Mobile Digital Signature (MDS) Application

HELP GUIDE

Version 4.0.1

Contents

About

Digital signatures can be used for many types of documents where traditional hand-written signatures have been used in the past. The sole existence of a digital signature is not enough assurance that a document is what it appears to be. For a recipient to fully trust an electronic document, they must be able to verify that:

- The document has not been altered
- The document came from someone they trust

Electronic Signatures are the equivalent of a hand-written signature that has been digitized. Electronic signatures are popular because they are easy to use (ex. created using a finger or mouse) however they are not equivalent to digital signatures.

Digital Signatures are quite different from Electronic signatures as they are more trustworthy because they verify the identity of the person who signed and that the signature is valid. In contrast to paper-based (hand-written) signatures, digital signatures offer higher levels of fidelity and integrity. Digital signatures verify and assure the following:

- The document is authentic and comes from a verified source
- The document has not been tampered with since being digitally signed as the signature would be displayed as invalid if changes were made
- The identity of the signer has been verified by a trusted entity or organization (by a trusted Certificate Authority (CA))

Digital signatures in Portable Document Format (PDF) documents address these needs by providing a way to authenticate digital data based on public key cryptography. This document describes how digital signatures can be placed on or validated within a PDF document by using the Mobile Digital Signature (MDS) application.

The Mobile Digital Signature (MDS) application allows users to apply digital signatures to PDFs from mobile devices on both the Apple iOS and Android platforms using the Purebred derived DoD issued digital certificate on the DoD Mobility Unclassified Capability (DMUC) device.

The following limitations should be noted as you utilize the MDS Application:

- The MDS Application will only support PDF documents that are fillable, containing predefined digital signature blocks, using X.509 based digital signing certificates, and will interact with PDF documents whose document security permission settings authorize it.
- The MDS Application will not create PDF documents.
- The MDS application will not identify or validate hand-written or electronic signatures.
- The MDS Application will only utilize X.509 based digital signing certificates that are accessible from within the mobile device upon which it is installed.
- The MDS Application will rely on external Certificate Authorities to provide a revocation status for an issued certificate.
- The MDS Application will rely on an Internet connection to perform a CRL check.
- The MDS Application cannot store the information related to any PDF documents and as such you must rely on external applications or storage.

Getting Started

This section explains how to launch the MDS Application from an Android device.

LAUNCHING THE MDS APPLICATION

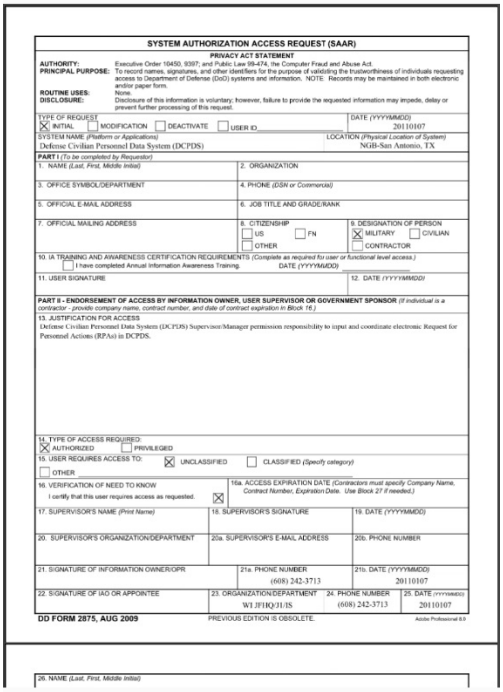
Users launch the MDS Application via two methods:

1) Selectthe MDS icon on an Android device. This will bring you to the MDS Application's welcome screen.
    a. At the MDS Application's welcome screen, users select OPEN PDF to open files stored locally on the device or in cloud storage (i.e. Google Drive, OneDrive, Dropbox, etc.).
        i. Once a PDF file has been selected, the file will be opened to the MDS Application's main screen to allow the user to use all the features of the MDS Application.
    b. Select the (Exit) icon
        i. Selecting this icon will close the MDS Application
    c. Select the (Help Guide) icon
        i. Selecting this icon will open the help guide
2) Open a PDF through a PDF viewing application (if installed) and share (export) the PDF with the MDS Application. This will open the MDS Application and the PDF that was shared.
    a. Alternatively, save a PDF received from an email to either the internal storage on the device or a cloud storage service. Then follow method #1 (above) to open the PDF.

OPENING A PDF WITH THE MDS ICON

Once the MDS Application opens to the welcome screen, users can access PDFs that are stored locally on the device or in cloud storage (i.e. Google Drive, OneDrive, Dropbox, etc.) by selecting the OPEN PDF icon.

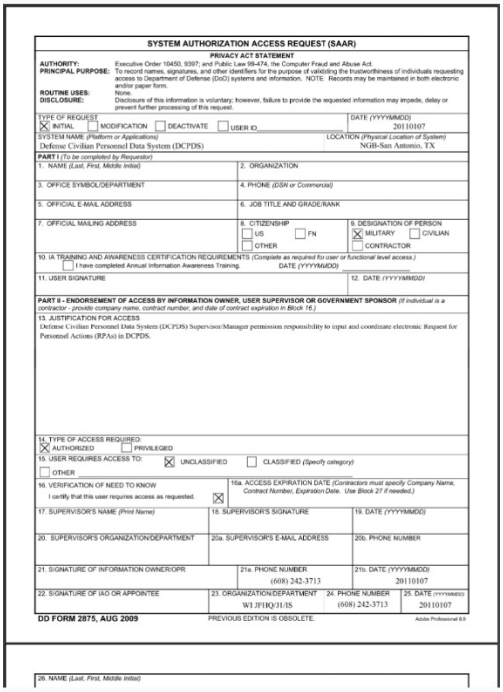
- Digitally sign the PDF in predefined signature blocks
- Determine the validity of existing digital signatures on the PDF
- Edit the fields in fillable PDF
- Save PDF locally on the mobile device or on a cloud storage media
- Share and export the PDF using multiple applications that are enabled on the device such as email, cloud storage applications or text messaging
- Open new PDF documents
- View the MDS help guide
- Close the MDS Application



OPENING PDFS THROUGH AN EMAIL APPLICATION OR WEB BROWSER

PDF attachments will either have to be saved to the local device or a cloud storage application; from which the MDS Application is able to open. Alternatively, a 3rd party PDF viewer application with the ability to share to other applications will be able to export a PDF into the MDS Application. The MDS Application will allow users to perform the following:

- Digitally sign the PDF in predefined signature blocks
- Determine the validity of existing digital signatures on the PDF
- Edit the fields in fillable PDF
- Save PDF locally on the mobile device or on a cloud storage media
- Share and export the PDF using multiple applications that are enabled on the device such as email, cloud storage applications or text messaging
- Open new PDF documents
- View the MDS help guide
- Close the MDS Application



Using the Application

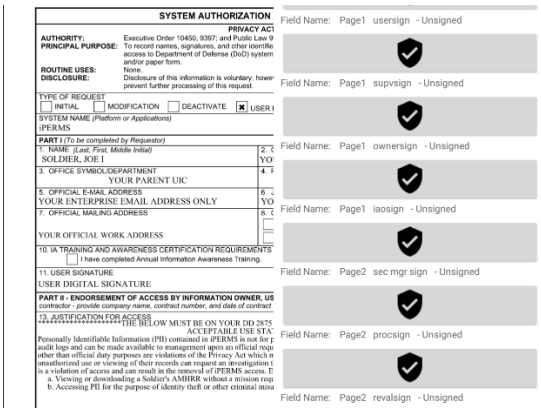
This section explains the navigation ribbon icons of the MDS Application.

DIGITAL SIGNATURES

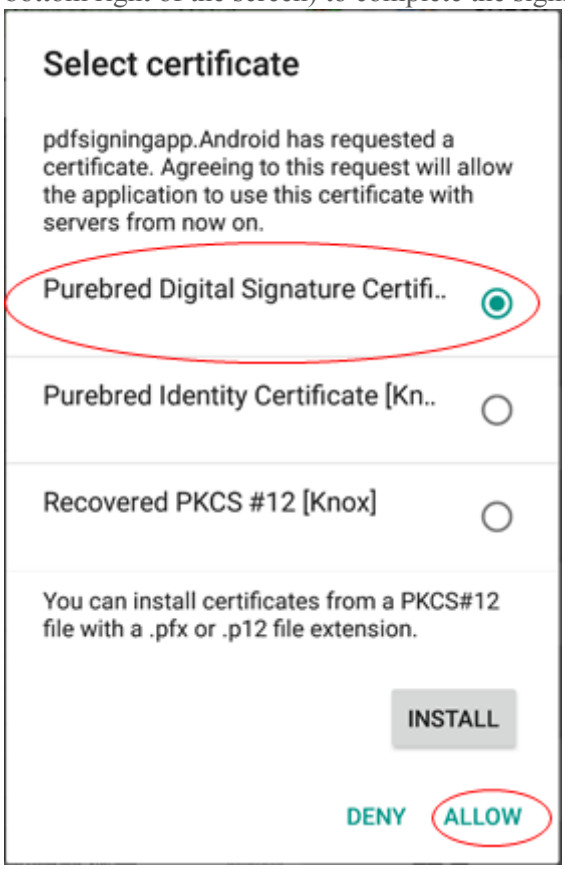
The MDS Application identifies all areas of the PDF that have predefined digital signature blocks that will accept a digital signature. Selecting the icon brings a right-side menu that lists all signature block areas of the PDF that can accept a digital signature.

Signing

After selecting the icon on the navigation ribbon, the list of digital signature block areas of the PDF that can be signed will appear on a right-side menu. Follow the steps below (1-2) to successfully sign a PDF.

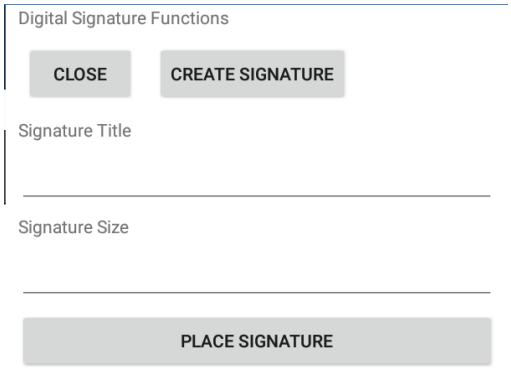


1. Select the corresponding icon of the part of the PDF to be digitally signed.
2. Select 'Purebred Digital Signature Certificate' from the list of certificates and then select 'ALLOW' (located at the bottom right of the screen) to complete the signing of the PDF.

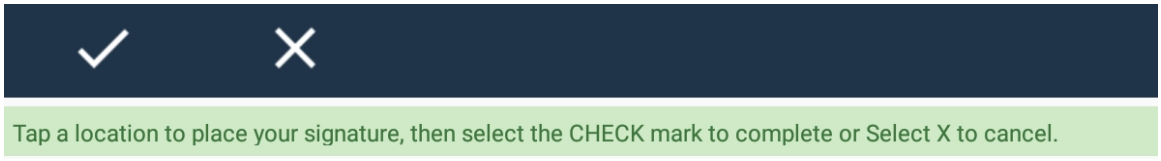


Once the PDF has been successfully signed, the message '**All digital signatures are valid**' will appear below the navigation ribbon.

Adding Custom Signature Fields



1. Enter the name of the new custom signature field under 'Signature Title'.
    a. Note: A unique name must be used for each new custom signature field. Entering a duplicate name will replace the pre-existing custom signature field.
2. Select a size of the new custom signature field based on the user's desired preference. The sizes range from the following:
    a. Small
    b. Medium
    c. Large
3. Select 'Place Signature' once the size of the new custom signature field has been selected, the user will be taken back to the PDF to place the location of the signature.
4. Tap the area of the PDF that the new custom signature will be placed.
    a. Note: the user can use his/her finger to scroll up/down the PDF and to find the location to place the signature.
5. Select the CHECK MARK as shown below in the navigation ribbon to confirm the placement of the new custom signature. Select X to cancel this function.

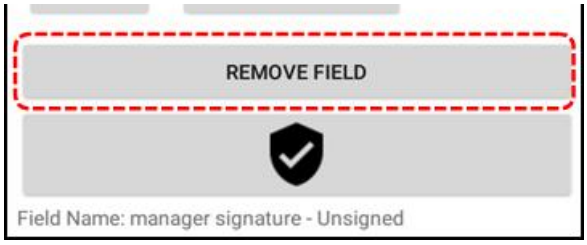


Upon completion, a gray box with the text 'SIGN HERE' will appear in the selected location.

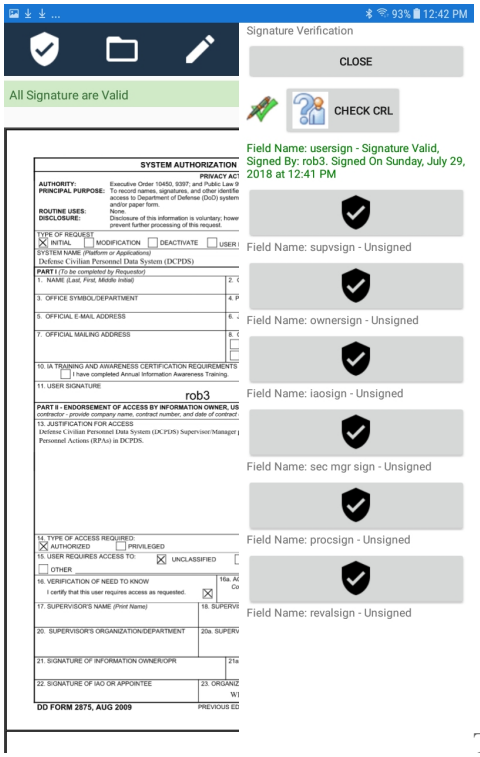
Once the new custom signature field has be added, the user may sign it using the steps in the 'Signing' section of this help guide. Alternatively, the user may send the unsigned document with the new custom signature field to another user to sign.

Removing Unsigned Custom Signatures Fields

After selecting the  icon on the navigation ribbon, select 'REMOVE FIELD' on a right-side menu for the appropriate custom signature field. This will remove the custom signature field from the PDF.



Continue Signing



To continue signing other areas of the PDF, select the  icon and complete steps 1-2 from the previous section for each additional digital signature.

Once a signature field has been signed, it will appear with  and the metadata of the digital signature (see image to the right). In addition, it will provide the user the option to conduct a Certificate Revocation List (CRL) check on the digital signature.

Signature Verification

To perform a Certificate Revocation List (CRL) check on a signature, select the  icon from the navigation ribbon to bring up the right-side menu that lists all areas of the PDF that can accept a digital signature.

Next, select ‘Check CRL’ to validate a signature. If a signature is valid, ‘CRL Check: SUCCESS’ will appear below the navigation ribbon.

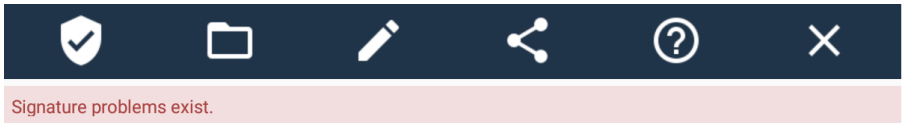
Note:

2. If a document does not have a digital signature field, when the user selects the icon, the right-side menu will display the message 'No Signatures available in this document'.

3. CRL checks fail on self-signed certificates as they are inherently considered untrustworthy as they are directly trusted as a trust anchor.

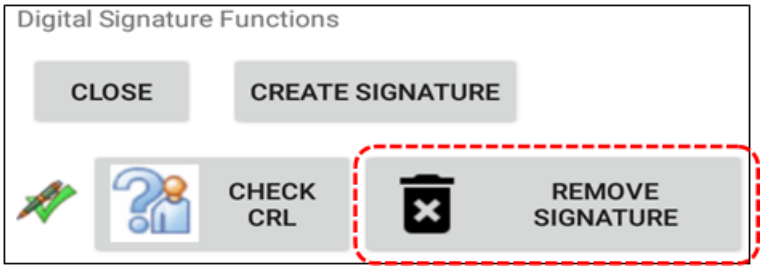
Invalid Signatures

If the MDS Application detects an invalid signature on the PDF due to an expired or revoked certificate, the message 'Signature problems exist' will be displayed on the navigation ribbon. If the user selects the 'sign' icon, the right-side menu will appear, and the invalid signature will not have nor will the user be able to conduct a CRL check on the signature.



Removing Signatures

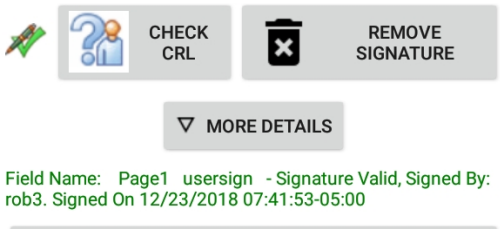
After selecting the icon on the navigation ribbon, select 'REMOVE SIGNATURE' on a right-side menu for the appropriate signature field. This will remove the signature and reset the signature field.



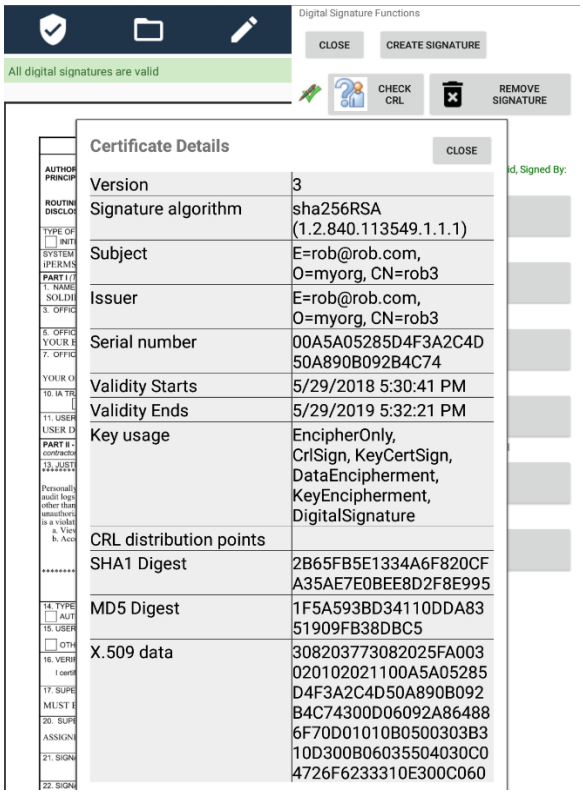
Note: This feature will only work on signatures applied during the current session. Any PDFs signed in a prior session or by another user cannot be removed.

Viewing Digital Certificate Properties

MDS allows users to view the X.509 digital certificate properties for all digital signatures that are placed on a document being viewed. To use this function, open the Digital Signature Function menu and select 'More Details' for the corresponding digital signature.



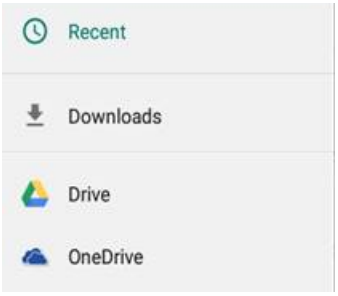
Selecting 'More Details' will provide the properties for the digital certificate that was used to make the digital signature that is represented on the document. The following scrollable screen is displayed when 'More Details' is selected and provides various details for the digital certificate used to make the digital signature.



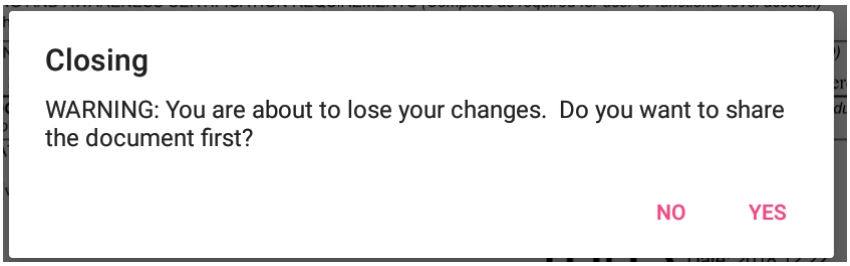
Select 'Close' to return to the previous screen.

Open folder 

Selecting the  icon allows users to access PDFs stored locally on the device or in cloud storage (i.e. Google Drive, OneDrive, Dropbox, etc.).



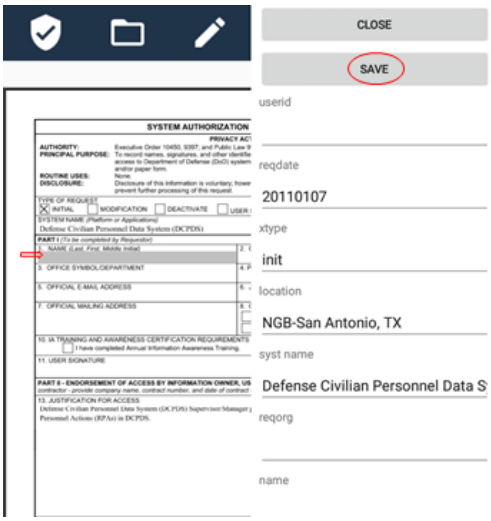
Note that MDS will prompt you to SHARE the document that is currently opened within the application if you select the OPEN function, this is to prevent loss of any modifications that have been made to the current document as the application does not save documents.



Selecting 'Yes' when prompted will provide the option to SHARE the document. Selecting 'No' will proceed with the OPEN function, thus removing the current document from the application, when another document is selected.

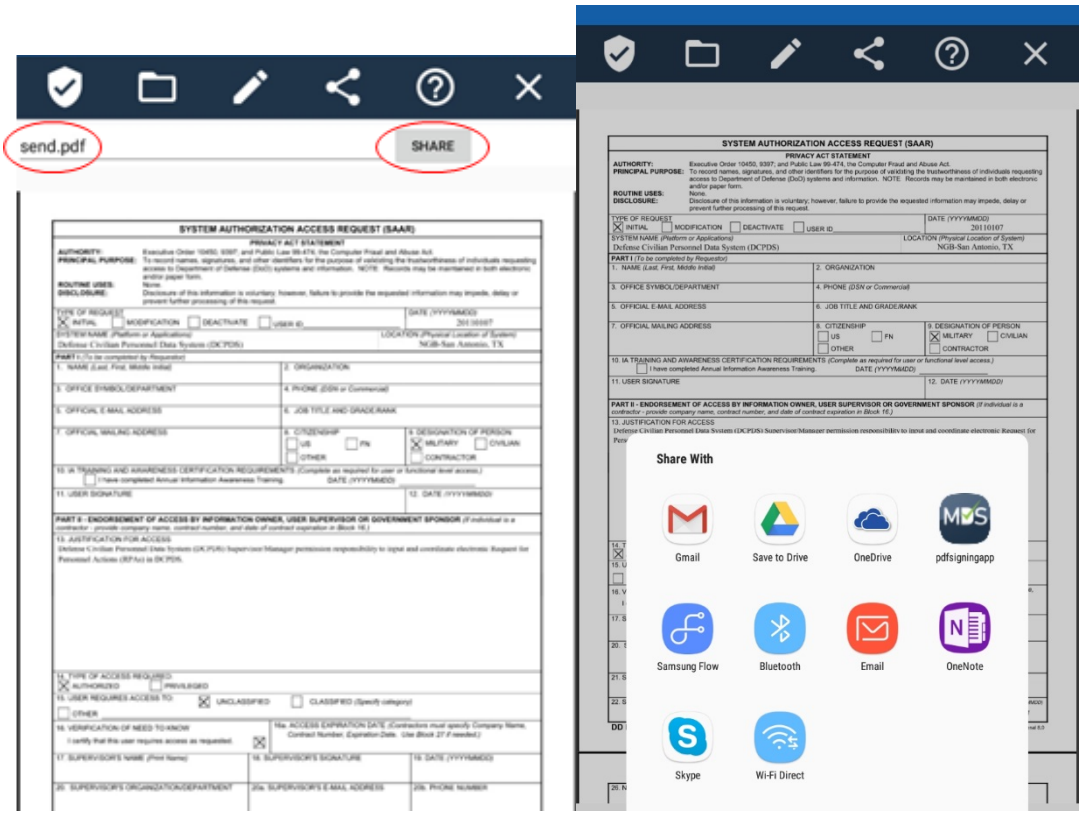
EDIT

Selecting the icon allows the user to add text to editable field of the document. Once the user selects the icon, a right-side menu will appear displaying all editable areas of the PDF. The user can add text to the editable area by selecting the corresponding field on the right-side menu (note: the area being edited will be shaded in grey). Once complete, the user selects 'SAVE' to capture the changes made to the PDF. Note that selecting 'DONE' on the keyboard will also save the changes made; after which you can select 'CLOSE' to return to the unobstructed view of the document.



SHARE

After selecting the icon, the user will be prompted with the option to change the name of the PDF file before exporting it. Once the user enters the desired name, then selecting ‘Share’ will bring up the menu of share options.



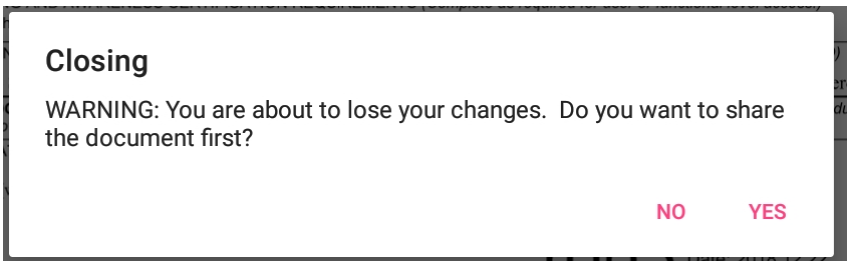
HELP GUIDE

Selecting this icon will open the help guide.

CLOSE PDF

Selecting this icon will close the open PDF and return the user back to the MDS Application’s welcome screen.

Note that MDS will prompt you to SHARE the document that is currently opened within the application if you select the CLOSE function, this is to prevent loss of any modifications that have been made to the current document as the application does not save documents.



Selecting ‘Yes’ when prompted will provide the option to SHARE the document. Selecting ‘No’ will proceed with the CLOSE function, thus removing the current document from the application, when another document is selected.

Support

The DoD Mobility User Corner is accessible from this URL:
https://disa.deps.mil/ext/cop/dod_mobility/SitePages/Home.aspx