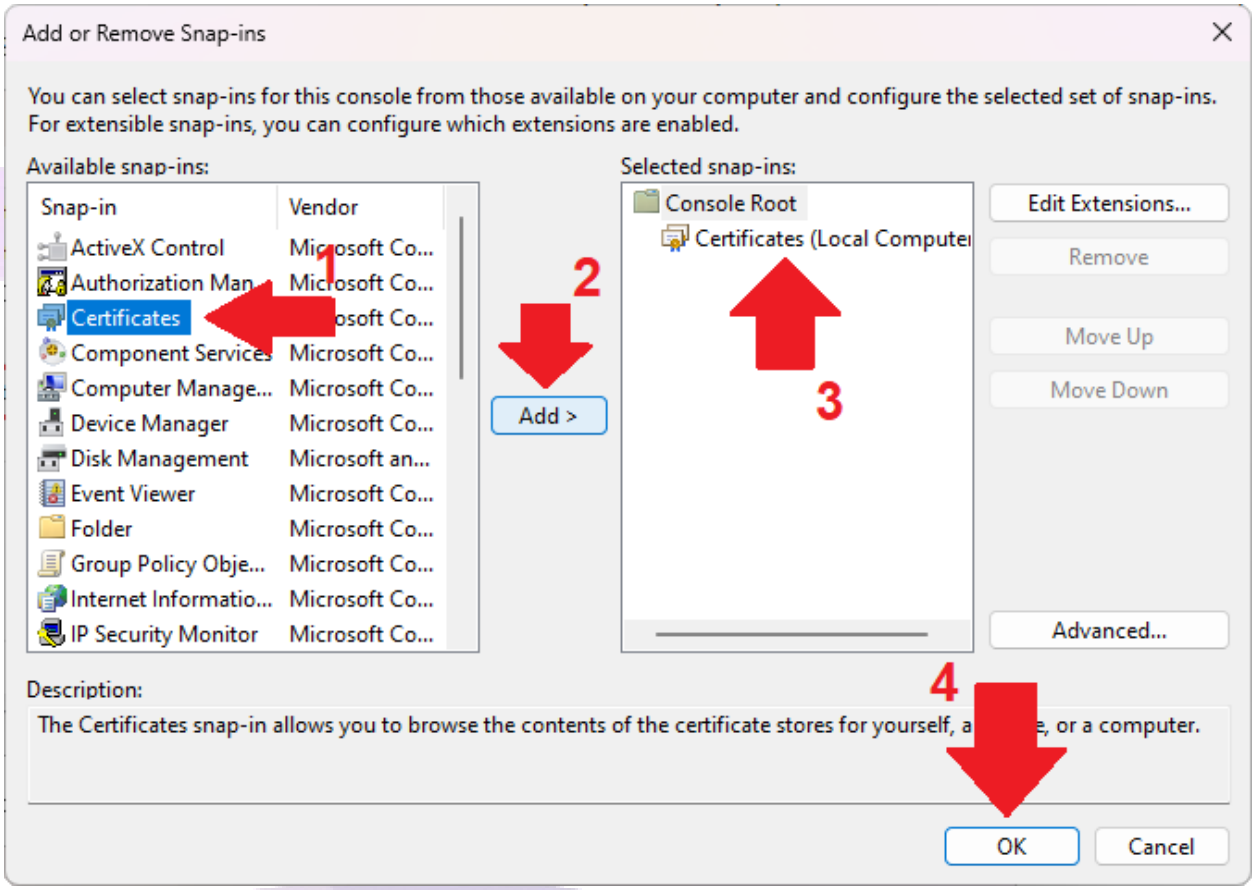
6. With the certificate added to IIS, we will add it to the trusted certificates folder. Press the Windows key + the R key to open the Run window, add 'mmc' to it and open the Microsoft Management Console.

7. Press the 'File' menu and select 'Add/Remove Snap in...'.

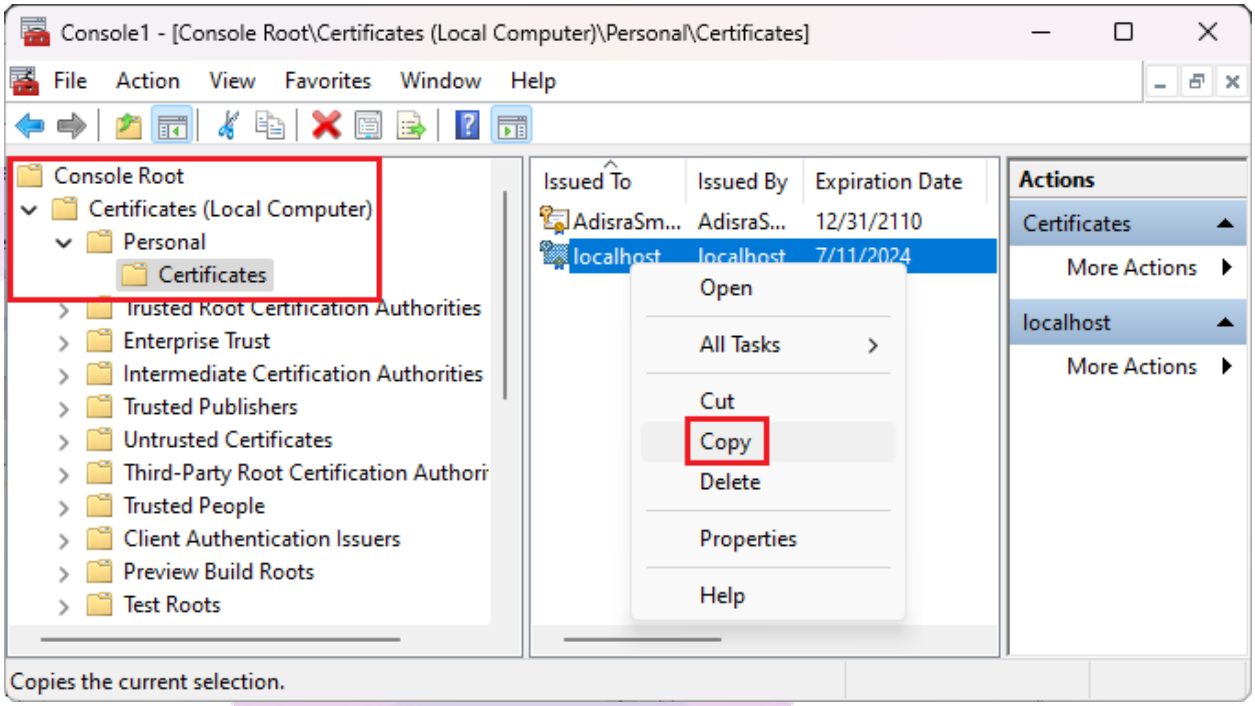


8. Press the 'File' menu and select 'Add/Remove Snap in...'.

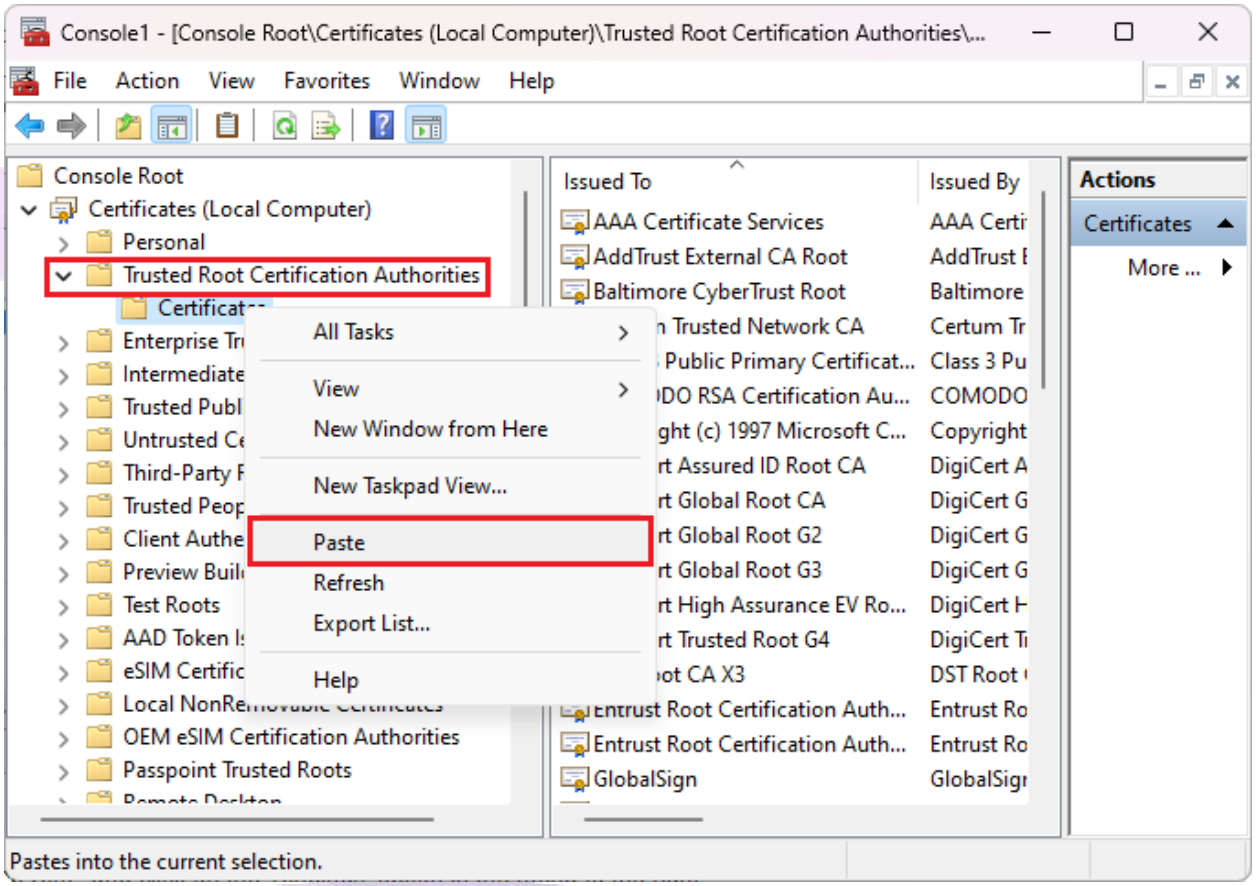
9. In the new window, select the 'Certificates' option in the menu to the left, press the 'Add' button, select 'Computer Account', press Next, select Local Computer, press Finish, and then OK.



10. Expand the 'Certificates' and 'Personal' folders, and then select the 'Certificates' folder. Right-click on the certificate we previously created and copy it.

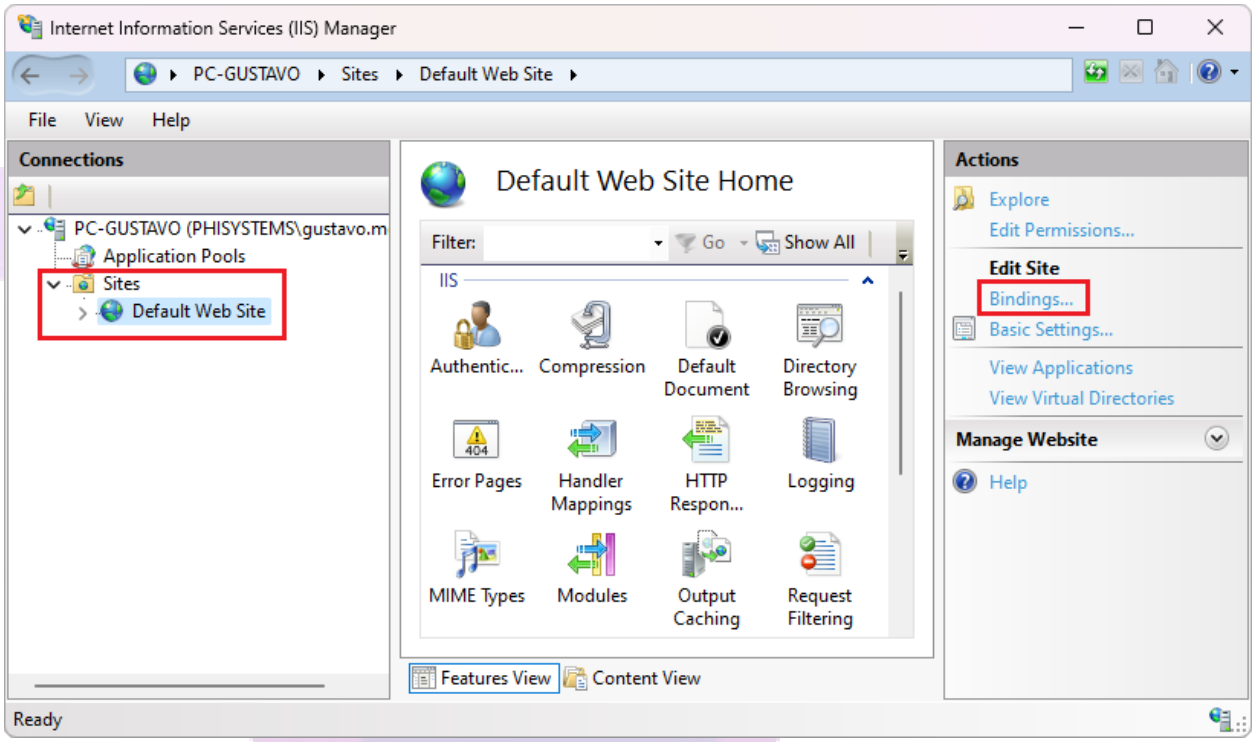


11. Expand the 'Trusted Root Certificates', right-click the Certificates folder, and select 'Paste'. This will ensure that the certificate we generated is trusted by our system.

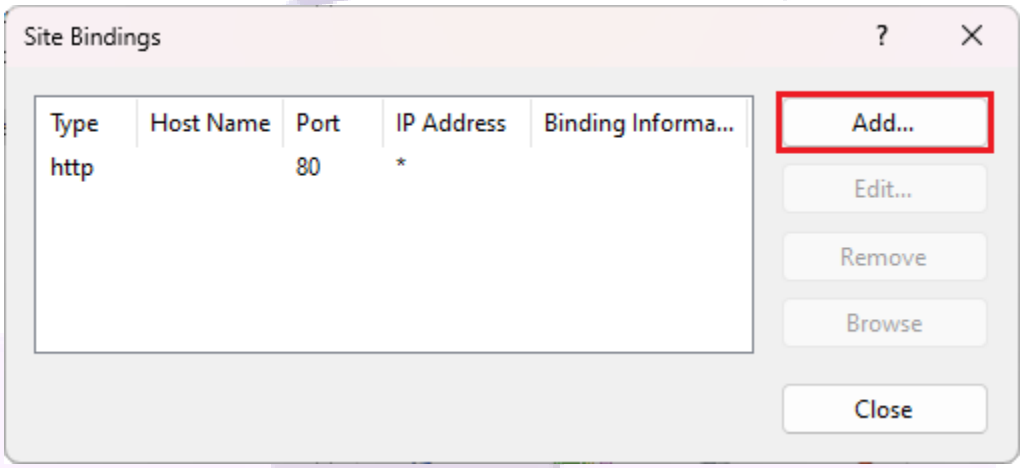


It is recommended to restart your machine after this step so that it can update the list of certificates it trusts.

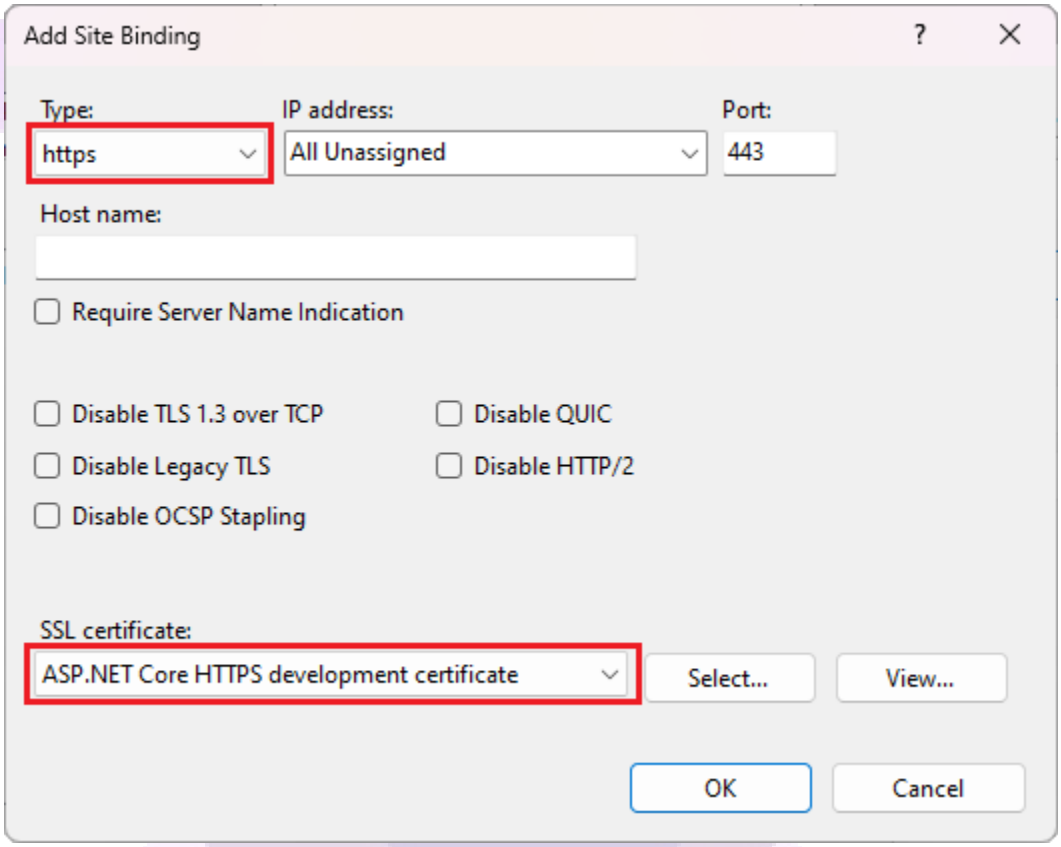
12. To indicate which certificate to use when opening the project on the web, open IIS, select the 'Default Web Site' option, and click on 'Bindings...' in the menu to the right.



13. In the new window that will open, click the "Add" button.



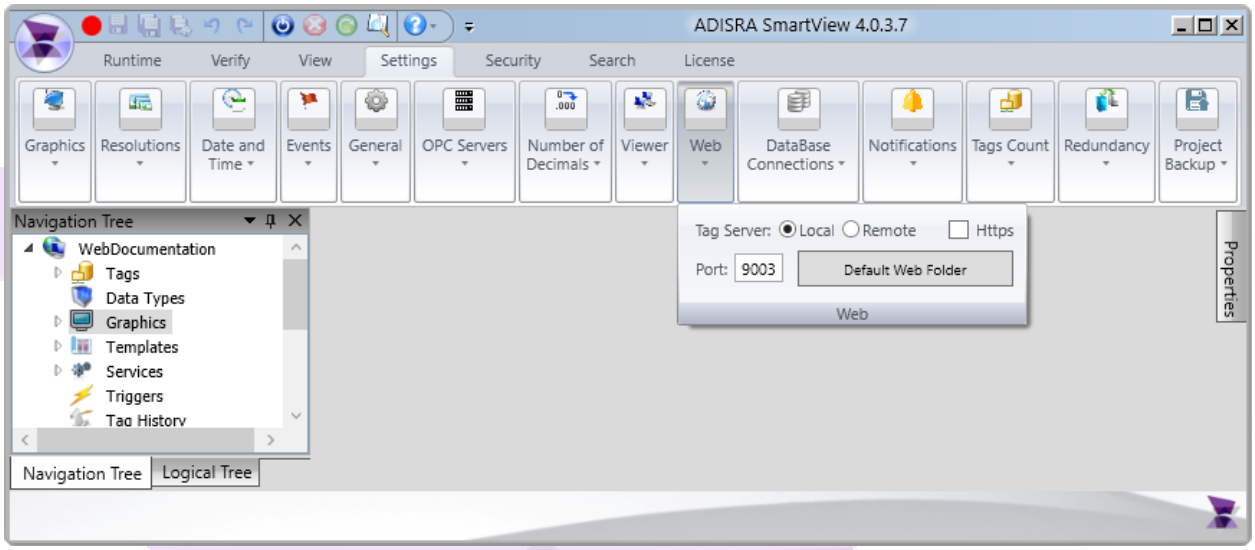
14. With the new window opened, configure the type to 'HTTPS' and new fields will be displayed. In the 'SSL certificate' area, select the certificate we created.



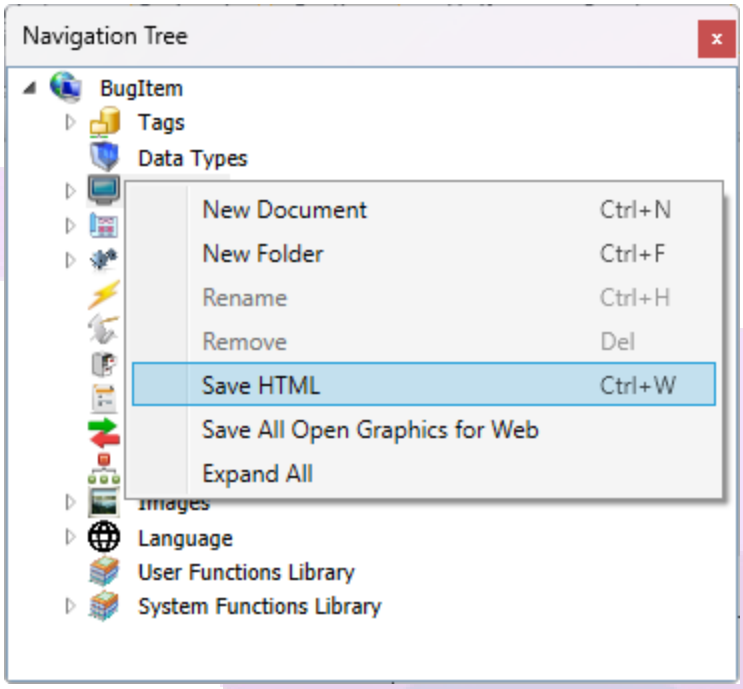
15. Press OK, and a new option to open the project on the web will be displayed.

16. Open the ADISRA SmartView engineering area with the project you want to display on a web viewer.

17. Access the 'Web' area and, if you want to set a different web folder for your project, click 'Default Web Folder' and set the new folder. The other options are explained in the following area: Web Settings

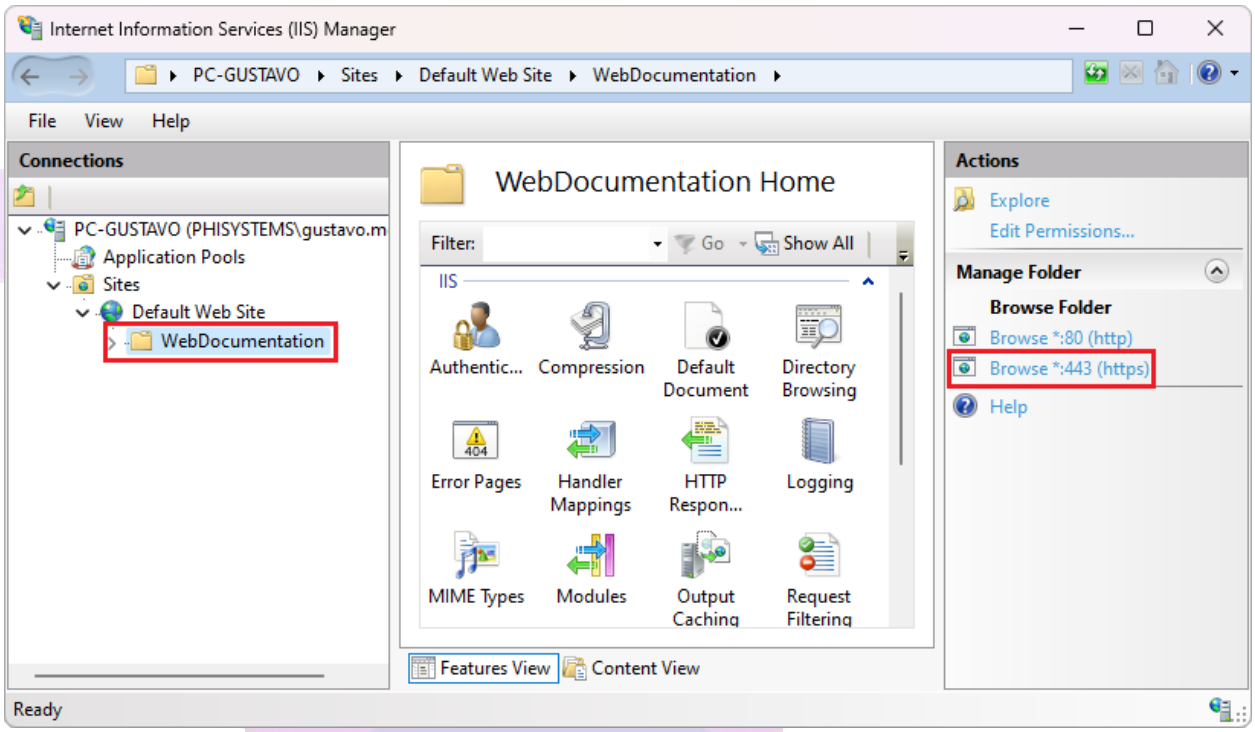


18. With the web folder configured, we will now save all graphic documents as HTML. Open the Navigation Tree, right-click the Graphics icon, and click "Save HTML" to save all graphic documents in the project as HTML. Alternatively, you can press the left Ctrl key + W key to save all graphics as HTML. Please note that if you make any modifications to a graphic document after saving it as HTML, you will need to save it as HTML again in order to update it on the web.



If you have already saved all the graphic documents as HTML and have made a modification to a specific document, to avoid spending time saving all the graphics as HTML again, you can right-click on the graphic document and select "Save as HTML" to indicate that you want to save it in that format.

19. With all graphic documents saved as HTML, you are now ready to test the application on the web viewer. Start the application runtime, open the IIS Manager, expand the Default Web Site area, find and select the folder with the name of your project, and then press 'Browse *:443 (https).' The web viewer will open locally in the default web browser on your machine.



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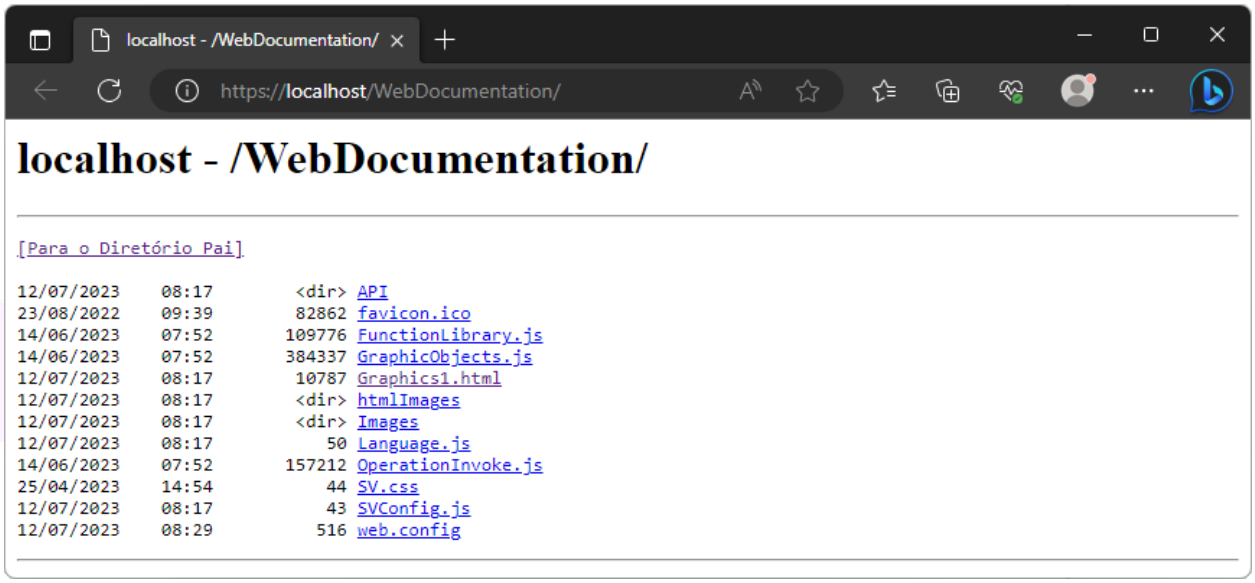
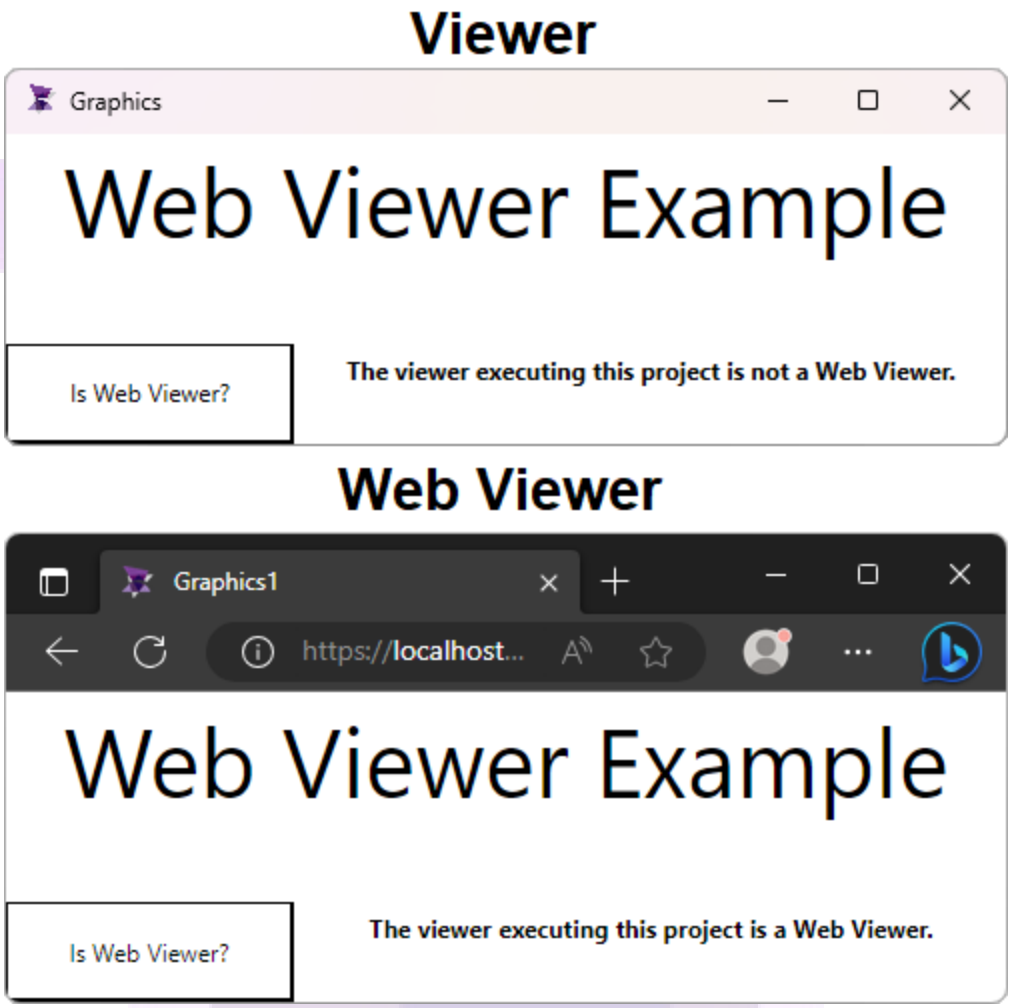


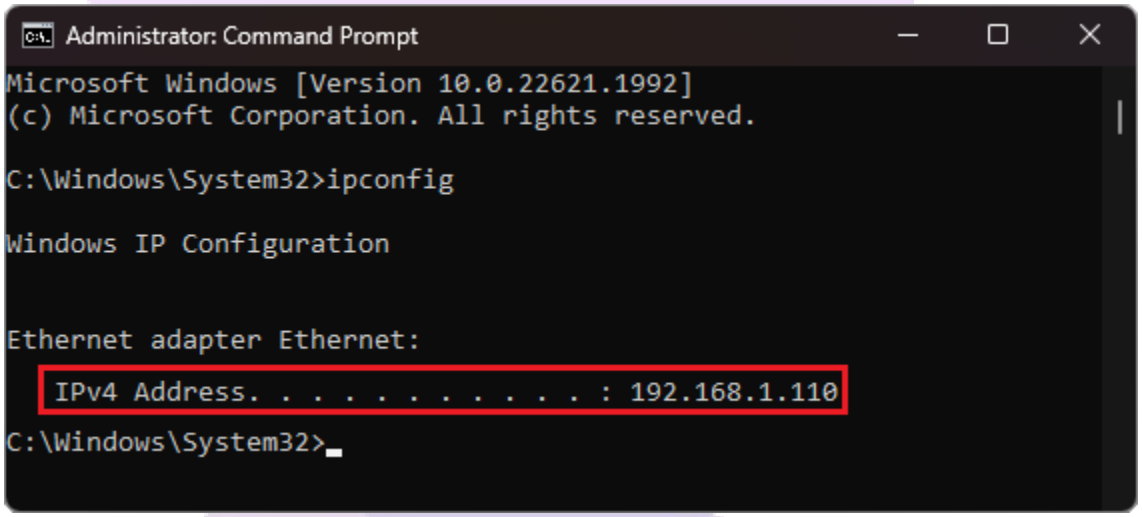


With the project correctly configured to run on the web using HTTPS, you can also remotely access it with the web viewer.

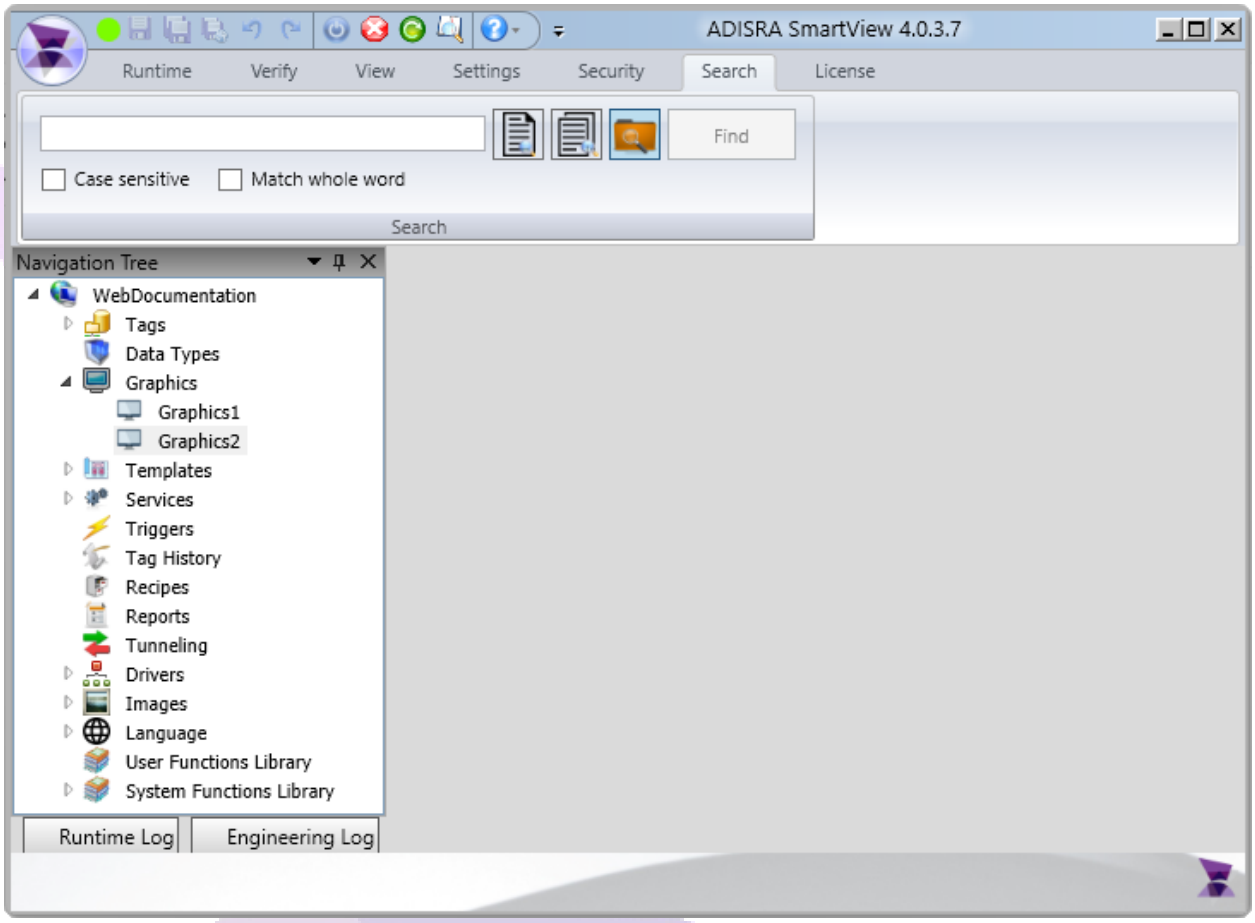
6. Configuring the Web Viewer for remote access (same network)

If you have correctly configured your project to be displayed on the web viewer, this page will teach you how to allow other machines on the same network to access the application using a web browser as well.

1. The first step is to know the IP address of the machine that will execute the runtime. To do that, you can open the command prompt and insert the command: "ipconfig".

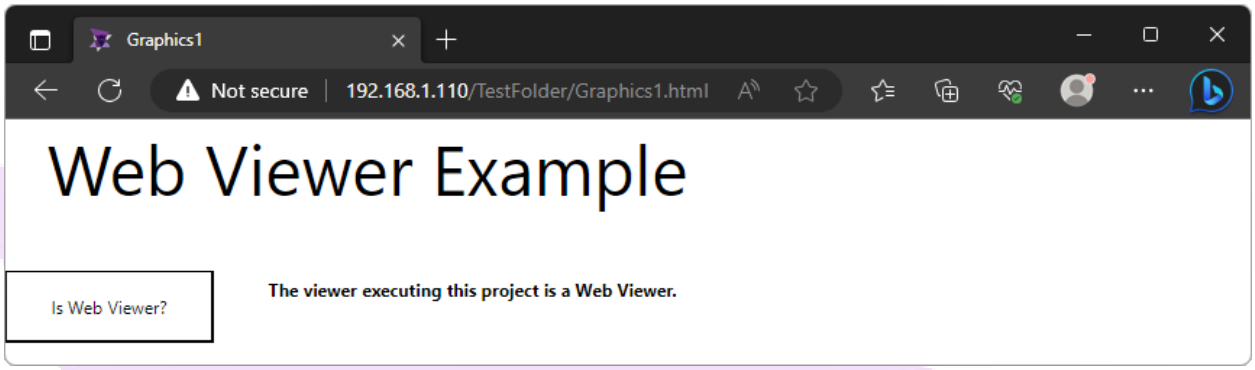


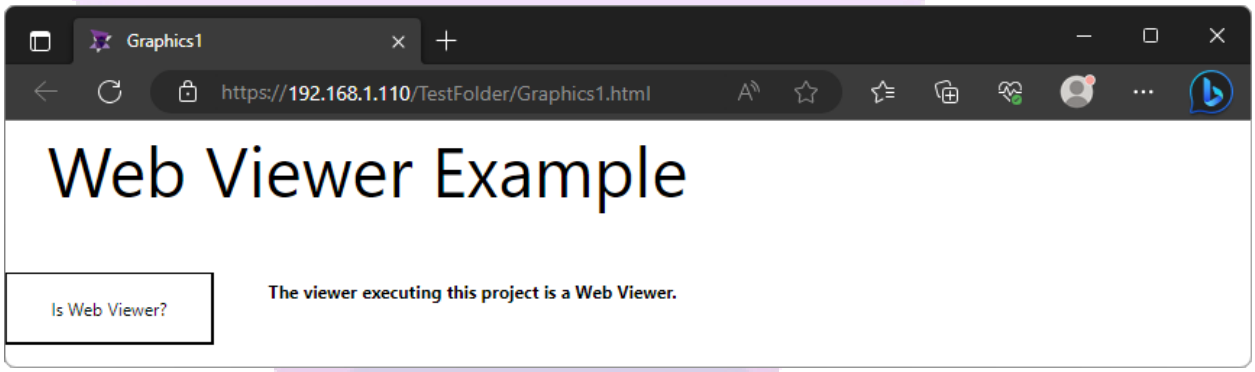
2. Now that we know the IP address, we need to start the runtime.



3. With the runtime being executed, you will need to obtain the name of the folder where your project was saved as HTML. Additionally, if your project has a startup graphic, you will also need to obtain its name. The image above shows the project with the startup graphic named 'Graphics1' and the folder named 'TestFolder'. Therefore, the path, in the format of 'Protocol://IP/WebFolder/GraphicPath', will be 'http://192.168.1.110/TestFolder/Graphics1.html' or 'https://192.168.1.110/TestFolder/Graphics1.html' if you are using the https protocol.

4. To test it, open the browser you use by default on another machine using the same network as the one executing the runtime. Insert the path you found along with the information you collected previously, and it will open the web viewer.

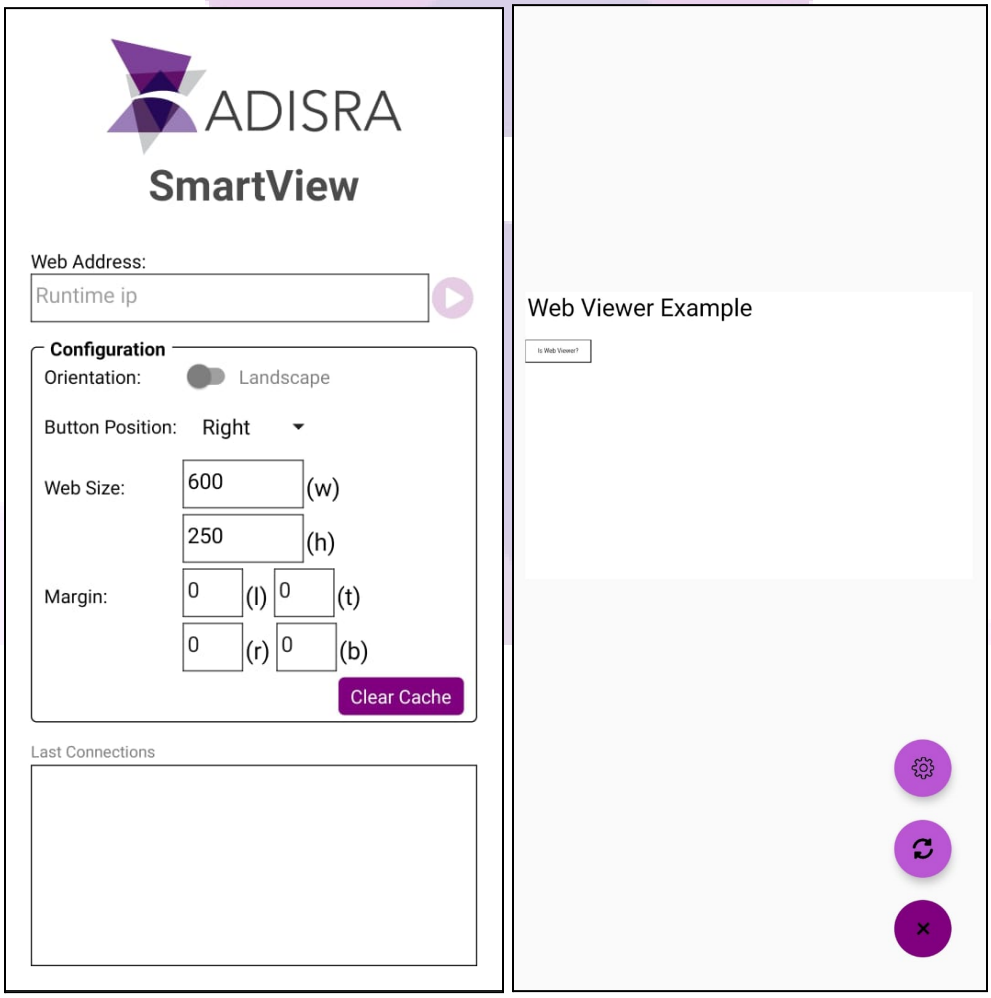

Graphics1
Not secure
192.168.1.110/TestFolder/Graphics1.html
Web Viewer Example
Is Web Viewer?
The viewer executing this project is a Web Viewer.


Graphics1
https://192.168.1.110/TestFolder/Graphics1.html
Web Viewer Example
Is Web Viewer?
The viewer executing this project is a Web Viewer.

7. Configuring the Smartphone Viewer for remote access (same network)

If you have correctly configured your project to be displayed on the web viewer, this page will teach you how to connect your android smartphone with the runtime of your application so it can be displayed in it. **Be reminded that the app cannot be used to display an application using the HTTPS.**

The app can be downloaded by accessing this link, "https://l1nq.com/smartview-mobile-app" and the interface looks like the following images. The image on the left shows the initial interface of the app, and the one on the right shows it when it is being used to display an application.



App configuration fields

Web Address: This field is used to indicate the IP address of the machine executing the application runtime. You can also specify which graphic the app will start displaying and it is not necessary to specify the protocol part of the path.

Orientation: This button is used to indicate whether the application will be displayed horizontally or vertically.

Button Position: This button configures where the runtime buttons will be available for use.

Web Size: These fields configure the width and height that will be used to display the application within the application.

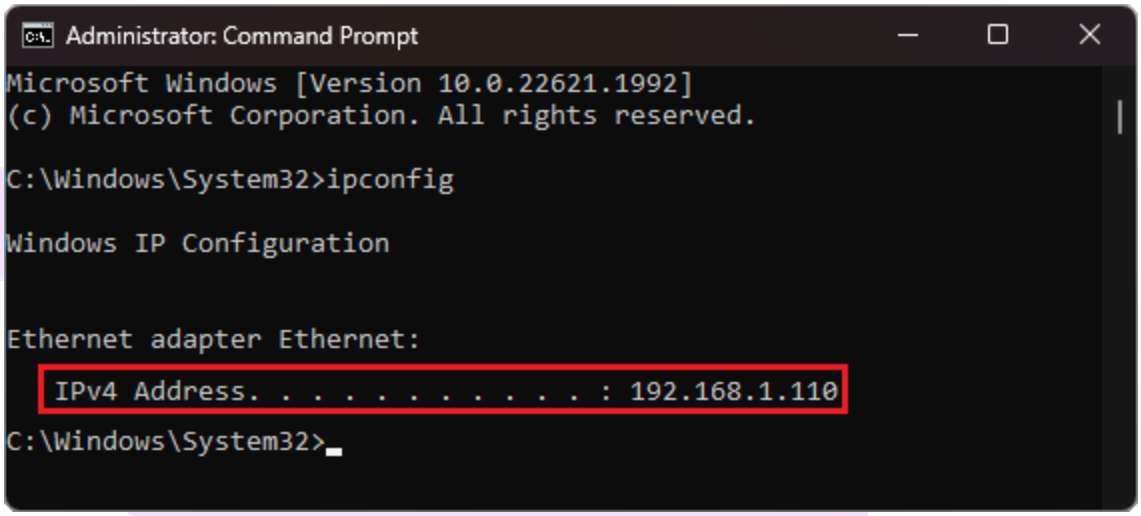
Margin: These fields are used to configure the distance of the area displaying the application from the top, left, right, and bottom sides of the smartphone screen.

Last Connections: This field is used to indicate all the paths that you have previously connected.

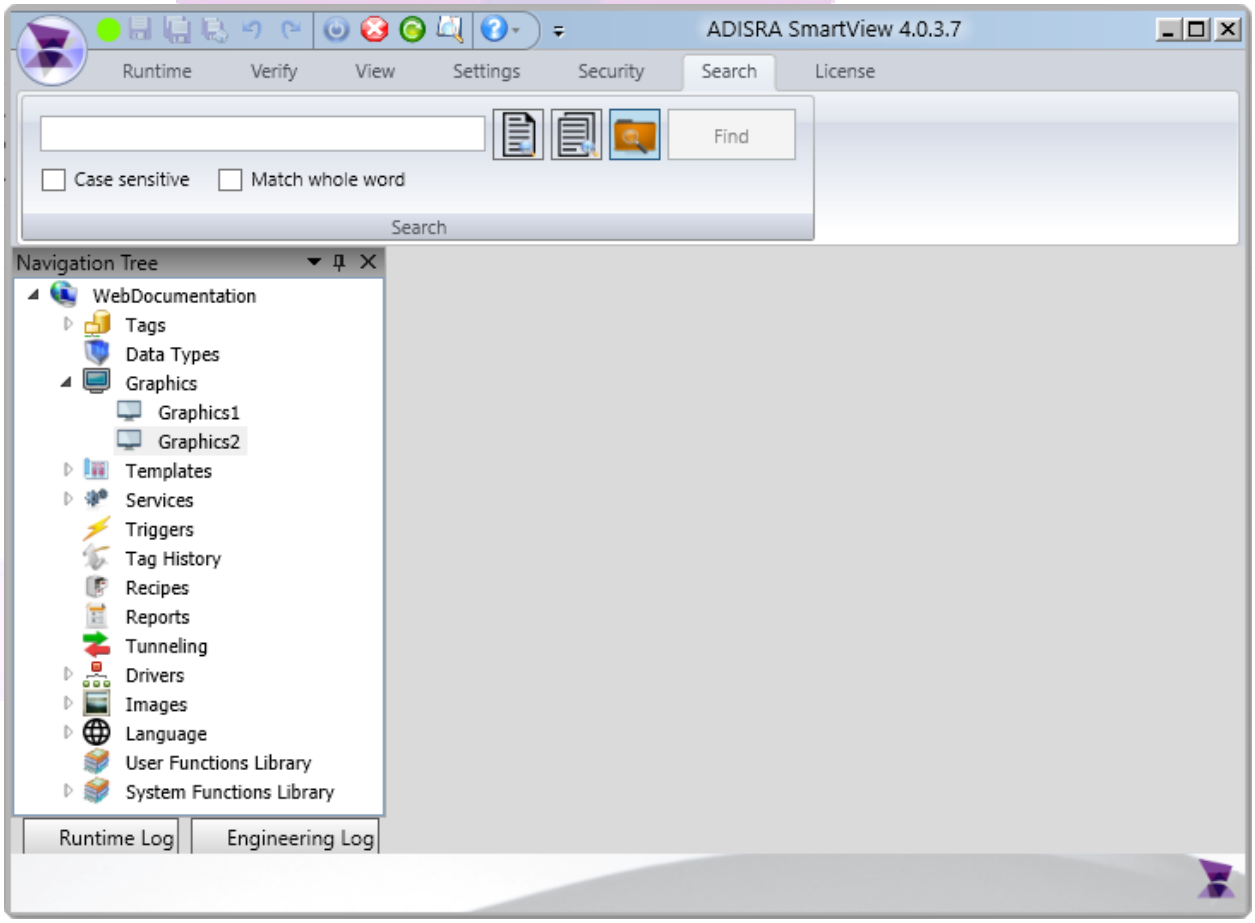
: These buttons are displayed when the app is displaying the application. The first button is used to hide the buttons, the second is used to refresh the application, and the third button allows you to return to the initial interface.

Example

1. The first step is to know the IP address of the machine that will execute the runtime. To do that, you can open the command prompt and insert the command: "ipconfig".



2. Now that we know the IP address, we need to start the runtime.

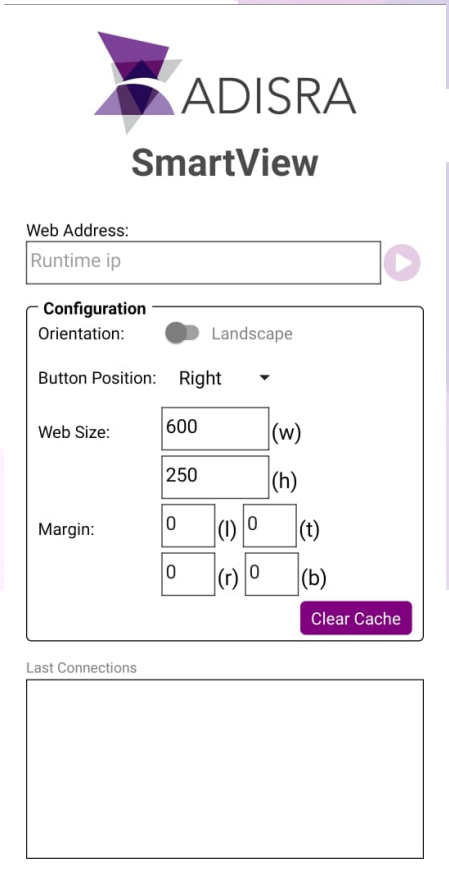


3. With the runtime being executed, you will need to obtain the name of the folder where your project was saved as HTML. Additionally, if your project

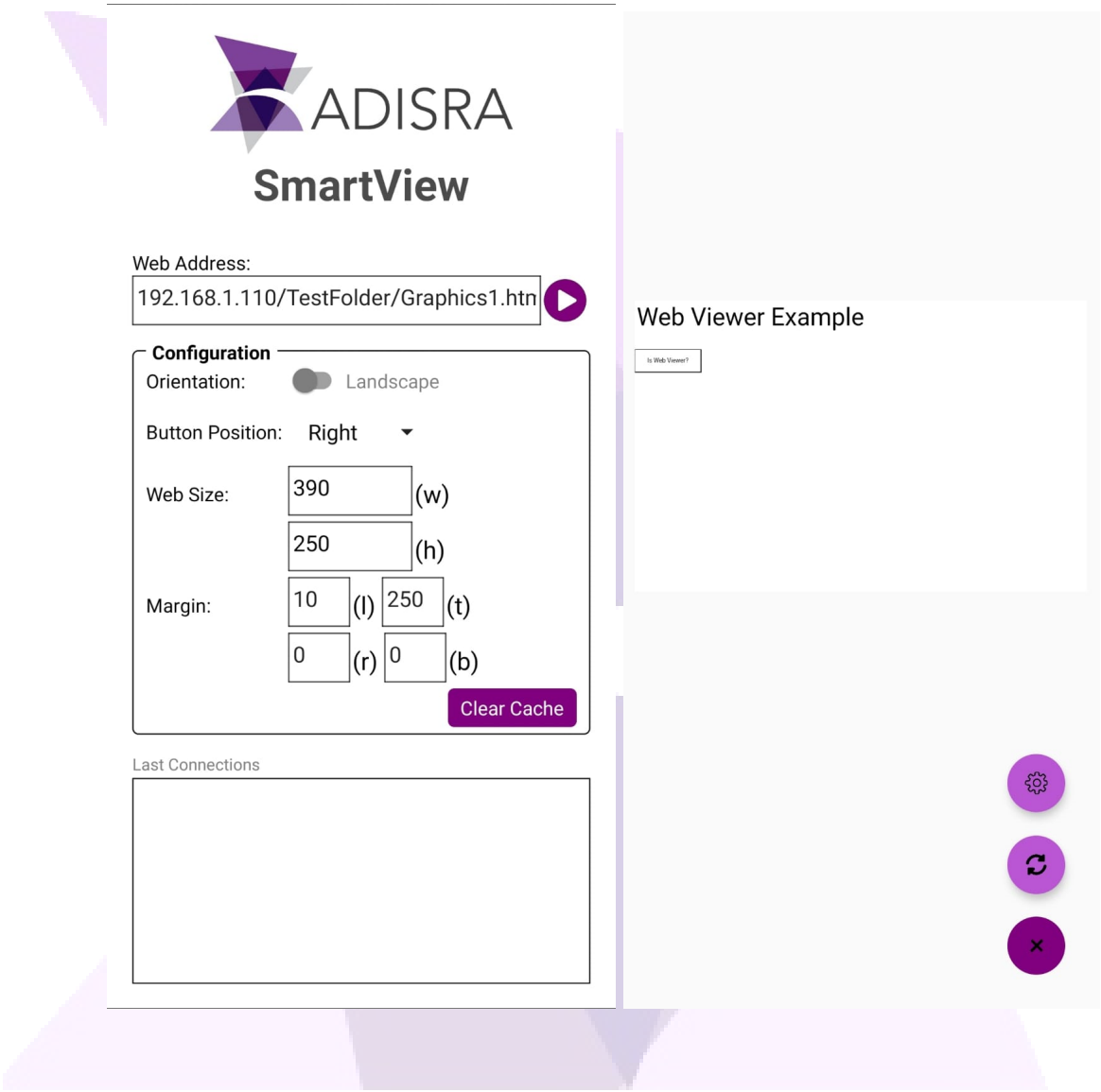
has a startup graphic, you will also need to obtain its name. The image above shows the project with the startup graphic named 'Graphics1' and the folder named 'TestFolder'. Therefore, the path, in the format of 'Protocol://IP/WebFolder/GraphicPath', will be 'http://192.168.1.110/TestFolder/Graphics1.html' or 'https://192.168.1.110/TestFolder/Graphics1.html' if you are using the https protocol.

4. To install the app on your smartphone, access the following link: "https://l1nq.com/smartview-mobile-app". The link contains an APK file with the app that allows the user to connect with the application runtime.

5. With the app successfully installed, open it, and you will be presented with the following screen. On this screen, you can specify the address of the project you want to display, the orientation to be used to fill the smartphone screen, the size for displaying it, the margin size, and the previously accessed addresses.



6. Add the path we previously found to the "Web Address" textbox and press the "Start" button. By doing so, the web viewer on your smartphone will start.

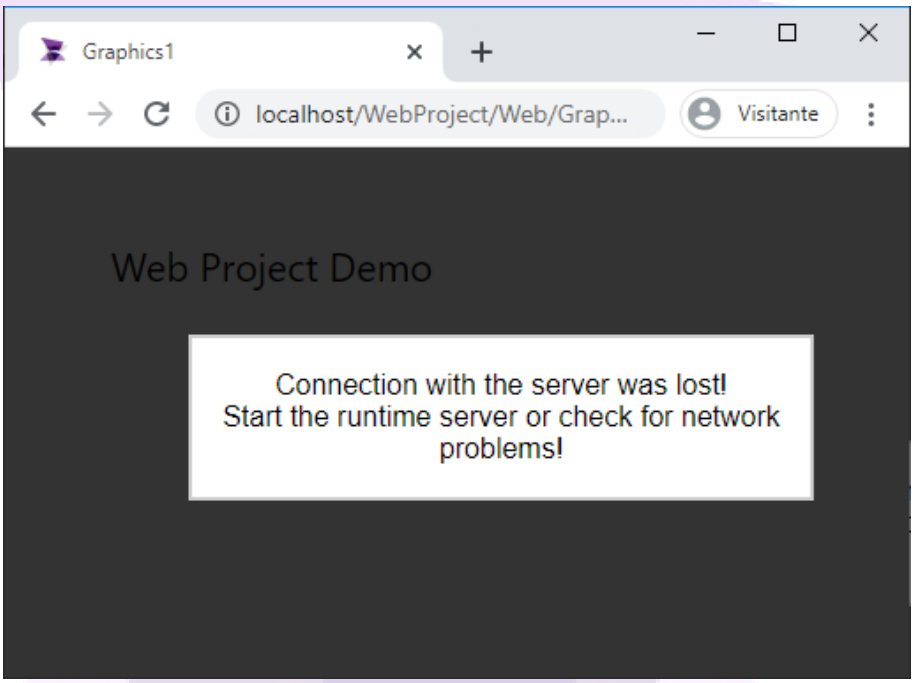


8. Possible Errors

In this section, we will show how to resolve some errors that may occur:

8.1. Runtime Not Started

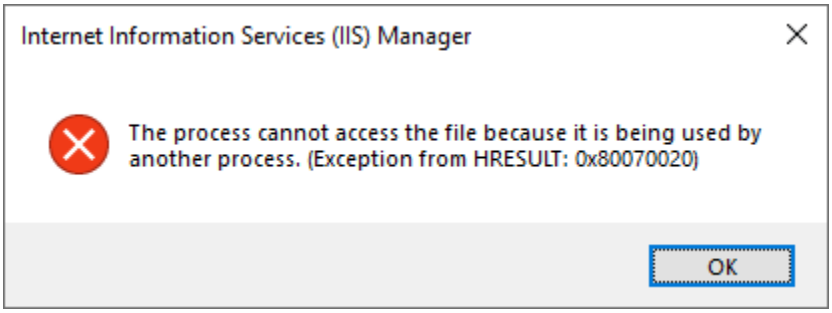
When trying to access the web page, the message shown in the image below appears



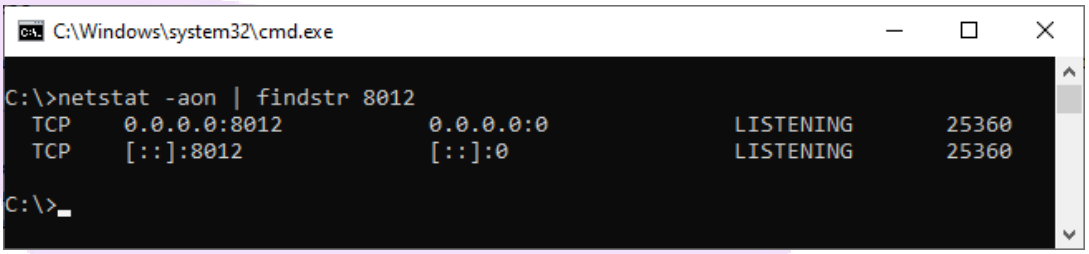
To resolve this error, restart the project's Runtime.

8.2. Port Already Being Used

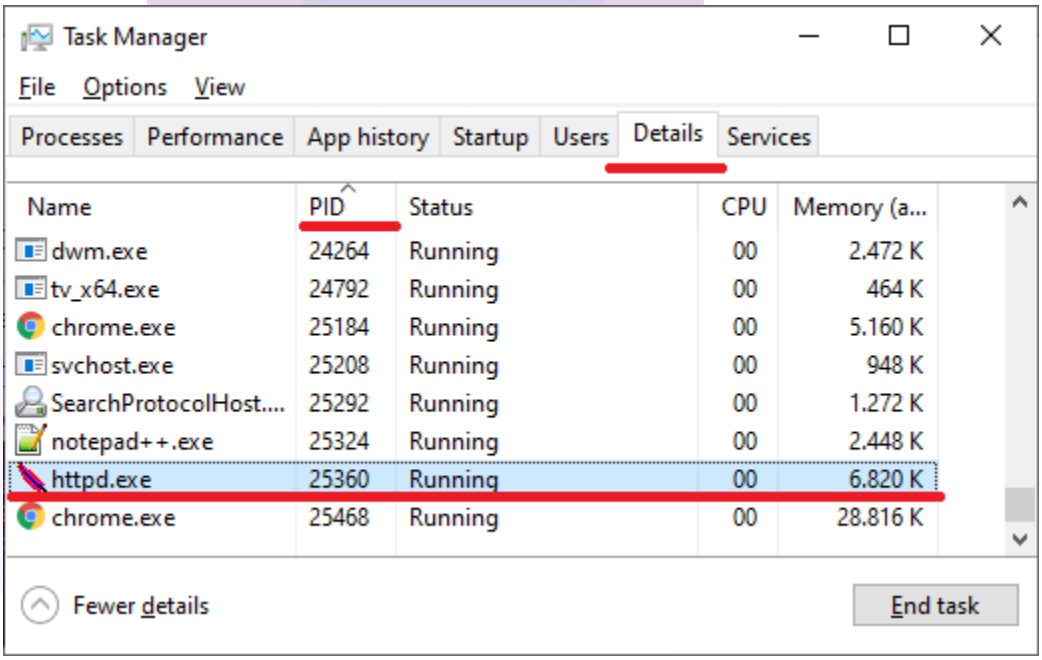
When trying to start the web server, a message appears stating the configured port is already in use, or in the case of IIS, the message shown below appears:



First, check if the configured port is being used by opening the Command prompt and typing "netstat – aon | findstr port_number". Instead of "port_number", type the configured port to be checked. If the port is being used; the result will display as shown in the example below:



The number in the last column, in this example, "25360" is the process ID. To find which process this ID belongs to, open the task manager. In the "Details" tab, search for the ID number under the "PID" column, as shown in the example below:



Either end the task that is using the port or configure a new port number.