



**Commercial Taxes Department  
Government of Tamil Nadu**

**Tamil Nadu VAT Implementation,  
Guide for Using Digital Signature Certificate (DSC)  
January, 2015  
Version 1.0**

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## List of Abbreviations

**Table 1: List of Abbreviations**

Abbreviation	Description
LT	Luxury tax
TCS	Tata Consultancy Services Ltd
TIN	Tax Payer's Identification Number
TN	Tamil Nadu
TNCTD	Tamil Nadu Commercial Taxes Department
TNSWAN	Tamil Nadu State Wide Area Network
VAT	Value Added Tax

## 1. Introduction

---

Digital certificate is the electronic counterpart of an ID card, such as a driver's license or passport. The validity of a digital certificate is based on similar systems to those used to issue physical ID cards. The certification authority issues a digital certificate. The digital certificate contains information about who the certificate was issued to, as well as the certifying authority that issued it. Additionally, some certifying authorities may themselves be certified by a hierarchy of one or more certifying authorities, and this information is also part of the certificate. When a digital certificate is used to sign documents and software, this ID information is stored with the signed item in a secure and verifiable form so that it can be displayed to a user to establish a trust relationship.

Digital certificates use a cryptographic technology called public-key cryptography to sign software publications and to verify the integrity of the certificate itself. Public key cryptography uses a matched pair of encryption and decryption keys called a public key and a private key. The public-key cryptography algorithms perform a one-way transformation of the data they are applied to, so that data that is encrypted with one key can only be decrypted by the other key. Additionally, each key uses a sufficiently large value to make it computationally infeasible to derive a private key from its corresponding public key. For this reason, a public key can be made widely available without posing a risk to security.

### 1.1 Approach

TCS shall provide an in-house component to provide digital certificate based solution. This component shall be an applet which would be loaded in the browser and would perform various operations like – mapping a digital certificate of the dealer, signing web form or signing an xml document.

This component shall read the certificates from an e-token and display the certificate details including Alias of the certificate, Serial Number, Subject, Issuer, type and the path of the certificate.

The same component shall be used for mapping the dealer's certificate in the database. In order to map the certificate, the end user shall select the certificate and click on submit button. On clicking the same, public key, serial number, issuer, subject and expiry date shall be stored in database.

The component shall ask for various details including the file to be signed and the output directory where the signed document is to be written.

Once the signing process is done, end user would be given the path of the final directory.

After the signed document gets uploaded, server shall verify the signature against the mapped signature of the dealer.

### 1.2 Login

To get the access of Map Digital Signature functionality, the dealer needs to get logged in web portal.

Below are the steps to log in to TNVAT Portal.

1. Click on Portal Home Page Link for Login.

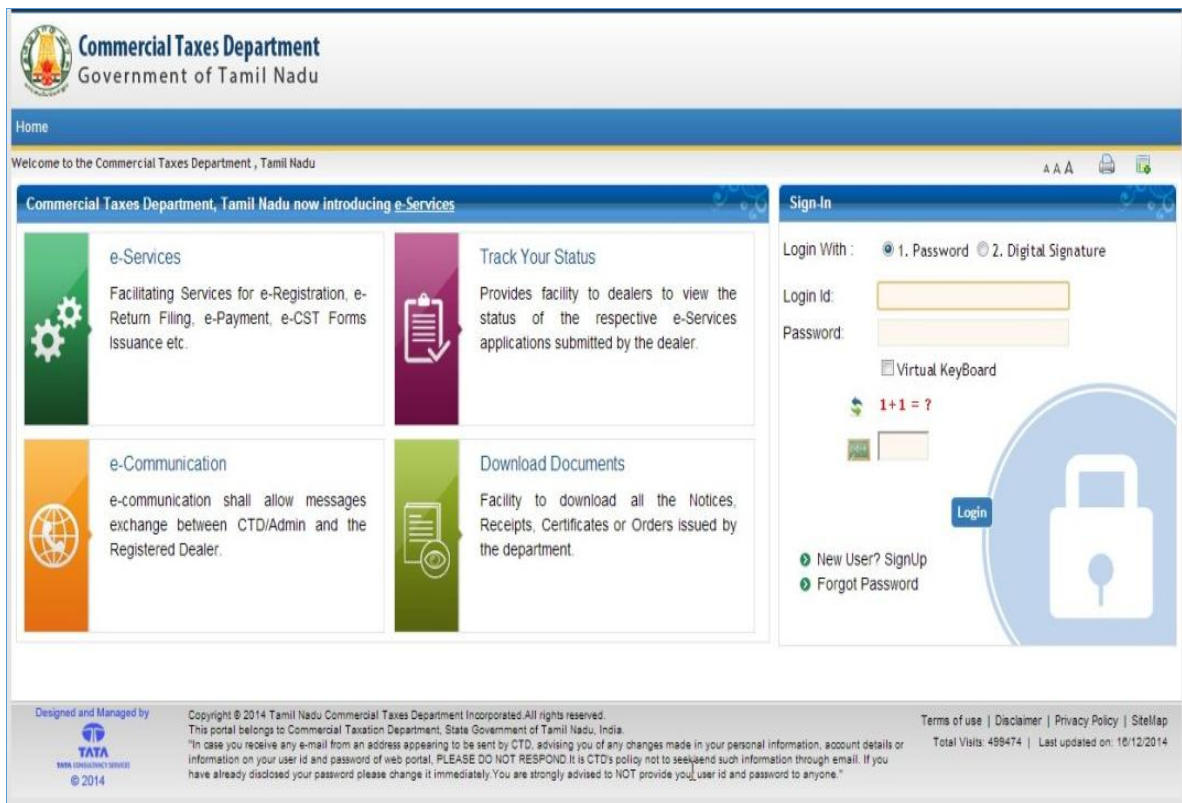


Figure 1: Login Screen

2. Home screen will be displayed after Login.

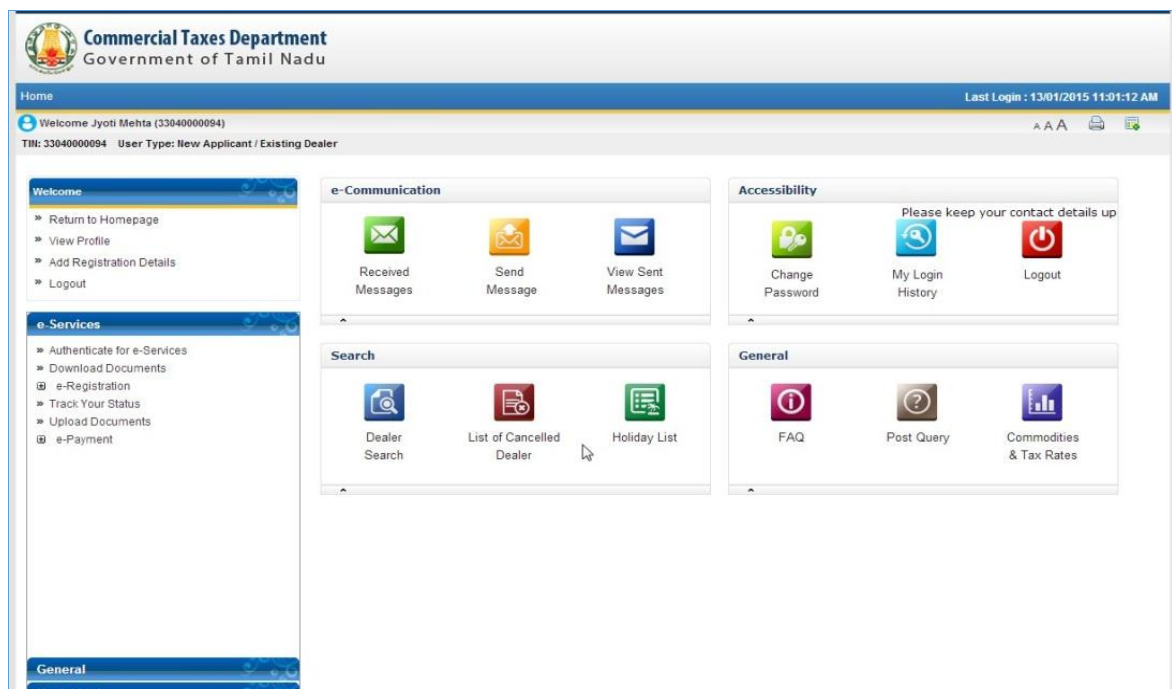


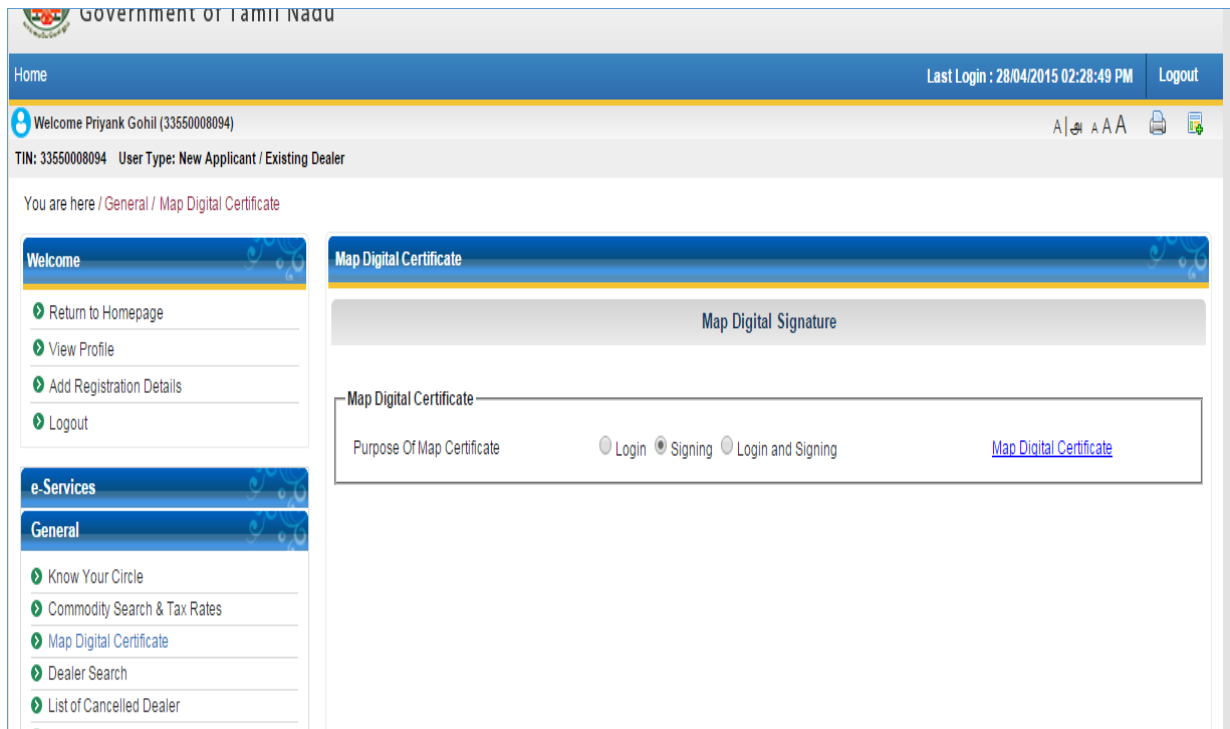
Figure 2: Home Screen

## 2. Map Digital Certificate

Any dealer who wants to use Digital Certificate for logging in and/or for signing, needs to first map that digital certificate with the portal. Once mapped, dealer can use that certificate for logging in and/or for signing as selected.

Below are the steps to map digital certificate:

1. Click on General->Map Digital Certificate link from left pane. Below mentioned screen appears after the dealer clicks on “**Map Digital Certificate**”.



**Figure 3: Map Digital Certificate Screen**

2. Select purpose.
  - If user selects Logging with signing then user can use it for logging and signing both purposes.
  - If user selects Logging then user can use digital signature for logging in only.
  - If user select Signing then user can use digital signature as Signing only.
3. Click on 'Map Digital Certificate' link provided on right side of purpose. An applet will be displayed which allows the dealer to map the digital certificate.



Commercial Taxes Department - Tamil Nadu - Mozilla Firefox

10.142.224.150:22180/Portal/digiCertiUpload.htm?actionCode=digitalCertificateScreen&openerFlag=MapScreen&ForSigning=N&taxType=MAP&signatureUsedFor=L

### Settings

**File Settings**

Input File \*

Output Directory \*

Type \* Token

**Pfx File Settings**

Certificate \*

**Token Settings**

Library \*

**Certificate Details**

Alias	SI No	Subject	Certificate Path	Issuer	Type	Password

Last Login : 12/01/2015 05:20:45 PM

[Map Digital Certificate](#)

General

**Figure 4: Applet Screen for Mapping Digital Certificate**

- Click on browse button under Token Settings tab. In order to map the digital certificate, dealer needs to provide the path of the .dll file from the system for the plugged in token. After selecting the same, system will ask for the password of the token.

Commercial Taxes Department - Tamil Nadu - Mozilla Firefox

10.142.224.150:22180/Portal/digiCertiUpload.htm?actionCode=digitalCertificateScreen&openerFlag=MapScreen&ForSigning=N&taxType=MAP&signatureUsedFor=L

**Settings**

**File Settings**

Input File \*  Browse

Output Directory \*  Browse

Type \* Token

**Pfx File Settings**

Certificate \*  Browse

**Token Settings**

Library \*  C:\Windows\System32\TPKCS11.dll Browse

**Certificate Details**

Alias	SI No	Subject	Certificate Path	Issuer	Type	Password

Submit

password

OK Cancel

Last Login : 12/01/2015 05:20:45 PM

Map Digital Certificate

**Figure 5: Provide Password for Mapping Digital Certificate**

5. If password gets validated, system will display Digital Certificate details.

Commercial Taxes Department - Tamil Nadu - Mozilla Firefox

10.142.224.150:22180/Portal/digiCertiUpload.htm?actionCode=digitalCertificateScreen&openerFlag=MapScreen&ForSigning=N&taxType=MAP&signatureUsedFor=L

**Settings**

**File Settings**

Input File \*  Browse

Output Directory \*  Browse

Type \* Token

**Pfx File Settings**

Certificate \*  Browse

**Token Settings**

Library \*  C:\Windows\System32\TPKCS11.dll Browse

**Certificate Details**

Alias	SI No	Subject	Certificate Path	Issuer	Type
test27 - digitalSignatur...	54236	ST=Karnataka, SERIAL...	C:\Windows\System32...	C=IN, O=eMudhra Con...	Token

Submit

Last Login : 12/01/2015 05:20:45 PM

Map Digital Certificate

**Figure 6: Certificate Details with Mapped Digital Certificate**

6. Click on Submit button to Map the digital certificate. Dealer would be shown a success page once the certificate gets mapped and it will be displayed on screen.

**Commercial Taxes Department**  
Government of Tamil Nadu

Home Last Login : 12/01/2015 05:20:45 PM

Welcome Priyank Gohil (33550008094)  
TIN: 33550008094 User Type: New Applicant / Existing Dealer

**Welcome**

- Return to Homepage
- View Profile
- Add Registration Details
- Logout

**e-Services**

- Authenticate for e-Services
- Download Documents
- ☒ e-Registration
- Track Your Status
- Upload Documents
- ☒ e-Payment

**General**

You are here >> Home >> Map Digital Certificate

**Map Digital Signature**

Note :- Mapping Functionality will work in Internet Explorer and Google Chrome.

**Map Digital Certificate**

Purpose Of Map Certificate ☐ Logging ☒ Signing ☐ Logging and Signing [Map Digital Certificate](#)

**List Of Certificates**

Select	Subject	Issuer	Purpose
<input checked="" type="radio"/>	C=IN, O=eMudhra Consumer Services Ltd., OU=Sub-CA, CN=e-Mudhra Sub CA for Class 2 Gold Individual 2011	ST=Karnataka, SERIALNUMBER=91920E781216D163A4F1141CF6F1009C8B98C2B761377C3C1A66595329ABA837, CN=test27, O=test, C=IN	Logging
<input checked="" type="radio"/>	C=IN, O=eMudhra Consumer Services Ltd., OU=Sub-CA, CN=e-Mudhra Sub CA for Class 2 Gold Individual 2011	ST=Karnataka, SERIALNUMBER=91920E781216D163A4F1141CF6F1009C8B98C2B761377C3C1A66595329ABA837, CN=test27, O=test, C=IN	Signing

[UnMap Certificate](#)

**Figure 7: List of Mapped Certificates**

### 3. E-registration

If dealer wants to apply for registration with signed XML, he can use the already mapped certificate and upload the signed XML.

Below are the steps to apply for e-Registration with digital certificate:

1. Click **e-Registration** link from the e-Services left menu pane. Below mentioned screen shall appear for selecting appropriate tax type. Dealer selects the form type and clicks on **Next** button.

The screenshot displays the 'e-Registration' interface. At the top, the header includes the department name and user login details. The left sidebar contains a menu with 'e-Registration' highlighted. The main content area shows a form titled 'e-Registration' with a dropdown menu for 'Select Form Type' currently set to 'Luxury Tax Registration'. Below the dropdown are 'Next' and 'Back' buttons. The breadcrumb trail indicates 'You are here >> Home'.

**Figure 8: e-Registration Form Type Selection Screen**

2. The below mentioned screen displays the details which are captured during selected registration. Dealer would be given an option to sign the XML which is to be uploaded.

Welcome

- Return to Homepage
- View Profile
- Add Registration Details
- Logout

**e-Services**

- Authenticate for e-Services
- Download Documents
- e-Registration**
- Track Your Status
- Upload Documents
- e-Payment

**General**

**Useful Links**

You are here >> Home >> LUXURY TAX Registration

[Click here to get help.](#)

**LUXURY TAX Registration**

[Click here](#) to download LUXURY TAX Registration Form

Note :-1) Please ensure that you have downloaded the latest template from web portal of Department of Commercial Taxes.  
2) Mapping Functionality will work in Internet Explorer and Google Chrome.

Form Type\*

E Mail :\*

Mobile No : \*

Is application digitally signed? ☐ Yes ☒ No

Do you have Intimation Notice Reference Id? ☐ Yes ☒ No

PAN

(PAN is mandatory for first time registration)

Upload File\*  No file selected.

(Please click on Browse button to upload .xml file)

Please enter result for expression: \*  $1+1=?$

☐ I declare that the particulars furnished in the application above are true, correct and complete to the best of my knowledge and belief.

Field marked with \* are mandatory

Please do not press 'Back'/'Submit' button or Refresh the page while the uploading is in process.

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Users Online : 2

Figure 9: e-Registration Screen

- Select **Yes** in 'Is application Digitally Signed?' option. On selecting, a list of all the certificates mapped with the logged in dealer will be displayed.

Welcome

- Return to Homepage
- View Profile
- Add Registration Details
- Logout

**e-Services**

- Authenticate for e-Services
- Download Documents
- e-Registration**
- Track Your Status
- Upload Documents
- e-Payment

**General**

**Useful Links**

You are here >> Home >> LUXURY TAX Registration

[Click here to get help.](#)

**LUXURY TAX Registration**

[Click here](#) to download LUXURY TAX Registration Form

Note :-1) Please ensure that you have downloaded the latest template from web portal of Department of Commercial Taxes.  
2) Mapping Functionality will work in Internet Explorer and Google Chrome.

Form Type\*

E Mail :\*

Mobile No : \*

Is application digitally signed? ☒ Yes ☐ No

Select from following mapped certificate :  
[Click here to Sign Your XML](#)

Select	Subject	Issuer
<input type="radio"/>	ST=Karnataka, SERIALNUMBER=91920E781216D163A4F1141CF8F1009C8B98C2B761377C3C1A66595329ABA837, CN=test27, O=test, C=IN	C=IN, O=eMudhra Consumer Services Ltd., OU=Sub-CA, CN=e-Mudhra Sub CA for Class 2 Gold Individual 2011
<input type="radio"/>	ST=Karnataka, SERIALNUMBER=91920E781216D163A4F1141CF8F1009C8B98C2B761377C3C1A66595329ABA837, CN=test27, O=test, C=IN	C=IN, O=eMudhra Consumer Services Ltd., OU=Sub-CA, CN=e-Mudhra Sub CA for Class 2 Gold Individual 2011

Do you have Intimation Notice Reference Id? ☐ Yes ☒ No

PAN

(PAN is mandatory for first time registration)

Upload File\*  No file selected.

(Please click on Browse button to upload .xml file)

Please enter result for expression: \*  $1+1=?$

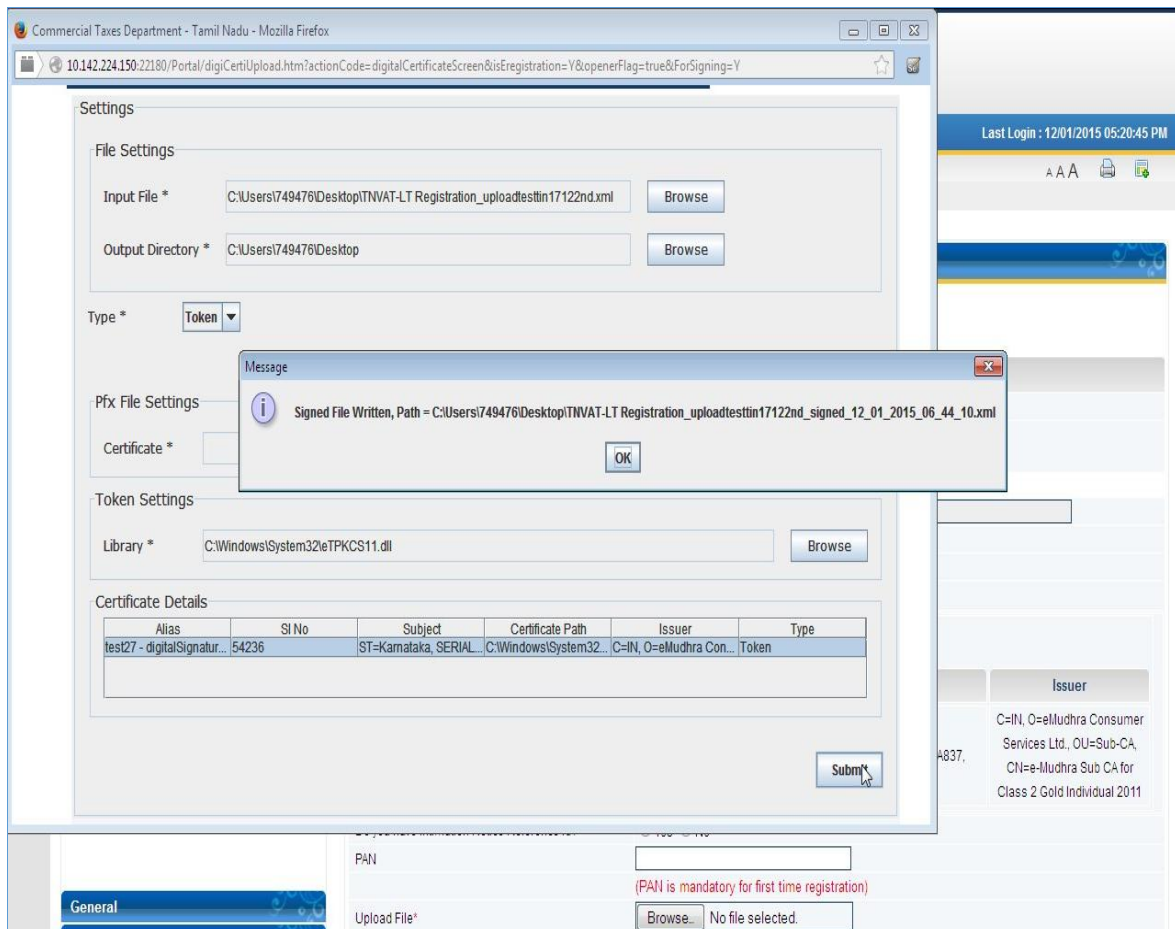
☐ I declare that the particulars furnished in the application above are true, correct and complete to the best of my knowledge and belief.

Figure 10: List of mapped Digital Certificates on e-Registration Screen

4. To sign validated XML with the selected certificate, click “**Click Here to Sign XML**” link. Dealer shall be displayed an applet to sign the XML as shown below.

**Figure 11: Applet to Sign XML**

5. Select the file (generated XML) which needs to be signed by clicking **Browse** button against field **Input File**. Select **Output Directory** path for saving signed XML. Select certificate against **Library** under **Token Settings** and click on **Submit**. On submit the signed file will be generated and saved at the selected Output Directory.



**Figure 12: Generated Signed XML**

- Dealer shall upload the signed XML to complete the registration process.



## 4. Login with Digital Signature

Any dealer who wants to use Digital Certificate for logging in, needs to first map that digital certificate with the portal. Once mapped, dealer can use that certificate for logging in.

Below are the steps to login with Digital Signature:

1. Select '**Login with**' as **Digital Signature** in Login Screen.

**Commercial Taxes Department**  
Government of Tamil Nadu

Home

Welcome to the Commercial Taxes Department , Tamil Nadu

Commercial Taxes Department, Tamil Nadu now introducing e-Services

**e-Services**  
Facilitating Services for e-Registration, e-Return Filing, e-Payment, e-CST Forms Issuance etc.

**Track Your Status**  
Provides facility to dealers to view the status of the respective e-Services applications submitted by the dealer.

**e-Communication**  
e-communication shall allow messages exchange between CTD/Admin and the Registered Dealer.

**Download Documents**  
Facility to download all the Notices, Receipts, Certificates or Orders issued by the department.

**Sign-In**

Login With : ☐ 1. Password ☒ 2. Digital Signature

Login Id:

Password:

Designed and Managed by  
**TATA**  
TATA CONSULTANCY SERVICES  
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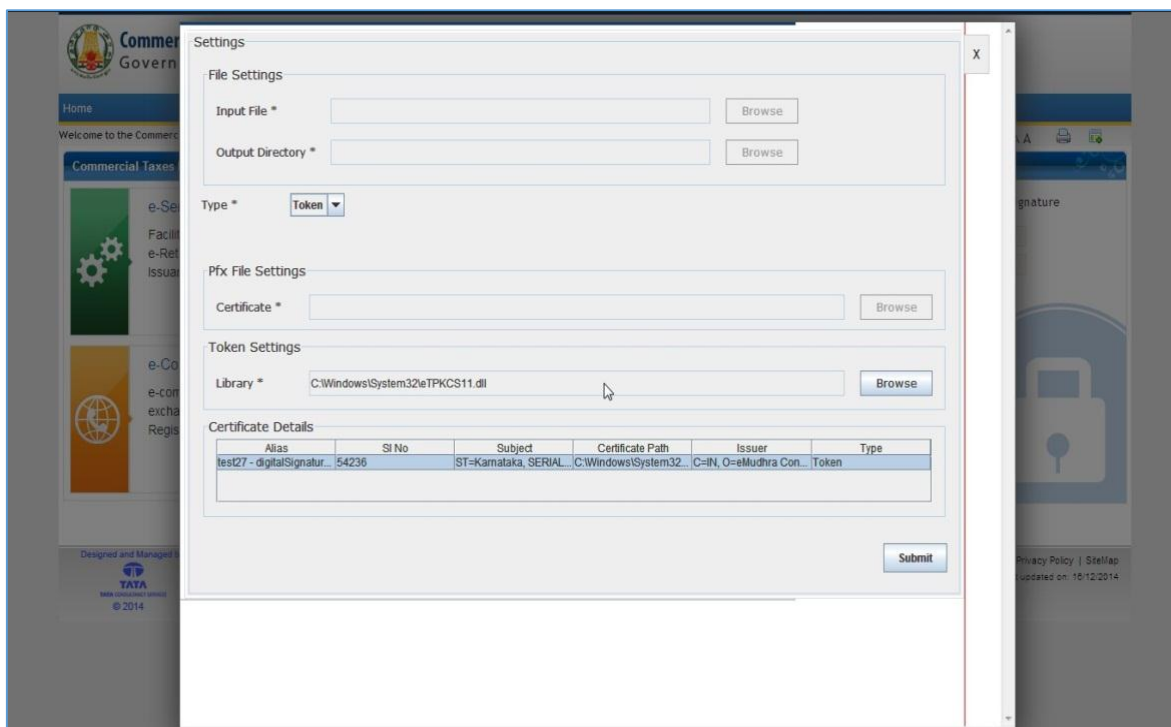
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**Figure 13: Login Page**

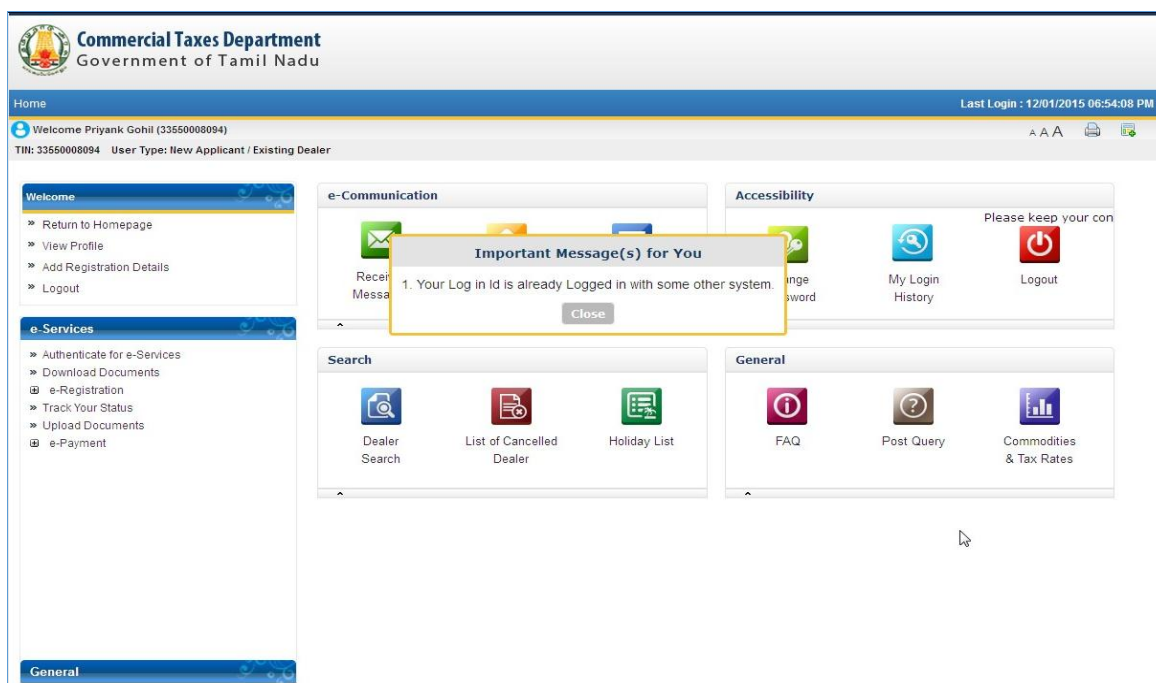
2. A popup is opened to select the certificate with which dealer wants to login and which is mapped with purpose as Logging in by dealer.





**Figure 14: Popup to login with Digital Signature**

- Once dealer has selected valid certificate and has provided valid password, he/she will be able to login successfully and will be redirected to home page as shown below.



**Figure 15: Home Page after Successful Login**

## 5. Un Map Digital Certificate

Un Map Digital Certificate functionality is used to remove existing mapped digital certificate from the Web Portal. After that dealer cannot use that Digital Certificate for Logging and/or for Signing the functionalities.

Below are the steps to un map Digital Certificate:

1. Click on **General->Map Digital Certificate** link in left page.
2. A list of all mapped Digital Certificate(s) will be displayed.

**Commercial Taxes Department**  
Government of Tamil Nadu

Home Last Login : 12/01/2015 05:20:45 PM

Welcome Priyank Gohil (33550008094)  
TIN: 33550008094 User Type: New Applicant / Existing Dealer

**Welcome**

- » Return to Homepage
- » View Profile
- » Add Registration Details
- » Logout

**e-Services**

- » Authenticate for e-Services
- » Download Documents
- » e-Registration
- » Track Your Status
- » Upload Documents
- » e-Payment

**General**

You are here >> Home >> Map Digital Certificate

**Map Digital Signature**

Note :- Mapping Functionality will work in Internet Explorer and Google Chrome.

**Map Digital Certificate**

Purpose Of Map Certificate ☐ Logging ☒ Signing ☐ Logging and Signing [Map Digital Certificate](#)

**List Of Certificates**

Select	Subject	Issuer	Purpose
<input type="radio"/>	C=IN, O=eMudhra Consumer Services Ltd., OU=Sub-CA, CN=e-Mudhra Sub CA for Class 2 Gold Individual 2011	ST=Karnataka, SERIALNUMBER=91920E781216D163A4F1141CF6F1009C8B98C2B761377C3C1A66595329ABA837, CN=test27, O=test, C=IN	Logging
<input checked="" type="radio"/>	C=IN, O=eMudhra Consumer Services Ltd., OU=Sub-CA, CN=e-Mudhra Sub CA for Class 2 Gold Individual 2011	ST=Karnataka, SERIALNUMBER=91920E781216D163A4F1141CF6F1009C8B98C2B761377C3C1A66595329ABA837, CN=test27, O=test, C=IN	Signing

**UnMap Certificate**

**Figure 16: List of all mapped Digital Certificates**

3. Select Digital Certificate which you want to un map from your account and click on **UnMap Certificate** button.

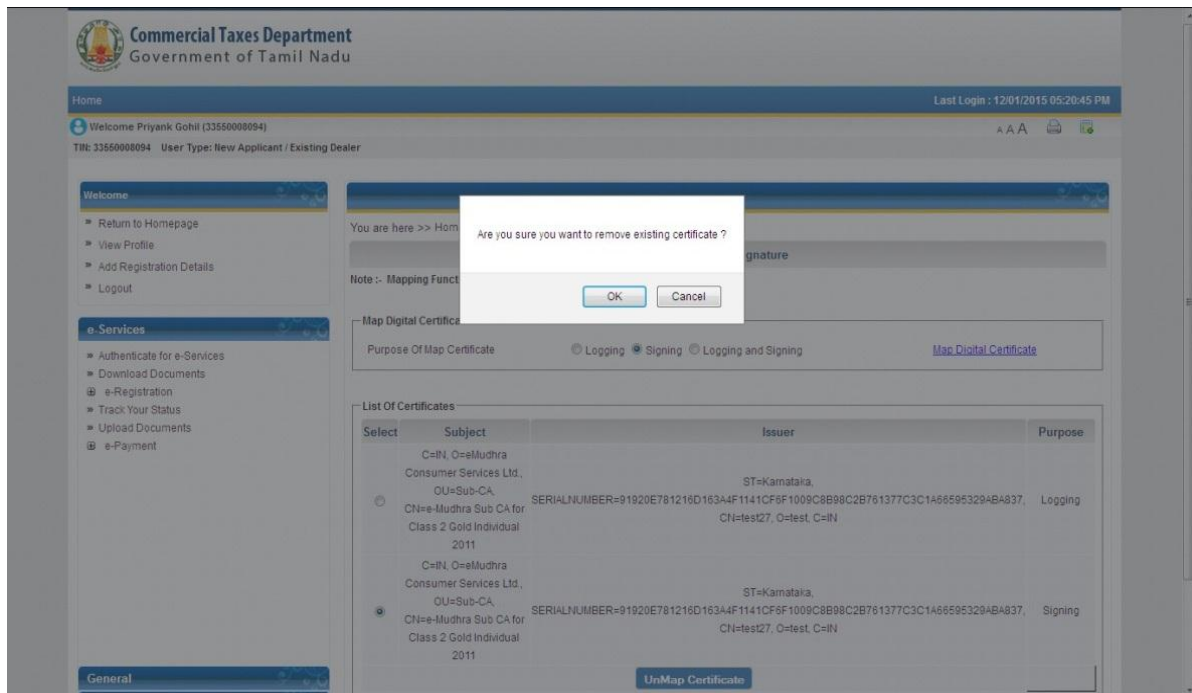


Figure 17: Un Map Digital Certificate

4. On submit, a success message will be displayed.

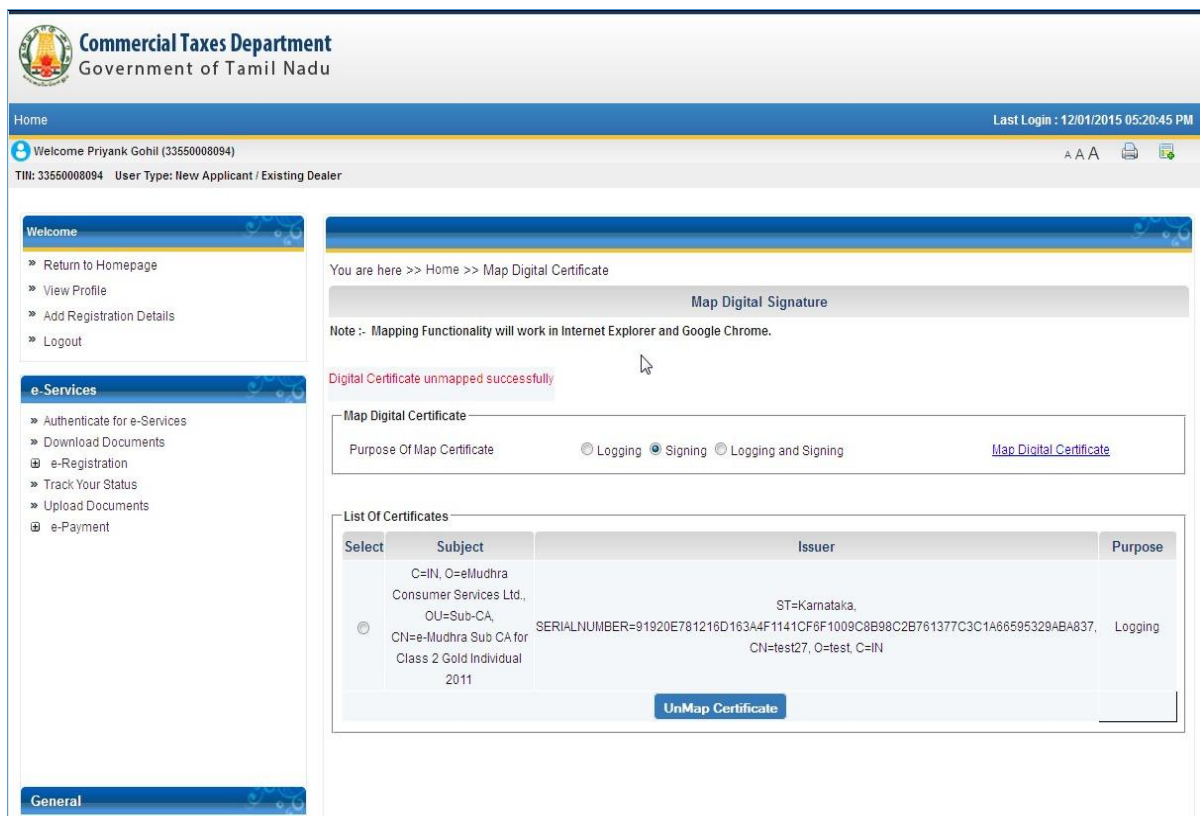


Figure 18: Un Map Certificate Success page