



Ocularis Web – WebRTC Configuration Guide

Version 5.8

October, 2019

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Contents

1	About This Guide	1
	1.1 Related Documentation	1
2	Introduction	2
3	Google Chrome	3
4	Mozilla Firefox	11
5	Microsoft Edge	15
6	Apple Safari	19

List of Tables

Table 1-1: Related Documents	1
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List of Figures

Figure 1 Initial Message for Google Chrome Browser	3
Figure 2 Customize...Settings	4
Figure 3 Manage certificates	5
Figure 4 Import the certificate	6
Figure 5 Certificate Import Wizard	6
Figure 6 Import the root-ca certificate	7
Figure 7 Place certificate in Trusted Root Certification Authorities Store	7
Figure 8 Completing the Import	8
Figure 9 Import the Intermediate Certificate file	8
Figure 10 Import the Intermediate Certificate	9
Figure 11 Place certificate in Intermediate Store	9
Figure 12 Complete the Import Wizard	10
Figure 13 Initial screen Mozilla Firefox	11
Figure 14 Open Menu...Options	12
Figure 15 Privacy & Security	12
Figure 16 View Certificates	13
Figure 17 Import the certificate	13
Figure 18 Trust CA	13
Figure 19 Initial message for Microsoft Edge	15
Figure 20 Right-click file and select Install Certificate	16
Figure 21 Certificate Import Wizard	16
Figure 22 Select Certificate Store	17
Figure 23 Completing the Certificate Import Wizard	17
Figure 24 Completing the Certificate Import Wizard	17
Figure 25 Select Intermediate Certification Authorities	18
Figure 26 Initial Screen on Apple Safari	19
Figure 27 Select System	20
Figure 28 Import Items	20
Figure 29 Select the certificate	20
Figure 30 Double-click the certificate	21
Figure 31 Expand Trust	21
Figure 32 Always Trust Root CA	22
Figure 33 Always Trust Intermediate CA	22

2 Introduction

WebRTC (Web Real-Time Communication) provides web browsers with real-time communication via a simple application programming interface. It replaces Adobe Flash in Ocularis Web v5.7. In order to take advantage of this technology, a certificate must be imported into the browser used to view Ocularis Web video. This process need only be done once. These steps assume that Ocularis Media Server (OMS) has already been upgraded to v5.7.

Keep in mind that with WebRTC, TCP Port 8420 must be open as it is used for live video. Port 1935 is still used when sending M2O video from the Ocularis Mobile App to Ocularis Media Server.

Note: The Microsoft Internet Explorer browser is no longer supported.

Supported Browsers:

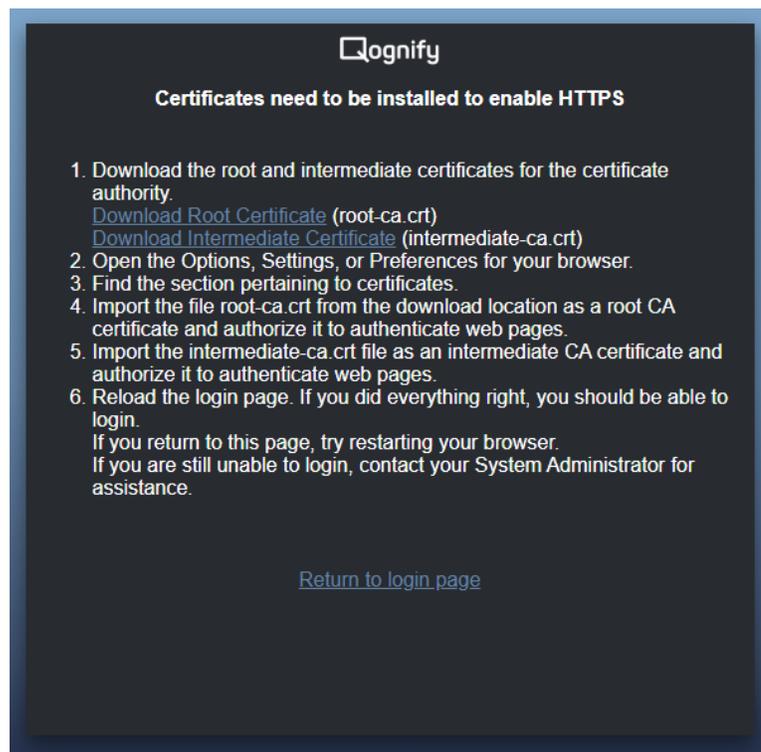
- Google Chrome
- Mozilla Firefox
- Microsoft Edge
- Apple Safari

3 Google Chrome

These steps are required in order to proceed with Ocularis Web. They only need to be done once for this browser.

1. Open the browser and enter the IP address of the Ocularis Media Server in the URL field. You should see the following screen:

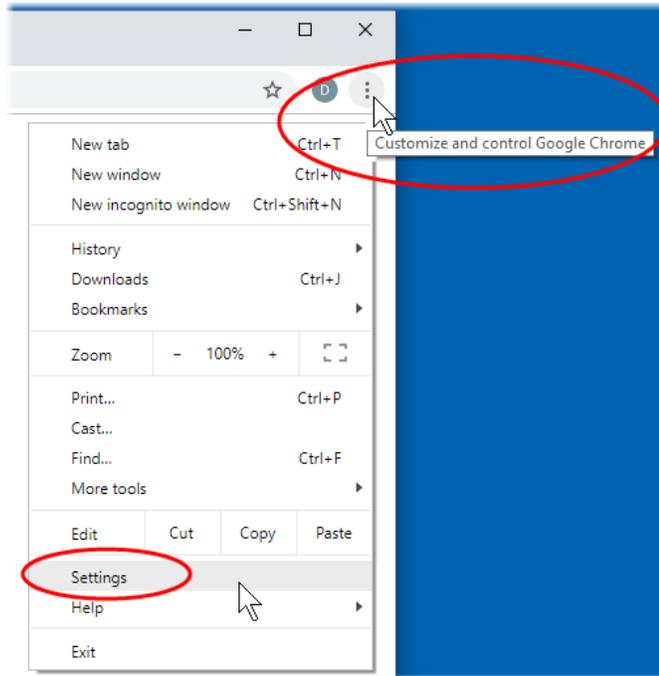
Figure 1 Initial Message for Google Chrome Browser



2. Click the corresponding links to download the root and intermediate certificates for the certificate authority. Remember where you store the downloaded files.
 - Root Certificate (root-ca.crt)
 - Intermediate Certificate (intermediate-ca.crt)

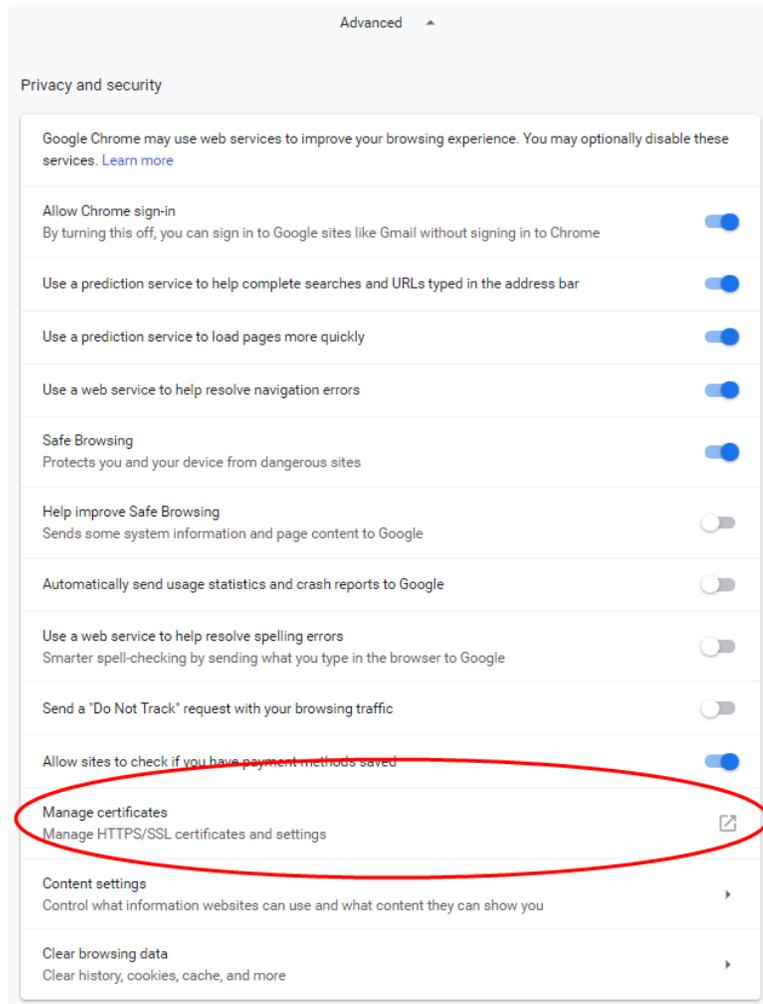
3. Click the 'Customize and Control Google Chrome' icon to the right of the URL bar and select 'Settings'.

Figure 2 Customize...Settings



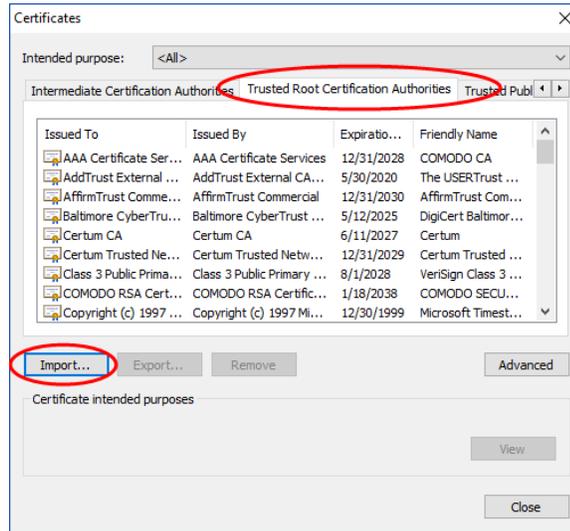
4. Scroll the page and click 'Advanced' to expand the 'Privacy and security' section.

Figure 3 Manage certificates



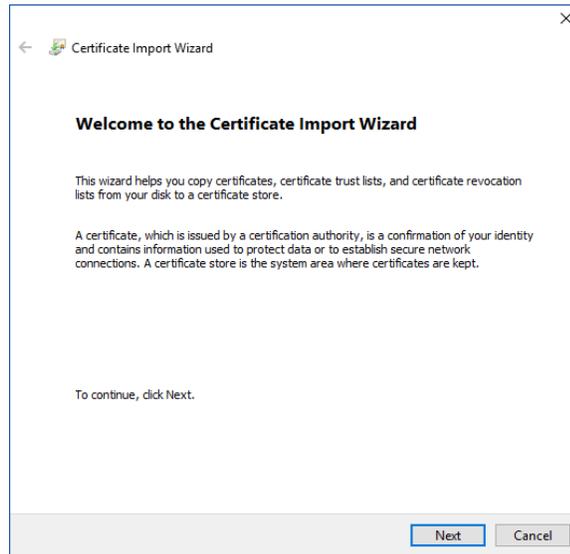
5. Select the section 'Manage certificates'.
6. Select the tab 'Trusted Root Certification Authorities'.

Figure 4 Import the certificate



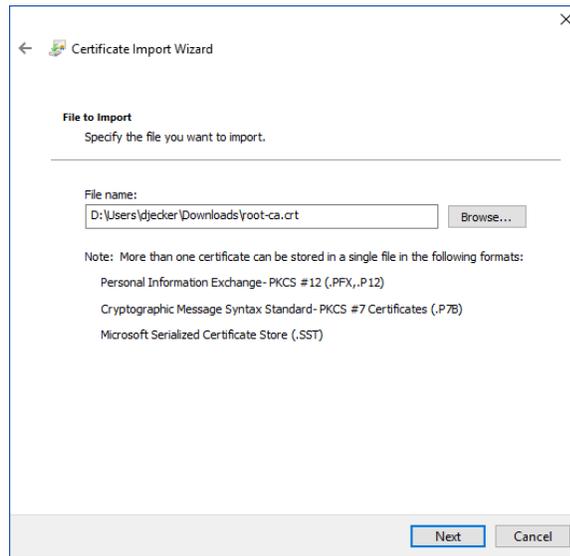
7. Click **Import...** to start the Certificate Import Wizard.

Figure 5 Certificate Import Wizard



8. Click **Next**.
9. Click **Browse...** and locate the file 'root-ca.crt' from the download location. Select the file and click **Open**.

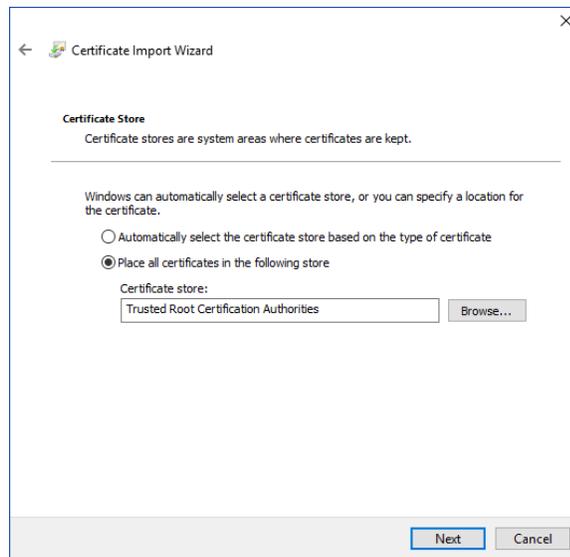
Figure 6 Import the root-ca certificate



10. Click **Next**.

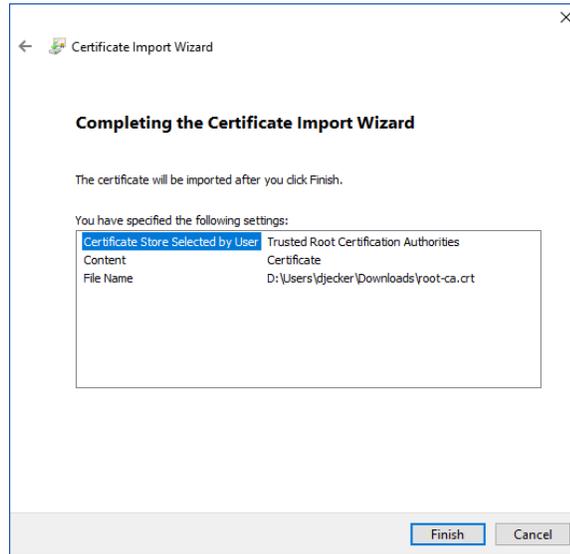
11. Leave the default selection 'Place all certificates in the following store' and verify the store is 'Trusted Root Certification Authorities'. Click **Next**.

Figure 7 Place certificate in Trusted Root Certification Authorities Store



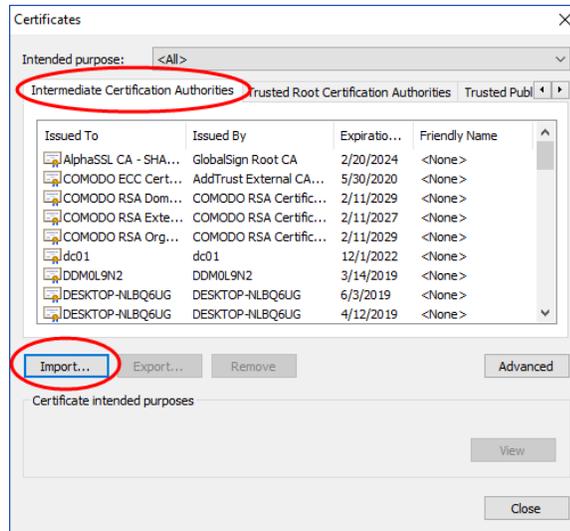
12. Click **Finish**.

Figure 8 Completing the Import



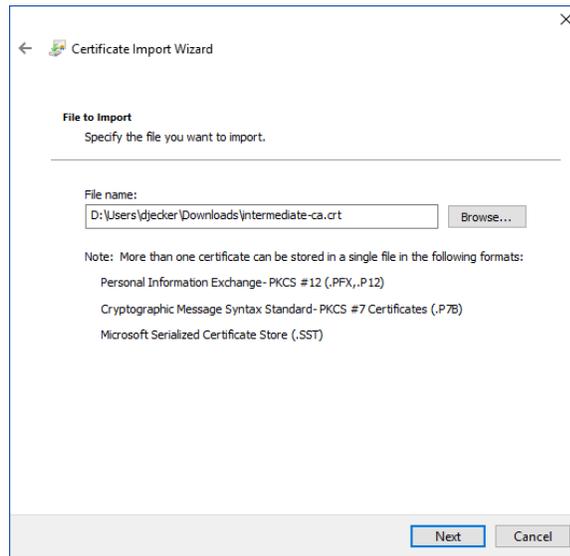
- 13. At 'The import was successful' pop-up, click **OK**.
- 14. Next, import the 'intermediate-ca.crt' file. Select the tab 'Intermediate Certification Authorities'.

Figure 9 Import the Intermediate Certificate file



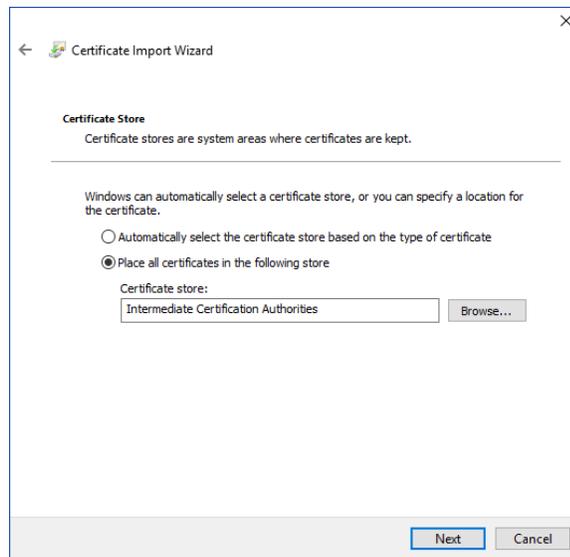
- 15. Click **Import...** to launch the Certificate Import Wizard (see Figure 5).
- 16. Click **Next**.
- 17. Click **Browse...** and locate the file 'intermediate-ca.crt' from the download location.

Figure 10 Import the Intermediate Certificate



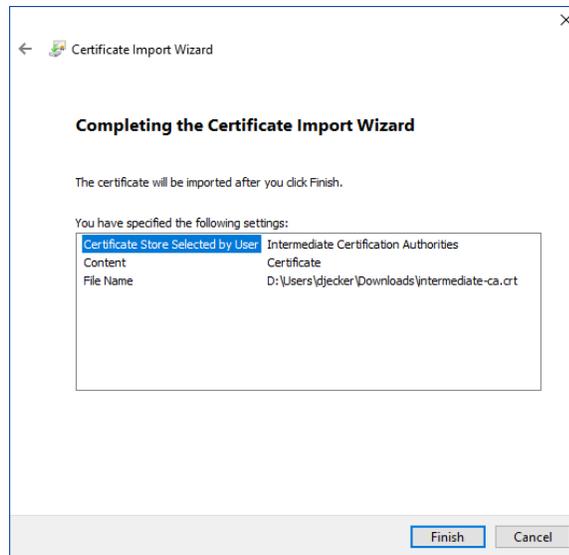
- 18. Click **Next**.
- 19. Leave the default selection 'Place all certificates in the following store' and verify the store is 'Intermediate Certification Authorities'. Click **Next**.

Figure 11 Place certificate in Intermediate Store



20. Click **Finish**.

Figure 12 Complete the Import Wizard



21. At 'The import was successful' pop-up, click **OK**.
22. Click **Close** on the 'Certificates' pop-up.
23. Reload the login page or click 'Return to login page'. If you did everything right, you should be able to login.

If you return to this page, try restarting your browser.

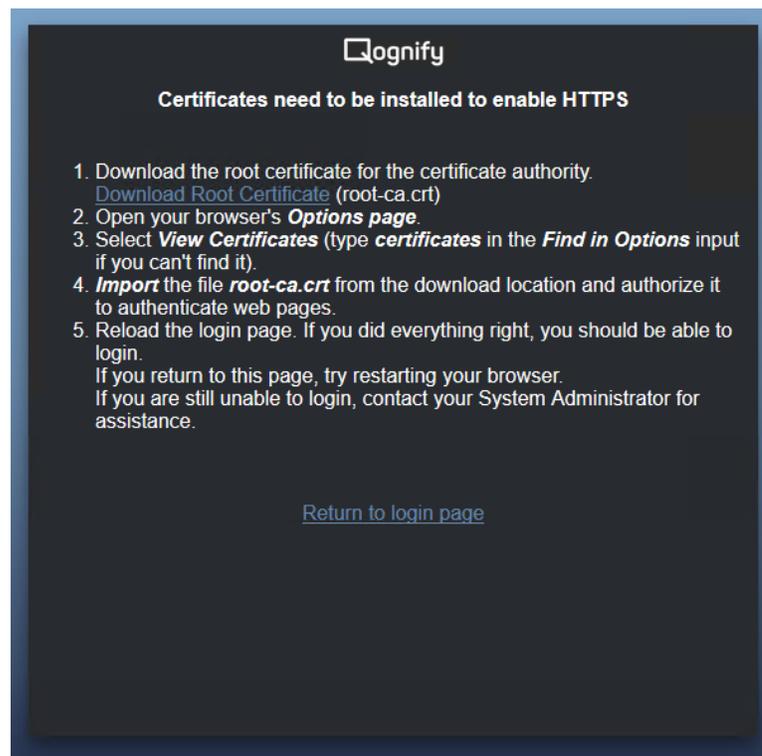
If you are still unable to login, contact your System Administrator for assistance.

4 Mozilla Firefox

These steps are required in order to proceed with Ocularis Web. They only need to be done once for this browser. You may need to install Microsoft's Feature Pack for some operating systems. A message appears in Firefox if this is necessary.

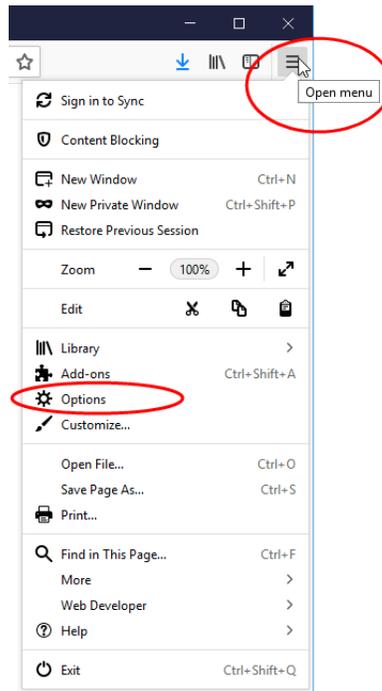
1. Open the browser and enter the IP address of the Ocularis Media Server in the URL field. You should see the following screen:

Figure 13 Initial screen Mozilla Firefox



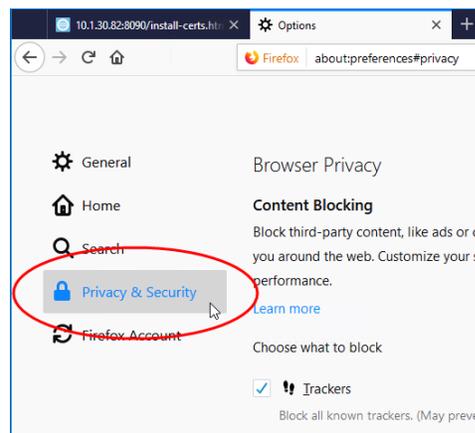
2. Click the link to download the root certificate (root-ca.crt) for the certificate authority. Remember where you store the downloaded file.
3. Open your browser's Options page. Click the 'Open menu' icon to the right of the URL bar. Then select 'Options'.

Figure 14 Open Menu...Options



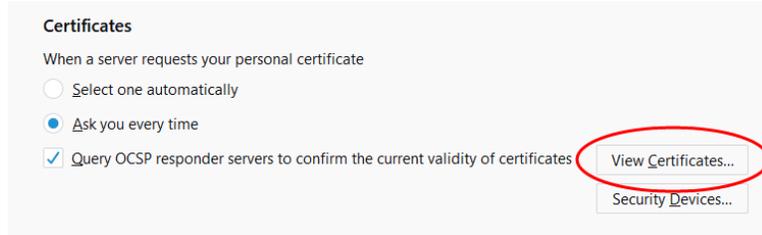
4. Click 'Privacy & Security' from the menu on the left.

Figure 15 Privacy & Security



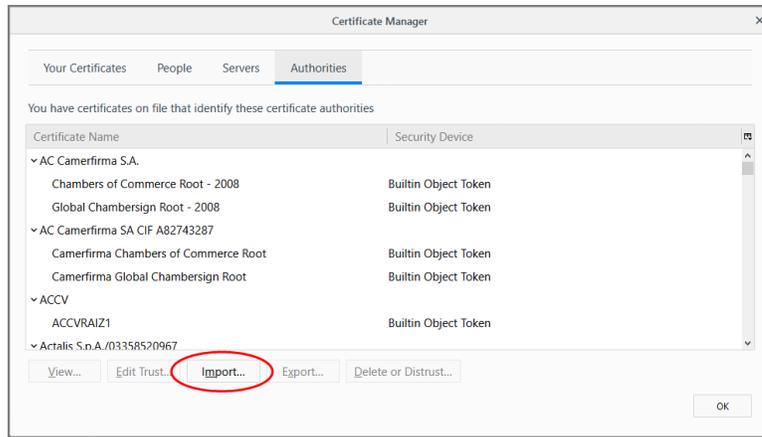
5. Scroll down until you see the section on **Certificates**.
6. Select 'View Certificates...' (type certificates in the Find in Options input if you can't find it).

Figure 16 View Certificates



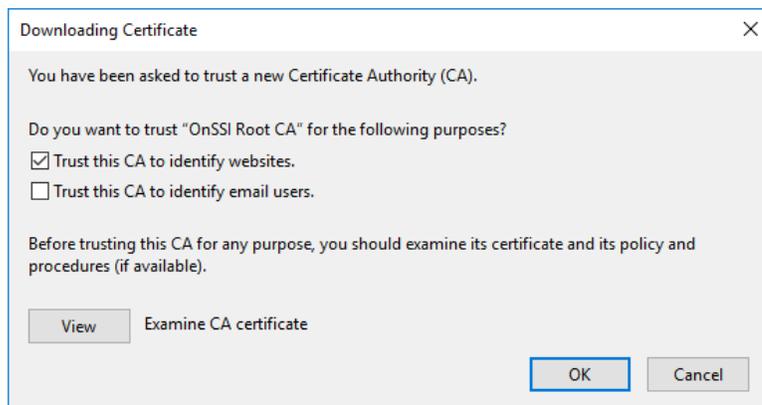
7. Import the file 'root-ca.crt' from the download location and authorize it to authenticate web pages. Click **Import...**

Figure 17 Import the certificate



8. Browse to the 'root-ca.crt' file. Select the file and click **Open**.
9. Check the box for 'Trust this CA to identify websites' and click **OK**.

Figure 18 Trust CA



10. Click **OK** again on the Certificate Manager screen.

11. Reload the login page or click 'Return to login page'. If you did everything right, you should be able to login.

If you return to this page, try restarting your browser.

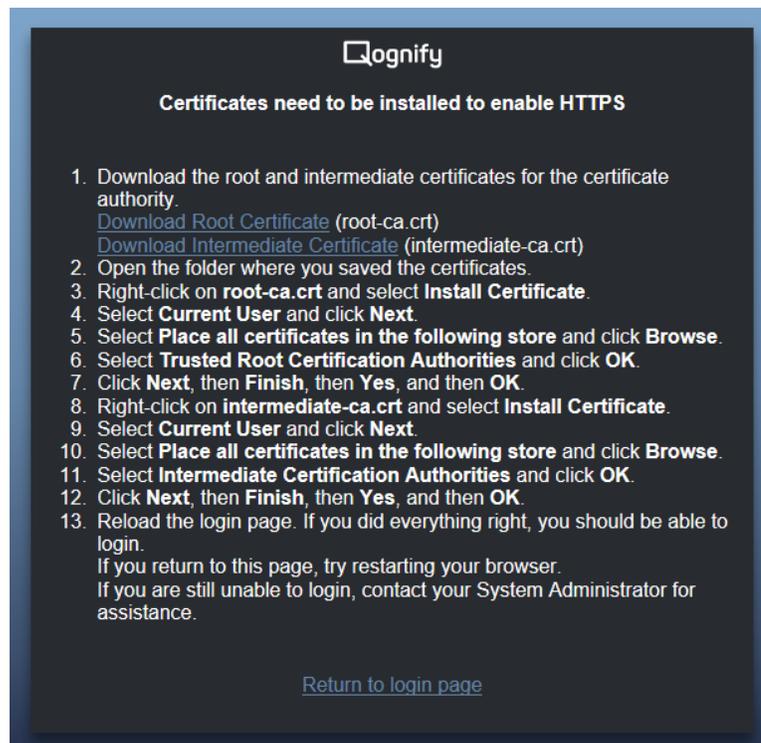
If you are still unable to login, contact your System Administrator for assistance.

5 Microsoft Edge

These steps are required in order to proceed with Ocularis Web. They only need to be done once for this browser.

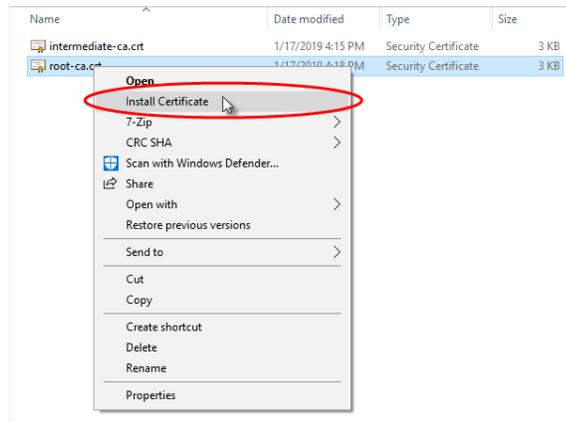
1. Open the browser and enter the IP address of the Ocularis Media Server in the URL field. You should see the following screen:

Figure 19 Initial message for Microsoft Edge



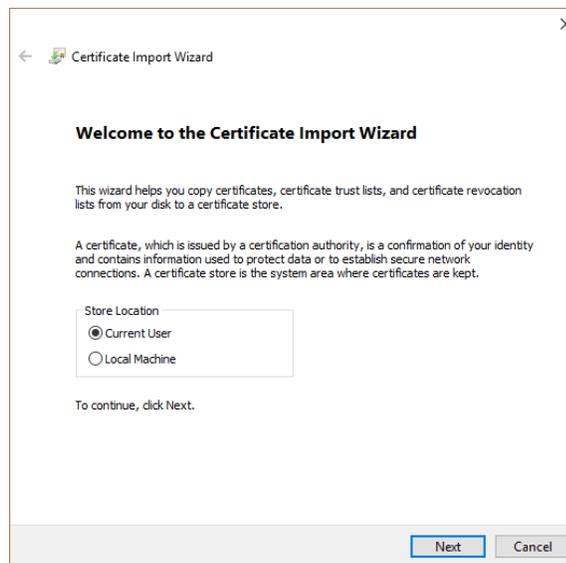
2. Click the corresponding links to download the root and intermediate certificates for the certificate authority. Remember where you store the downloaded files.
3. Use Windows Files Explorer to open the folder where the certificates reside.

Figure 20 Right-click file and select Install Certificate



4. If you get a security warning about opening the file, click **Open**. A **Certificate Import Wizard** appears.

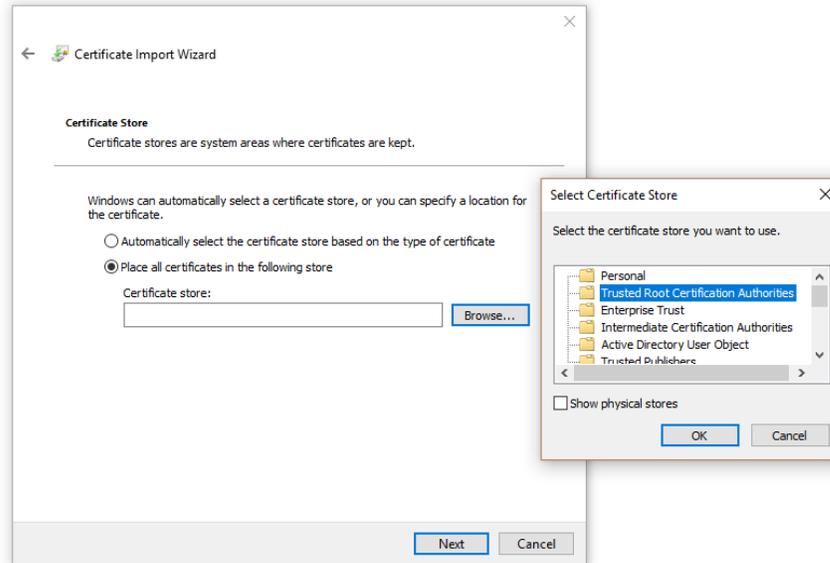
Figure 21 Certificate Import Wizard



5. Leave the default selection of **Current User** selected and click **Next**.

6. Select **Place all certificates in the following store** and click **Browse...**

Figure 22 Select Certificate Store



7. Select the store **Trusted Root Certification Authorities** and click **OK**.
8. Click **Next**.

Figure 23 Completing the Certificate Import Wizard

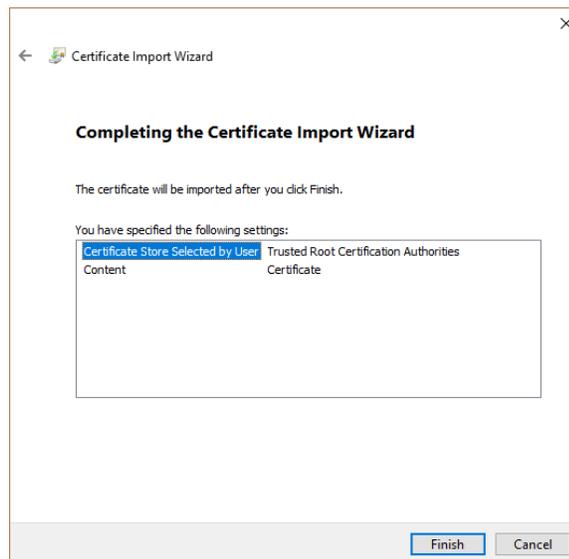
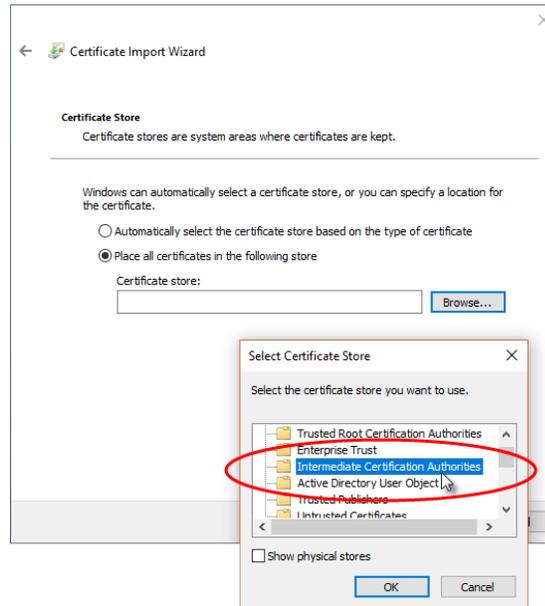


Figure 24 Completing the Certificate Import Wizard

9. Click **Finish**.
10. At the **Import was successful** pop-up, click **OK**.

11. Repeat the steps for the other certificate. From within Windows File Explorer, right-click the **intermediate-ca.crt** file and select **Install Certificates**.
12. If you get a security warning about opening the file, click **Open**.
13. At the **Certificate Import Wizard**, leave the default selection of **Current User** selected and click **Next**.
14. Select **Place all certificates in the following store** and click **Browse...**
15. Select the store **Intermediate Certification Authorities** and click **OK**.

Figure 25 Select Intermediate Certification Authorities



16. Click **Next** at the **Certificate Import Wizard**.
17. Click **Finish** at the Completing the **Certificate Import Wizard** screen.
18. At the **Import was successful** pop-up, click **OK**.
19. Reload the login page or click 'Return to login page'. If you did everything right, you should be able to login.

If you return to this page, try restarting your browser.

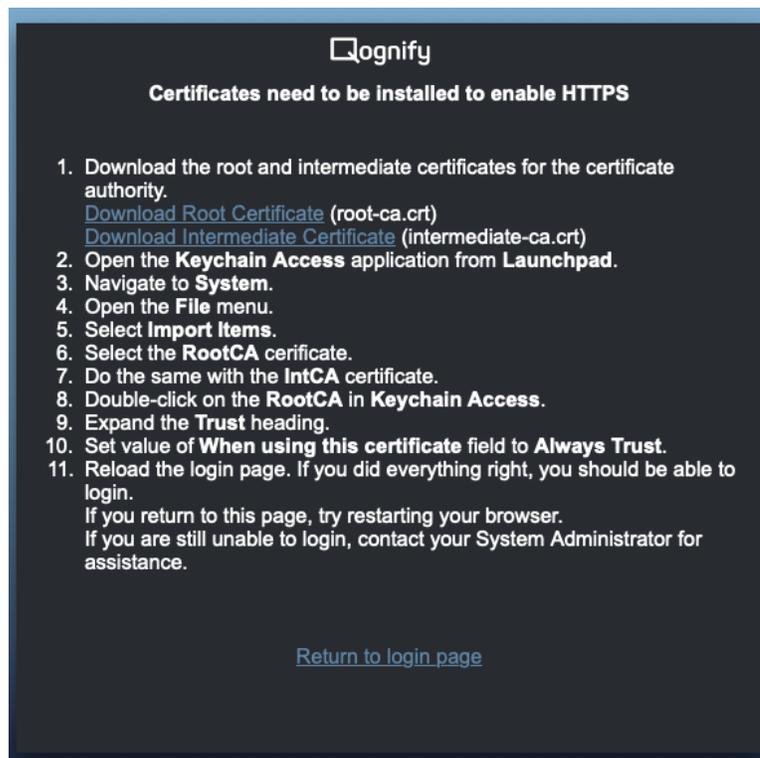
If you are still unable to login, contact your System Administrator for assistance.

6 Apple Safari

These steps are required in order to proceed with Ocularis Web. They only need to be done once for this browser.

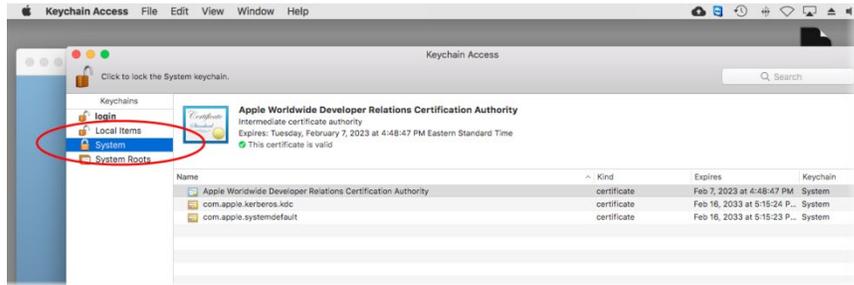
1. Open the browser and enter the IP address of the Ocularis Media Server in the URL field. You should see the following screen:

Figure 26 Initial Screen on Apple Safari



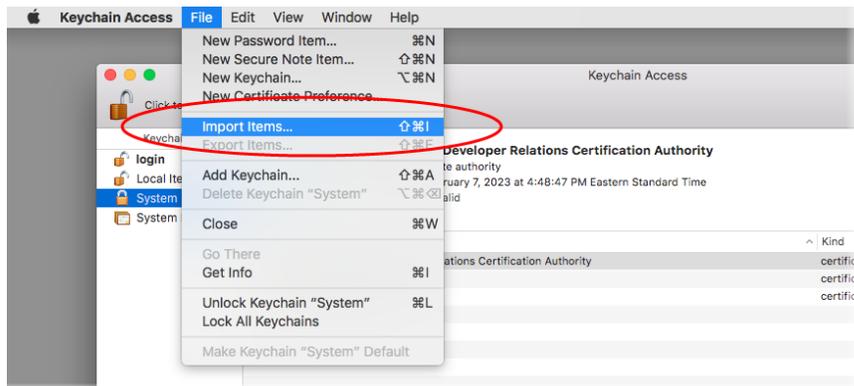
2. Click the corresponding links to download the root and intermediate certificates for the certificate authority. Remember where you store the downloaded files.
 - Root Certificate (root-ca.crt)
 - Intermediate Certificate (intermediate-ca.crt)
3. Open 'Keychain Access'.
4. Select 'System' if not already selected.

Figure 27 Select System



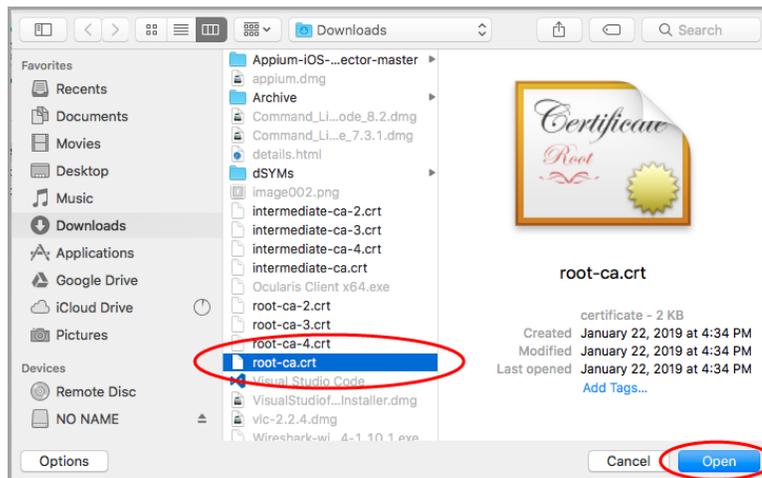
- 5. From the top Keychain Access bar, select the **File** menu and then select 'Import Items...'

Figure 28 Import Items...



- 6. Select the certificate 'root-ca.crt' and click **Open**.

Figure 29 Select the certificate



- 7. If prompted, enter the password of the mac and click the **Modify Keychain** button.

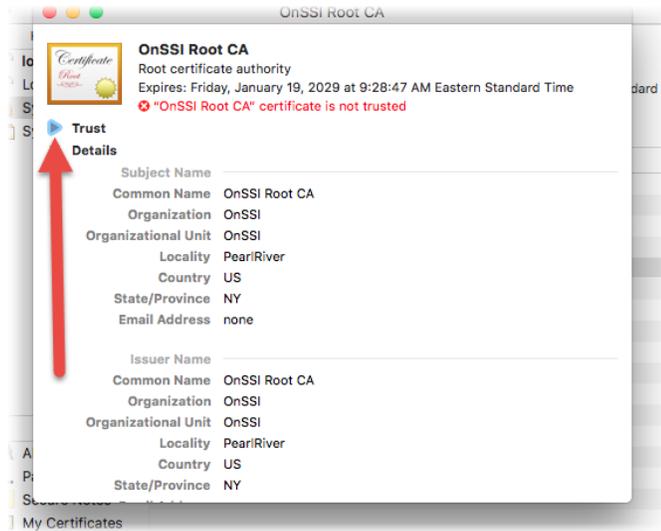
8. Again, from the top Keychain Access bar, select the **File** menu and then select 'Import Items...'
9. Select the certificate 'intermediate-ca.crt' and click **Open**. If prompted, enter the password of the mac and click the **Modify Keychain** button.
10. Double-click the certificate 'root-CA.crt'.

Figure 30 Double-click the certificate



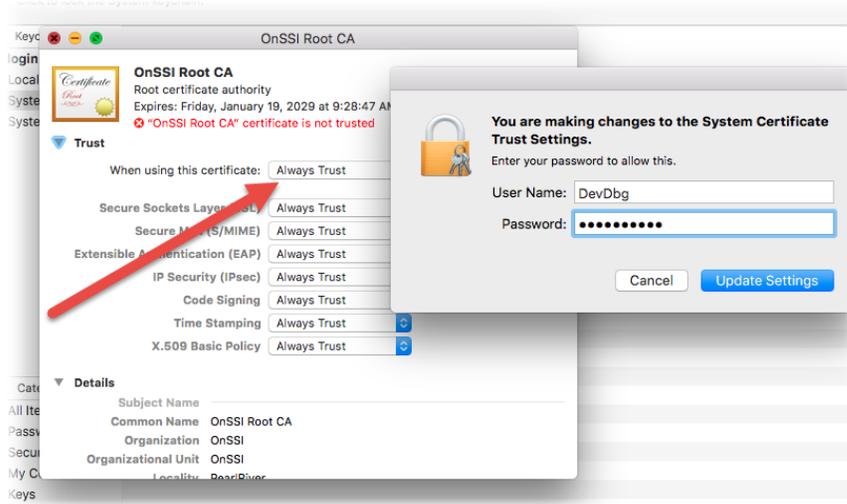
11. Expand **Trust**.

Figure 31 Expand Trust



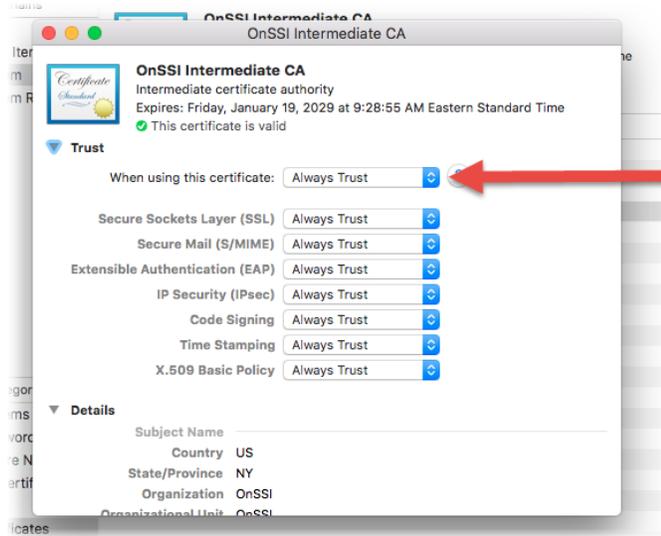
12. Change the top item 'When using this certificate:' to **Always Trust**.
13. Close the window. You may be asked to provide the machine password. Enter it and click **Update Settings**.

Figure 32 Always Trust Root CA



- 14. Repeat for the other certificate. Double-click the 'Intermediate-CA.crt'
- 15. Expand **Trust**.
- 16. Change the top item 'When using this certificate:' to **Always Trust**.

Figure 33 Always Trust Intermediate CA



- 17. Close the window. You may be asked to provide the machine password. Enter it and click **Update Settings**.
 - 18. Now, go back to the browser and reload the login page or click 'Return to login page'. If you did everything right, you should be able to login. If you return to this page, try restarting your browser.
- If you are still unable to login, contact your System Administrator for assistance.