Pre–requisites for Digital Signature

Know about Digital Signature Certificate

- You should have a legally valid Class III digital certificate as per Indian IT Act from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. (http://www.cca.gov.in/)

Steps for obtaining Digital Certificate

1. Visit the site of the licensed Certifying Authority
2. Apply for a class 3 digital certificate for the designated individual with organization name. Ensure the Digital Certificate is legally valid in India.
3. For making payment for Digital Certificate and submission of documents required for issue of the Digital Certificate, follow the instructions on the CA's website.
4. Register the class 3 Digital Certificate thus obtained at Bharat Electronics E-procurement portal
5. Click here for viewing the process flow Screen shot
6. In case any assistance required for obtaining Digital signature certificates, vendors may contact our DSC server component service provider.

   M/s (n) Code Solutions Division Of GNFC LTD
   No 3698, 9th Cross 13th D Main Road HAL 2nd stage Indiranagar
   Bangalore – 560008
   Mail ids: snagaraj@ncode.in
   Landline: 080-25263027/25213521 Extn:301
   Contact Persons: Nagaraj S +91 9880800905

Java Applet:

In order to operate Digital Signature in our Portal you need to have Java Internet component. If the Java Internet component is not installed in your system, the same can be downloaded by clicking on the hyper link: "Download Java Component" provided in Bharat Electronics e-procurement portal or from URL : http://www.java.com/en/download/manual.jsp.

After downloading the Java component, ensure that you re-start your internet browser.

Registration of Digital Signature Certificate in Bharat Electronics E-procurement portal:

Login through link SRM of portal at http://bel-india.com. Go to User Menu ->Register DSC. Follow the instruction to register your Digital Signature Certificate (DSC).

About Digital Signature Certificate

What is a Digital Signature Certificate (DSC)?

The Information Technology Act, 2000 provides for use of Digital Signatures on the documents submitted in electronic form in order to ensure the security and authenticity of the documents filed electronically. This is the only secure and authentic way that a document can be submitted electronically.

Need for Digital Signature

Below are three common reasons for applying a digital signature to communications:

Authentication

Although messages may often include information about the entity sending a message, that information may not be accurate. Digital signatures can be used to authenticate the source of messages. When ownership of a digital signature secret key is bound to a specific user, a valid signature shows that the message was sent by that user.

Integrity

In many scenarios, the sender and receiver of a message may have a need for confidence that the message has not been altered during transmission. If a message is digitally signed, any change in the message after signature will invalidate the signature..

Non-repudiation

Non-repudiation is an important aspect of digital signatures. By this property an entity that has signed some information cannot at a later time deny having signed it. Similarly, access to the public key only does not enable a fraudulent party to fake a valid signature.

How Digital Signature Works

In Digital Signature, a public and private key are created simultaneously using the same algorithm (a popular one is known as RSA) by a certificate authority (CA). The private key is given only to the requesting party and the public key is made publicly available (as part of a digital certificate) in a directory that all parties can access. The private key is never shared with anyone or sent across the Internet. One has to use the private key to decrypt text that has been encrypted with recipient public key by someone else (who can find out what your public key is from a public directory). Sender can authenticate to the receiver of the message by using sender's private key to encrypt a digital certificate. The

recipient can verify the message using public key of the sender to decrypt it. Here's a table that restates it:

To do this	Use whose	Kind of key
Send an encrypted message	Use the receiver's	Public key
Send an encrypted signature	Use the sender's	Private key
Decrypt an encrypted message	Use the receiver's	Private key
Decrypt an encrypted signature (and authenticate the sender)	Use the sender's	Public key

Legal Warning:

You can use only the valid Digital Signatures issued to you. It is illegal to use Digital Signatures of anybody other than the one to whom it is issued.

Certification Agencies:

Certification Agencies are appointed by the office of the Controller of Certification Agencies (CCA) under the provisions of IT Act, 2000. There are a total of seven Certification Agencies authorised by the CCA to issue the Digital Signature Certificates (DSCs).

Class of DSCs:

Class 3 A/B digital signatures for individuals/Organization is certificate that provides highest level of assurance within the RCAI hierarchy setup by CCA (Controller of Certifying Authorities) in India which is mainly used for e-tendering or e-procurement or e-bidding.

Individual (Class 3A): Class 3A Individual certificates issued to individuals or devices and encompass primarily high end security-sensitive online activity.

Organization (Class 3B): Class 3B Organization certificates those are used for signing, encryption, electronic access control, e-commerce, and online financial transactions that

require a strong assertion of the customer's identity. The validation procedure for class 3 Organization certificates includes confirmation that the organization does in fact exist, authorization from the organization for the certificate applicant.

To participate in the e-procurement process, every **Vendor / Purchaser** is required to use a **Class 3B** Digital Signature Certificate. Class 3 Digital Signatures are issued to individuals, organizations and devices and applicable for personal and commercial use. Typically, they are used for Electronic Data Exchange (EDI), internet banking/broking-tendering and other web-based transactions where confidentiality and authenticity are critical.

Validity of Digital Signatures:

The DSCs are typically issued with one year validity and two year validity. These are renewable on expiry of the period of initial issue.

Certifying Authorities

Certifying Authorities (CA) has been granted a license to issue a digital signature certificate under Section 24 of the Indian IT-Act 2000. One can procure Class 3 certificates from any of the certifying authorities.

(n) Code Solutions CA

Tata Consultancy Services (TCS)

E-MUDHRA

SafeScrypt CA Services, Sify Communications Ltd.

MTNL Trust Line

IDRBT Certifying Authority

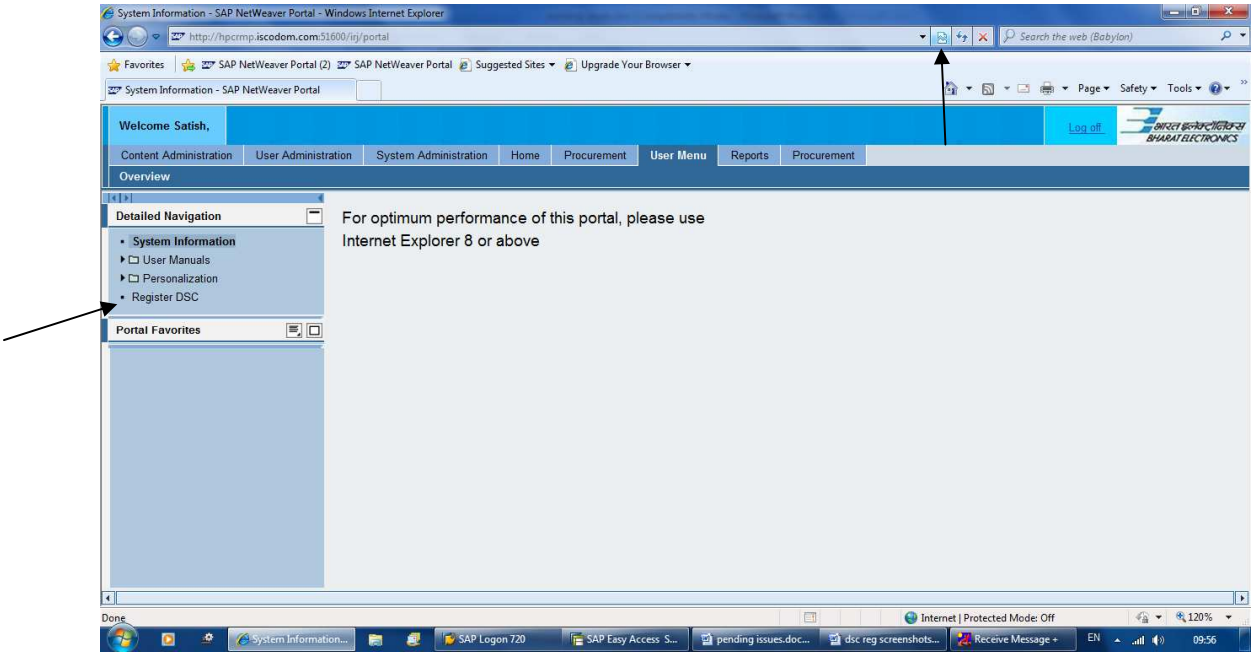
Customs & Central Excise

National Informatics Center (NIC)

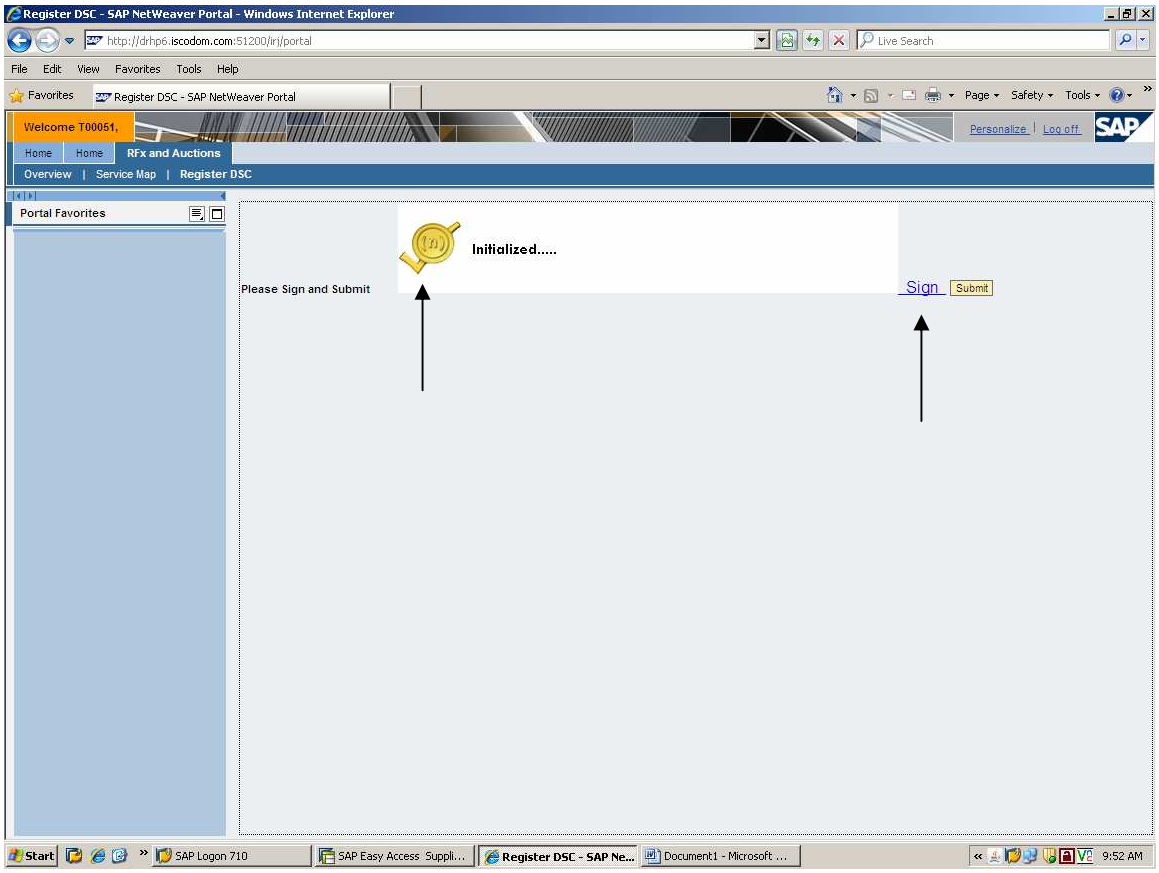
Prepared by : Information Systems – Corporate, Bharat Electronics Ltd

Steps to Register Digital Signature

Under USER MENU tab, click on 'Register DSC'
If 'specific URL not found' message comes, then click on 'browser compatibility' button, then click again on 'Register DSC'



Wait for the java applet to load and get Initialized. Then click on 'Sign'
(Compatible JAVA version is 1.7 or below)


Register DSC - SAP NetWeaver Portal - Windows Internet Explorer
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Live Search
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Welcome T00051,
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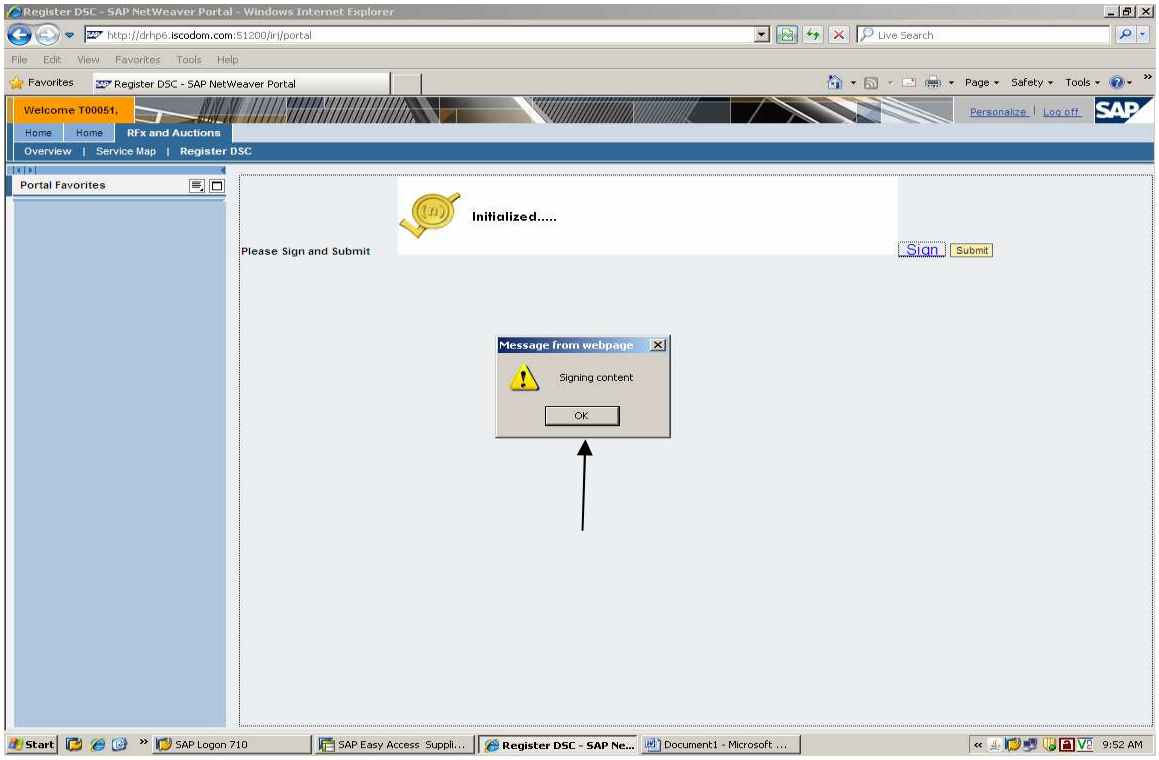
Register DSC - SAP NetWeaver Portal - Windows Internet Explorer
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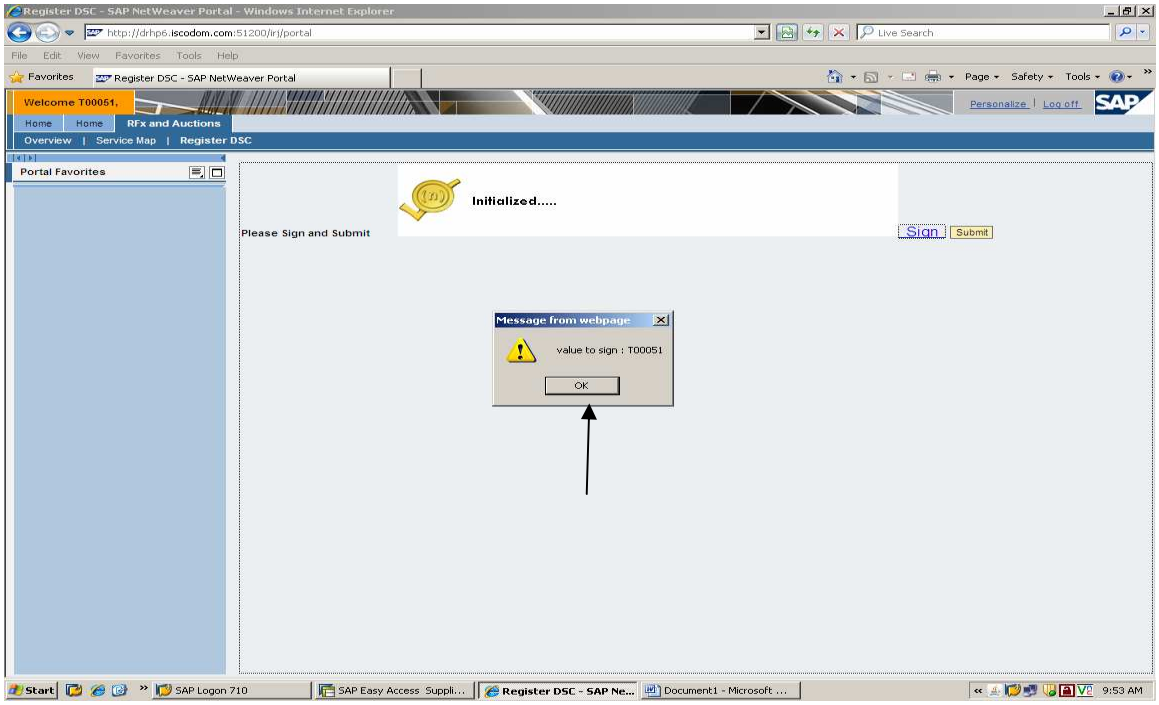
Register DSC - SAP NetWeaver Portal
Welcome T00051,
Home
RFx and Auctions
Overview | Service Map | Register DSC
Portal Favorites
Initialized.....
Please Sign and Submit
Sign
Submit
Message from webpage
Signing content
OK

Click OK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Overview | Service Map | Register DSC
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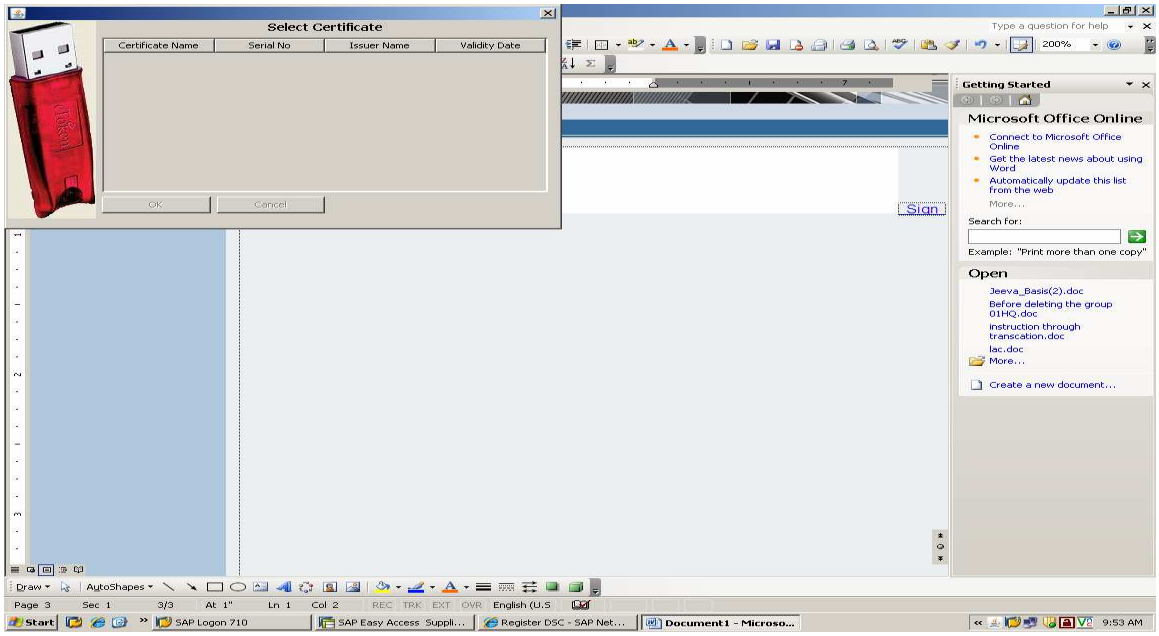
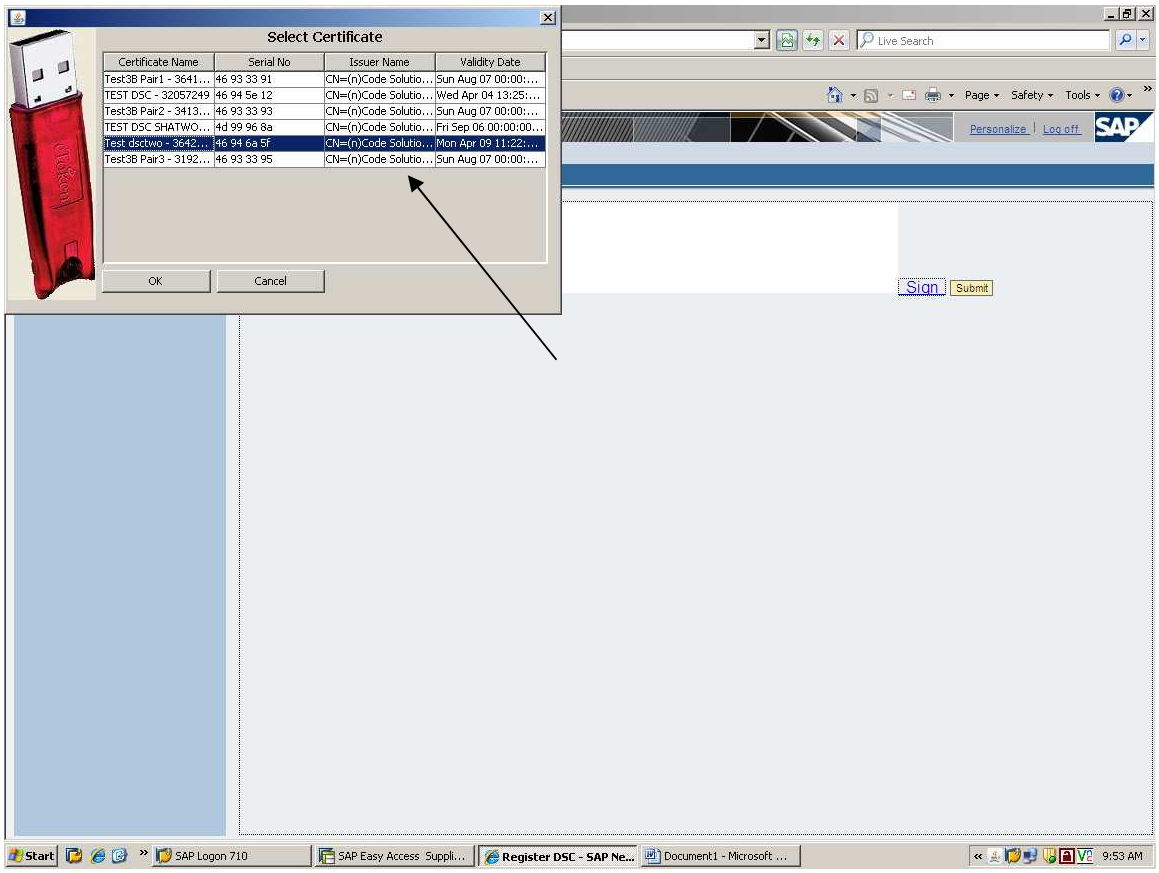
Initialized.....
Please Sign and Submit
Sign
Submit
Message from webpage
value to sign : T00051
OK

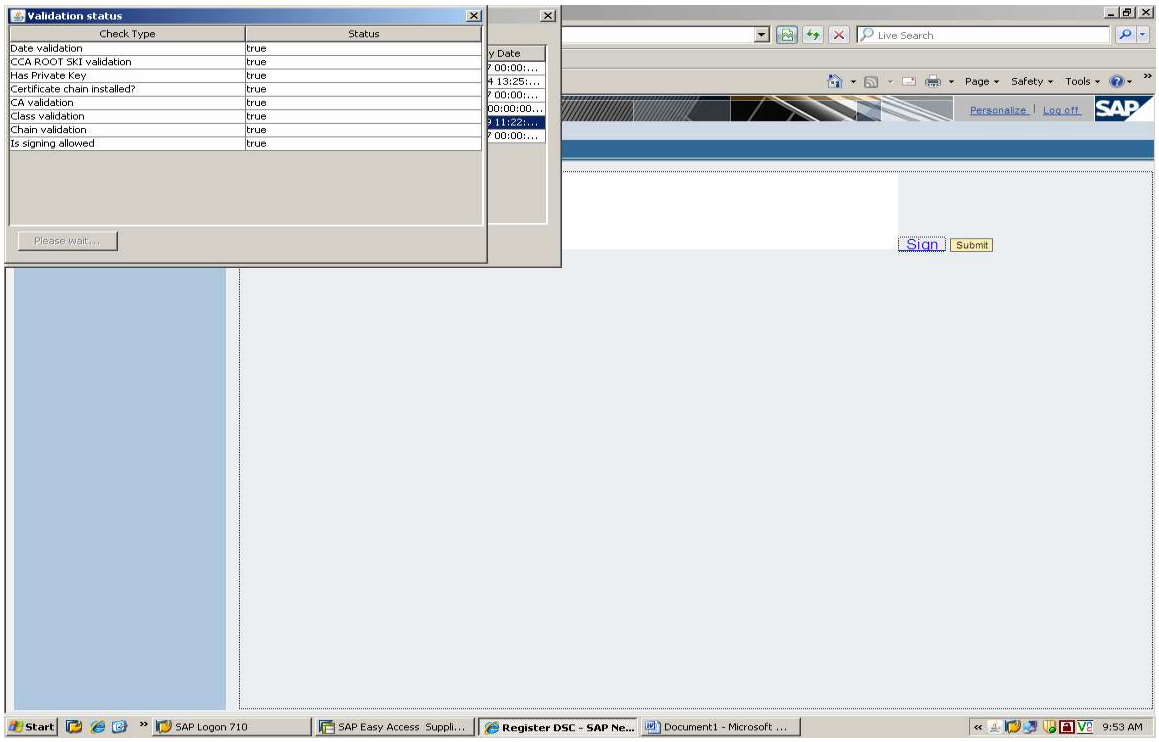
Wait for the Certificate to load for selection



Select the Certificate Number



Status 'true' for all values


Validation status
Check Type
Status
Date validation
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CCA ROOT SKI validation
true
Has Private Key
true
Certificate chain installed?
true
CA validation
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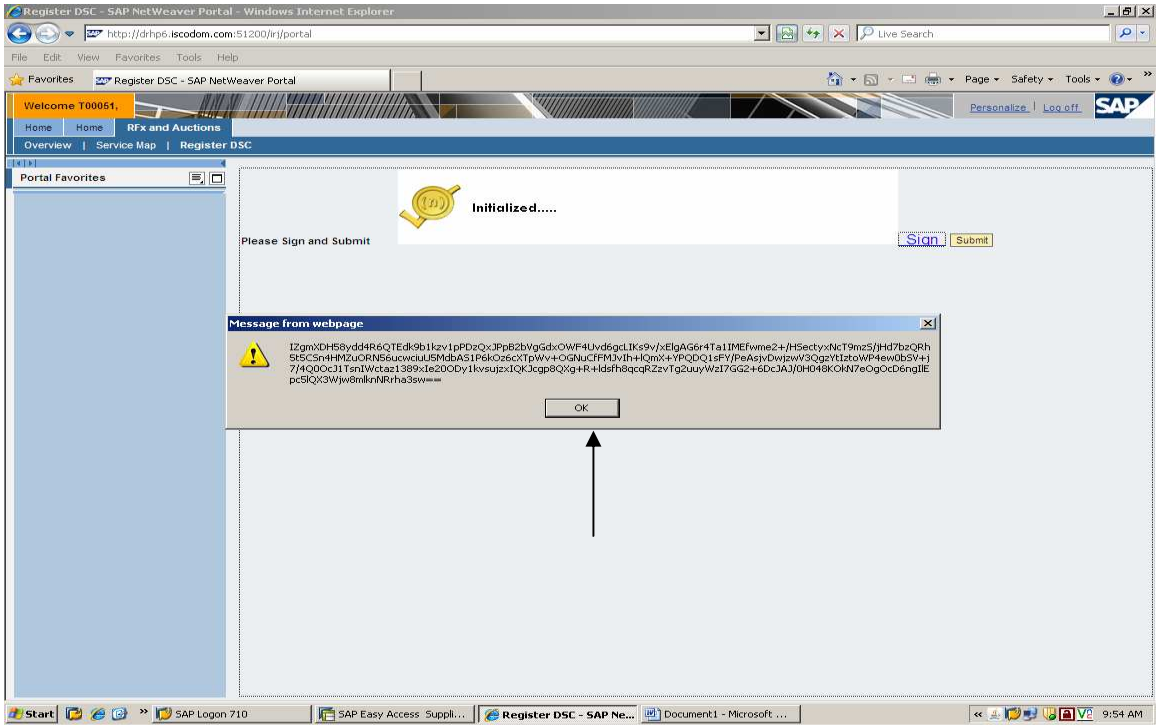
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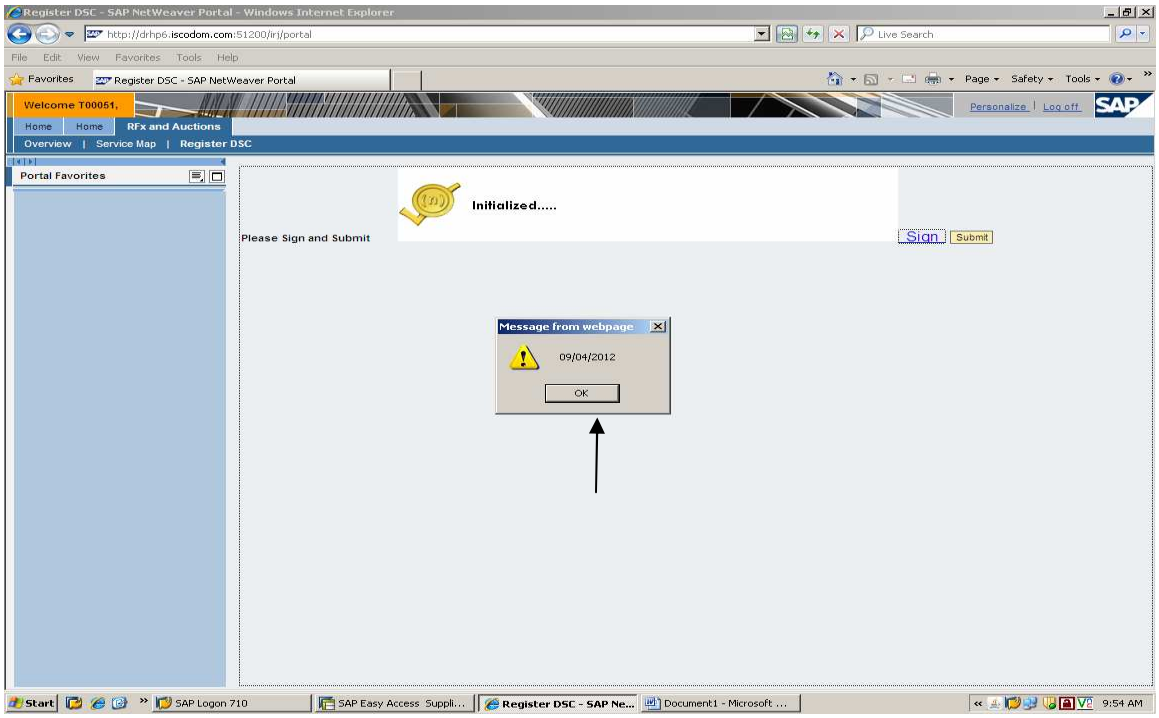

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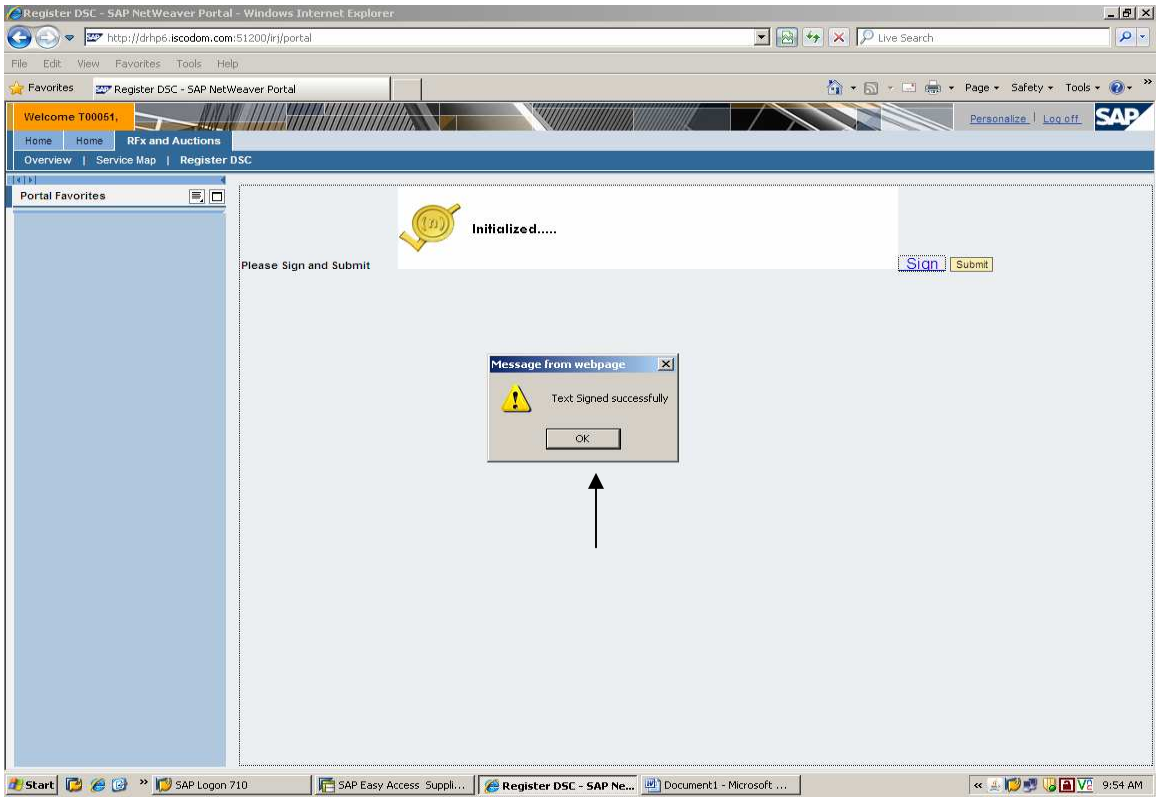
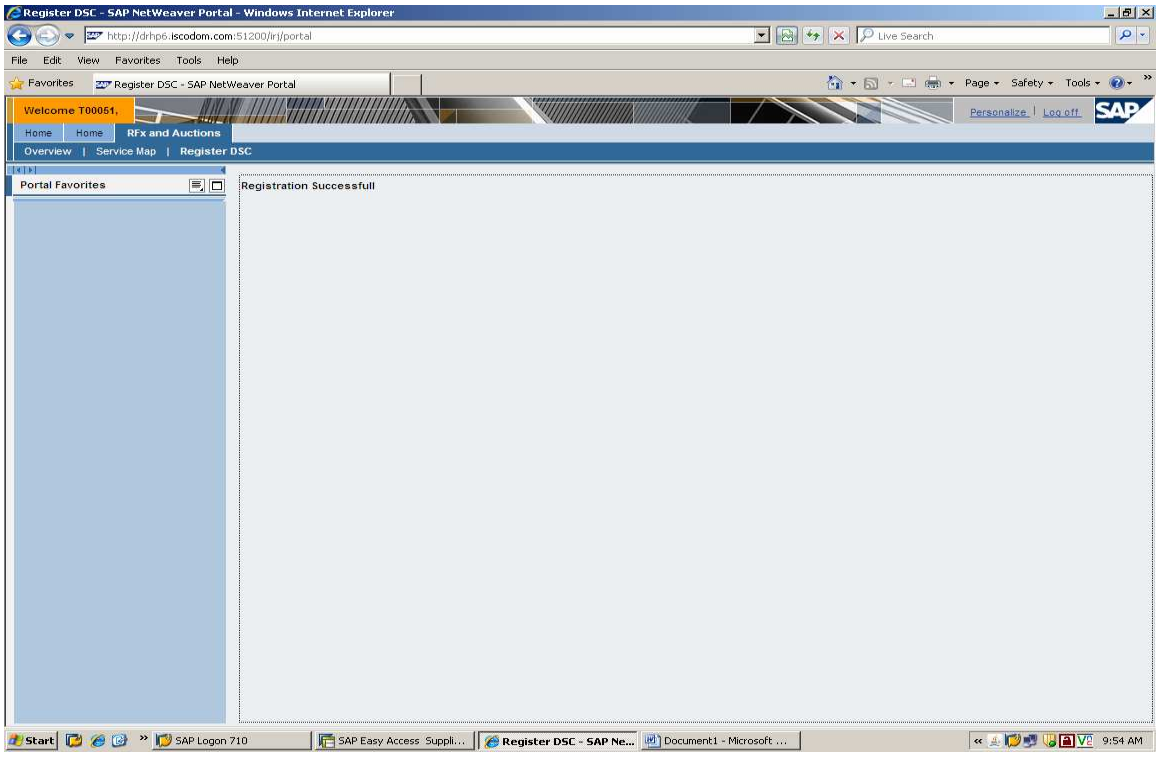


Registration Successful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