

Slide 1 - Zscaler Private Access: BYOE



Zscaler Private Access

Architecture – Bring Your Own Encryption

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Slide notes

Welcome to this training module on the Zscaler Private Access ‘Bring Your Own Encryption’ (BYOE) architecture.

Slide 2 - Navigating the eLearning Module

The screenshot shows the Zscaler eLearning module interface. On the left, there's a sidebar with icons for Dashboard, Diagnostics, Live Logs, Administration, and Search. The main area has tabs for Applications, Users, and Health, with a date range selector set to 14 Days. Key statistics include 15 Applications Accessed, 3 Discovered Applications, 0 Access Policy Blocks, and 884 Successful Transactions. A large blue callout points to the top right corner with the word "Exit". Another blue callout on the left side points to the "Previous Slide" and "Next Slide" buttons. A third blue callout at the bottom left points to the "Play/Pause" button. A fourth blue callout at the bottom right points to the "Progress Bar". A fifth blue callout on the right side points to the "Audio On/Off" and "Closed Captioning" buttons.

Slide notes

Here is a quick guide to navigating this module. There are various controls for playback including **Play and Pause**, **Previous** and **Next** slide. You can also **Mute** the audio or enable **Closed Captioning** which will cause a transcript of the module to be displayed on the screen. Finally, you can click the X button at the top to exit.

Slide 3 - Agenda

Agenda



- BYOE Overview
- The Root CA Certificate
- Create Client and App Connector Subsidiary CAs
- Set the Correct Sub CA for Client Connector Enrollment

Slide notes

In this module, we will look at:

- The BYOE architecture in overview;
- Then at the process for uploading your enterprise private Root CA certificate to the ZPA Admin Portal;
- At the process to put in place the subsidiary CAs you need to generate Client and App Connector certificates;
- And finally, at the process for specifying which subsidiary CA to use to issue identity certificates to Client Connectors on enrollment.

Slide 4 - ZPA Prerequisites



BYOE Overview

Slide notes

The first topic that we will cover is a look at the BYOE architecture in overview.

Slide 5 - Bring Your Own Encryption



Bring Your Own Encryption

What is BYOE?

- Use your own enterprise private CA to establish trust for your ZPA connections
- Subordinate CAs are created in ZPA and signed by your internal root CA
- With **Double Encryption**, traffic is encrypted using customer keys as it transits the ZPA infrastructure

Slide notes

The ZPA 'Bring Your Own Encryption' option (BYOE) allows you to use your own enterprise private CA to establish trust for your ZPA connections. You create subordinate CAs in ZPA that are signed by your own internal Root CA, which allows them to create identity and server certificates for ZPA components as they enroll (Zscaler Client and App Connectors).

With BYOE certificates in place, for **Application Segments** with the **Double Encryption** (DE) option enabled, traffic is encrypted end-to-end using customer keys as it transits the ZPA infrastructure, meaning there is no possibility whatsoever of Zscaler intercepting any data transmitted.

Slide 6 - Bring Your Own Encryption



Bring Your Own Encryption

What is BYOE?

- Use your own enterprise private CA to establish trust for your ZPA connections
- Subordinate CAs are created in ZPA and signed by your internal root CA
- With **Double Encryption**, traffic is encrypted using customer keys as it transits the ZPA infrastructure

When do you need BYOE?

- BYOE does not bring any benefits unless you also enable **Double Encryption**
- BYOE and **Double Encryption** are useful if legacy applications use unencrypted data transport
- If your applications use end-to-end encryption already, BYOE and **Double Encryption** brings no benefit

Slide notes

BYOE is only really useful if the customer plans to use the **Double Encryption** option for one or more **Application Segments**. But when do you need **Double Encryption**? The whole purpose of DE is to encrypt the traffic and the customer data it carries as it transits the Zscaler cloud, to ensure that Zscaler itself cannot intercept or inspect that traffic. Encrypting that traffic with Zscaler-provided keys and certificates defeats this purpose.

Replacing Zscaler crypto with customer crypto doesn't provide any additional protection against Zscaler unless you're also doing **Double Encryption**, since without DE the certificates only protect traffic on its way into, and on its way out of our cloud. **Double Encryption** is only required to protect one type of traffic – unencrypted transports carrying sensitive data. Examples include:

- Legacy protocols such as MODBUS over TCP;
- Or traffic such as telnet, or HTTP carrying sensitive data because it was designed in an age when internal apps were expected to run on trusted networks.

If the traffic isn't carrying sensitive data, then there's no detriment to having it transit the ZPA Service Edge memory without the DE option, for example:

- HTTP / TCP 80 traffic to a webserver, where no data is transported that needed to be encrypted in the first place;

- Or, if the transport protocol is already end-to-end encrypted between the software client and the back-end server, that already protects the traffic content as it transits the ZPA Service Edge memory, so DE is unnecessary and would have negative impact on performance (such as reduced App Connector capacity or possible MTU issues due to the three layers of encryption). Examples include:
 - HTTPS / TCP 443 traffic to a webserver;
 - SSH.

Slide 7 - BYOE Certificate Authorities



BYOE Certificate Authorities

Enterprise Private
Root CA

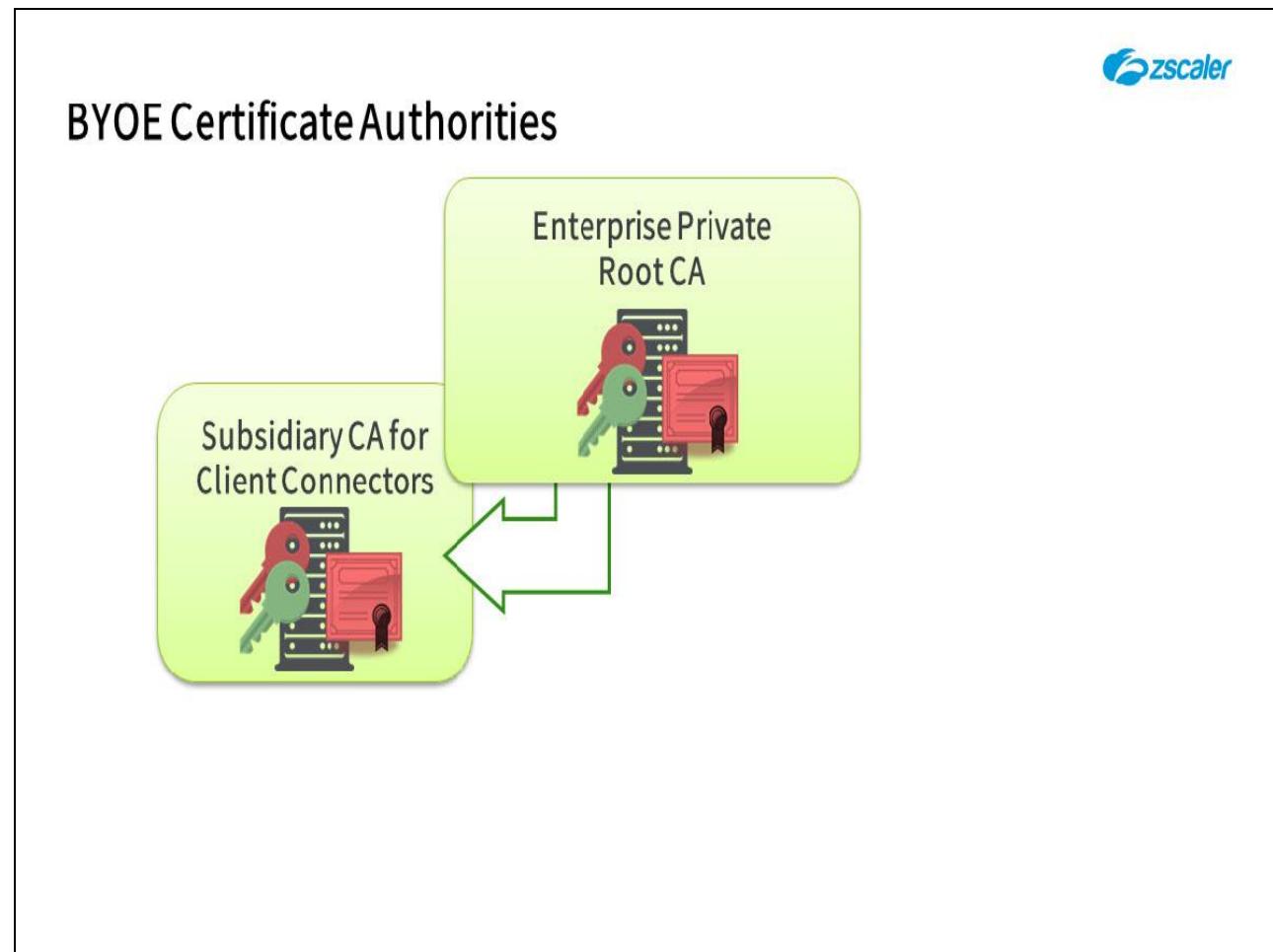


Slide notes

The foundation for the trust of your ZPA ‘Bring Your Own Encryption’ security is your own internal enterprise private Root CA, and its associated keys.

Note that if you follow the recommended best practices and have ‘air gapped’ your Root CA and taken it offline, a subsidiary intermediate CA must be available with permissions to process certificate signing requests (CSRs) to create further subsidiary CAs.

Slide 8 - BYOE Certificate Authorities

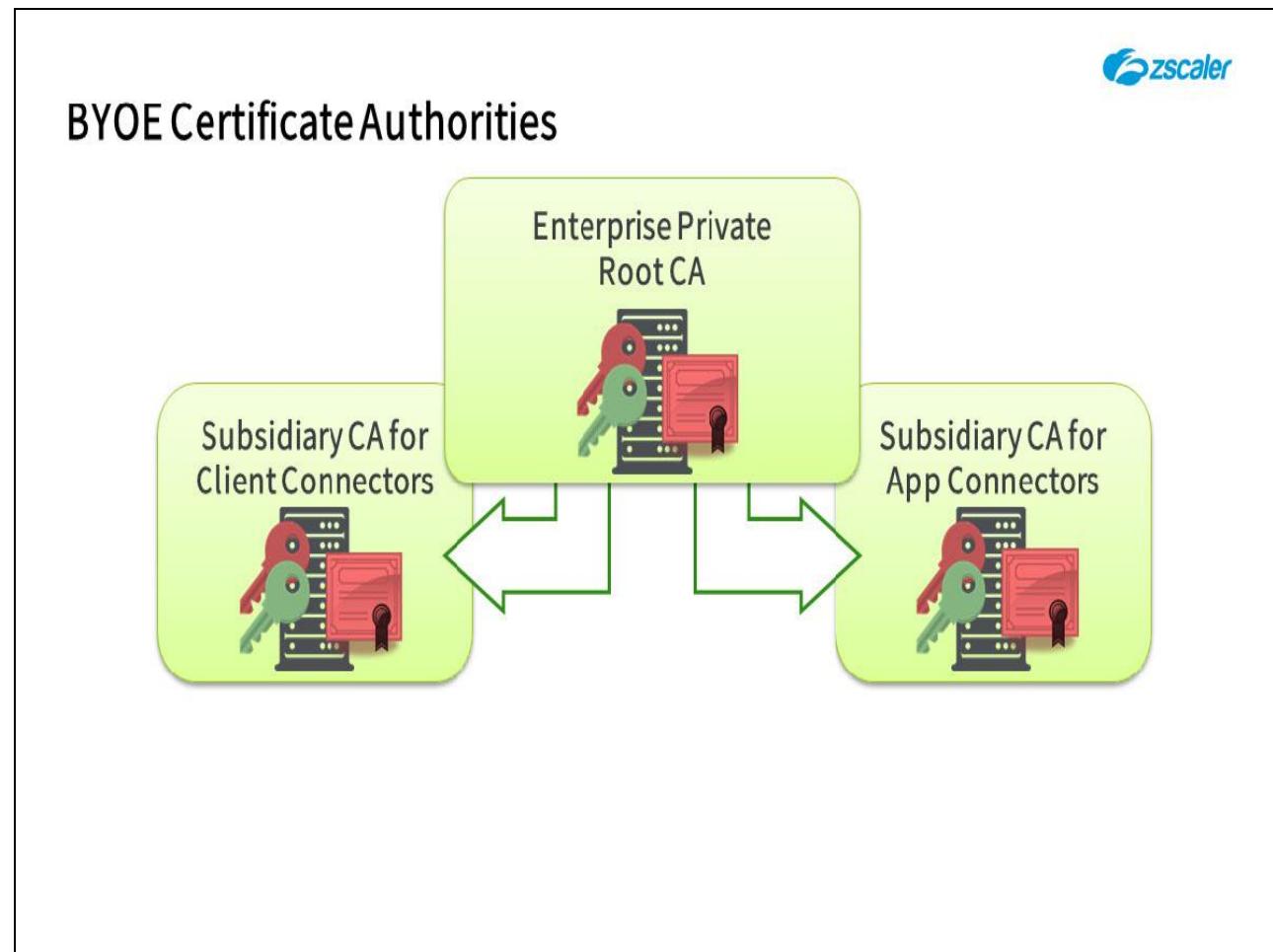


Slide notes

Within the ZPA infrastructure you will need to establish a subsidiary CA that is able to sign the identity certificates required by the client devices running the Zscaler Client Connector.

This process involves the generation of a new public/private key pair for this purpose from the ZPA Admin Portal, then the creation of a CSR with the public key embedded in it for your root/subsidiary CA to sign. Note that the private key for this CA is only ever stored locally within the ZPA infrastructure where it is generated, it is never shared or transmitted on a network connection.

Slide 9 - BYOE Certificate Authorities

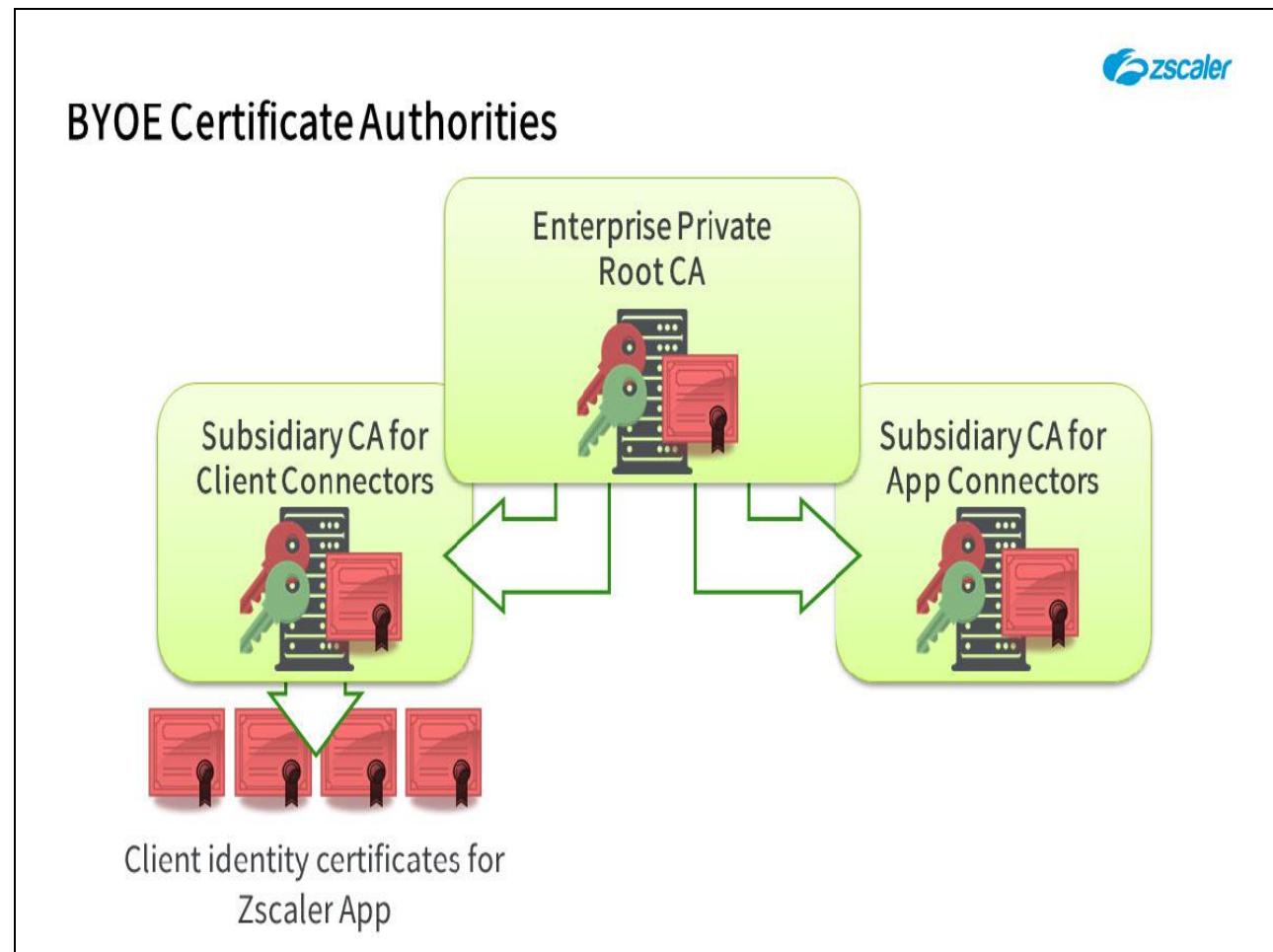


Slide notes

Similarly, and in the same way, you will need to establish a subsidiary CA that is able to sign both the identity certificates and the server certificates required by your App Connectors. The process is exactly the same as for the Client Connector subsidiary CA.

Note that it is possible to use a single subsidiary CA to generate certificates for both Client and App Connectors, however this is not recommended. You need to be able to manage the certificate environments for Client and App Connectors separately.

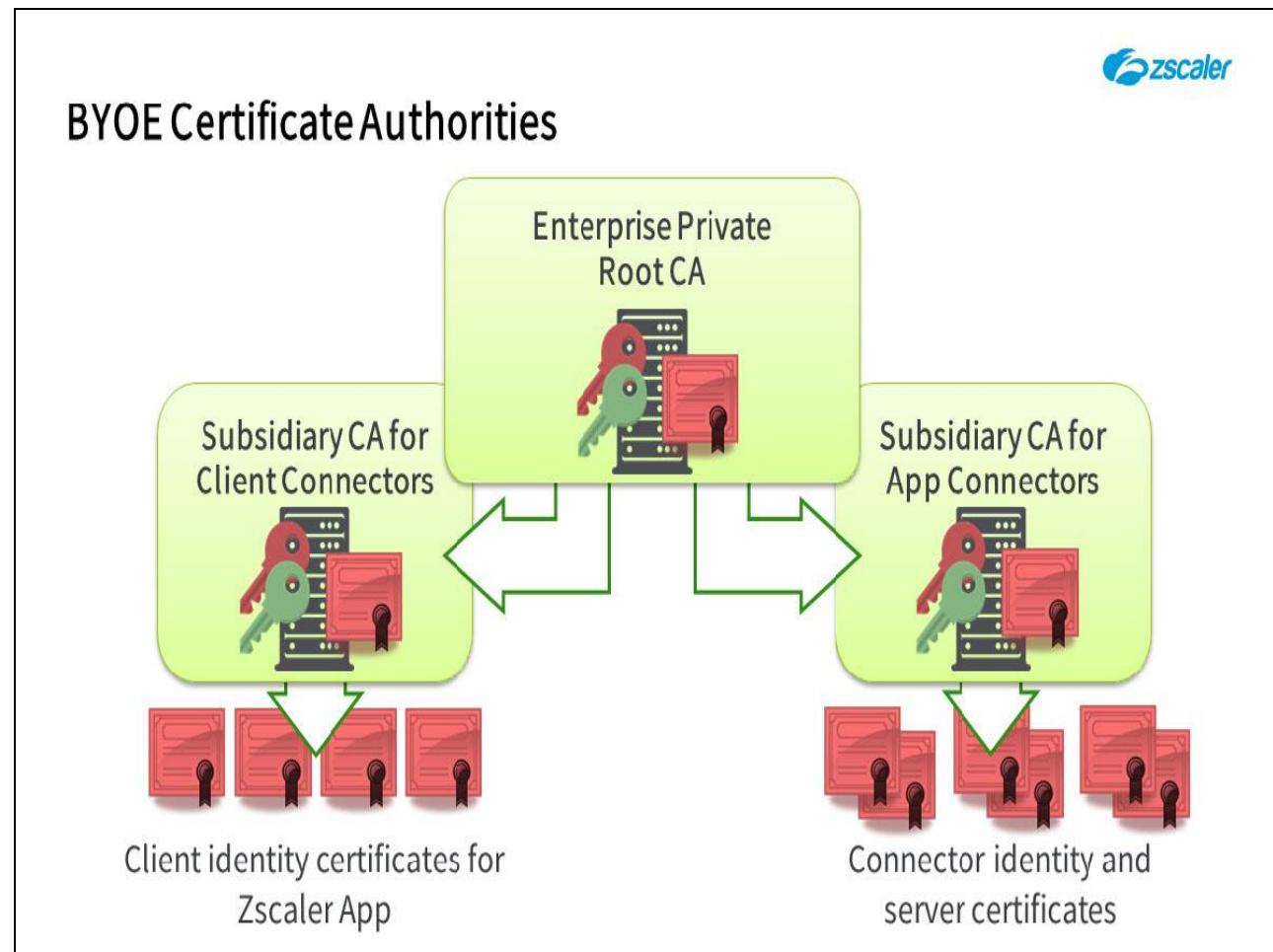
Slide 10 - BYOE Certificate Authorities



Slide notes

Once established, the subsidiary CA for clients is available for generating the identity certificates required by the Zscaler Client Connector users that enroll onto your service.

Slide 11 - BYOE Certificate Authorities



Slide notes

Similarly, once established, the subsidiary CA for App Connectors is available for generating the identity certificates and server certificates required by the App Connectors that you provision adjacent to your private applications.

Slide 12 - BYOK Certificate Enrollment Process



BYOE Certificate Enrollment Process

1. Upload Root CA Certificate

- Export the Root CA certificate from your enterprise private CA
- Upload the certificate to your ZPA instance

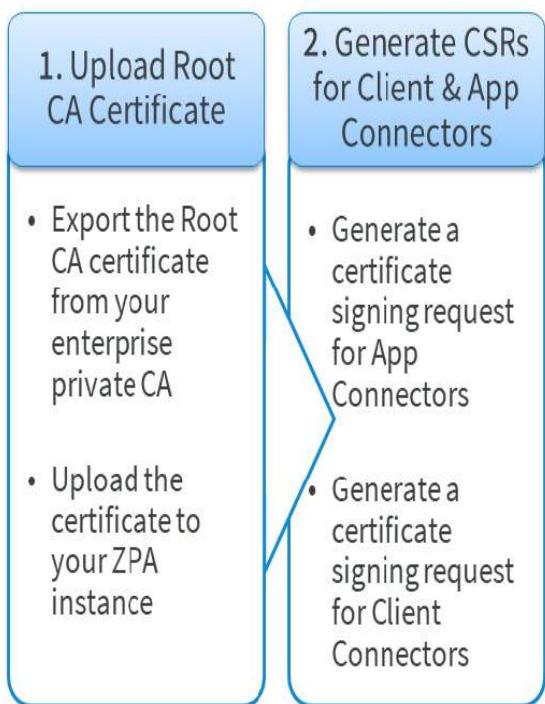
Slide notes

The BYOE enrollment process begins with you exporting the enterprise private Root CA certificate to file, then uploading it to your ZPA instance at the ZPA admin portal.

Slide 13 - BYOK Certificate Enrollment Process



BYOE Certificate Enrollment Process



Slide notes

You will then configure and generate Certificate Signing Requests for both a subsidiary CA for Client Connectors and one for App Connectors. When you do this, the first thing that is created is a new public/private key pair for the subsidiary CA in question.

Slide 14 - BYOK Certificate Enrollment Process



BYOE Certificate Enrollment Process

- 1. Upload Root CA Certificate**
 - Export the Root CA certificate from your enterprise private CA
 - Upload the certificate to your ZPA instance
- 2. Generate CSRs for Client & App Connectors**
 - Generate a certificate signing request for App Connectors
 - Generate a certificate signing request for Client Connectors

The Private keys never leave the ZPA CA

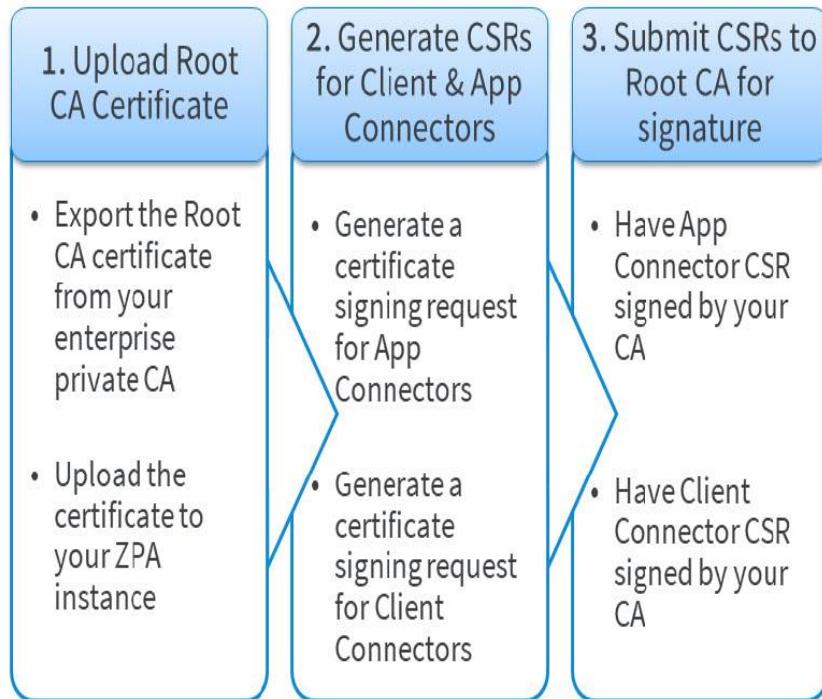
Slide notes

Note that the private key is stored within the ZPA infrastructure and is never shared or transmitted on a network connection, the public key is embedded in the CSR for that subsidiary CA.

Slide 15 - BYOK Certificate Enrollment Process



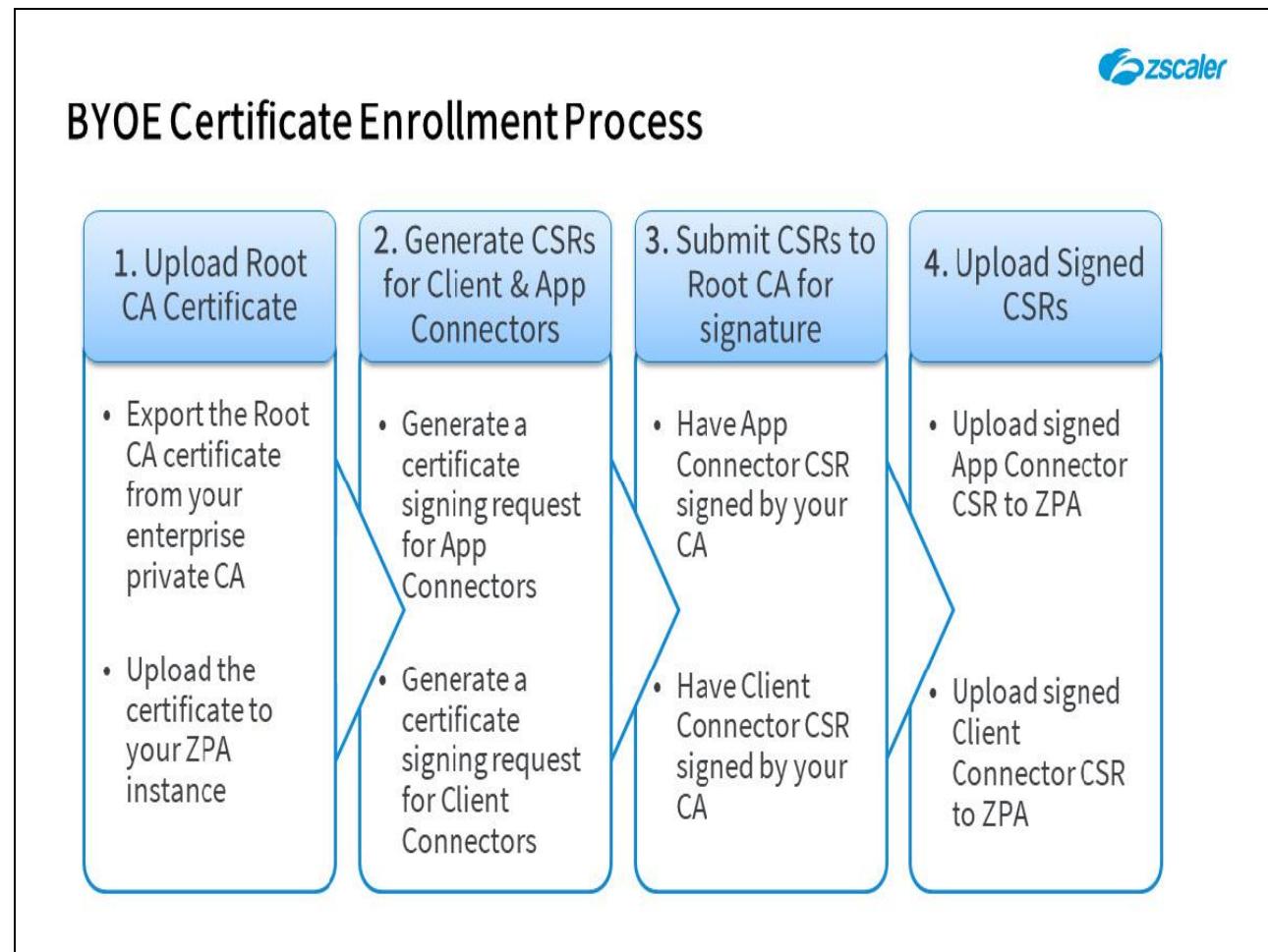
BYOE Certificate Enrollment Process



Slide notes

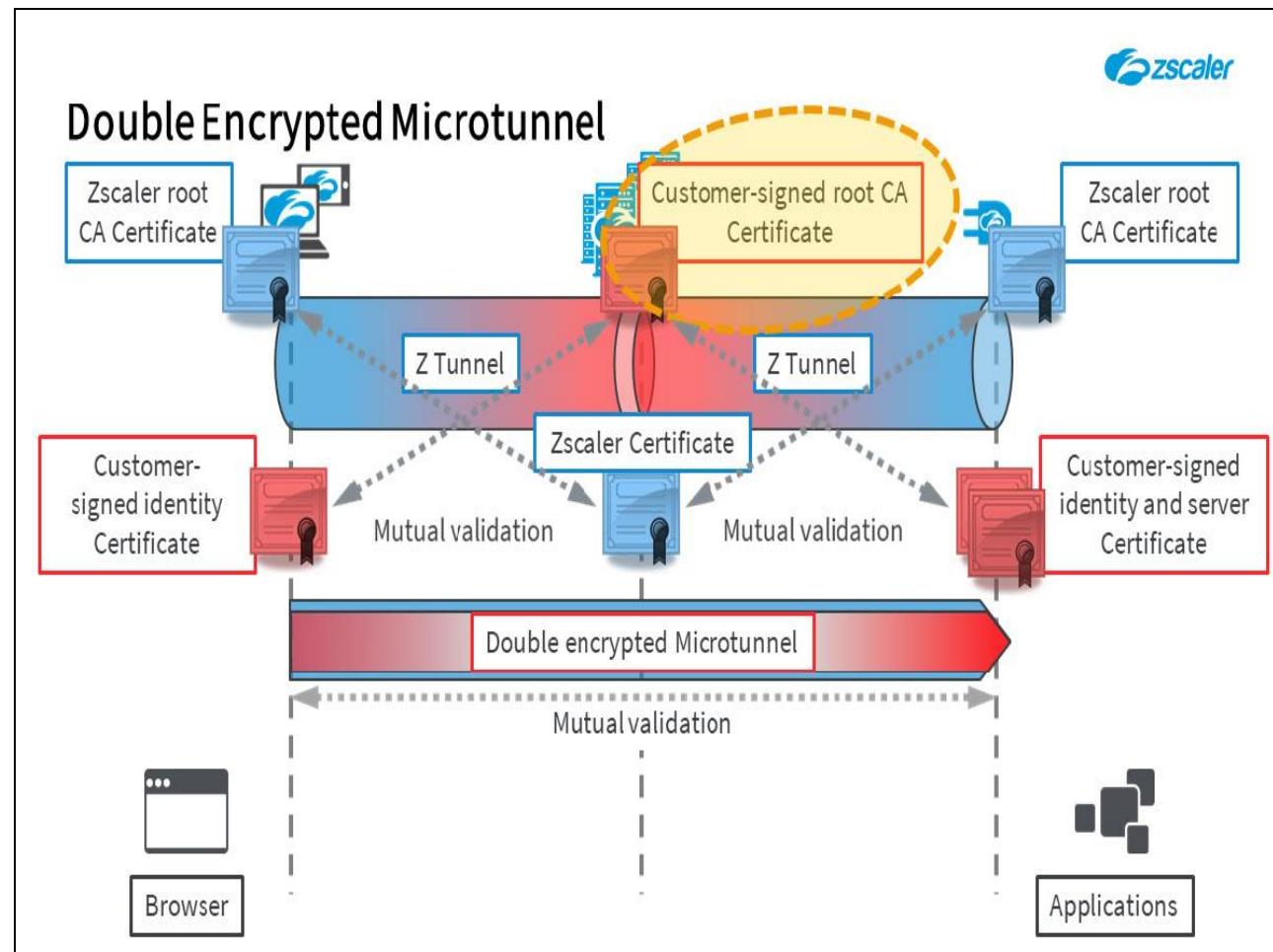
You then need to take the generated CSRs to your enterprise private Root CA (or a subsidiary) to be signed and for digital identity certificates for the new subsidiary CAs to be generated.

Slide 16 - BYOK Certificate Enrollment Process

**Slide notes**

Finally, you must upload the signed CSRs to the relevant subsidiary CAs on the ZPA admin portal.

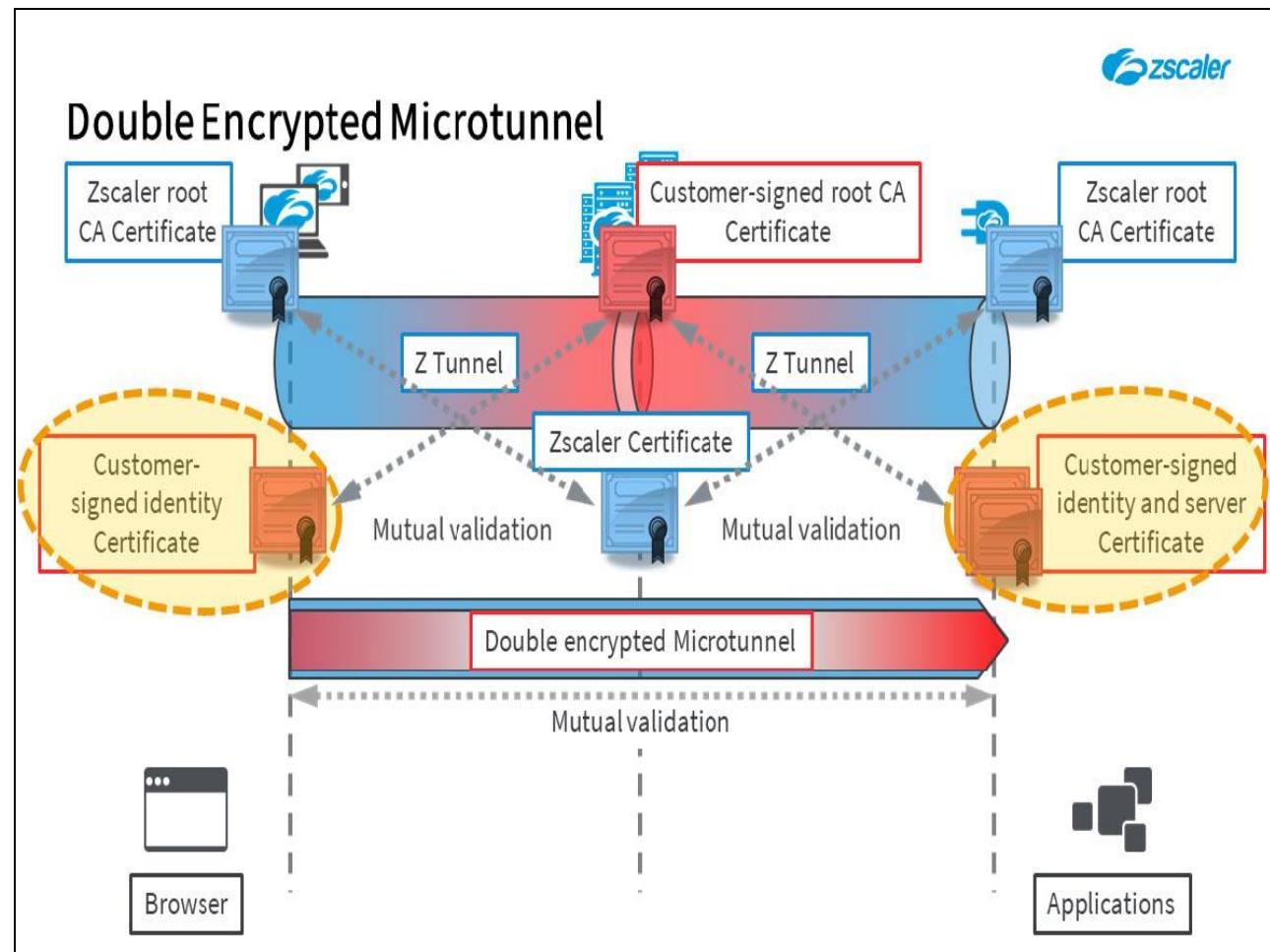
Slide 17 - Double Encrypted Microtunnel



Slide notes

This process puts in place all the components for your BYOE environment, that ensures total privacy for any data communicated within any **Doubly Encrypted** Microtunnels. Your Root CA certificate is available within the ZPA infrastructure to allow us to trust the inbound Z Tunnels from Zscaler Client Connector users and the App Connectors, ...

Slide 18 - Double Encrypted Microtunnel



Slide notes

...plus, the CAs subsidiary to your own enterprise private Root CA are in place to allow the generation of Client and App Connector identity certificates (for authentication), and the App Connector server certificate necessary to establish end-to-end encrypted Microtunnels. The private keys used to create the end-to-end encryption only exist on the devices that generated them (Zscaler Client and App Connectors), so there is no possibility for even Zscaler to decrypt data sent on these **Double Encrypted Microtunnel** connections.

Slide 19 - 3. Configure Single Sign-On



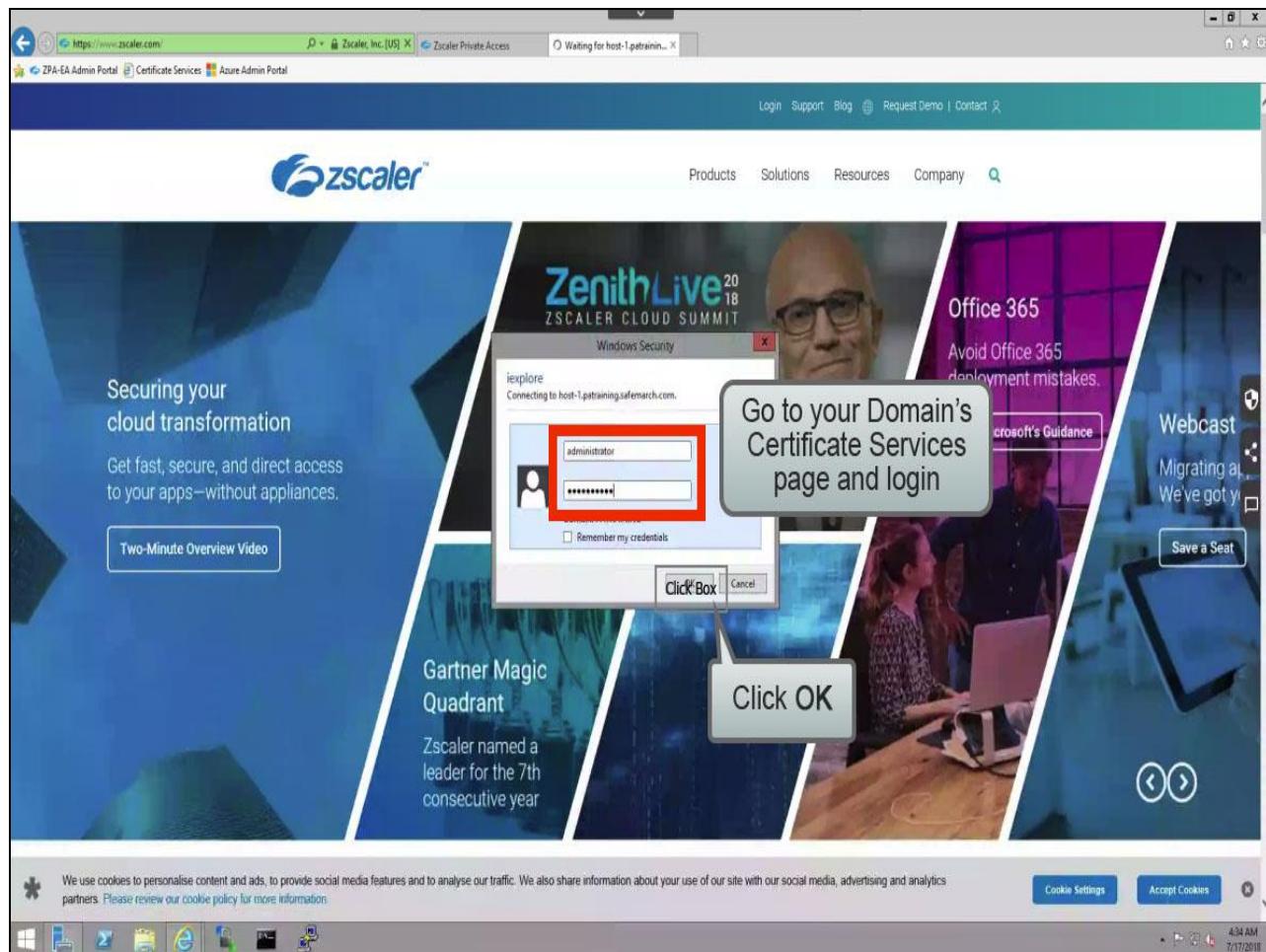
The Root CA Certificate

Slide notes

In the next section, we will look at how to provision your enterprise private Root CA certificate to the ZPA admin portal.

This section has been created as an interactive demo to give you a feel for the navigation of the ZPA Admin Portal UI. You will be asked to select the appropriate menu options to navigate the UI. You may also use the Play control to proceed to the next step.

Slide 20 - Slide 20

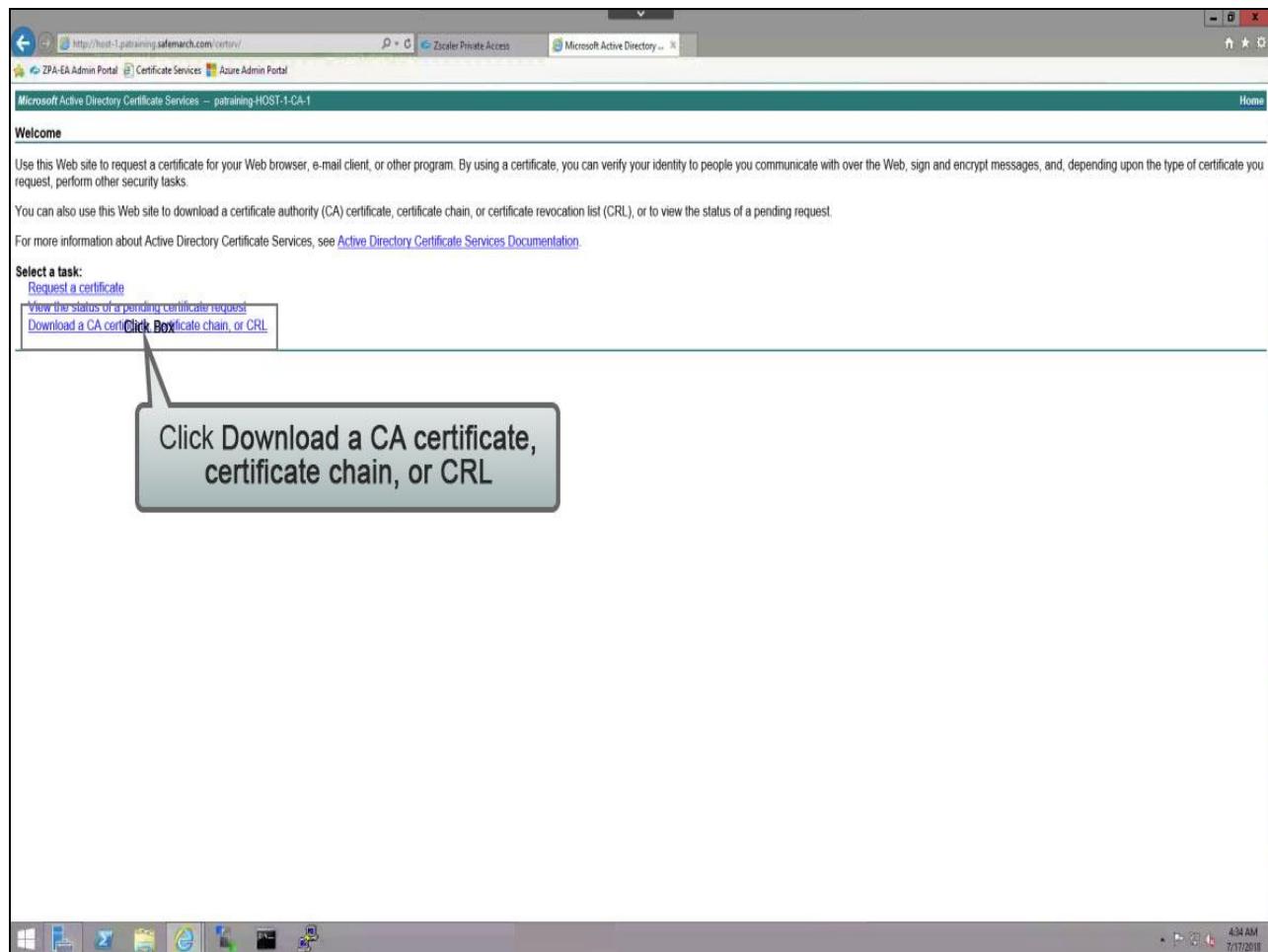


Slide notes

The first requirement is to download your internal Root CA certificate to file, then upload that to ZPA. For a Microsoft Root CA, one way to do this is through the **Certificate Services** web pages.

Navigate to the **Certificate Services** home page, provide user credentials for a user with permissions to create subsidiary CA certificates and click **OK** to login.

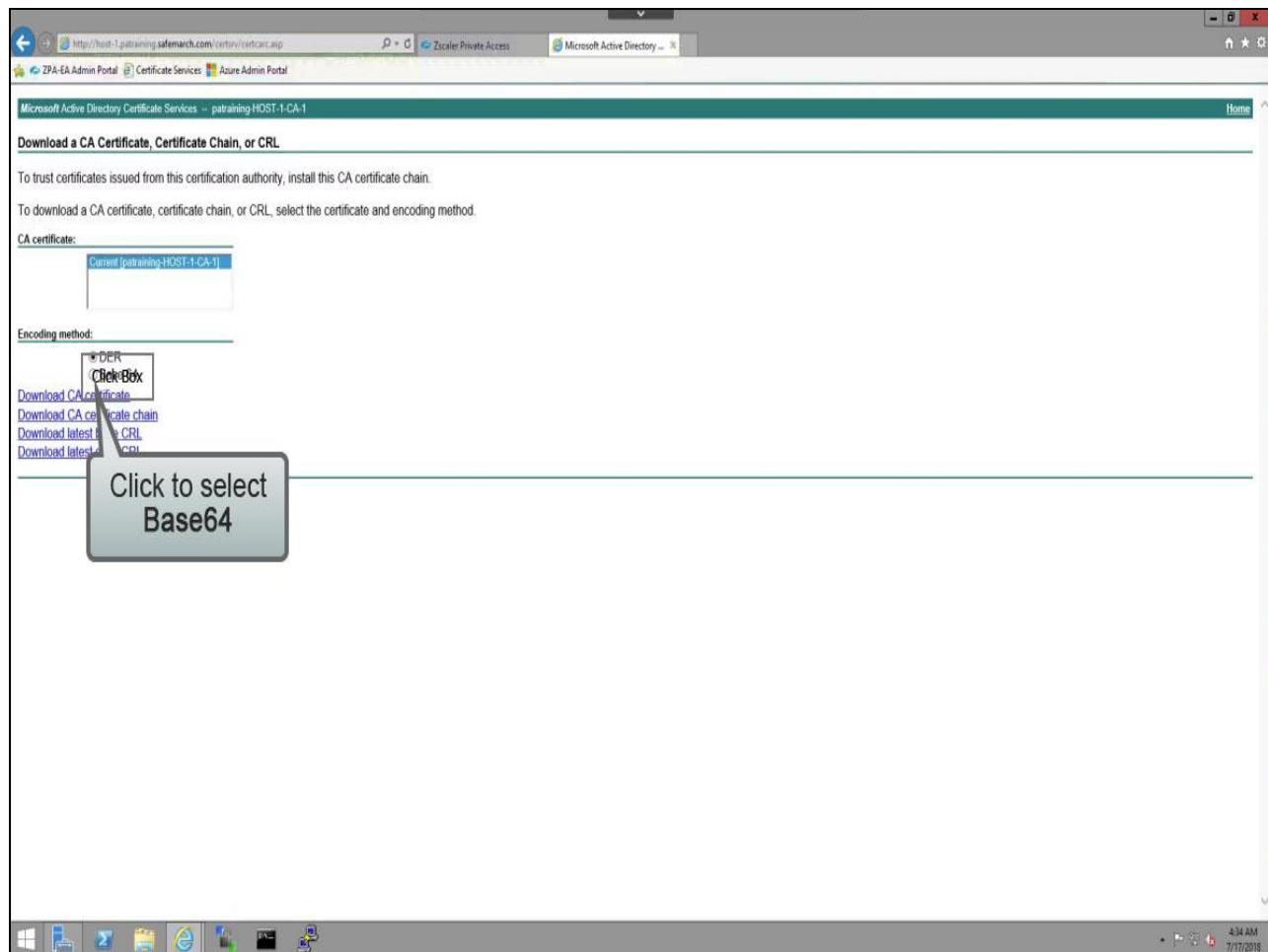
Slide 21 - Slide 21



Slide notes

You want the CA certificate, so click the **Download a CA certificate, certificate chain, or CRL** link.

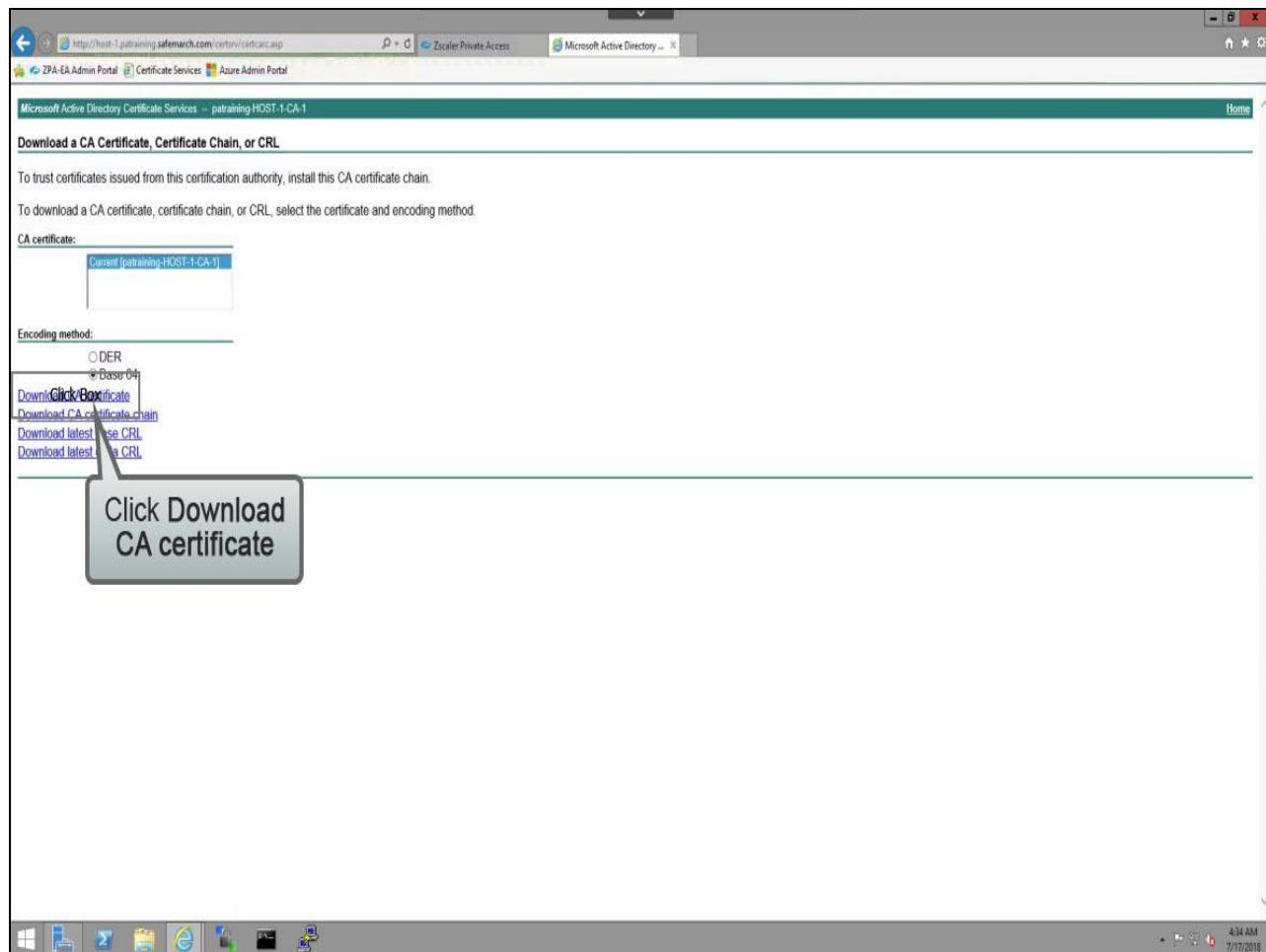
Slide 22 - Slide 22



Slide notes

Click to select the **Base 64** format, ...

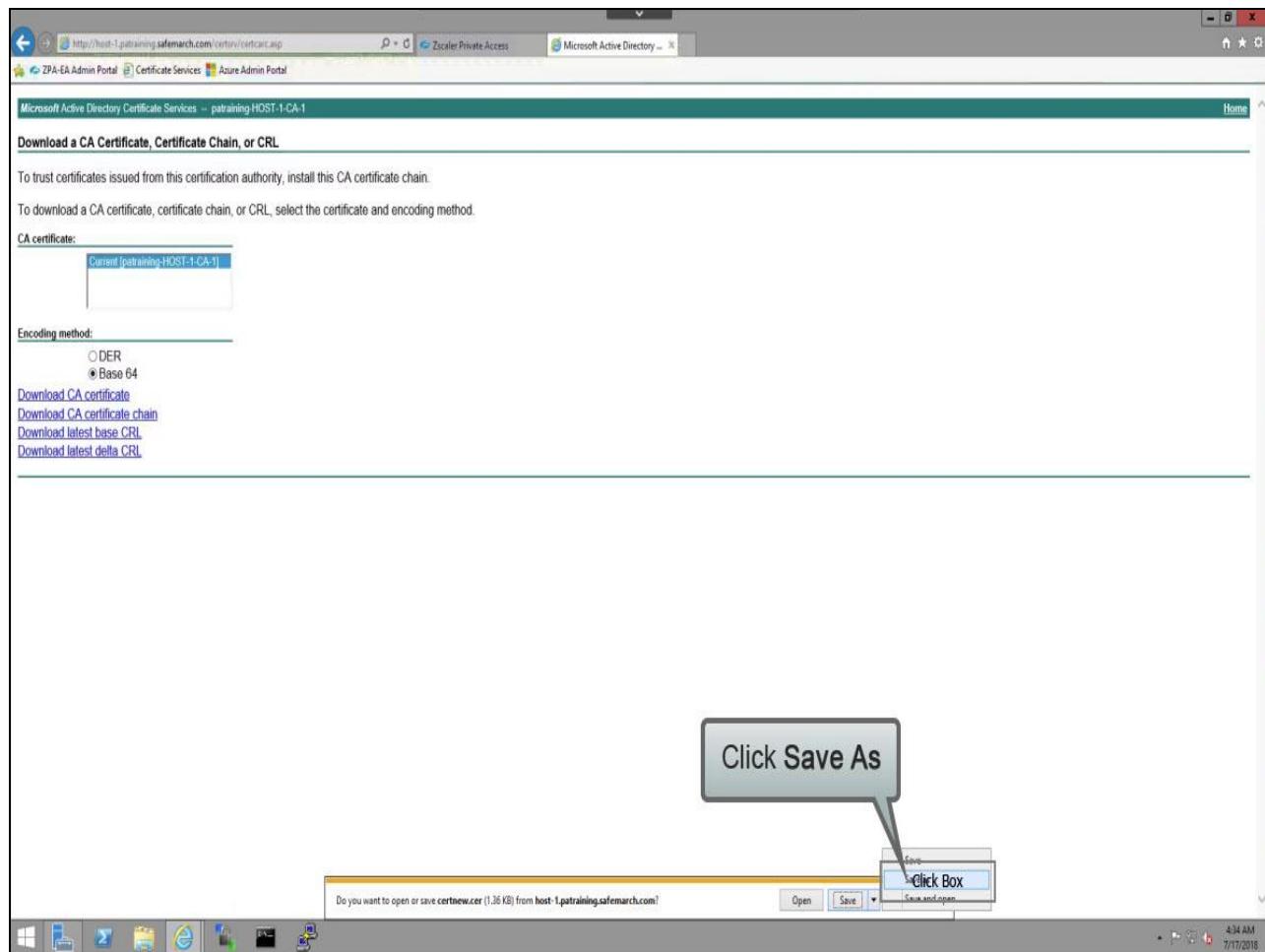
Slide 23 - Slide 23



Slide notes

...then click **Download CA certificate**.

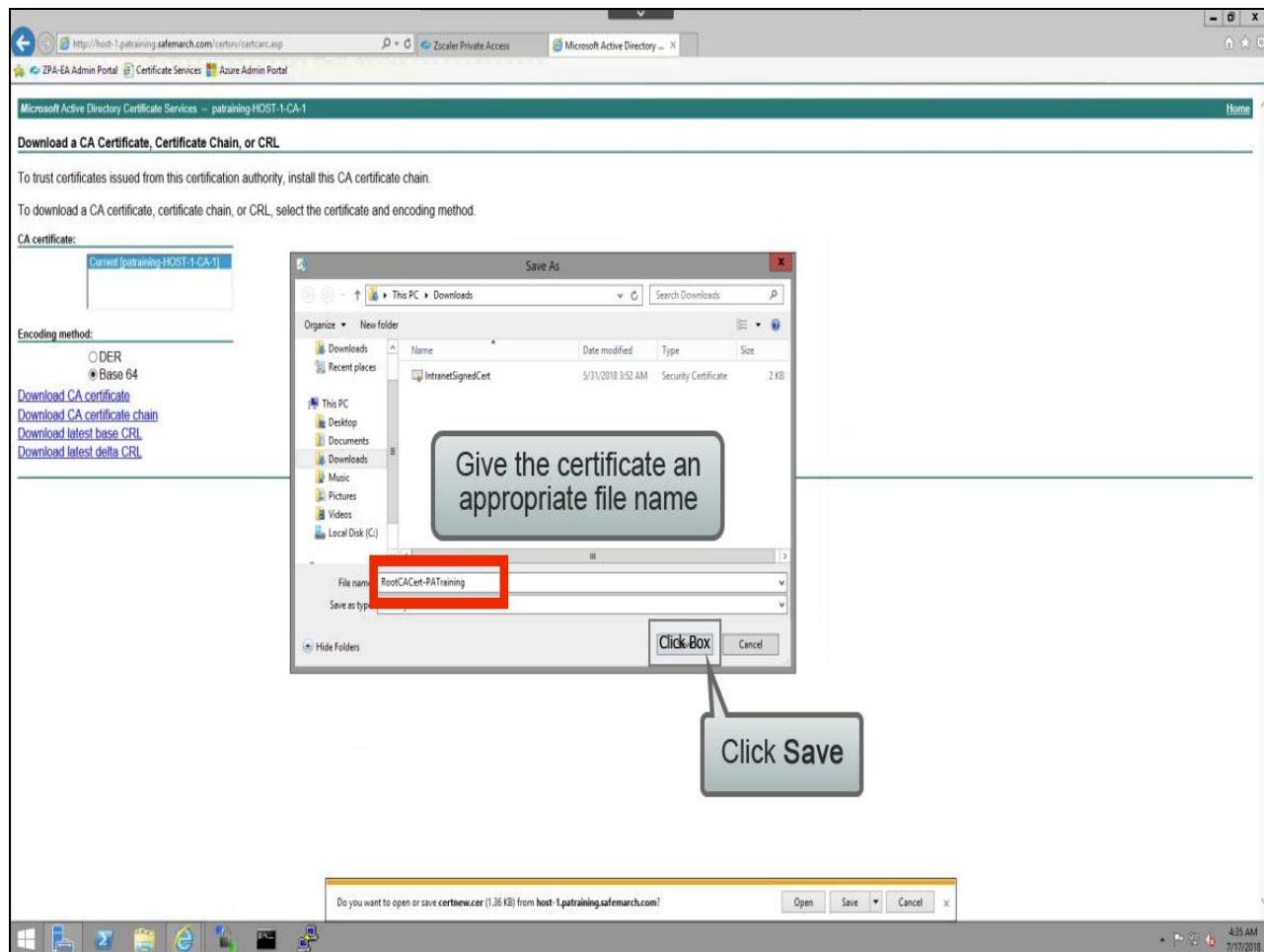
Slide 24 - Slide 24



Slide notes

Click Save As, ...

Slide 25 - Slide 25



Slide notes

...then navigate to an appropriate folder or share, give the file a useful name and click **Save**.

Slide 26 - Slide 26

The screenshot shows the Zscaler Private Access (ZPA) Admin Portal dashboard. On the left, there's a navigation sidebar with various links like Application Management, Authentication, Certificate Management, and Administration. In the 'CERTIFICATE MANAGEMENT' section, there are two options: 'Browser Access Certificates' and 'Enrollment Certificates'. A callout box with the text 'Click Enrollment Certificates' points to the 'Enrollment Certificates' link. The main dashboard area displays several metrics: 'APPLICATIONS' (4), 'ACCESS POLICY BLOCKS' (4), and 'SUCCESSFUL TRANSACTIONS' (33). Below these are sections for 'TOP APPLICATIONS BY BANDWIDTH' and 'LOG STREAMING SERVICE'.

Slide notes

In the ZPA Admin Portal, from the **Administration** menu under **CERTIFICATE MANAGEMENT**, click **Enrollment Certificates**.

Slide 27 - Slide 27

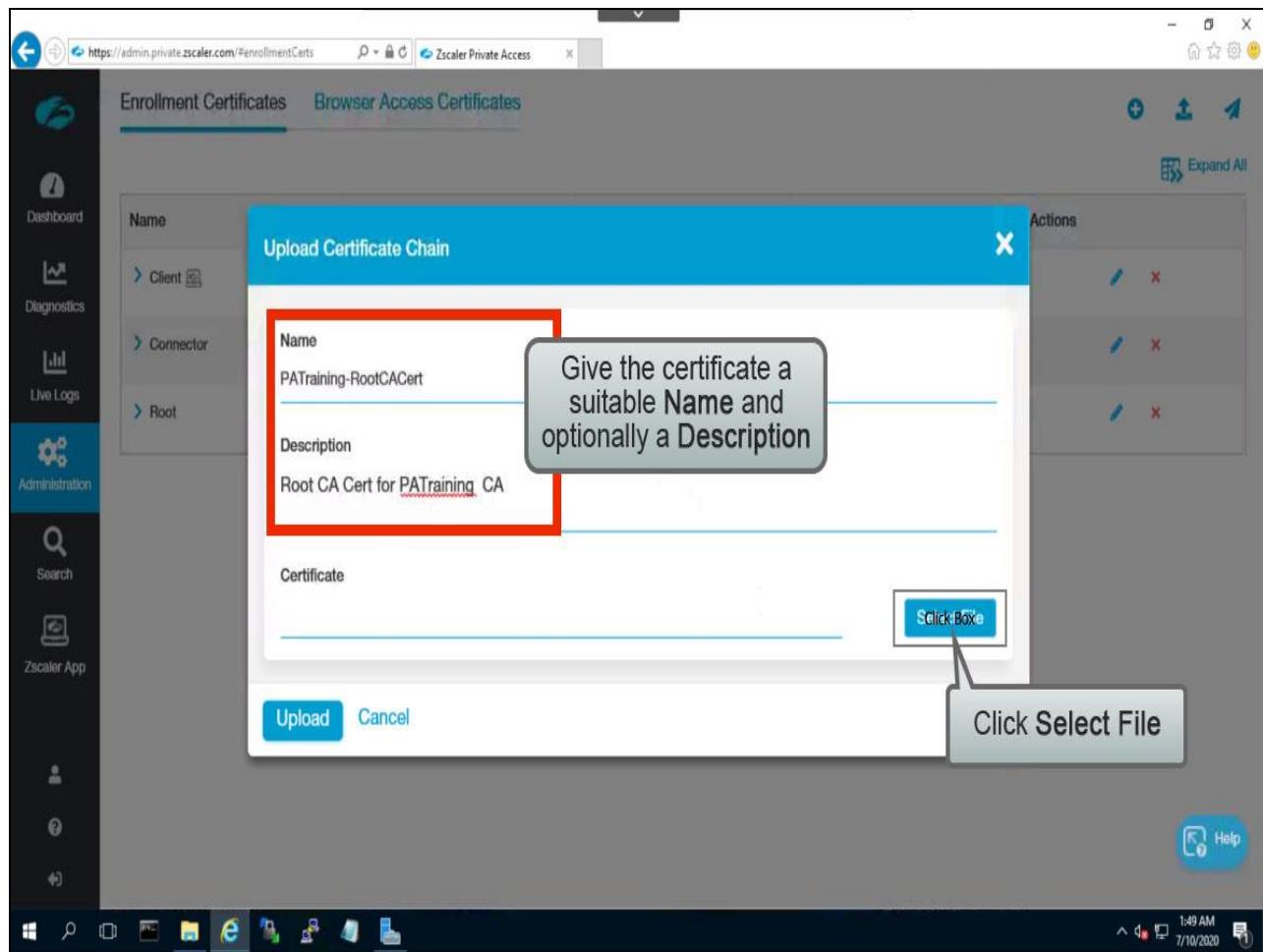
The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The main area displays a table of certificates with columns: Name, Creation Date, Expiry Date, and Common Name. Three entries are listed: 'Client' (Creation Date: Friday, August 09 2019 6:36:49 pm, Expiry Date: Saturday, August 05 2034 6:36:49 pm, Common Name: patraining35.safemarch.com), 'Connector' (Creation Date: Friday, August 09 2019 6:36:49 pm, Expiry Date: Saturday, August 05 2034 6:36:49 pm, Common Name: patraining35.safemarch.com/Connec...), and 'Root' (Creation Date: Friday, August 09 2019 6:36:49 pm, Expiry Date: Sunday, August 01 2049 6:36:49 pm, Common Name: patraining35.safemarch.com/Root). To the right of the table, there is an 'Upload Certificate Chain' button with a callout box pointing to it, containing the text 'Click Upload Certificate Chain'. The interface includes a navigation sidebar on the left with icons for Dashboard, Diagnostics, Live Logs, Administration, Search, Zscaler App, and Help.

| Name | Creation Date | Expiry Date | Common Name |
|-----------|------------------------------------|--------------------------------------|--------------------------------------|
| Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com |
| Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... |
| Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root |

Slide notes

To upload the certificate that you just saved, click **Upload Certificate Chain**.

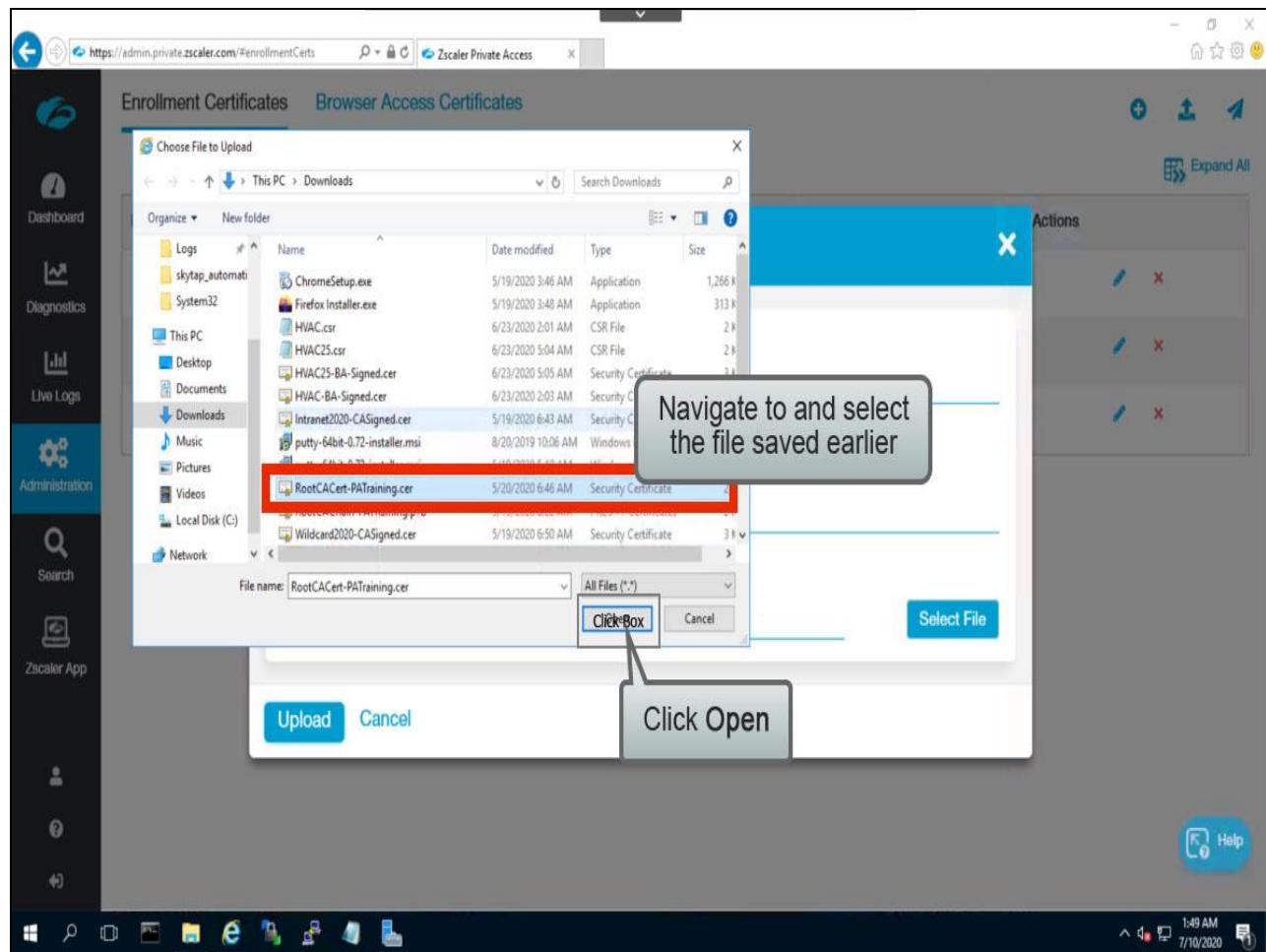
Slide 28 - Slide 28



Slide notes

Give the certificate a suitable **Name** and optionally a **Description**, then click **Select File**.

Slide 29 - Slide 29

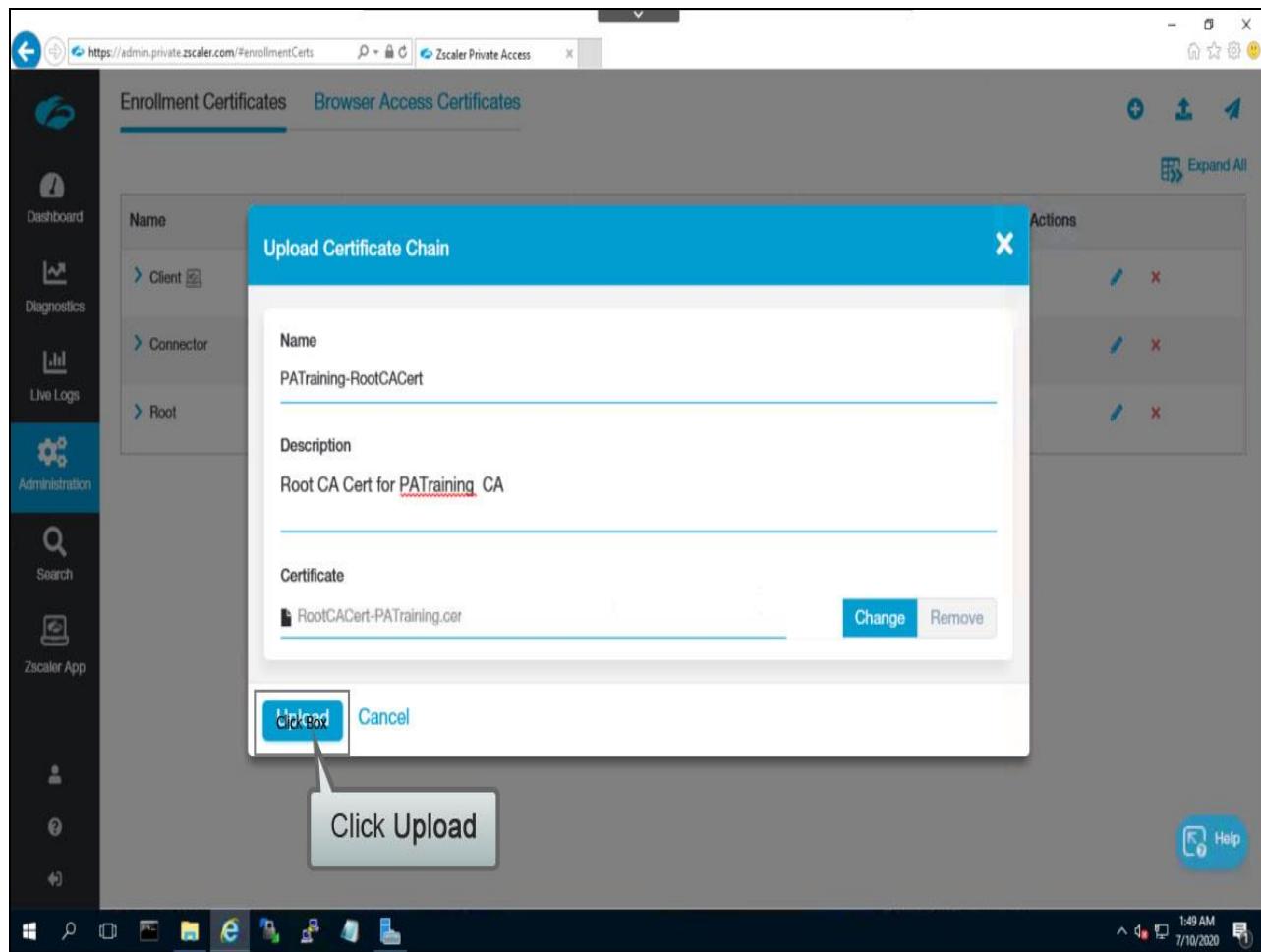


Slide notes

Navigate to and select the Root CA certificate that you just downloaded from **Certificate Services**, then click **Open**.

Note, in this case we have a very simple CA certificate structure, in more complex environments you will need to upload the full certificate chain.

Slide 30 - Slide 30



Slide notes

To upload the certificate to ZPA, click **Upload**.

Slide 31 - Slide 31

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The main area displays a table of certificates with columns: Name, Creation Date, Expiry Date, Common Name, and Actions. The table contains four rows:

| Name | Creation Date | Expiry Date | Common Name | Actions |
|-------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

A green notification bar at the bottom right indicates 'Certificate saved'. The left sidebar includes links for Dashboard, Diagnostics, Live Logs, Administration, Search, and Zscaler App. The taskbar at the bottom shows various icons and the date/time: 1:49 AM, 7/10/2020.

Slide notes

Slide 32 - Slide 32

The screenshot shows the 'Enrollment Certificates' section of the Zscaler Private Access web interface. The table lists five certificates:

| Name | Creation Date | Expiry Date | Common Name | Actions |
|-----------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | |
| Root | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | | |

A callout box with the text "Verify that the new Root CA certificate is listed" points to the "Root" row, which is highlighted with a red border.

Slide notes

Check the list of certificates to verify that the new Root CA certificate is listed.

Slide 33 - Client and Connector Certificates

**Slide notes**

In the next section, we will look at how to generate the subsidiary CAs required to generate the required Client and App Connector identity certificates, and the App Connector server certificate.

This section has been created as an interactive demo to give you a feel for the navigation of the ZPA Admin Portal UI. You will be asked to select the appropriate menu options to navigate the UI. You may also use the **Play** control to proceed to the next step.

Slide 34 - Slide 34

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The main area displays a table of certificates with columns: Name, Creation Date, Expiry Date, and Common Name. A callout box with the text 'Click Create CSR' points to the 'Create CSR' button in the top right corner of the table header. The table contains four rows of data:

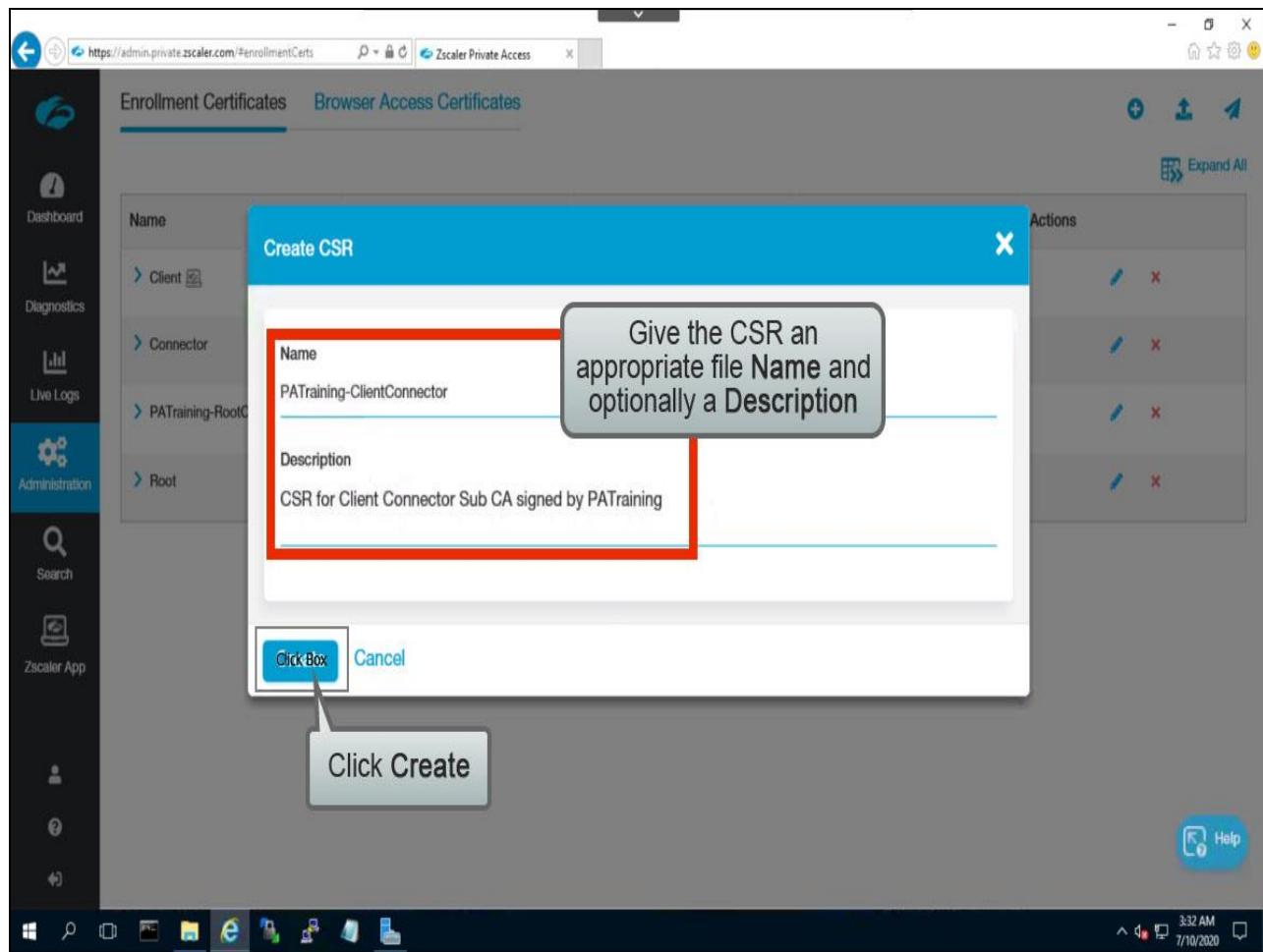
| Name | Creation Date | Expiry Date | Common Name |
|-------------------------|------------------------------------|--------------------------------------|--------------------------------------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root |

Slide notes

The next task is to create CA-signed subsidiary CAs for issuing the relevant certificates to Zscaler Client and App Connectors. The first step in this process is to generate separate **Certificate Signing Requests** (CSRs) for both Client and App Connectors. This process generates a new public/private key pair for the subsidiary CA, the private key never leaves the infrastructure it is created on, the public key gets embedded into the CSR.

To create a new CSR, click **Create CSR**. ...

Slide 35 - Slide 35



Slide notes

...give the CSR an appropriate **Name** (this one will be for Client Connectors), add a **Description** if necessary, then click **Create**.

Slide 36 - Slide 36

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The main area displays a table of certificates with columns: Name, Creation Date, Expiry Date, Common Name, and Actions. The table contains five entries:

| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

A tooltip 'Certificate Signing Request (CSR) c' is visible near the bottom right of the interface. The browser address bar shows 'https://admin.private.zscaler.com/#enrollmentCerts'. The operating system taskbar at the bottom includes icons for File Explorer, Internet Explorer, Task View, and others.

Slide notes

Slide 37 - Slide 37

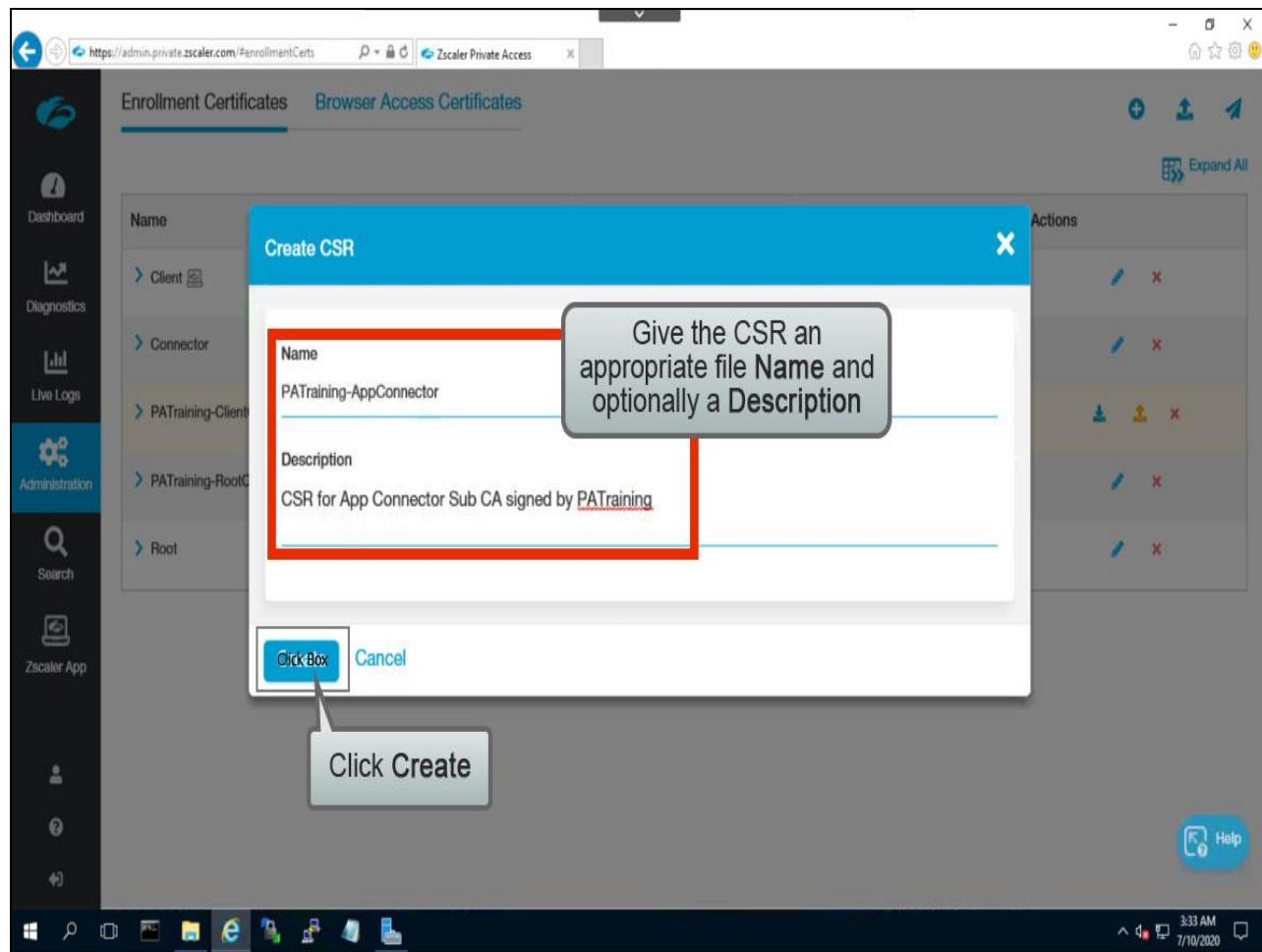
The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The main area displays a table of certificates with columns: Name, Creation Date, Expiry Date, and Common Name. The table includes five rows: 'Client', 'Connector', 'PATraining-ClientConnector', 'PATraining-RootCACert', and 'Root'. Each row has edit and delete icons. A callout box with the text 'Click Create CSR' points to the 'Create CSR' button located in the top right corner of the table header. The left sidebar contains navigation links for Dashboard, Diagnostics, Live Logs, Administration, Search, and Zscaler App. The bottom taskbar shows various system icons and the date/time.

| Name | Creation Date | Expiry Date | Common Name |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | | patraining35.safemarch.com/PATrai... |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root |

Slide notes

Now we'll create a CSR for an App Connector subsidiary CA, so click **Create CSR** again, ...

Slide 38 - Slide 38



Slide notes

...give the subsidiary CA a **Name**, add a **Description** if necessary, then click **Create**.

Slide 39 - Slide 39

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The main area displays a table of certificates with columns: Name, Creation Date, Expiry Date, Common Name, and Actions. The table contains the following data:

| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

A green callout box at the bottom right of the table area points to the 'CSR' link in the 'Actions' column of the first row, with the text 'Certificate Signing Request (CSR) c'.

Slide notes

Slide 40 - Slide 40

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The table lists several certificates with their details:

| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | Edit Delete |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | Edit Delete |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining35.safemarch.com/RootCA | Edit Delete |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | Edit Delete |

A callout box with a blue border and white background points to the 'Download .CSR File' link for the 'PATraining-AppConnector' entry. The callout box contains the text 'Click the Download CSR File link'. The 'Download .CSR File' link is highlighted with a red box.

Slide notes

You now need to have these CSRs signed by the same Root CA that you uploaded the certificate for. To save the CSR data to file, click the **Download CSR File** link for one of the new entries, ...

Slide 41 - Slide 41

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The main area displays a table of certificates with columns: Name, Creation Date, Expiry Date, Common Name, and Actions. The 'Actions' column includes edit and delete icons. A 'Save All' button is located at the top right of the table. On the left, a sidebar lists various navigation options: Dashboard, Diagnostics, Live Logs, Administration (which is currently selected), Search, Zscaler App, and Help.

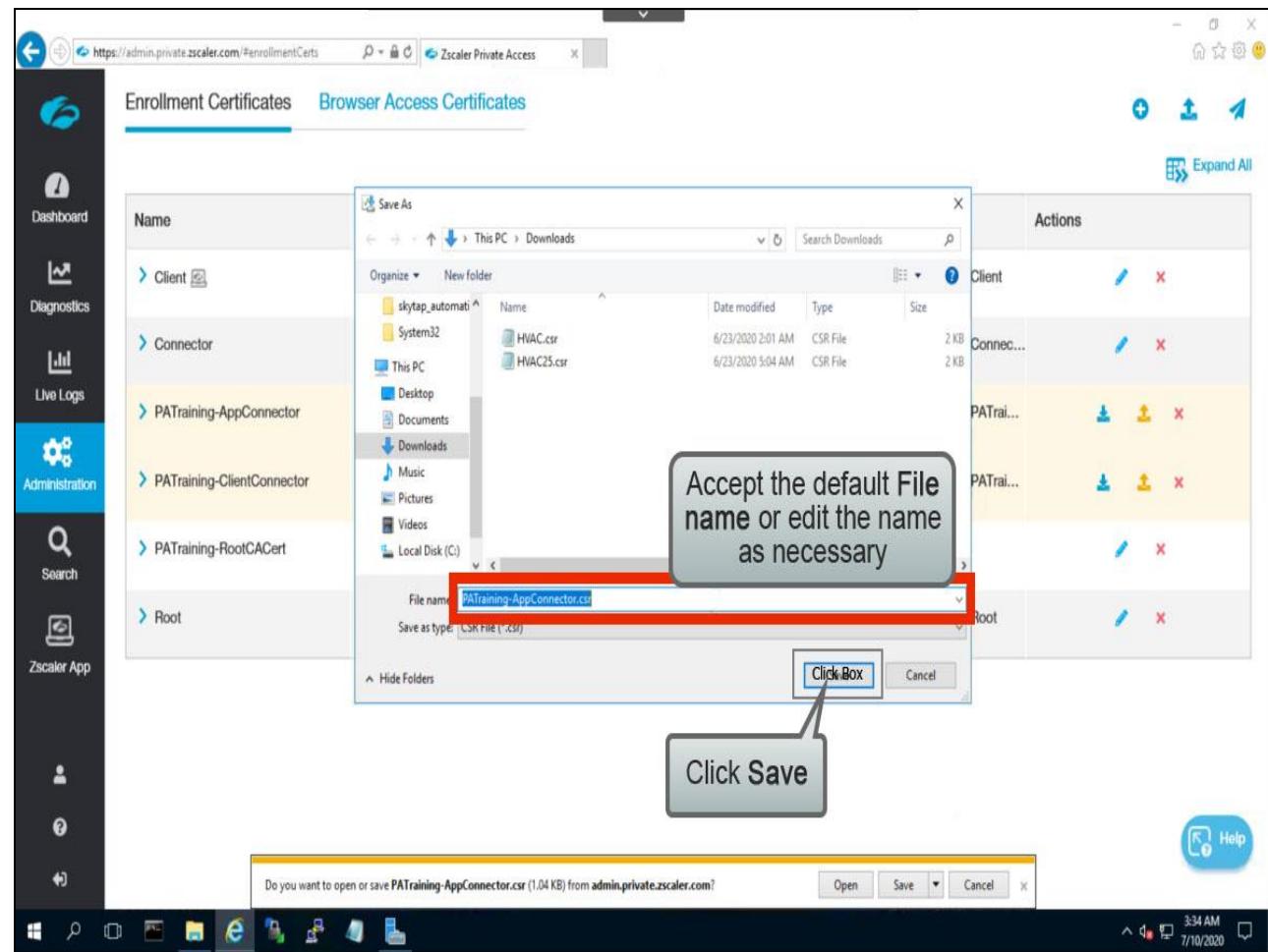
| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

A callout box with the text 'Click Save as' points to the 'Save' button in a file download dialog. The dialog asks if the user wants to open or save 'PATraining-AppConnector.csr (1.04 KB)' from 'admin.private.zscaler.com?'. The 'Save' button is highlighted with a blue box. The system tray at the bottom right shows the date and time as 7/10/2020 3:34 AM.

Slide notes

...click Save as, ...

Slide 42 - Slide 42



Slide notes

...give the file an appropriate **File name** (or accept the default name) and click **Save**.

Slide 43 - Slide 43

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The main area displays a table of certificates with columns: Name, Creation Date, Expiry Date, Common Name, and Actions. The table contains the following data:

| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

A download notification at the bottom indicates: 'The PATraining-AppConnector.csr download has completed.' with options to Open, Open folder, View downloads, and Close.

Slide notes

Slide 44 - Slide 44

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The table lists several certificates with their details:

| Name | Creation Date | Expiry Date | Common Name | Actions |
|----------------------------|------------------------------------|--------------------------------------|--------------------------------------|---|
| Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | Edit Delete |
| Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | Edit Delete |
| PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | | patraining35.safemarch.com/PATrai... | Download.CSR File Edit Delete |
| PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | | patraining35.safemarch.com/PATrai... | Edit Delete |
| PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | Edit Delete |
| Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | pat... | Edit Delete |

A callout box with the text "Click the Download CSR File link" points to the download link for the "Root" certificate.

Slide notes

Repeat this process for the other new subsidiary CA. Click the **Download CSR File** link, ...

Slide 45 - Slide 45

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The main area displays a table of certificates with columns: Name, Creation Date, Expiry Date, Common Name, and Actions. The 'Actions' column includes edit and delete icons. A 'Save All' button is located at the top right of the table. On the left, a sidebar lists various navigation options: Dashboard, Diagnostics, Live Logs, Administration (which is currently selected), Search, Zscaler App, and other icons for users, help, and refresh.

| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

Click Save as

Save
Save as...
Save and open

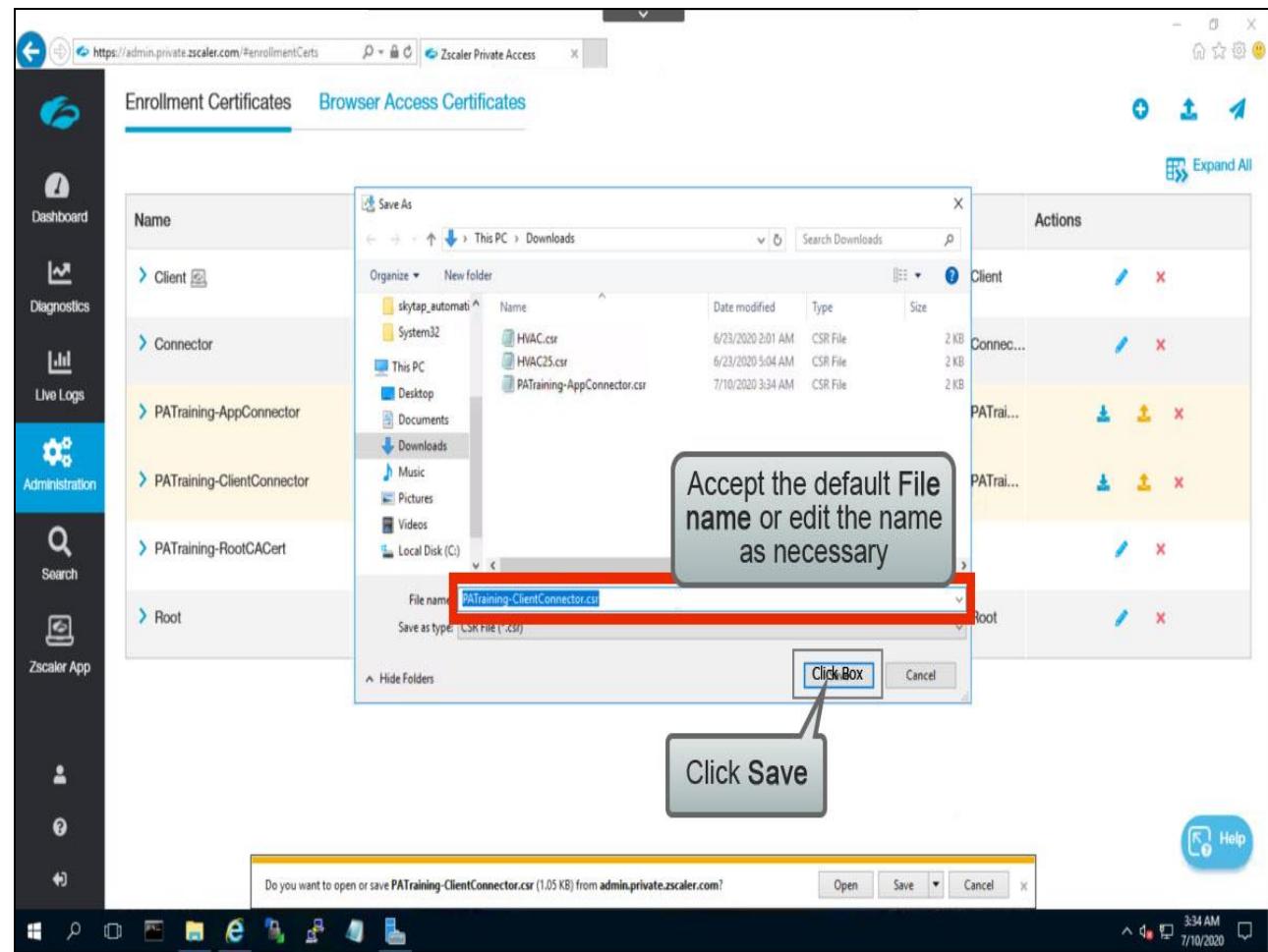
Do you want to open or save PATraining-ClientConnector.csr (1.05 KB) from admin.private.zscaler.com?

Open Save Save and open

Slide notes

...click Save as, ...

Slide 46 - Slide 46



Slide notes

...name the file and click **Save**.

Slide 47 - Slide 47

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The table lists several certificates with their details:

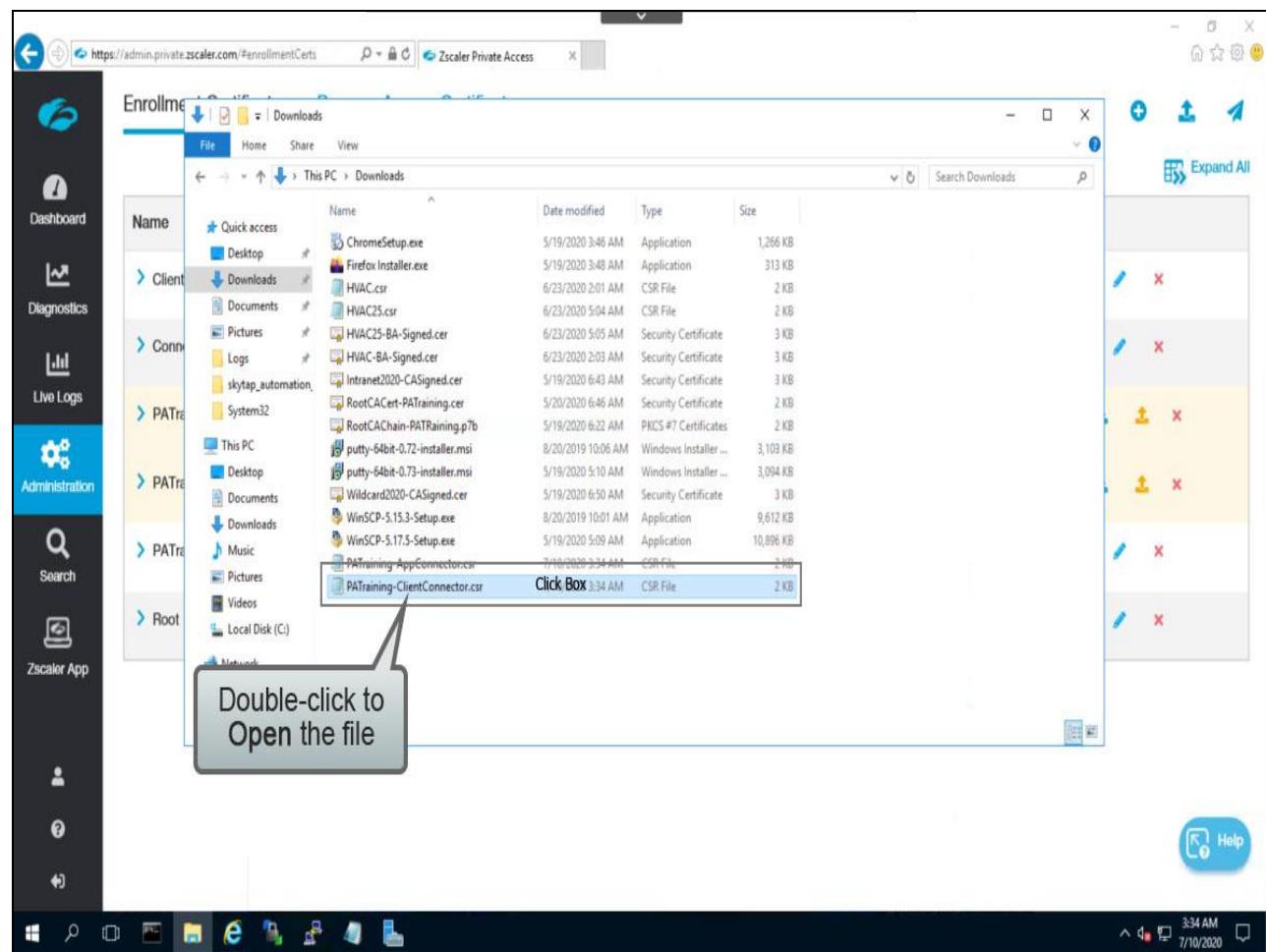
| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

A callout box with the text "Click Open folder" points to the "Open" button in the download notification bar at the bottom of the screen. The notification bar also displays the message "The PATraining-ClientConnector.csr download has completed."

Slide notes

You now need to open these files to copy the contents, so click **Open Folder**, ...

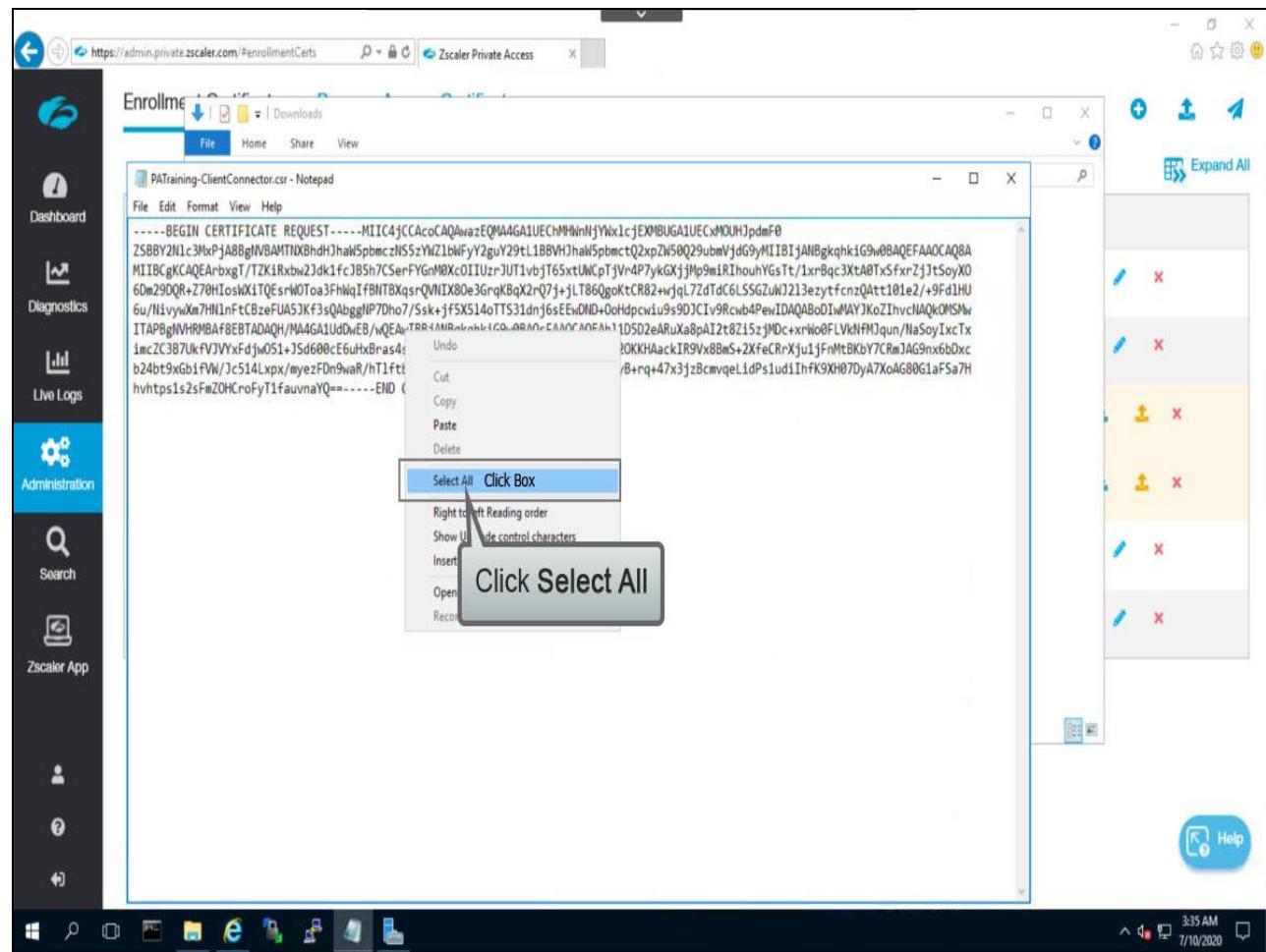
Slide 48 - Slide 48



Slide notes

...and double-click on one of the files to open it.

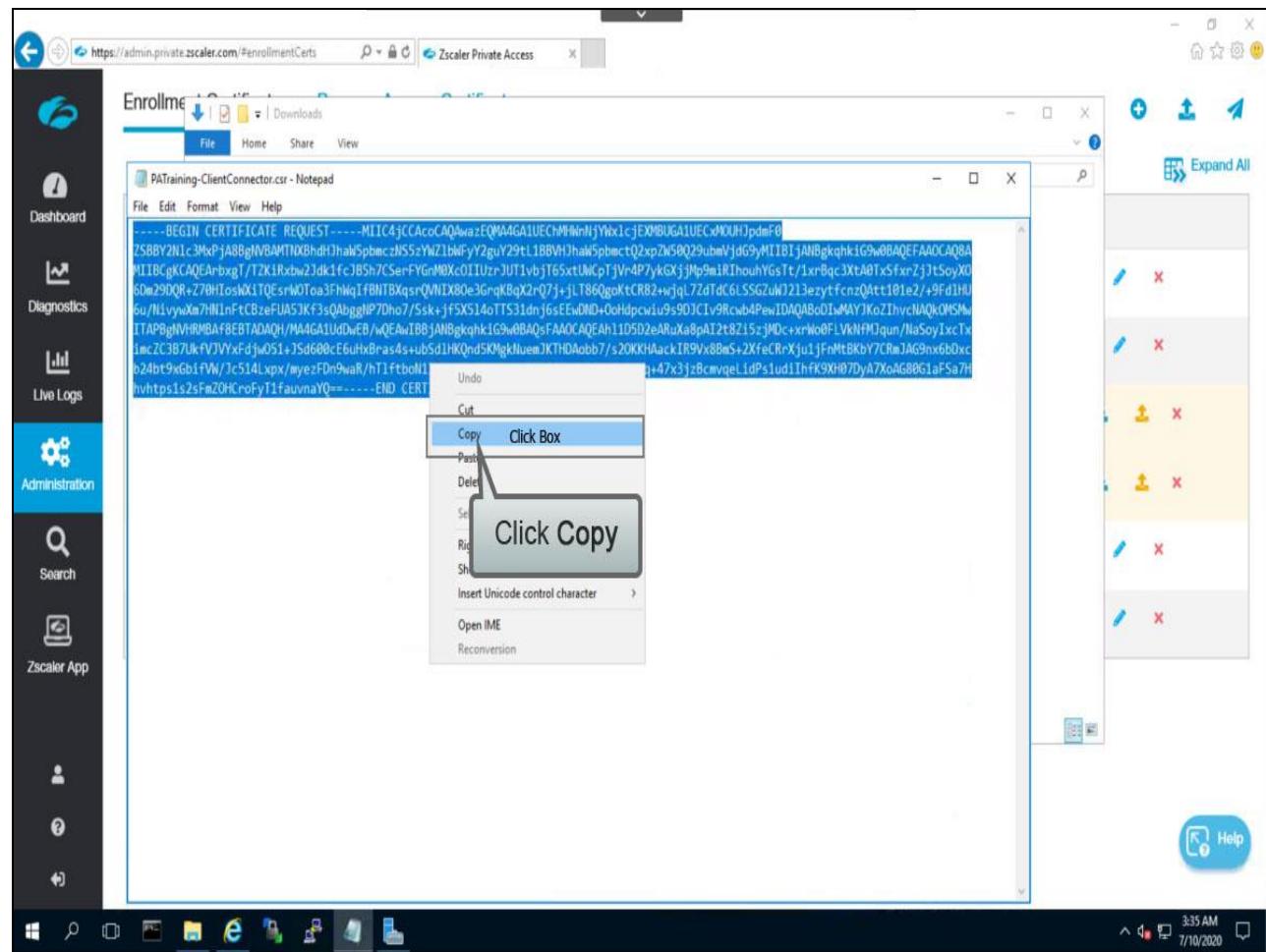
Slide 49 - Slide 49



Slide notes

Right click in the file data and click **Select All**, ...

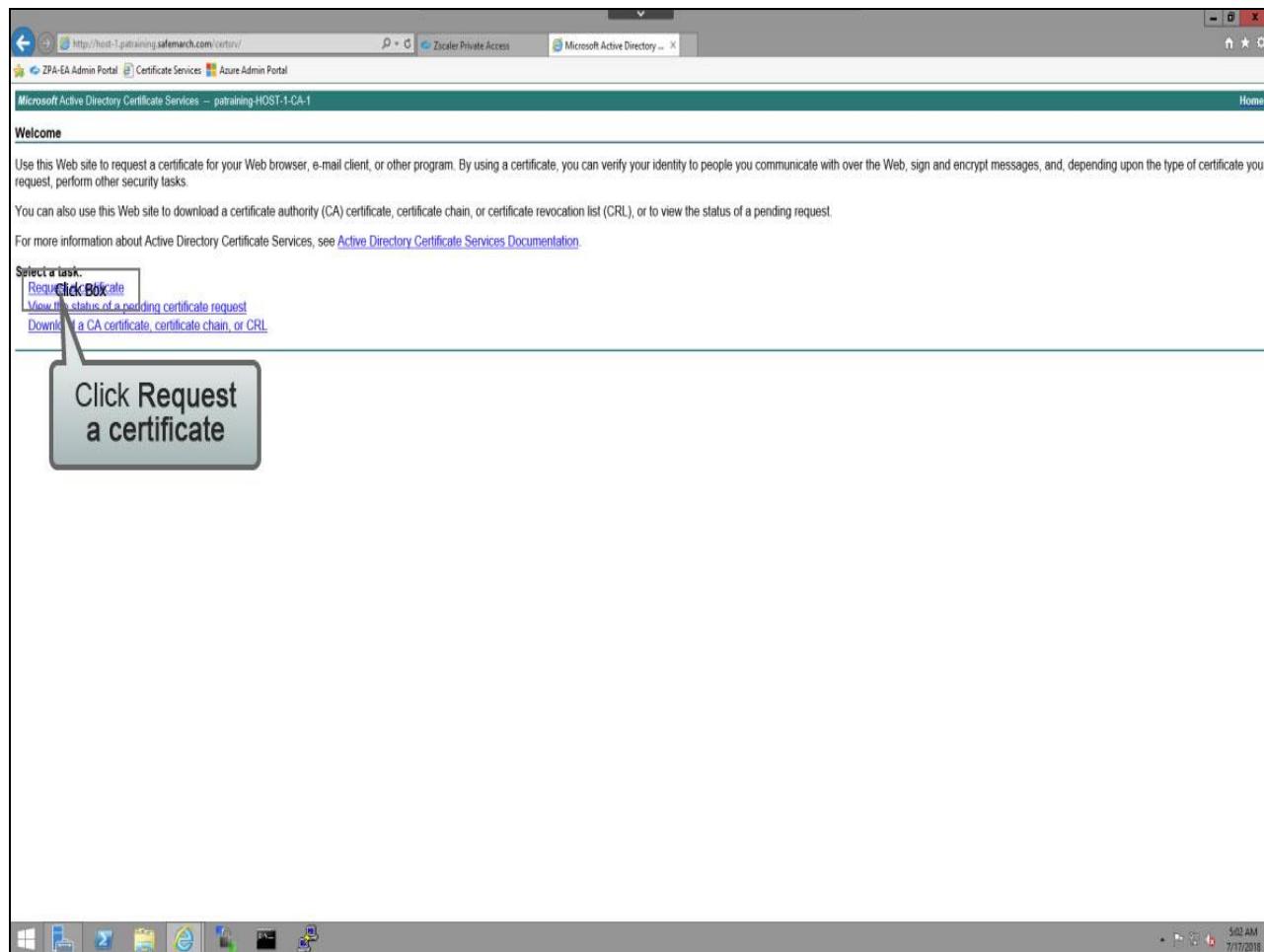
Slide 50 - Slide 50



Slide notes

...right click again and click **Copy**.

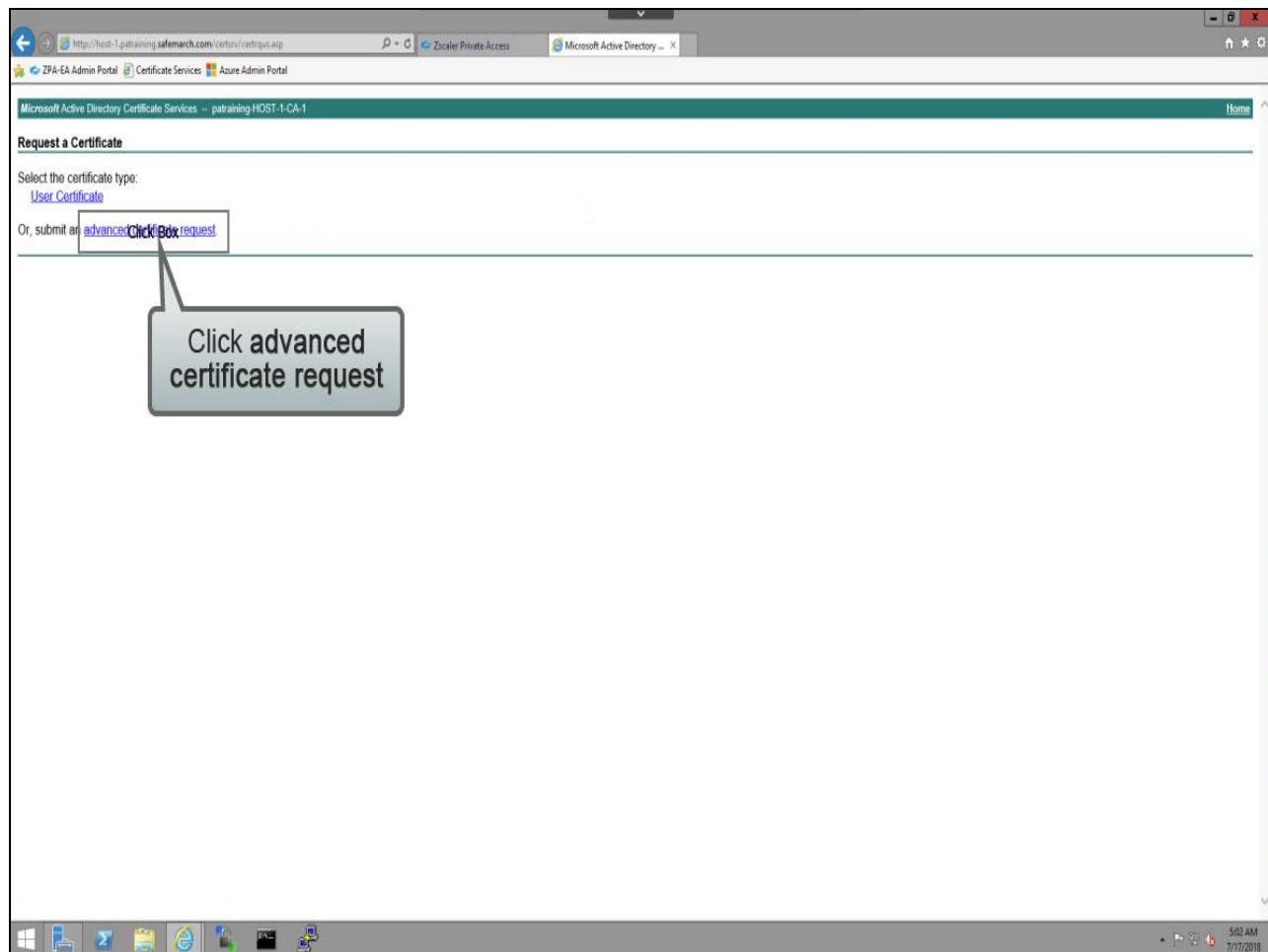
Slide 51 - Slide 51



Slide notes

In a new browser window or tab, navigate back to the corporate **Certificate Services** home page, and click the **Request a certificate** link.

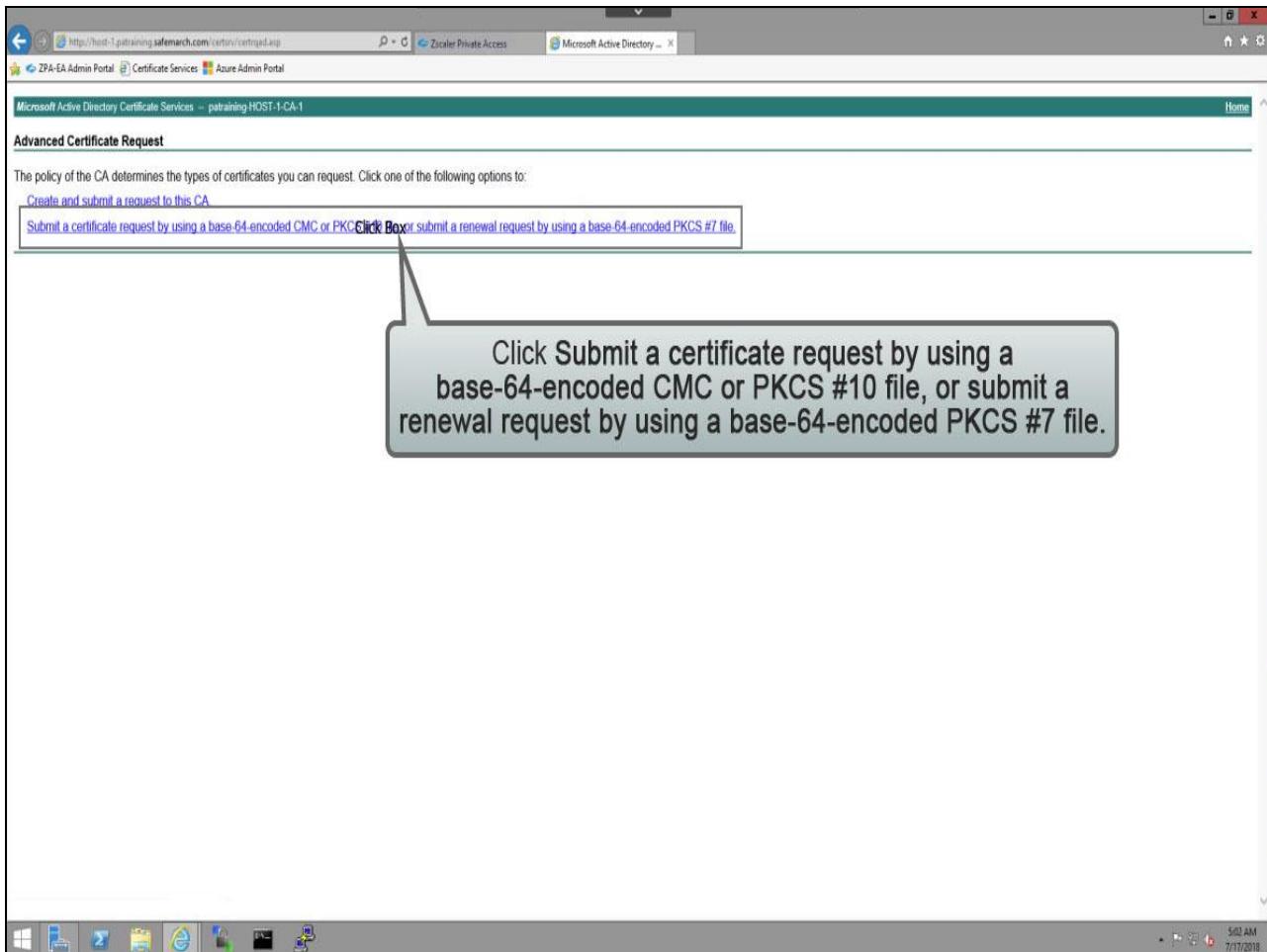
Slide 52 - Slide 52



Slide notes

Click the **advanced certificate request** link, ...

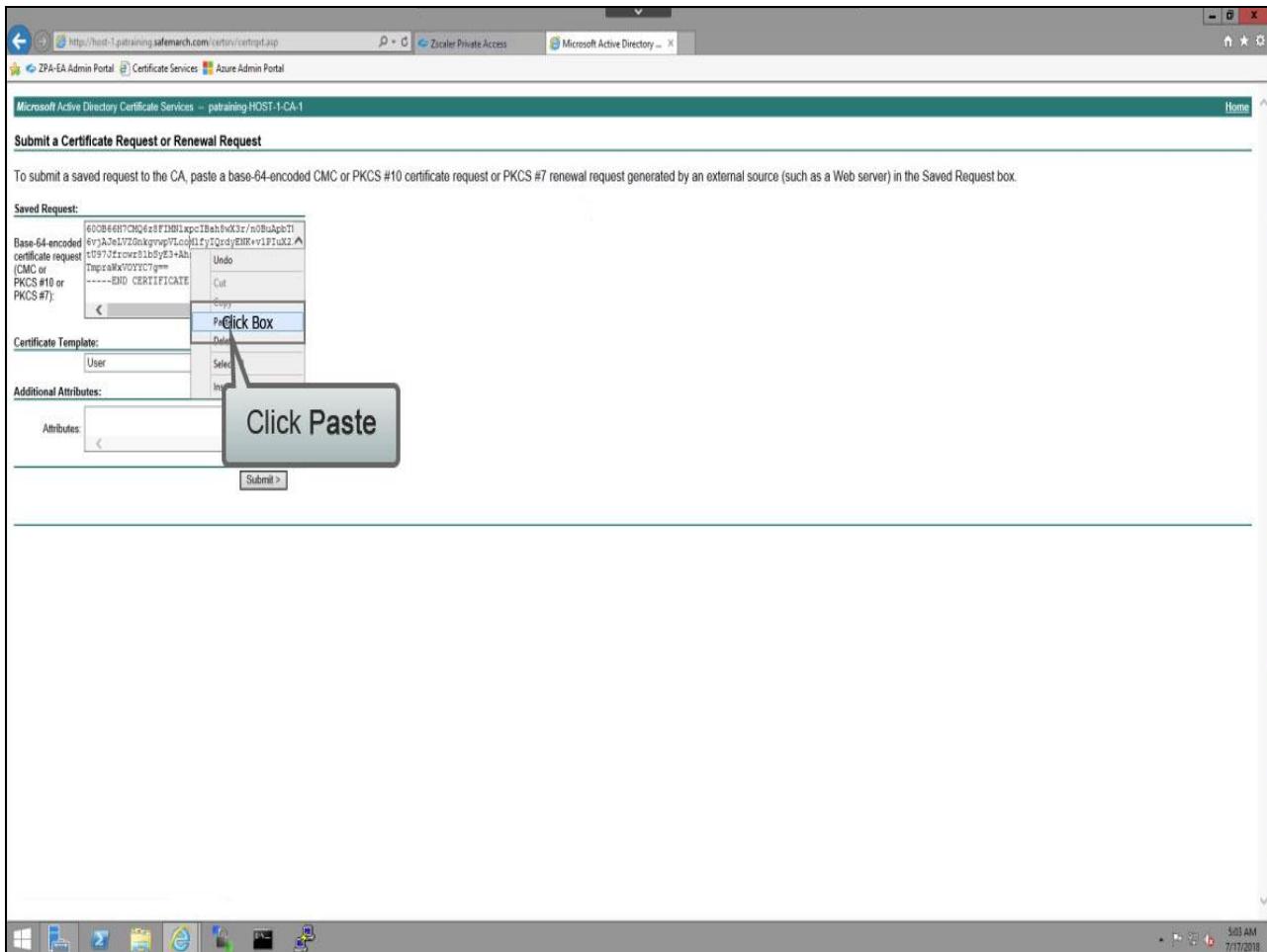
Slide 53 - Slide 53



Slide notes

...then click the link labelled **Submit a certificate request by using a base-64-encoded CMC or PKCS #10 file, or submit a renewal request by using a base-64-encoded PKCS #7 file.**

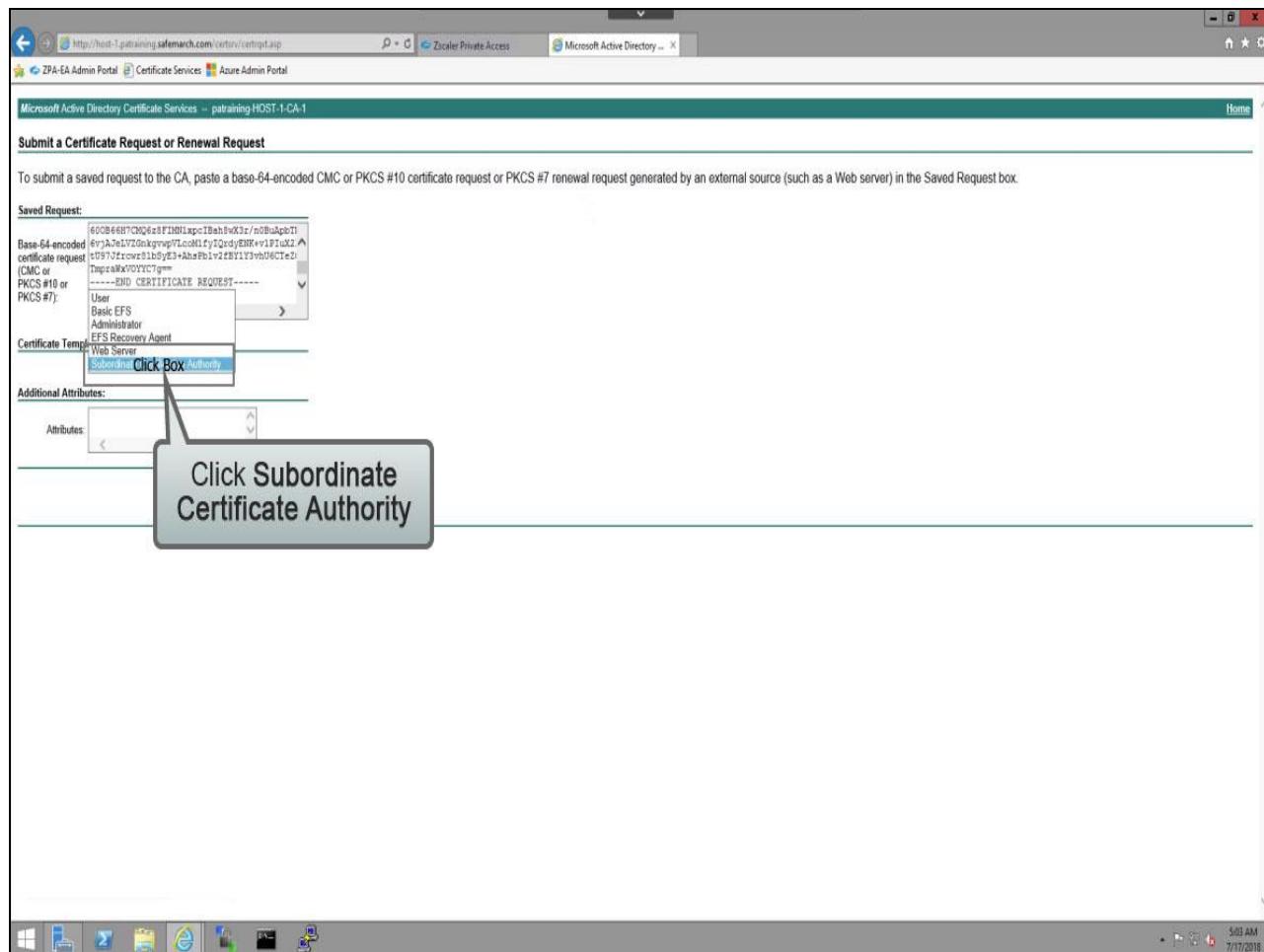
Slide 54 - Slide 54



Slide notes

To paste the CSR data into the signing request form, right click in the field under the heading **Saved Request** and click **Paste**.

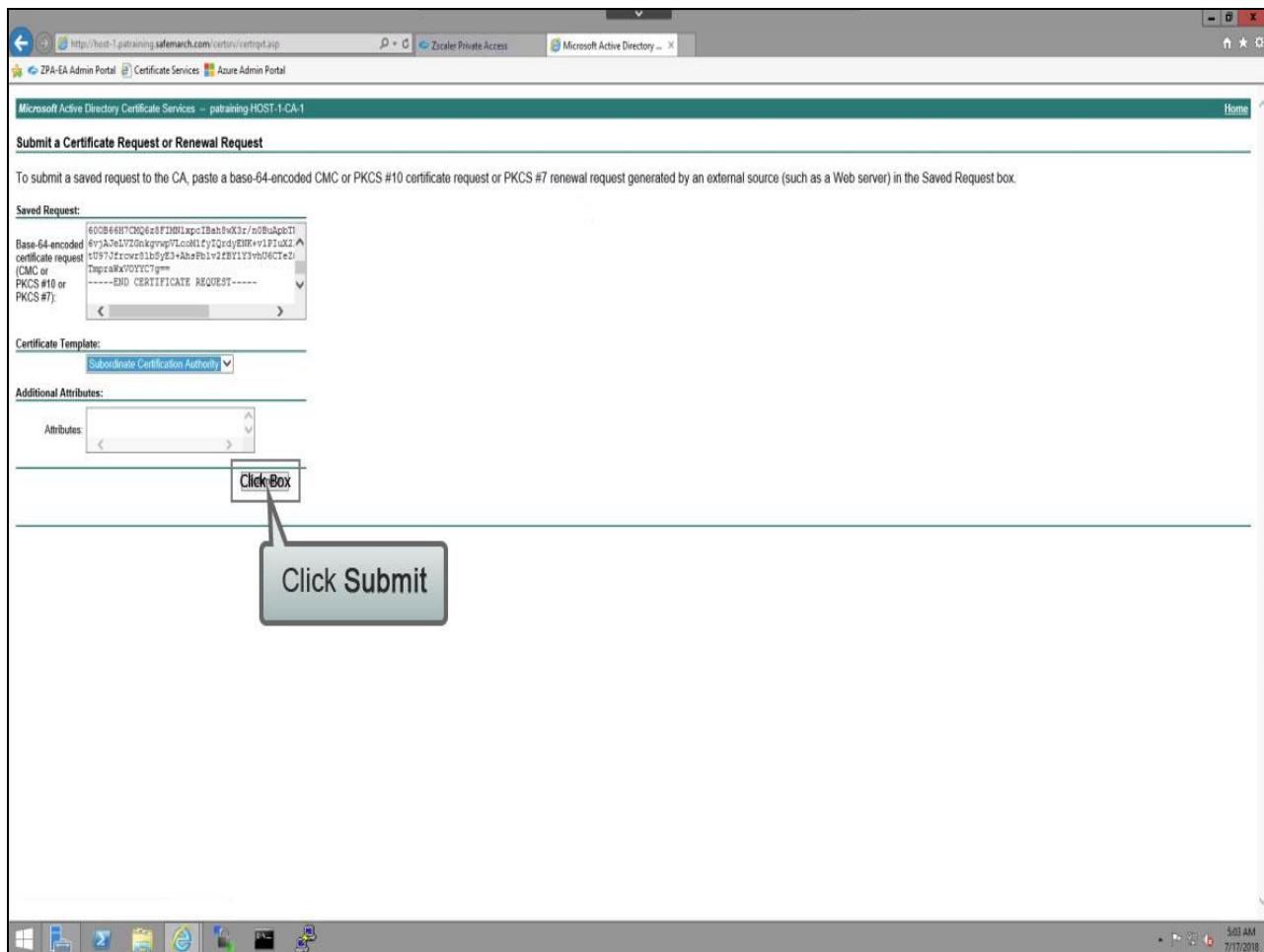
Slide 55 - Slide 55



Slide notes

Under the heading **Certificate Template**, from the drop-down list click to select the **Subordinate Certificate Authority** option, ...

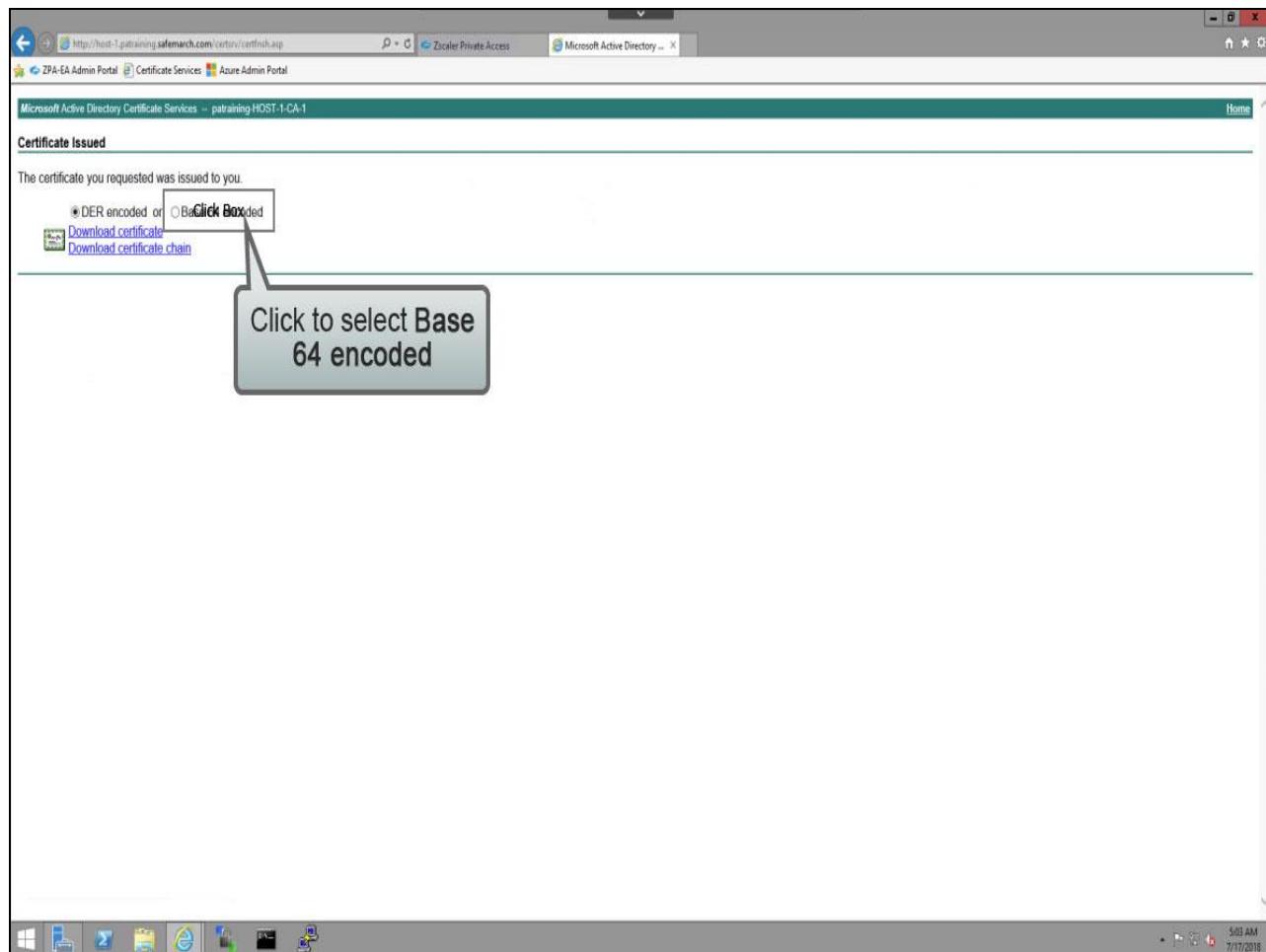
Slide 56 - Slide 56



Slide notes

...then click **Submit**.

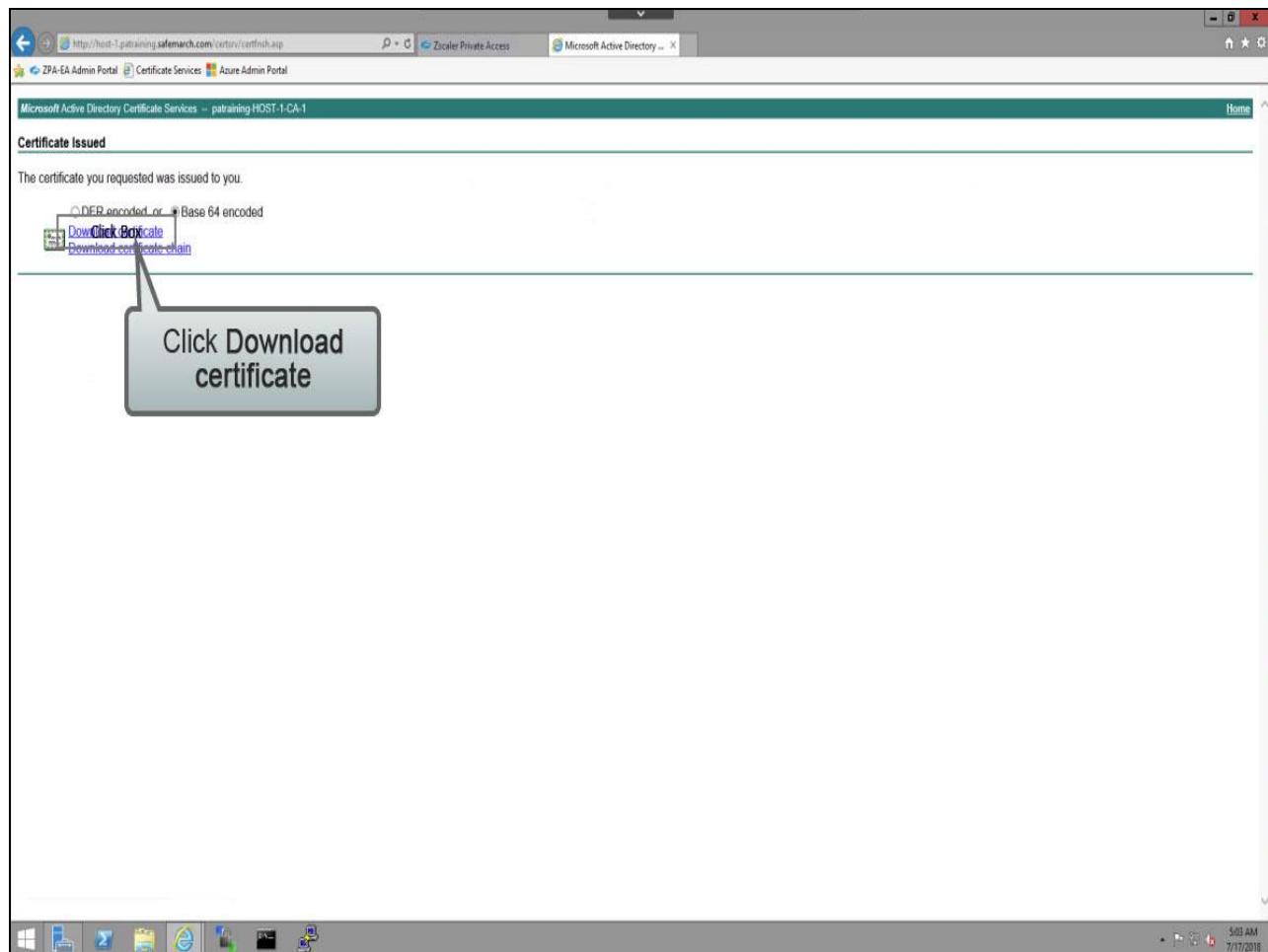
Slide 57 - Slide 57



Slide notes

Click to select the **Base 64 encoded** option, ...

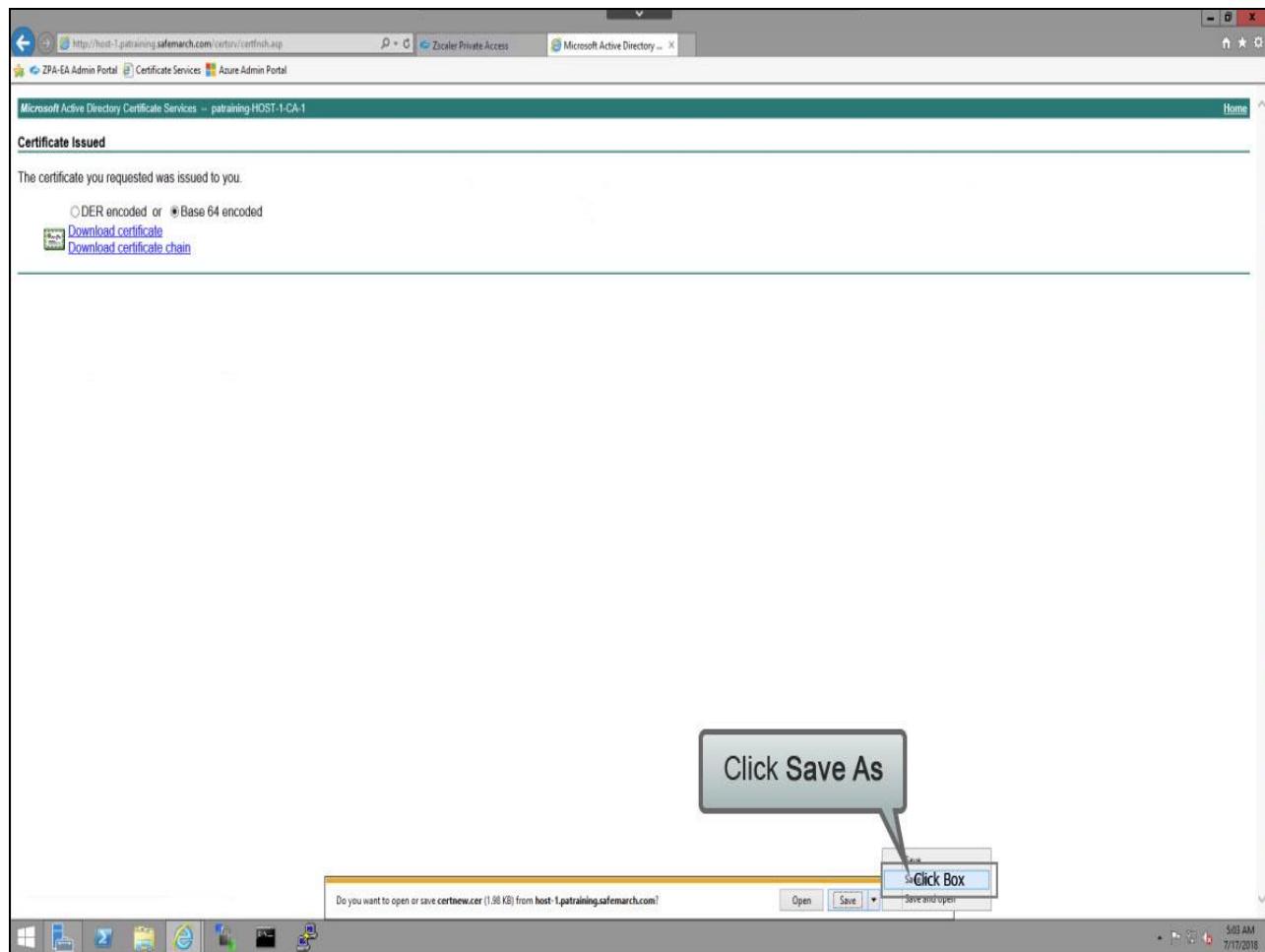
Slide 58 - Slide 58



Slide notes

...then click **Download certificate**.

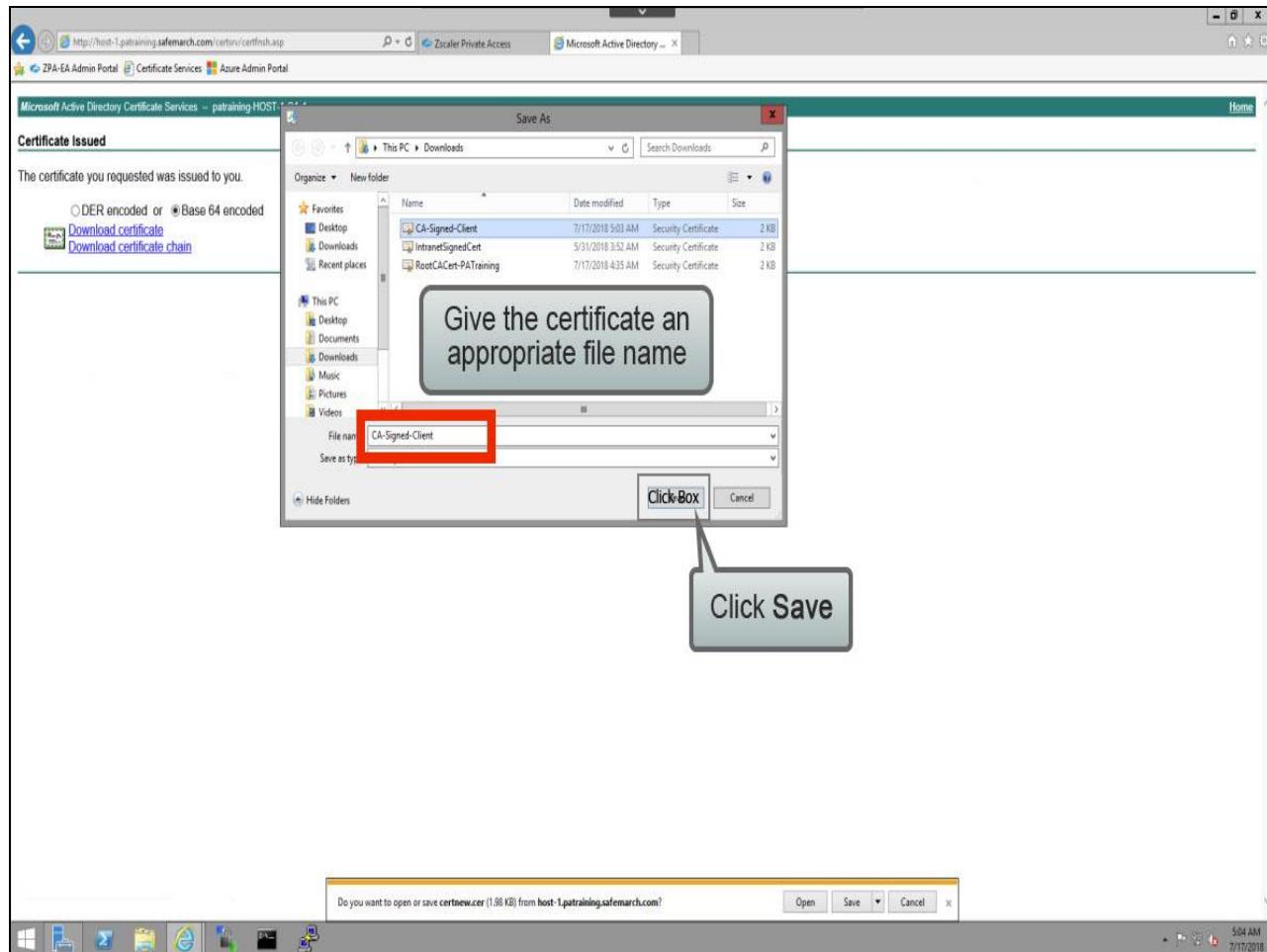
Slide 59 - Slide 59



Slide notes

Click Save As, ...

Slide 60 - Slide 60



Slide notes

...navigate to an appropriate folder or share, give the certificate a suitable name, then click **Save**.

Slide 61 - Slide 61

The screenshot shows the Zscaler Private Access (ZPA) Admin Portal interface. On the left, there is a vertical sidebar with icons for Dashboard, Diagnostics, Live Logs, Administration (which is selected), Search, and Zscaler App. The main content area has tabs for 'Enrollment Certificates' (selected) and 'Browser Access Certificates'. Below the tabs is a table with columns: Name, Creation Date, Expiry Date, Common Name, and Actions. There are six entries in the table:

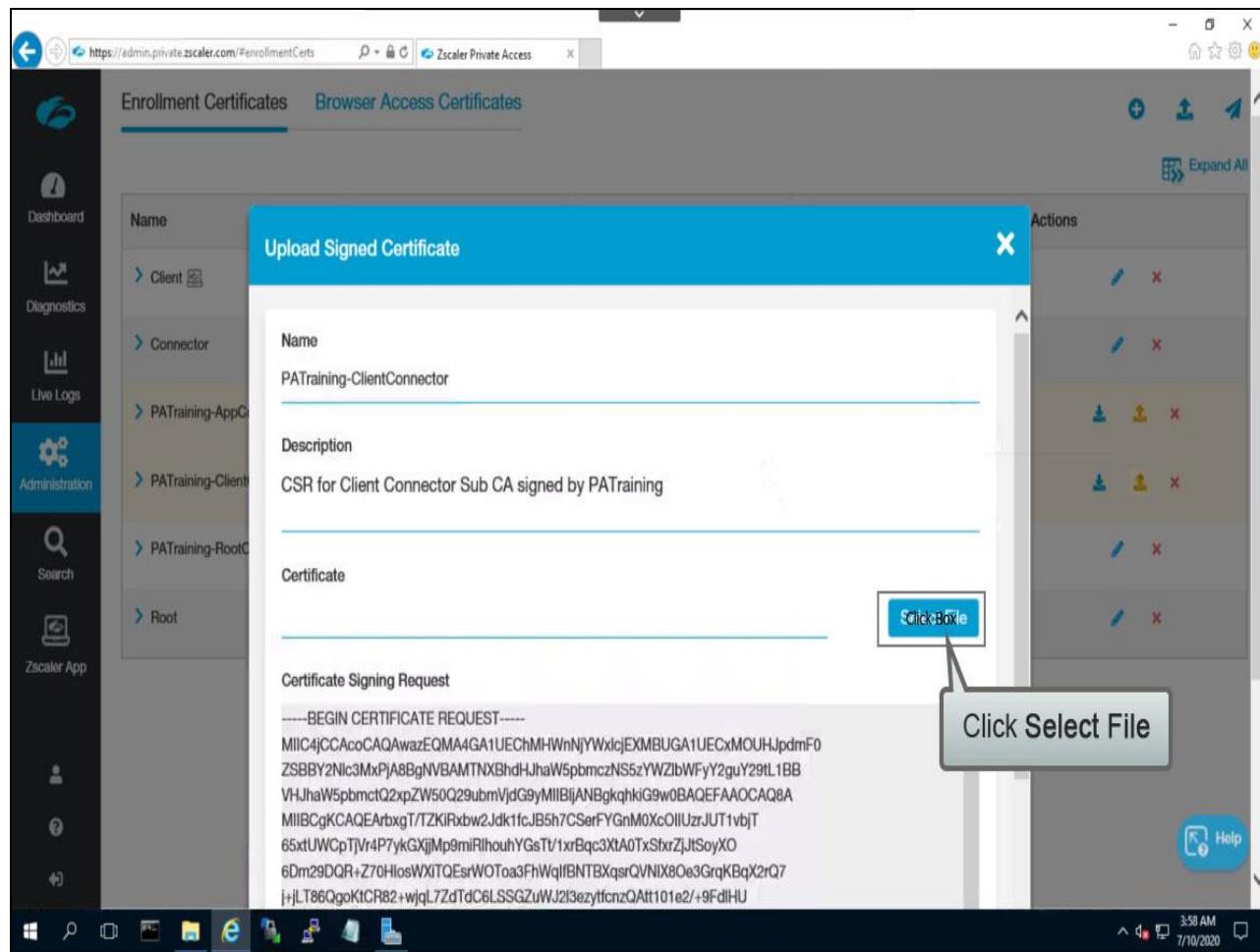
| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|--|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | Edit Delete |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | Edit Delete |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | | patraining35.safemarch.com/PATrai... | Download Edit Delete |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | | patraining35.safemarch.com/PA... | Download Edit Delete |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | Edit Delete |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.co... | Edit Delete |

A callout bubble with the text 'Click Upload Certificate' points to the 'Upload Certificate' link in the actions column of the 'PATraining-AppConnector' row.

Slide notes

To upload the signed certificate to the subsidiary CA in the ZPA Admin Portal, on the **Enrollment Certificates** page, click the **Upload Certificate** link for the correct entry, ...

Slide 62 - Slide 62

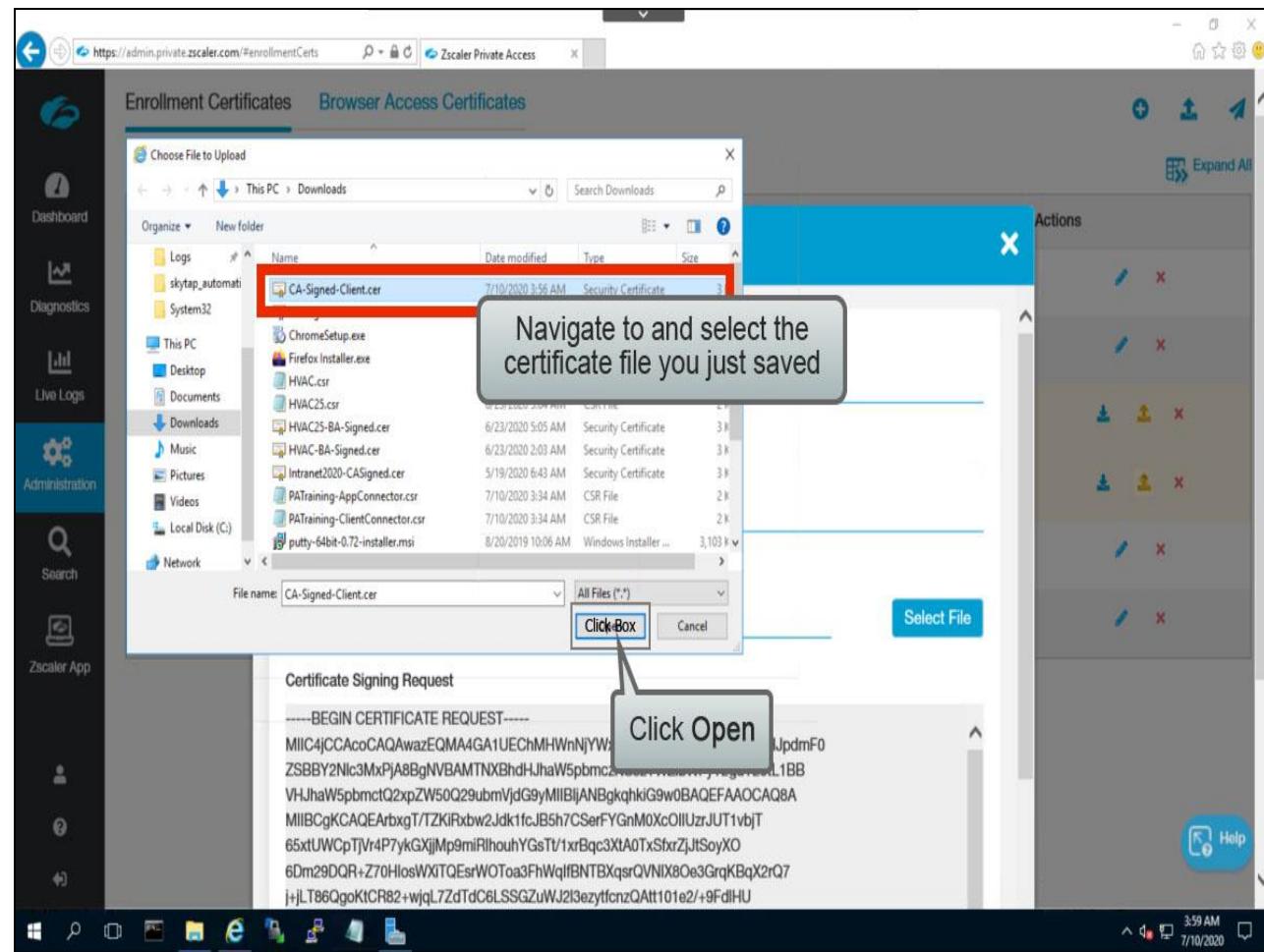


Slide notes

...click **Select File**, ...

Note, be sure to upload the certificate to the correct entry in the **Enrollment Certificates** list.

Slide 63 - Slide 63



Slide notes

...navigate to the folder or share where you just saved the signed certificate for this entry, select it and click Open.

Slide 64 - Slide 64

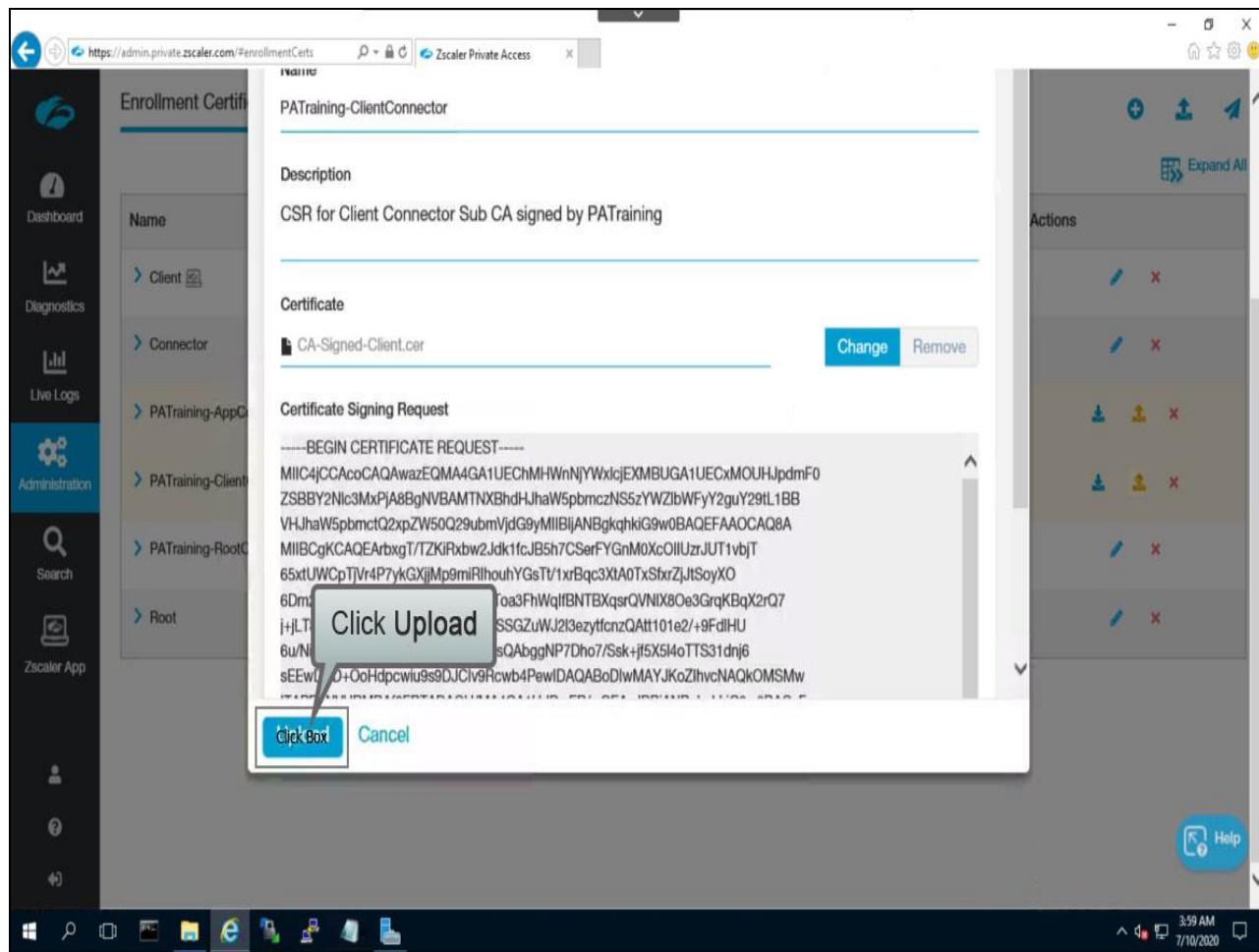
The screenshot shows a web browser window for 'Zscaler Private Access' at the URL <https://admin.private.zscaler.com/#enrollmentCerts>. The left sidebar has icons for Dashboard, Diagnostics, Live Logs, Administration, Search, and Zscaler App. The main area shows 'Enrollment Certificates' selected. A modal dialog box titled 'Upload Signed Certificate' is open. It contains fields for 'Name' (set to 'PATraining-ClientConnector'), 'Description' (set to 'CSR for Client Connector Sub CA signed by PATraining'), and 'Certificate' (set to 'CA-Signed-Client.cer'). Below these fields is a large text area containing a certificate signing request (CSR) in base64 format:

```
-----BEGIN CERTIFICATE REQUEST-----
MIIC4jCCAcQAwazEQMA4GA1UEChMHWnNjYWxlcjEXMBUGA1UECxMOUHJpdmF0
ZSBBy2Nlc3MxPjA8BgNVBAMTNXBhdHJhaW5pbmczNS5zYWZlbWFyY2guY29tL1BB
VHJhaW5pbmczQ2xpZW50Q29ubmVjdG9yMIIIBijANBgkqhkiG9w0BAQEAAQ8A
MIIBCgKCAQEArbxgT/TZKIRxbw2Jdk1fcJB5h7CSerFYGrM0XcOIIUzrJUT1vbjT
65xtUWCpTjv4P7ykGxjjMp9miRlhohuYGstI/1xrBqc3Xta0TxSfxrZjJtSoyXO
6Dm29DQR+Z70HlosWXiTQEsrWOToa3FhWqlfBNTBXqsrQVNIX8Oe3GrqKBqX2rQ7
j+LT86QgoKtCR82+wjqL7zdTdC6LSSGZuWJ2l3ezytfnzQAtt101e2/+9FdIHU
```

Slide notes

Scroll down if necessary, ...

Slide 65 - Slide 65



Slide notes

...then to actually upload the certificate to ZPA, click **Upload**.

Slide 66 - Slide 66

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The main area displays a table of certificates with columns: Name, Creation Date, Expiry Date, Common Name, and Actions. The table contains six rows:

| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | Sunday , July 10 2022 3:56:12 am | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

A green notification bar at the bottom right says 'Certificate saved' with a 'Help' link.

Slide notes

Slide 67 - Slide 67

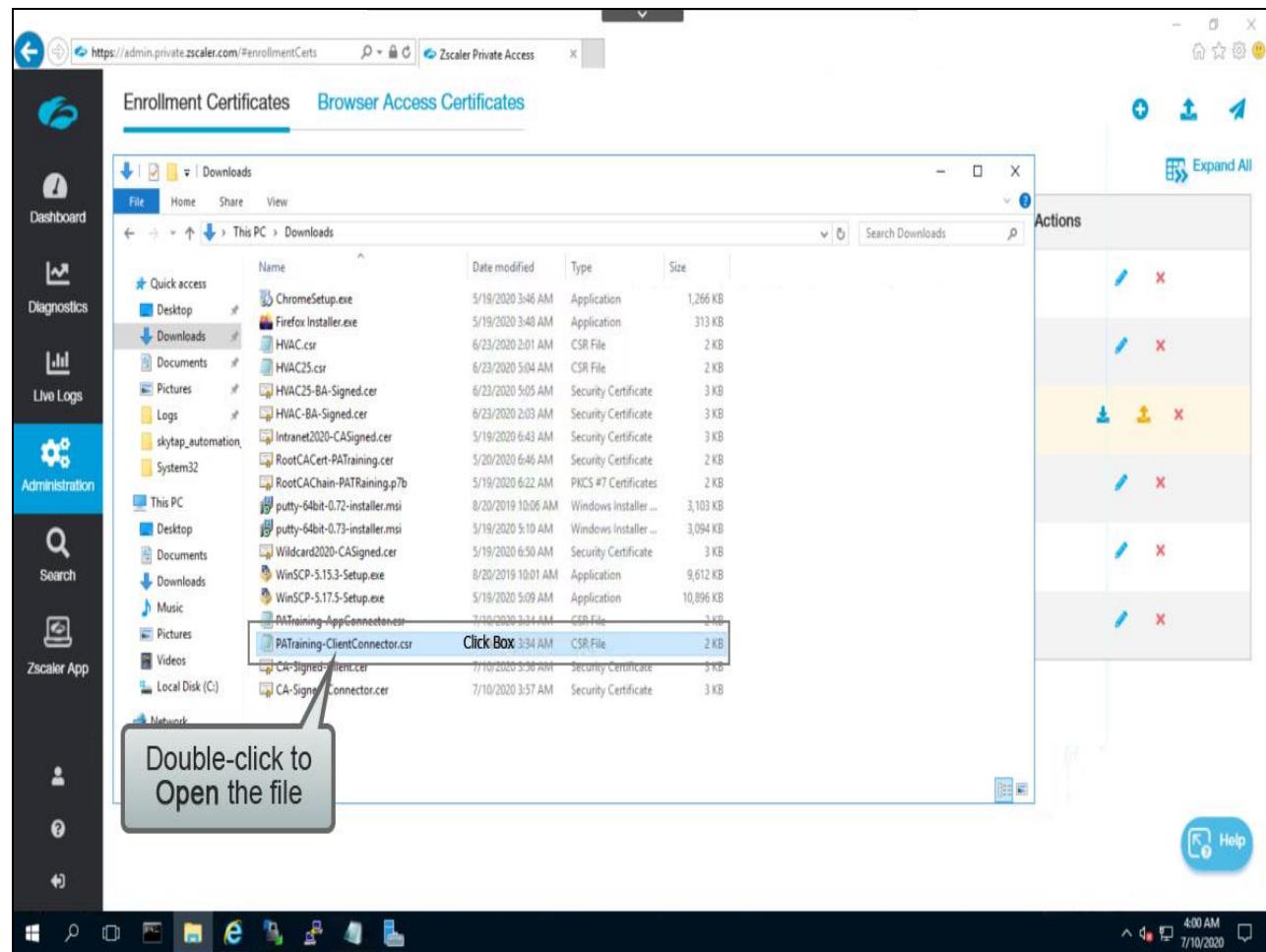
The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. A table lists several certificates with columns for Name, Creation Date, Expiry Date, Common Name, and Actions. One row, 'PATraining-ClientConnector', is highlighted with an orange background and has a red border around it. A callout bubble from the bottom left points to the Windows taskbar icon for 'File Explorer'. Another callout bubble from the middle right contains the text: 'Check that the orange warning indication for the certificate has now gone'.

| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | Sunday , July 10 2022 3:56:12 am | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 12:00:00 am | | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2022 12:00:00 am | | |

Slide notes

Check that the orange alert indication for that certificate has now gone. Now you need to repeat the whole process for the other CSR, click to open Windows **File Explorer**, ...

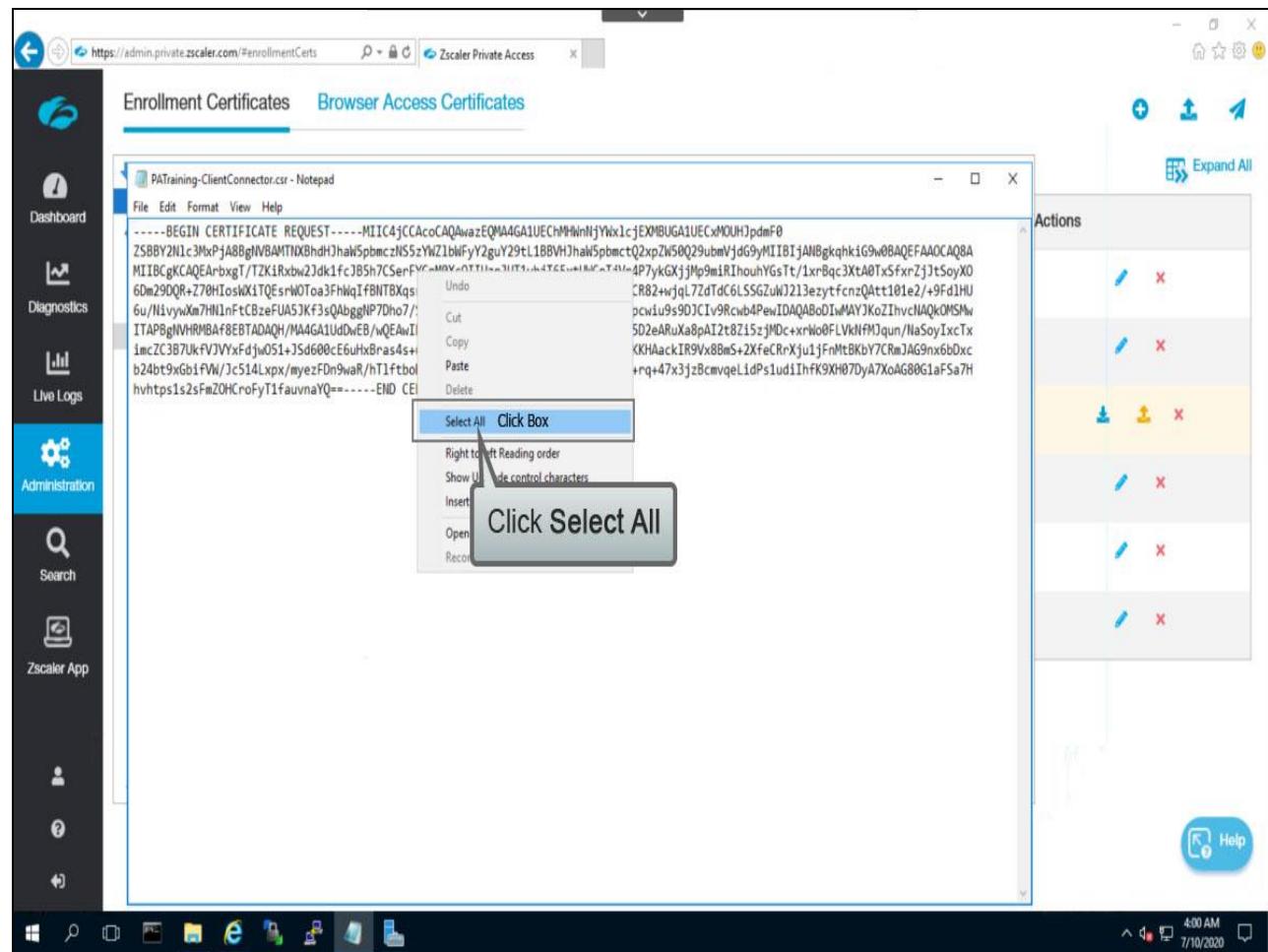
Slide 68 - Slide 68



Slide notes

...locate and double-click the other CSR file to open it, ...

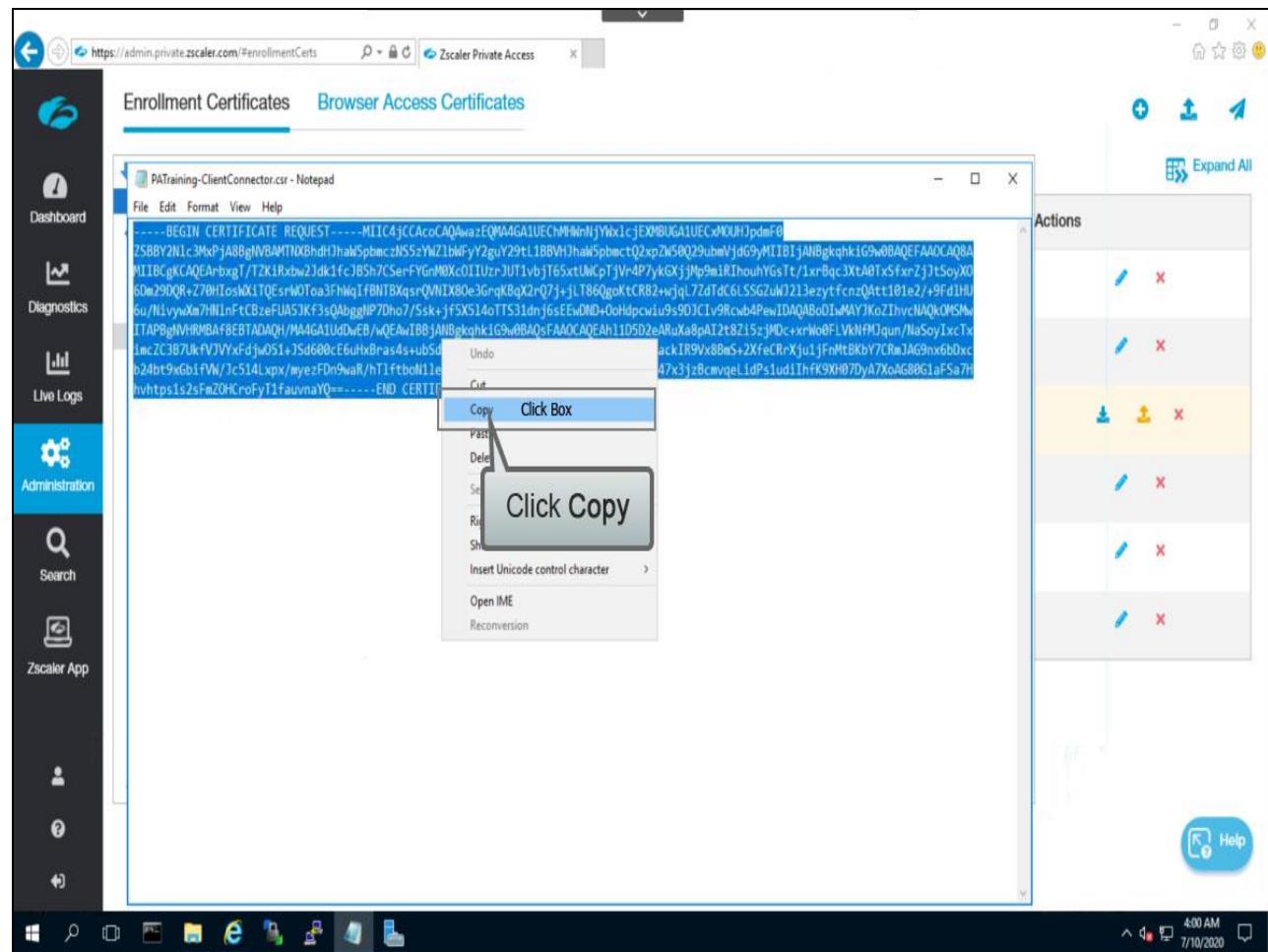
Slide 69 - Slide 69



Slide notes

...right click in the CSR data and click **Select All**, ...

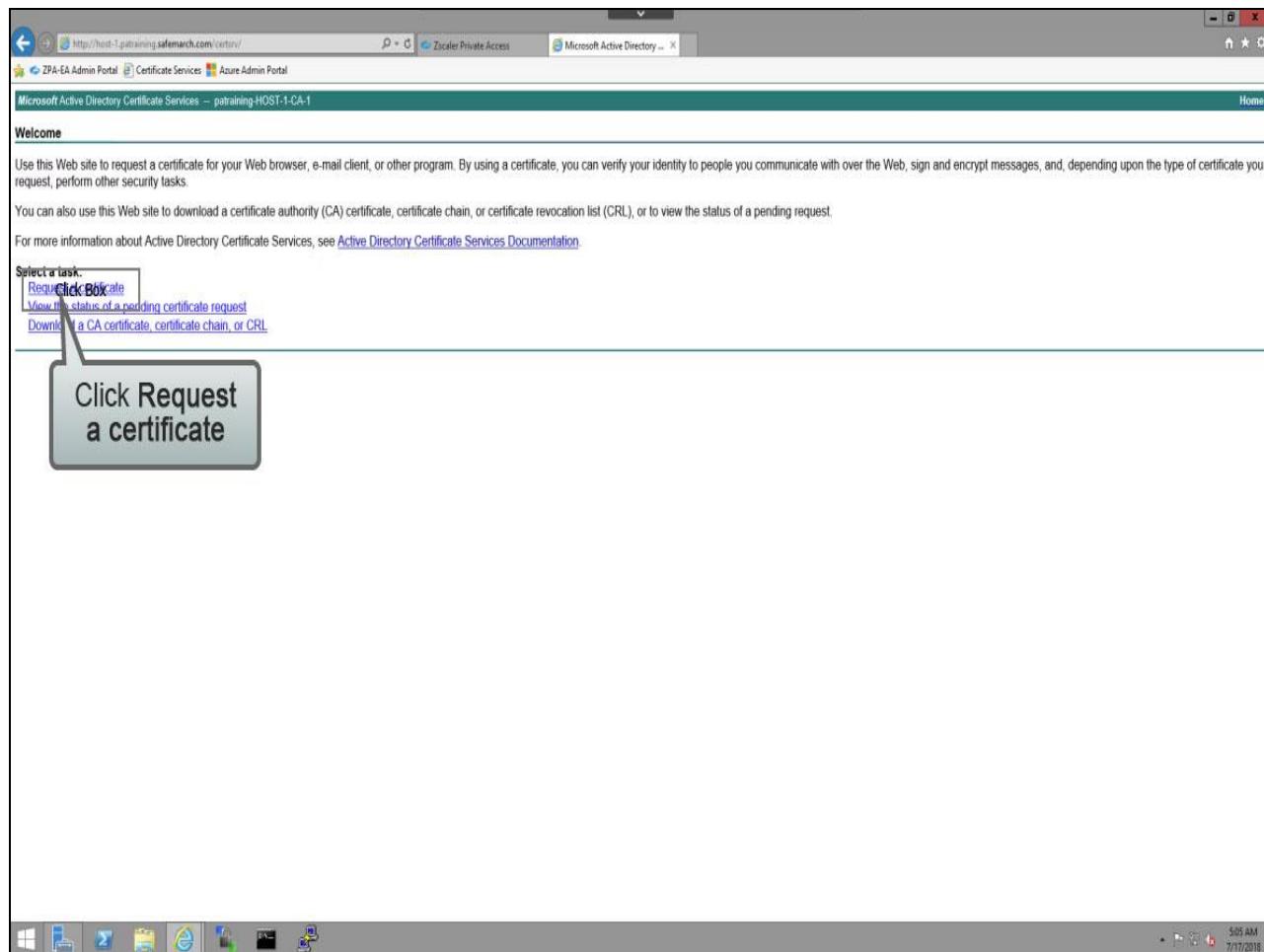
Slide 70 - Slide 70



Slide notes

...then right click again and select **Copy**.

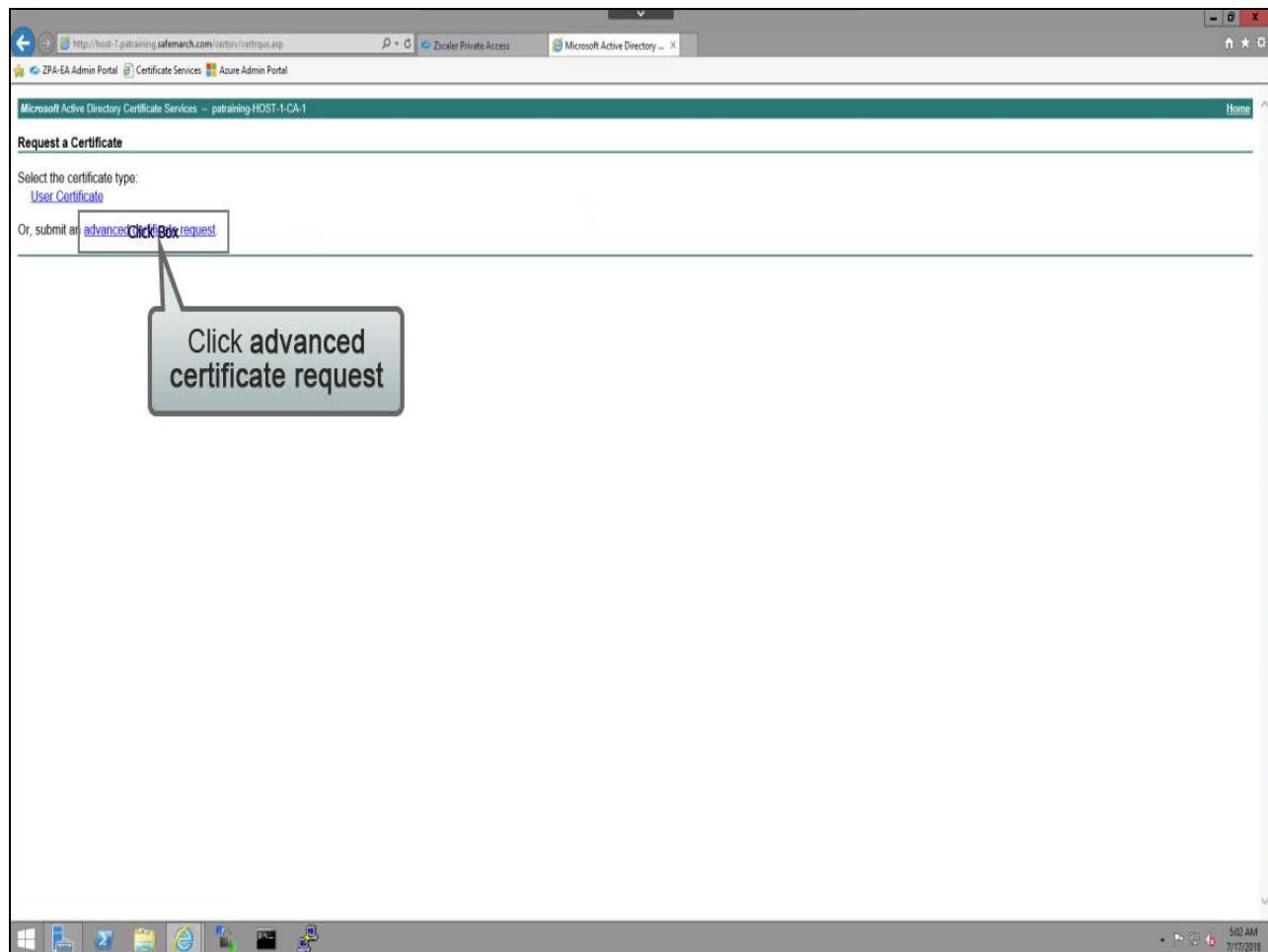
Slide 71 - Slide 71



Slide notes

Go back to the corporate **Certificate Services** home page and click **Request a certificate**, ...

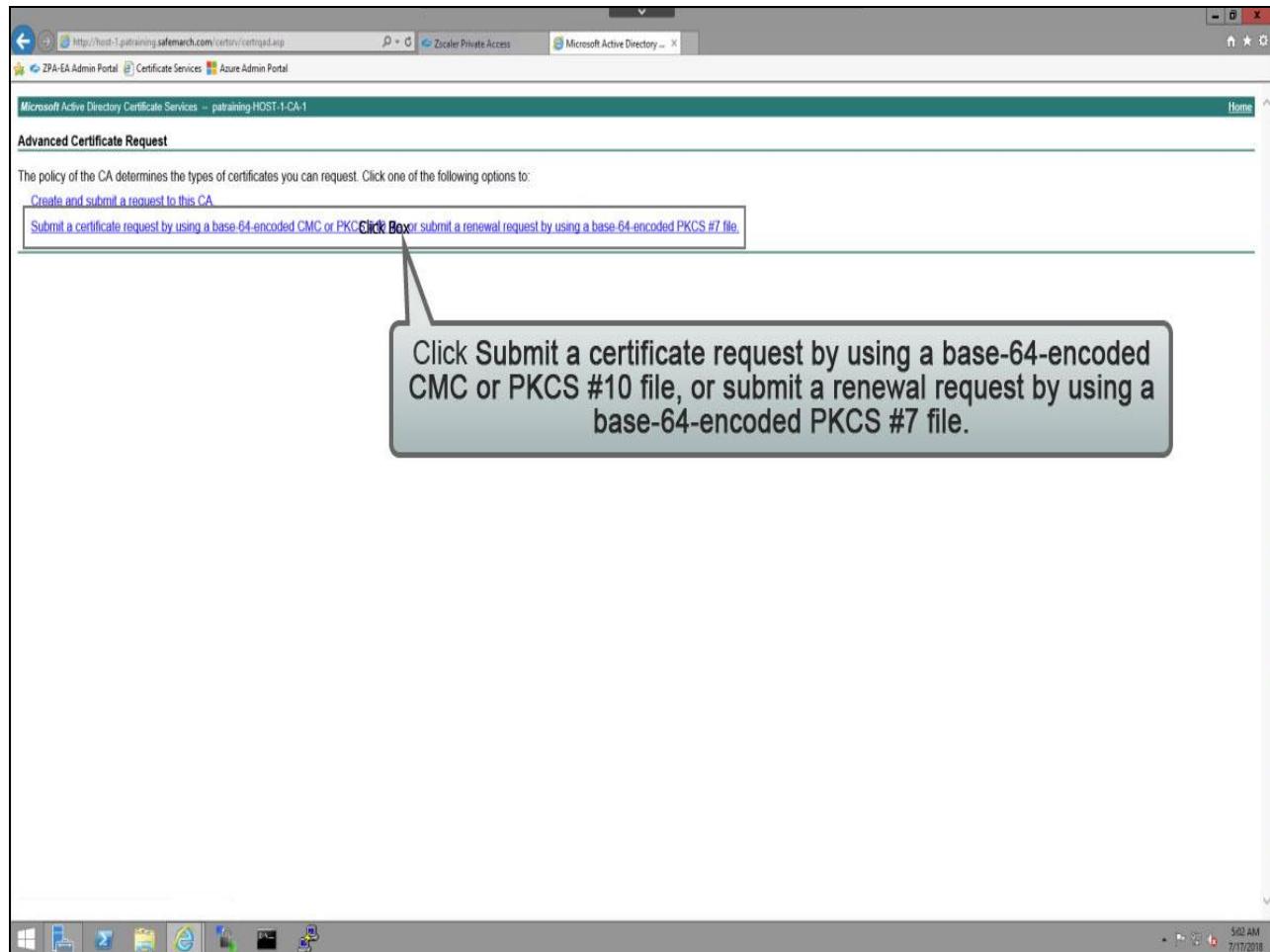
Slide 72 - Slide 72



Slide notes

...click advanced certificate request, ...

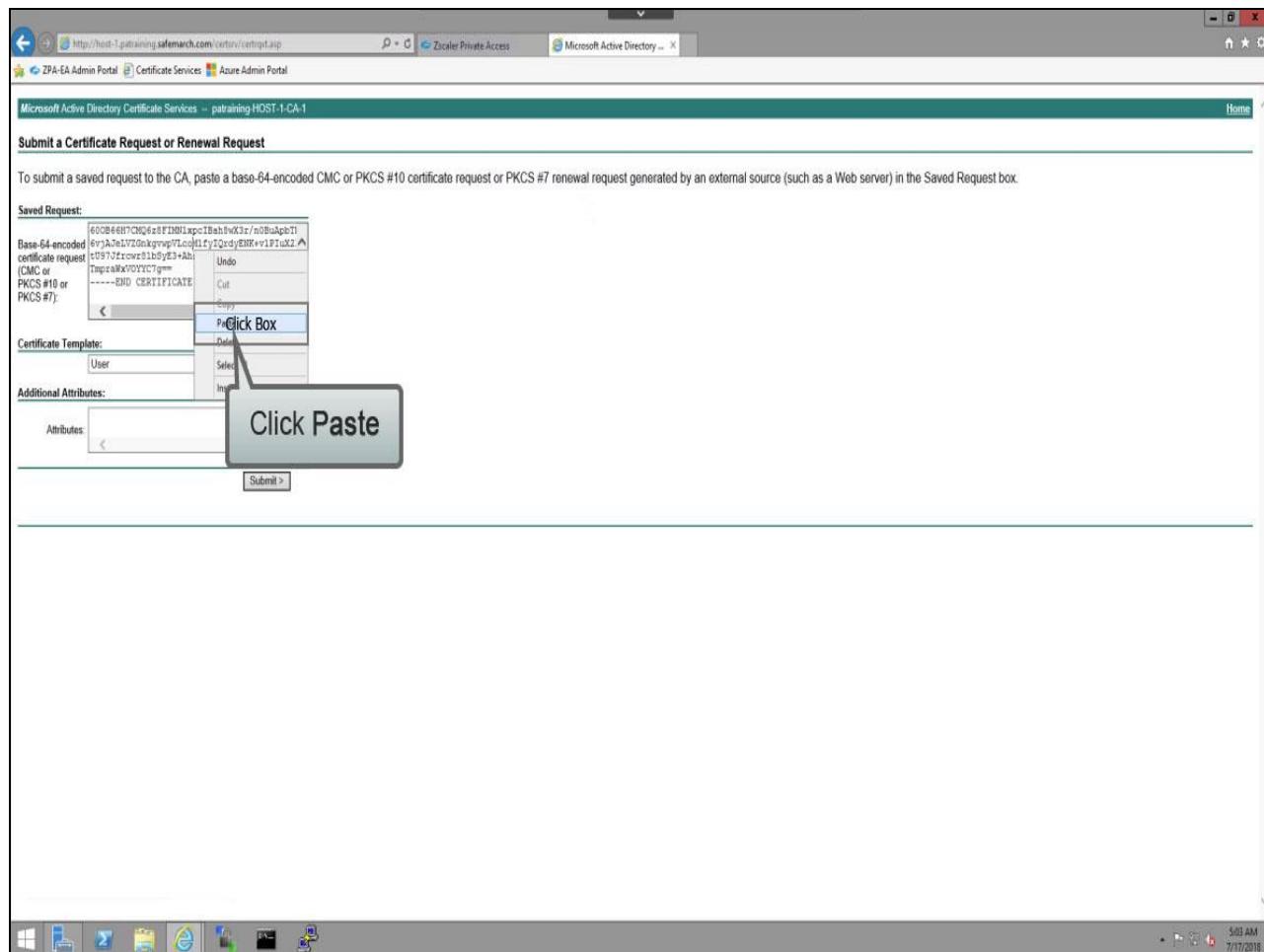
Slide 73 - Slide 73



Slide notes

...then click **Submit a certificate request by using a base-64-encoded CMC or PKCS #10 file, or submit a renewal request by using a base-64-encoded PKCS #7 file.**

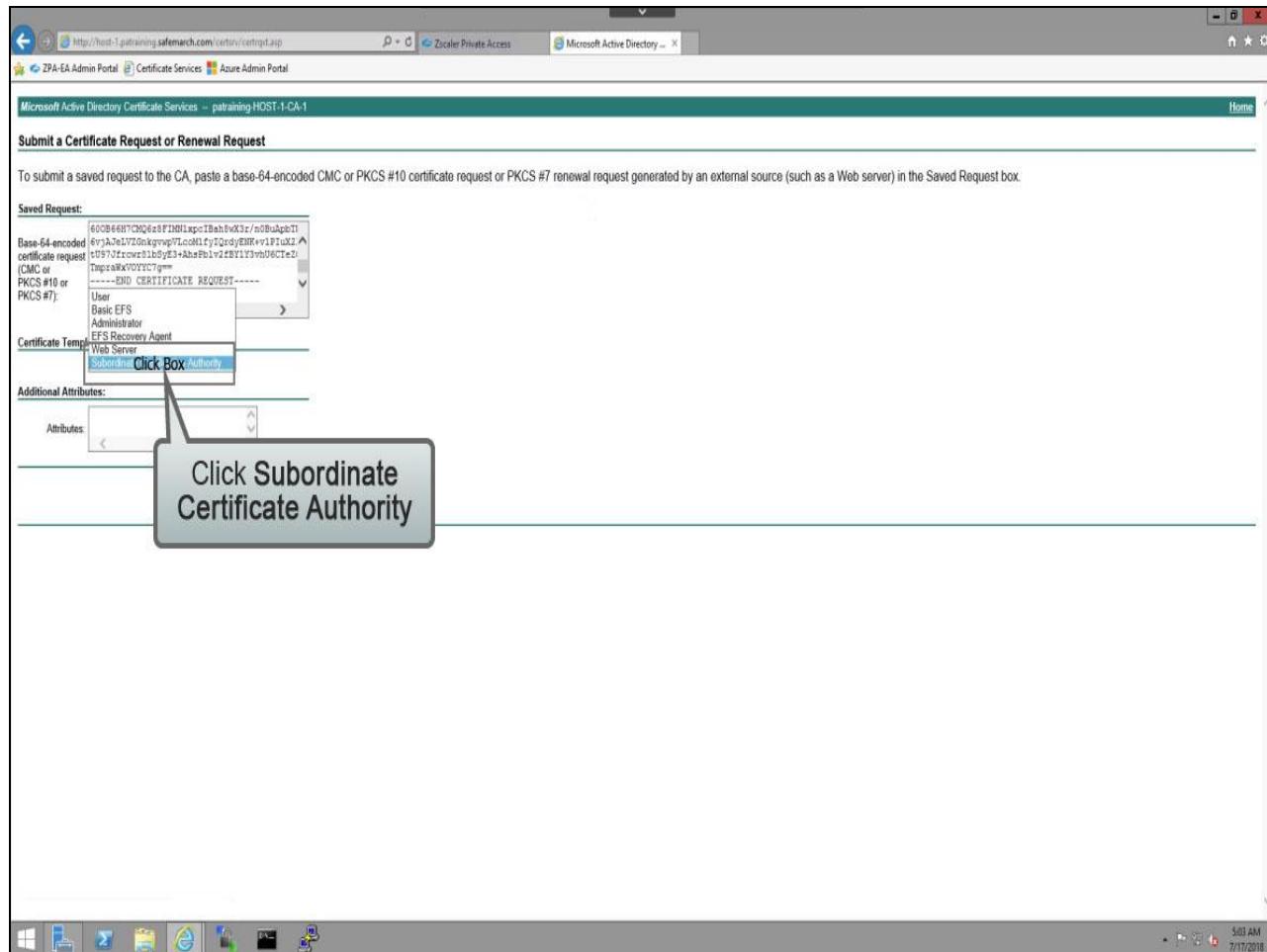
Slide 74 - Slide 74



Slide notes

Right click in the **Saved Request** field and click **Paste**, ...

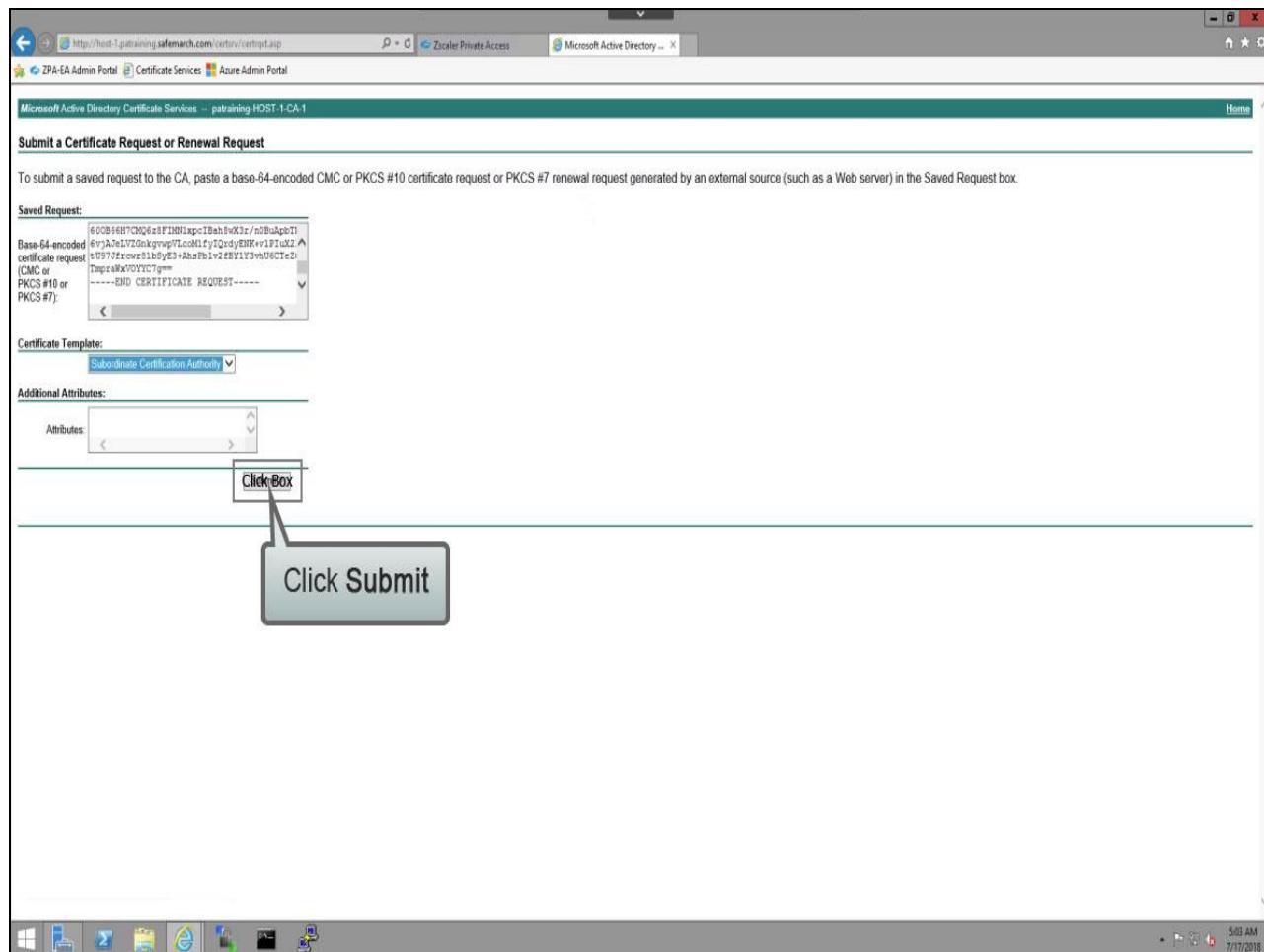
Slide 75 - Slide 75



Slide notes

...click to select the **Subordinate Certificate Authority** option from the drop-down list, ...

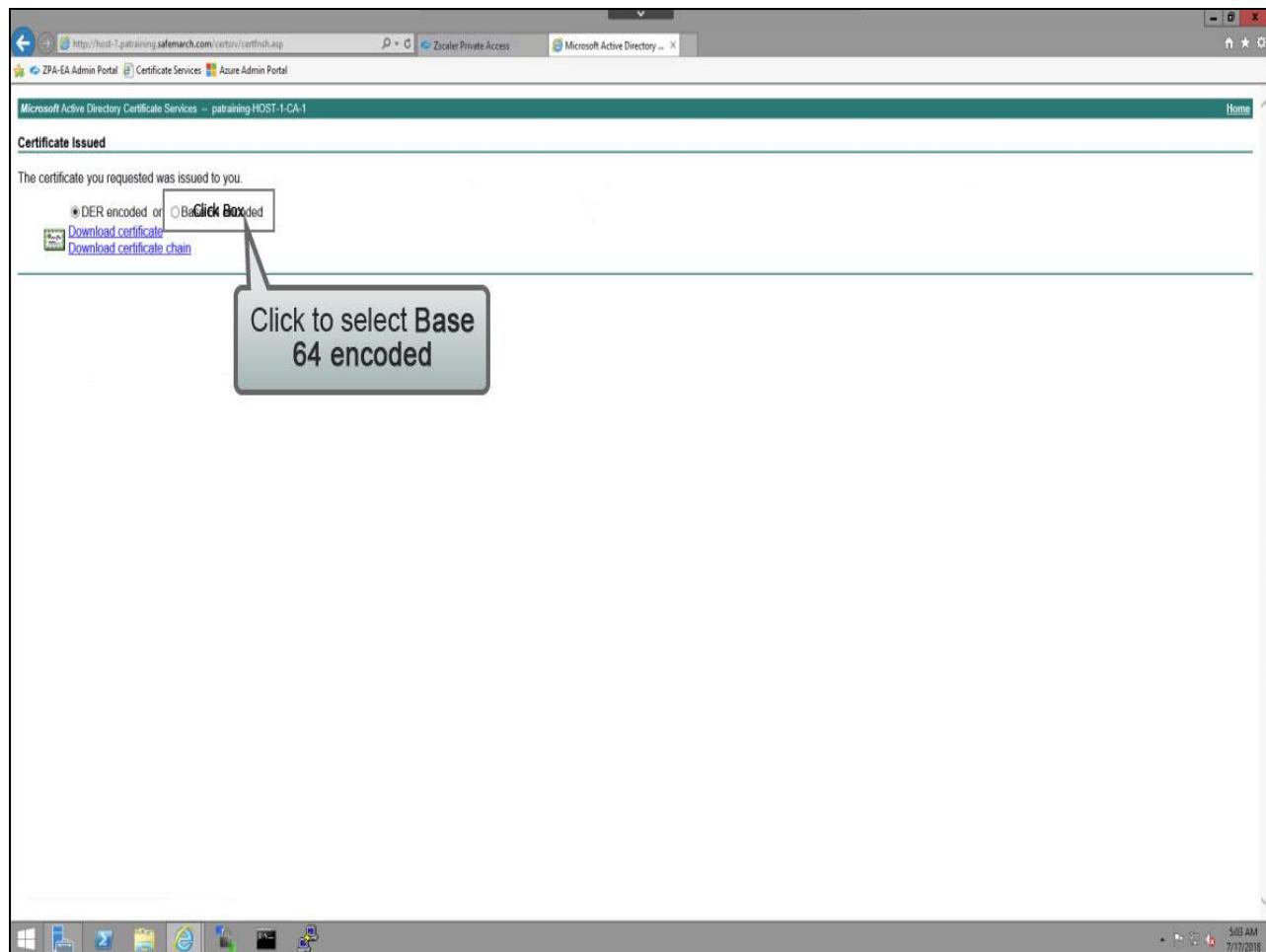
Slide 76 - Slide 76



Slide notes

...click Submit, ...

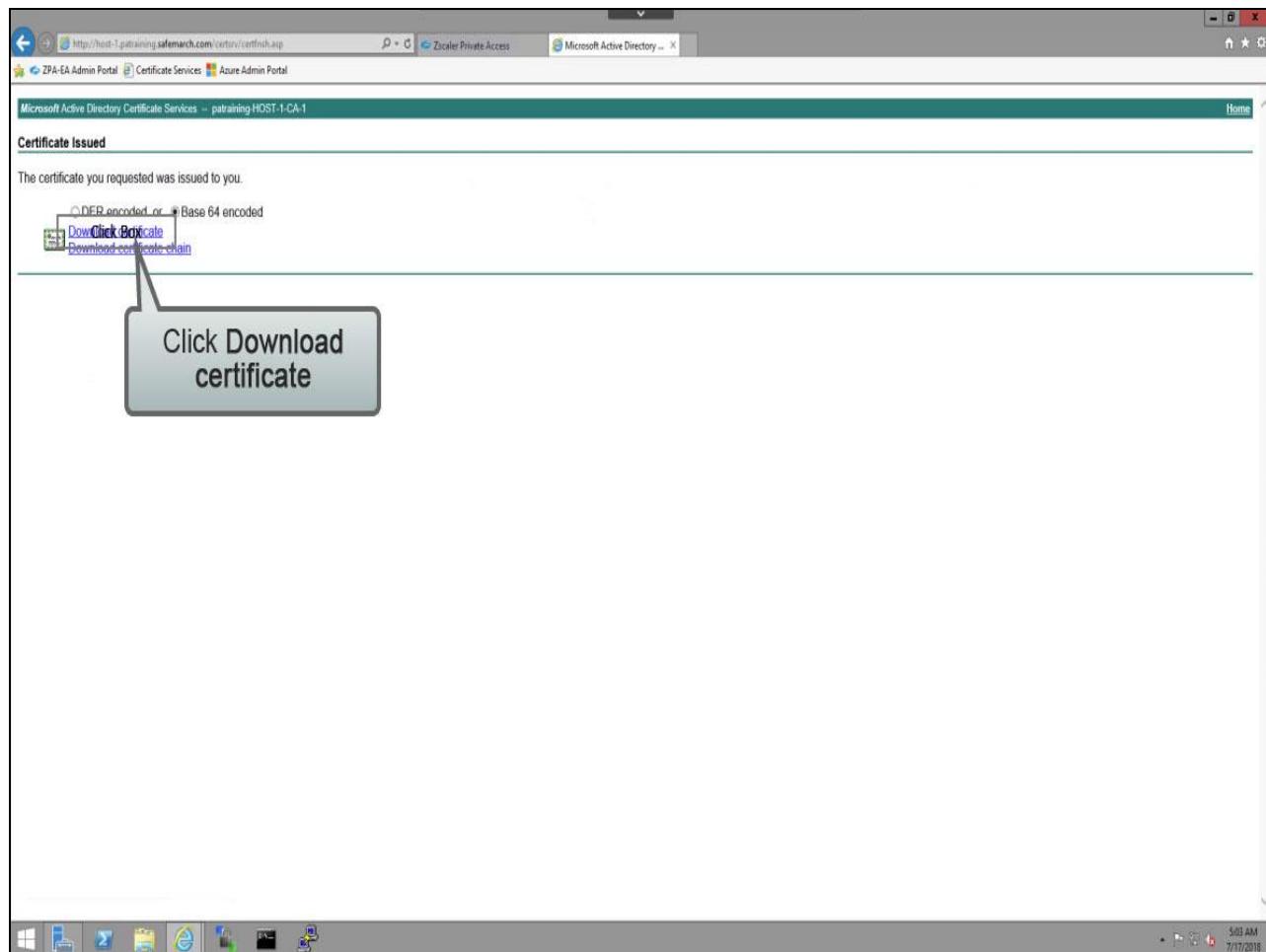
Slide 77 - Slide 77



Slide notes

...click to select the **Base 64 encoded** option, ...

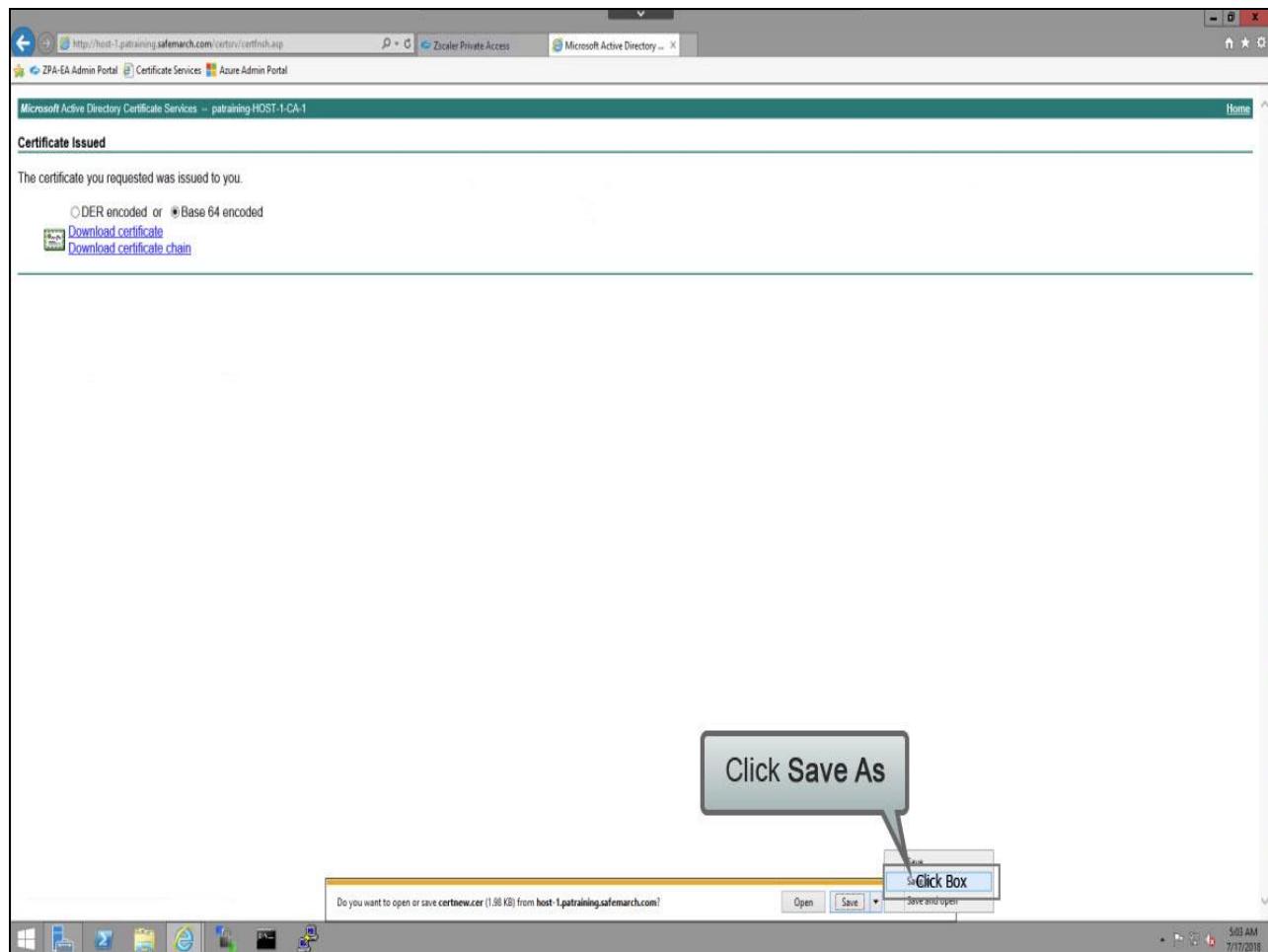
Slide 78 - Slide 78



Slide notes

...click Download certificate, ...

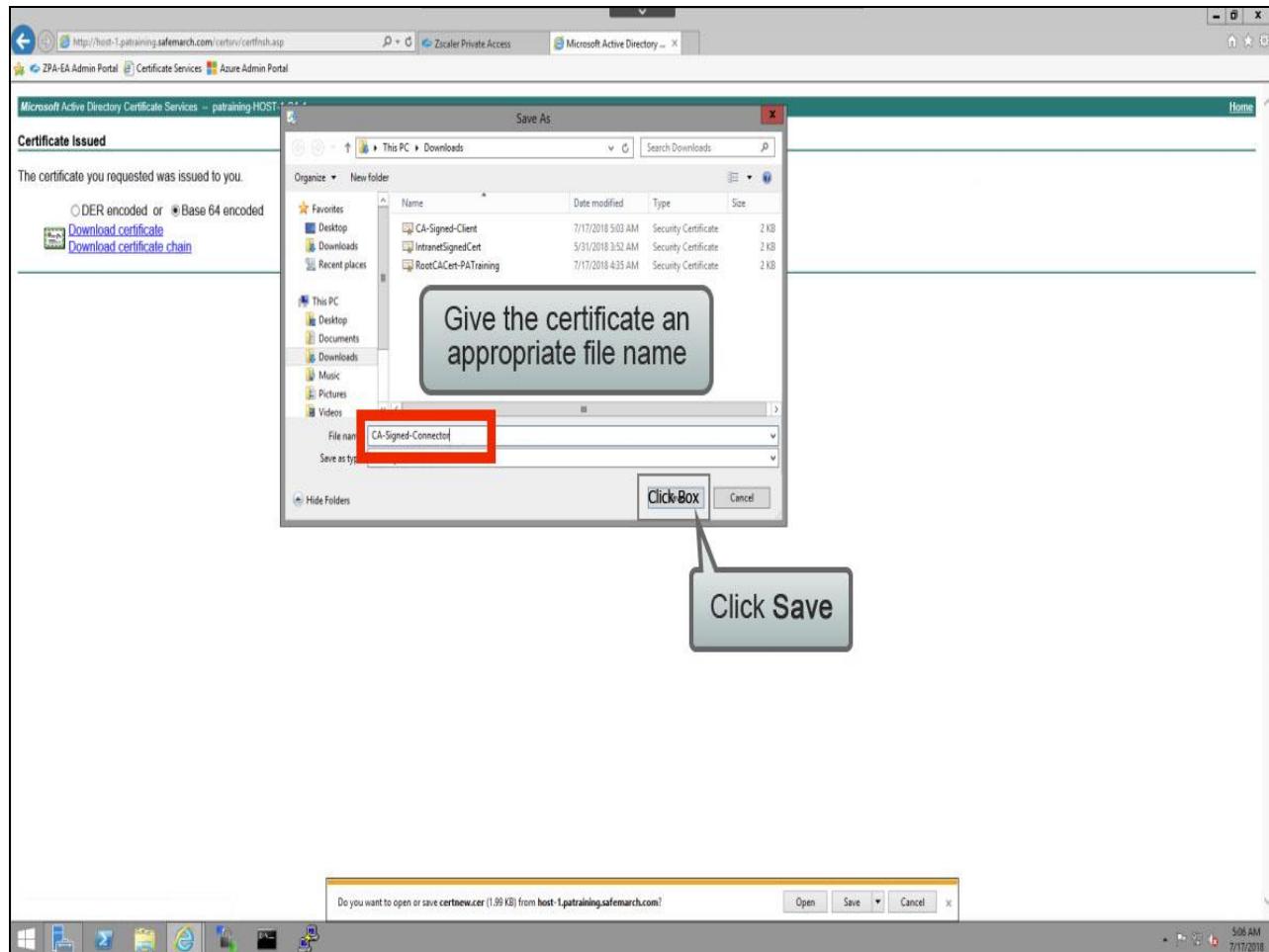
Slide 79 - Slide 79



Slide notes

...click to select the **Save As** option, ...

Slide 80 - Slide 80



Slide notes

...navigate to a suitable folder or share, give the certificate a suitable name and click **Save**.

Slide 81 - Slide 81

The screenshot shows the Zscaler Private Access (ZPA) Admin Portal interface. On the left, there is a vertical sidebar with icons for Dashboard, Diagnostics, Live Logs, Administration (which is selected), Search, and Zscaler App. The main content area has a title bar with the URL <https://admin.private.zscaler.com/#enrollmentCerts> and the page title "Enrollment Certificates". Below this is a sub-header "Browser Access Certificates". There is a table with columns: Name, Creation Date, Expiry Date, Common Name, and Actions. The table contains six entries:

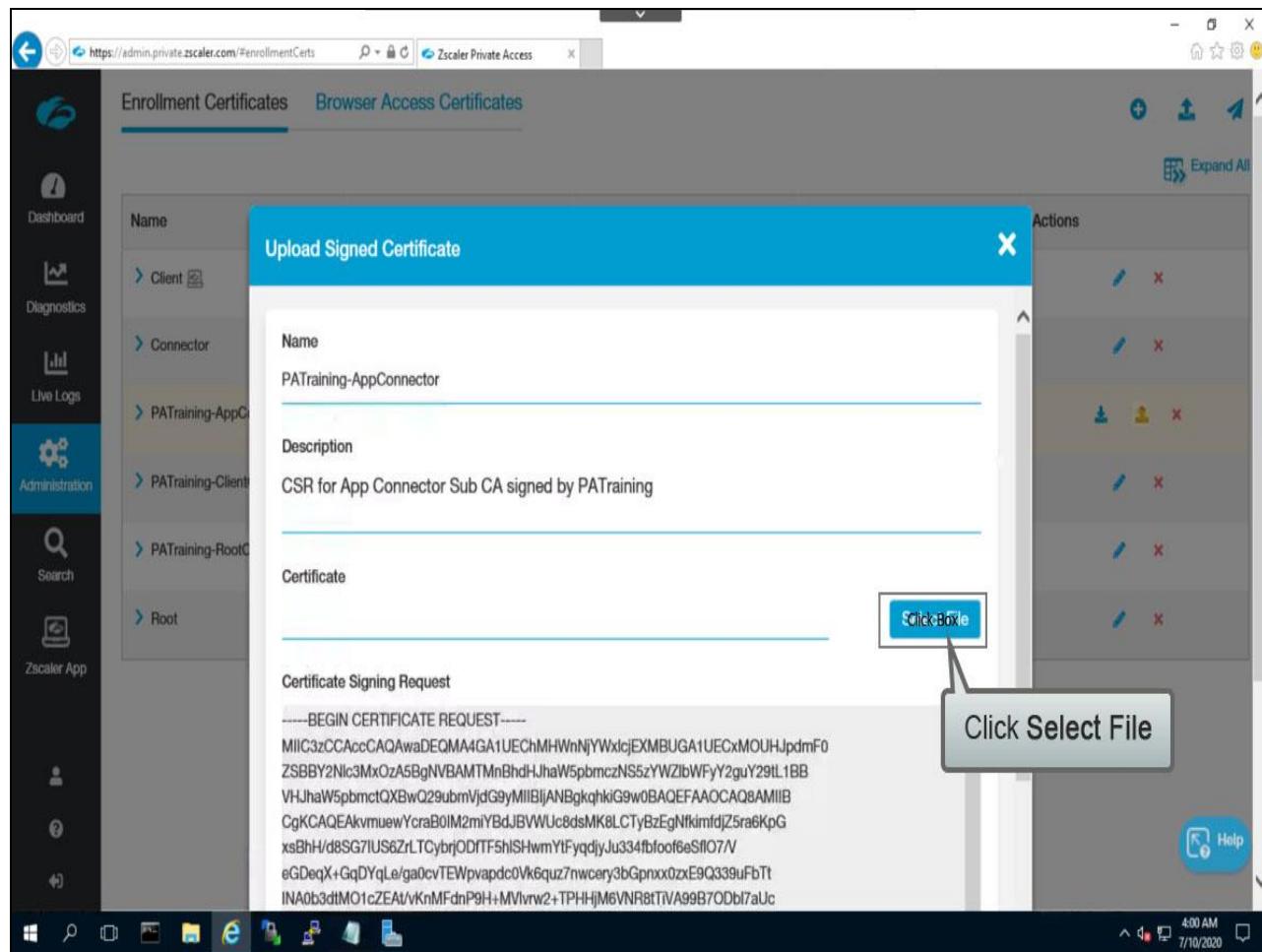
| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | Edit Delete |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | Edit Delete |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | | patraining35.safemarch.com/PA... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | Sunday , July 10 2022 3:56:12 am | patraining35.safemarch.co... | Edit Delete |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | Edit Delete |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | Edit Delete |

A callout box with the text "Click Upload Certificate" points to the "Upload Certificate" link next to the "Click Box" entry in the table.

Slide notes

Back on the **Enrollment Certificates** page of the ZPA Admin Portal, click the **Upload Certificate** link for the correct subsidiary CA entry, ...

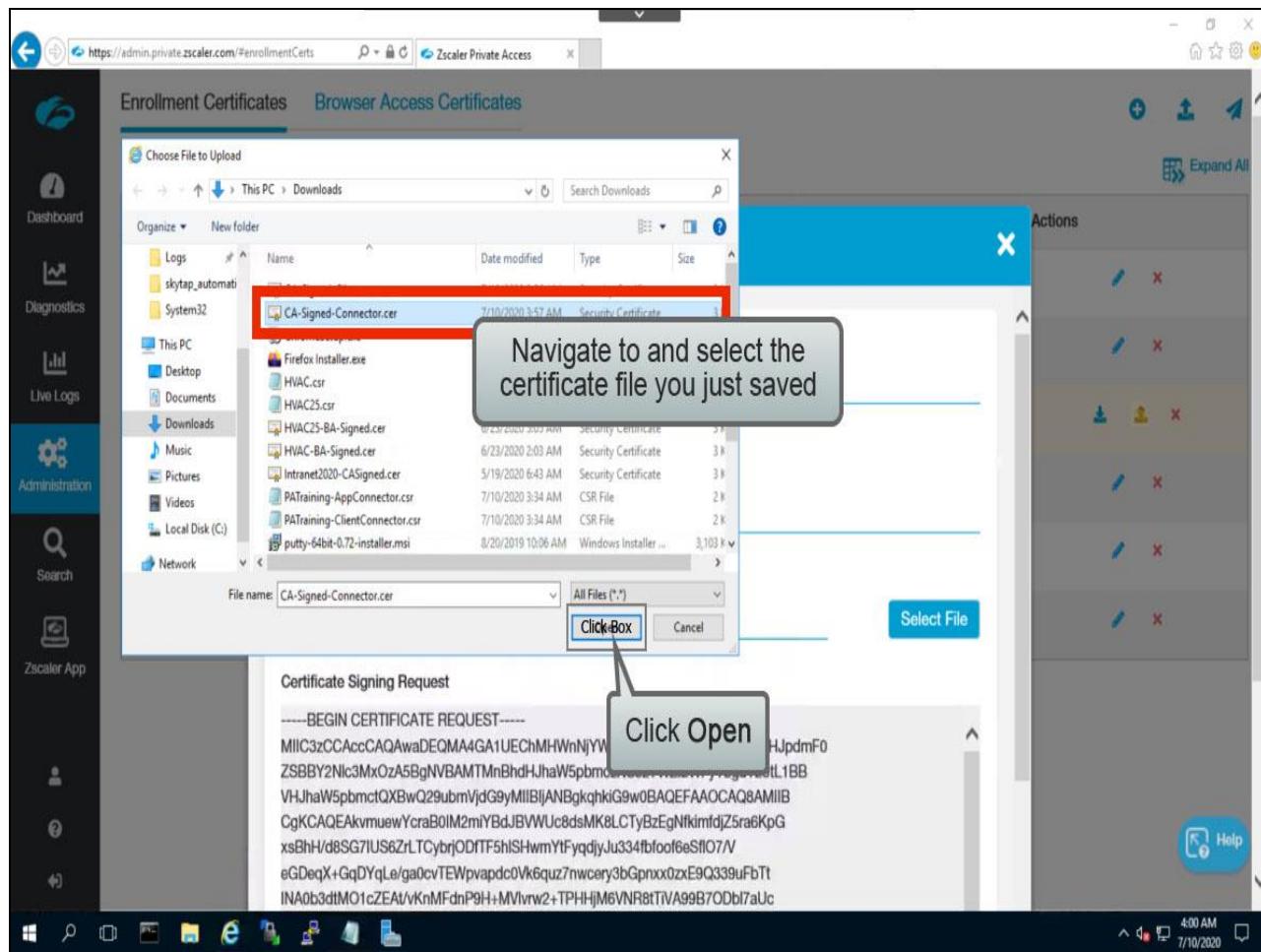
Slide 82 - Slide 82



Slide notes

...click Select File, ...

Slide 83 - Slide 83



Slide notes

...find the file that you just saved, select it and click Open, ...

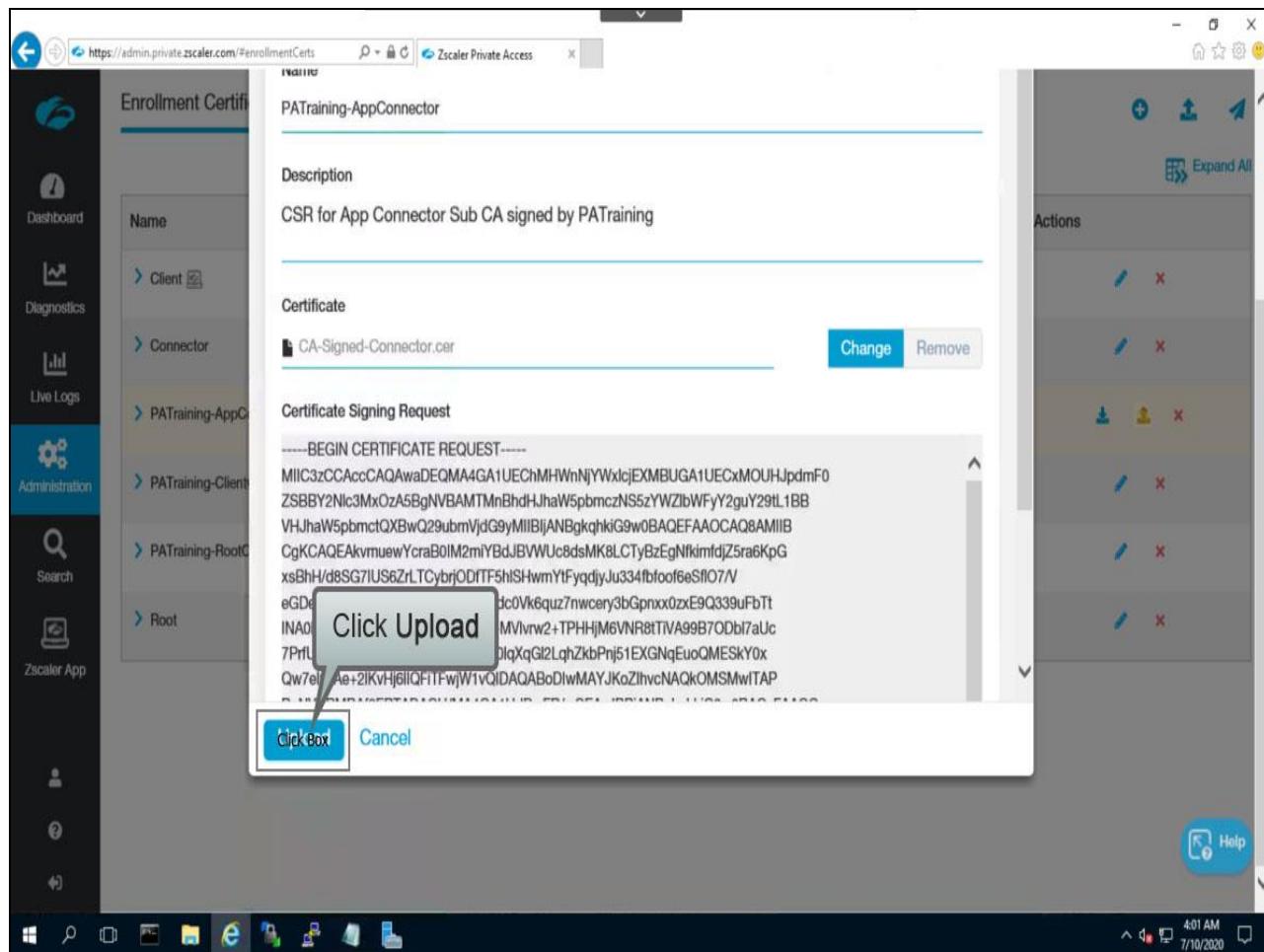
Slide 84 - Slide 84

The screenshot shows a web browser window for 'Zscaler Private Access' at the URL <https://admin.private.zscaler.com/#enrollmentCerts>. The left sidebar has icons for Dashboard, Diagnostics, Live Logs, Administration, Search, and Zscaler App. The main area shows 'Enrollment Certificates' selected. A modal dialog box titled 'Upload Signed Certificate' is open. It contains fields for 'Name' (set to 'PATraining-AppConnector'), 'Description' (set to 'CSR for App Connector Sub CA signed by PATraining'), 'Certificate' (file chosen is 'CA-Signed-Connector.cer'), and 'Certificate Signing Request' (containing a long base64 certificate request string). There are 'Change' and 'Remove' buttons for the certificate file. A 'Actions' column on the right lists various certificates with edit and delete icons. A 'Scroll down...' button is visible at the bottom of the list. The status bar at the bottom shows '4:00 AM' and '7/10/2020'.

Slide notes

...scroll down if necessary, ...

Slide 85 - Slide 85



Slide notes

...then click Upload.

Slide 86 - Slide 86

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The main area displays a table of certificates with columns: Name, Creation Date, Expiry Date, Common Name, and Actions. The table contains six rows:

| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | Sunday , July 10 2022 3:57:14 am | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | Sunday , July 10 2022 3:56:12 am | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

A green notification bar at the bottom right says 'Certificate saved' with a 'Help' link.

Slide notes

Slide 87 - Slide 87

The screenshot shows a browser window with the URL <https://admin.private.zscaler.com/#enrollmentCerts>. The page title is "Enrollment Certificates". The table lists several certificates:

| Name | Creation Date | Expiry Date | Common Name | Actions |
|-----------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | Sunday , July 10 2022 3:57:14 am | patraining35.safemarch.com/PATrai... | |
| > PATraining-SubCAConnector | Friday , July 10 2020 3:32:19 am | Sunday , July 10 2022 | | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 | | |
| > Root | 36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

A callout box points to the "PATraining-AppConnector" entry with the text: "Click on the name of one of the Sub CAs that you just created". Another callout box points to the same entry with the text: "Check that the orange warning indication for the certificate has now gone".

Slide notes

Once again, check that the orange alert indication for that certificate has now gone. To view details for one of the new subsidiary CAs, click on the name of the entry, ...

Slide 88 - Slide 88

The screenshot shows the 'Enrollment Certificates' section of the Zscaler Private Access interface. A specific certificate, 'PATraining-ClientConnector', is selected and expanded. The 'Parent Certificate' field is highlighted with a red box and contains the value 'PATraining-RootCACert'. A callout bubble with the text 'Review the Sub CA settings, in particular the Parent Certificate' points to this field. The table below lists various certificates with their details like Name, Creation Date, Expiry Date, and Common Name.

| Name | Creation Date | Expiry Date | Common Name | Actions |
|--|---|--------------------------------------|---|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | Sunday , July 10 2022 3:57:14 am | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | Sunday , July 10 2022 3:56:12 am | patraining35.safemarch.com/PATrai... ClientConnector | |
| Description CSR for Client Connector Sub CA signed by PATraining | | | | |
| Parent Certificate PATraining-RootCACert | | | | |
| Issued By | Issued To | | | |
| DC=com,DC=safemarch,DC=patraining,CN=patraining-HOST-1-CA-1 | O=Zscaler,OU=Private Access,CN=patraining35.safemarch.co... m/PATraining-ClientConnector | | | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

Slide notes

...and review the details. In particular check the **Parent Certificate**, which should be the Root CA certificate that you uploaded earlier.

Slide 89 - Set the Correct Sub CA for Client Enrollment



Set the Correct Sub CA for Client Enrollment

Slide notes

In the final section, we will look at how specify the subsidiary CA to be used to issue certificates to the Zscaler Client Connectors as client devices enroll.

This section has been created as an interactive demo to give you a feel for the navigation of the ZPA Admin Portal UI. You will be asked to select the appropriate menu options to navigate the UI. You may also use the Play control to proceed to the next step.

Slide 90 - Slide 90

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The table lists several certificates:

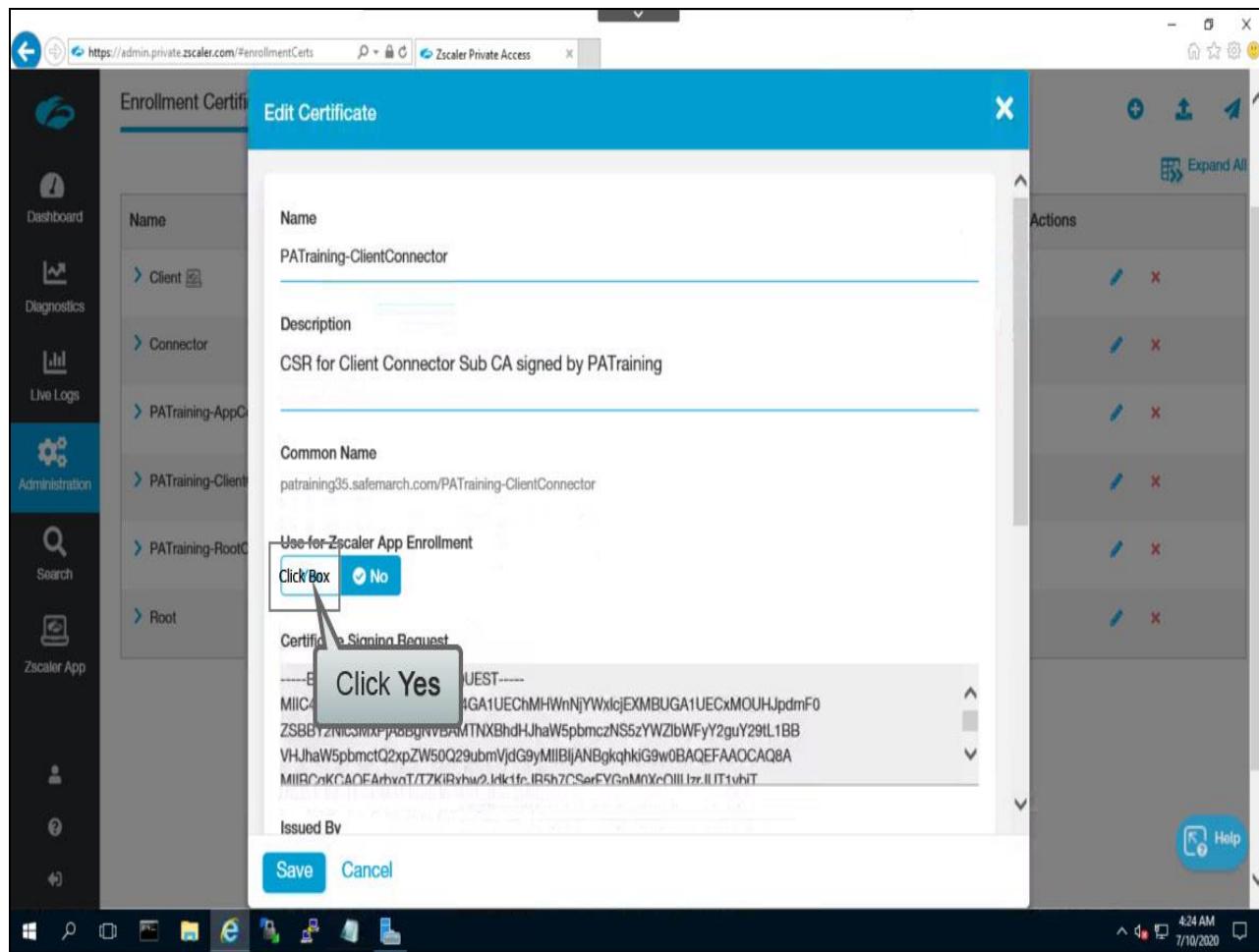
| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | Sunday , July 10 2022 3:57:14 am | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | Sunday , July 10 2022 3:56:12 am | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining35.safemarch.com/HOST_1_CA_1 | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

A callout box with the text "Click to edit the newly create Client Sub CA" points to the edit icon for the "PATraining-ClientConnector" row. The interface includes a left sidebar with various navigation icons and a bottom taskbar.

Slide notes

The final task is to set the correct subsidiary CA that is to issue certificates to the Zscaler Client Connector on the end user client devices. In this instance we want to use the newly created **PATraining-ClientConnector** subsidiary CA, so click to **Edit it** ...

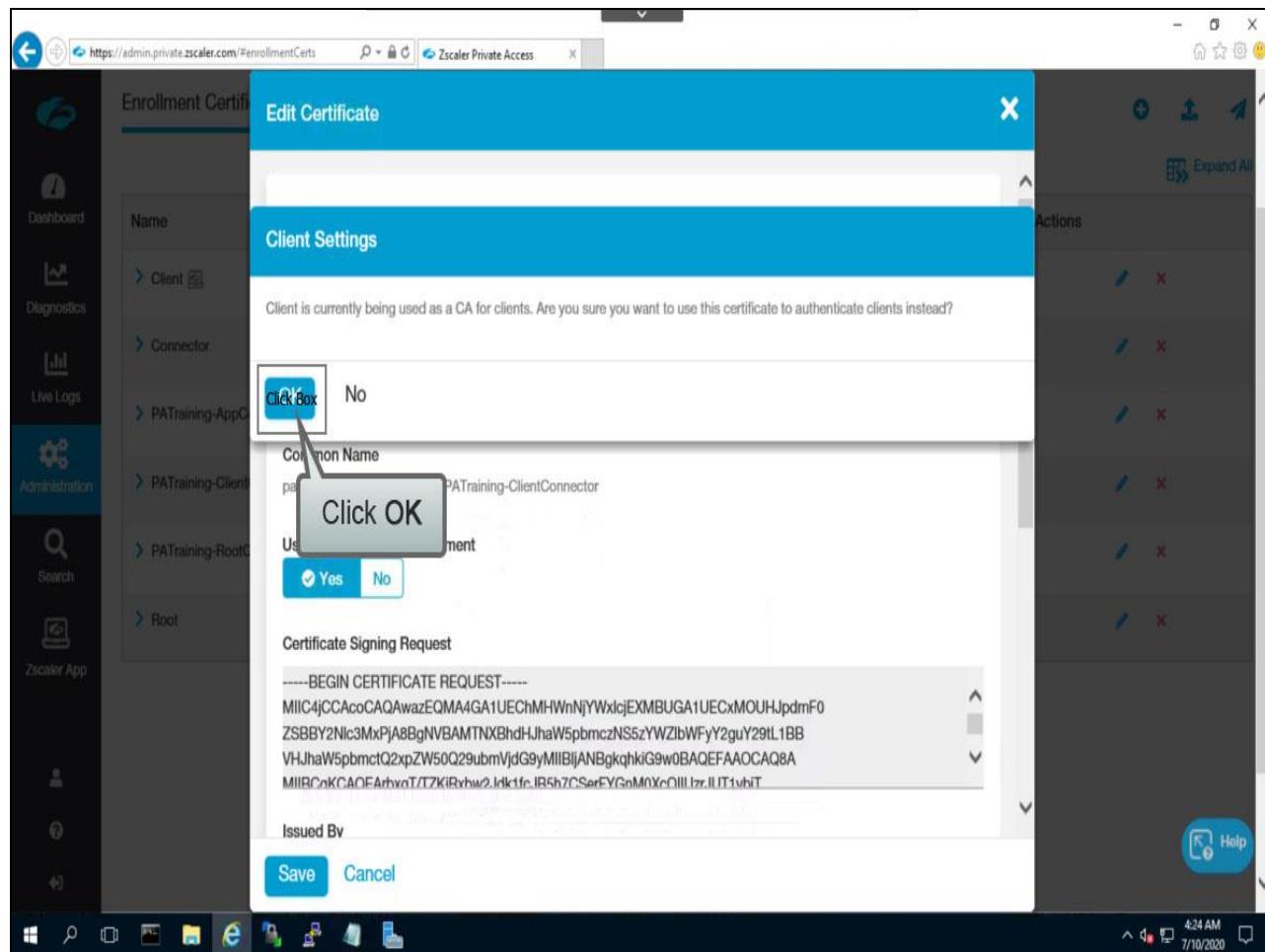
Slide 91 - Slide 91



Slide notes

...then under Used for Zscaler App Enrollment click Yes.

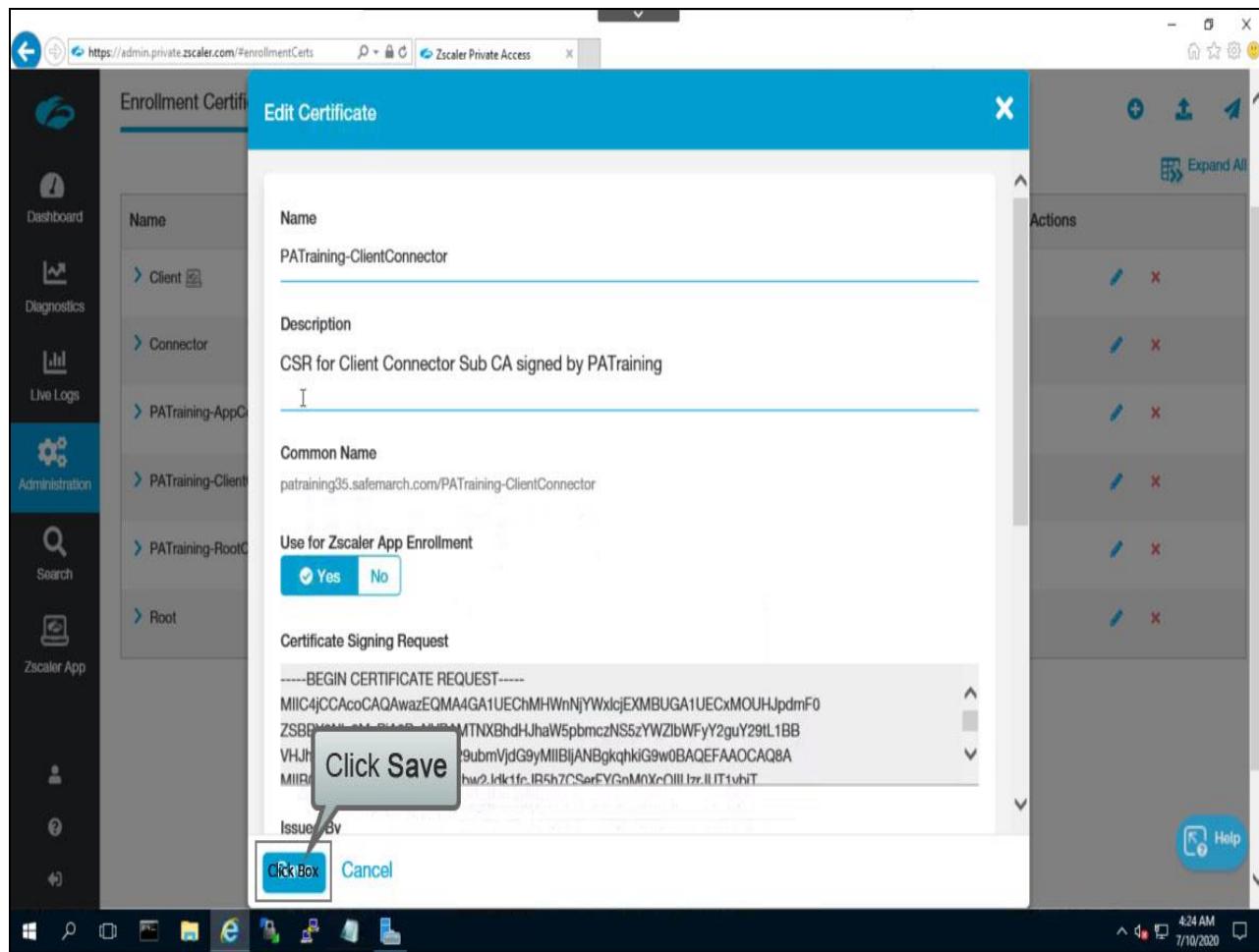
Slide 92 - Slide 92



Slide notes

Click OK at the warning message, ...

Slide 93 - Slide 93



Slide notes

...then click **Save**.

Slide 94 - Slide 94

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. The main area displays a table of certificates with columns: Name, Creation Date, Expiry Date, Common Name, and Actions. The table contains six rows:

| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | Sunday , July 10 2022 3:57:14 am | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | Sunday , July 10 2022 3:56:12 am | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | Friday , July 10 2020 1:49:24 am | Thursday , May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | |
| > Root | Friday , August 09 2019 6:36:49 pm | Sunday , August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | |

A green notification bar at the bottom right says 'Enrollment Certificate saved' with a help icon.

Slide notes

Slide 95 - Slide 95

The screenshot shows the Zscaler Private Access interface with the 'Enrollment Certificates' tab selected. A callout box highlights the 'PATraining-ClientConnector' entry, which has a red square drawn around its icon. The table lists the following certificates:

| Name | Creation Date | Expiry Date | Common Name | Actions |
|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------|
| > Client | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Client | |
| > Connector | Friday , August 09 2019 6:36:49 pm | Saturday , August 05 2034 6:36:49 pm | patraining35.safemarch.com/Connec... | |
| > PATraining-AppConnector | Friday , July 10 2020 3:33:58 am | Sunday , July 10 2022 3:57:14 am | patraining35.safemarch.com/PATrai... | |
| > PATraining-ClientConnector | Friday , July 10 2020 3:32:19 am | Sunday , July 10 2022 3:56:12 am | patraining35.safemarch.com/PATrai... | |
| > PATraining-RootCACert | May 19 2050 1:23:29 am | patraining-HOST-1-CA-1 | | |
| > Root | August 01 2049 6:36:49 pm | patraining35.safemarch.com/Root | | |

A callout box with the text "Verify that the correct Sub CA indicates it is used for Client enrollment" is positioned over the 'PATraining-ClientConnector' row.

Slide notes

Verify that the correct subsidiary CA now shows the icon to indicate that it is the one used for Client Connector enrollment. Any client device with the Zscaler Client Connector installed will now receive an identity certificate from this subsidiary CA. Certificates issued by any previously assigned CA remain valid.

Slide 96 - Thank you & Quiz



Thank you & Quiz

Slide notes

Thank you for following this Zscaler training module, we hope this module has been useful to you and thank you for your time.

What follows is a short quiz to test your knowledge of the material presented during this module. You may retake the quiz as many times as necessary in order to pass.