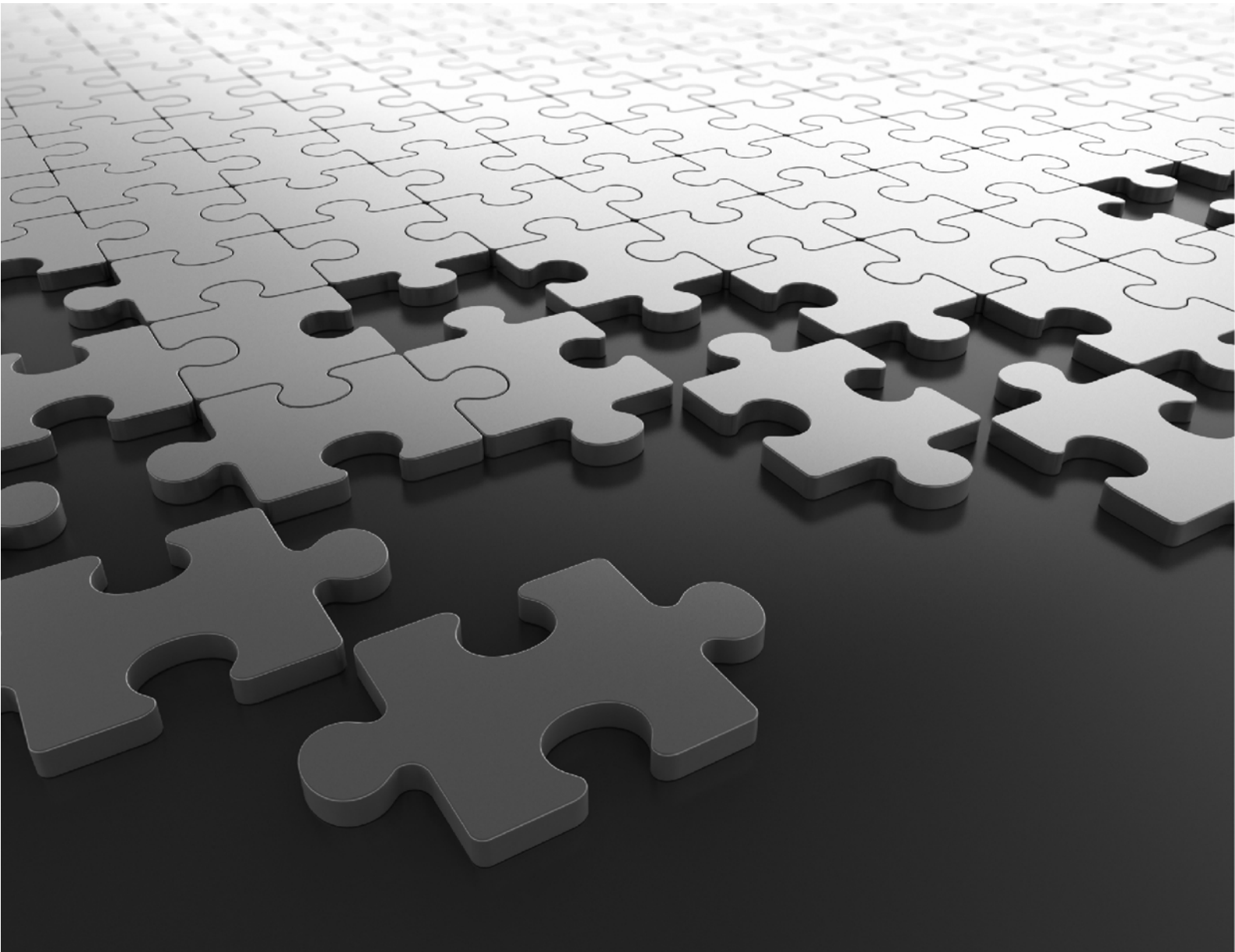


COSEC ENROLL

User Manual





COSEC ENROLL User Manual



Documentation Disclaimer

Matrix Comsec reserves the right to make changes in the design or components of the product as engineering and manufacturing may warrant. Specifications are subject to change without notice.

This is a general documentation for all variants of the product. The product may not support all the features and facilities described in the documentation.

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Warranty

For product registration and warranty related details visit us at:
<http://www.matrixaccesscontrol.com/product-registration-form.html>

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Welcome

Thank you for choosing the Matrix COSEC Multi door Access Control System! The COSEC Enroll is a desktop based application and is a part of the COSEC suite of applications which has been primarily designed to centralize and organize the issuance of user credentials as well as the enrollment of fingerprints. COSEC Enroll module also enables the user to upload the user photographs and also to capture and store user photographs in the COSEC database. However, the user needs to ensure that the COSEC license includes the COSEC Enrollment module. Please read this document carefully to get acquainted with the product before installing and operating it.

About this System Manual

This is common document providing detailed information and instructions for installing and configuring the COSEC Enroll software application as well as its hardware components. This manual includes sufficient information to install and configure all the components of the Matrix COSEC Enroll station.

COSEC Enroll is an Enrollment Station which integrates with the COSEC application software to provide a comprehensive access control package that incorporates the latest in biometric fingerprint technology to provide a fast and effective way to enroll staff and visitors.

COSEC Enroll is an easy to use, intuitive software application for Windows PCs providing the following options:

- Fingerprint Biometrics
- Mifare Reader
- HID Reader
- EM-Prox Reader
- USB Camera

Intended Audience

This System Manual is aimed at:

- **System Engineers**, who will install, maintain and support the COSEC System. System Engineers are persons who are responsible for configuring the COSEC system to meet the requirements of the organization/users. It is assumed that they are experienced in installing an Access Control System and are familiar with the operation of such systems. They are expected to be aware of how it works, and the various technical terms and functions associated with it. The SE must have undergone training in the installation and configuration of the COSEC system. No one, other than the System Engineer is permitted to make any alterations to the configuration of the COSEC system.
- **System Administrators**, who are persons who will monitor and control the COSEC system after installation. Generally, an employee of the IT/HR department in an organization or establishment is

selected as the System Administrator. It is assumed that the System Administrator has some previous experience in configuring and deploying a security cum Time and Attendance system.

- **Operators**, persons/organizations who will use the COSEC system. They may be executives, include personnel of small and medium businesses, large enterprises, front desk and administration staff of Hotels/Motels, hospitals, and other commercial and public organizations/institutions.

Organization of this Document

This system manual contains the following chapters:

- **Introduction** - gives an overview of this document, its purpose, intended audience, organization, terms and conventions used to present information and instructions.
- **Know Your COSEC ENROLL** - describes the system and its design and the hardware options.
- **Installing COSEC ENROLL application** - provides a step by step instruction for installing the various components required to run the COSEC ENROLL application including the associated hardware.
- **Starting the COSEC ENROLL application** - provides detailed instructions on using the different functionalities of the COSEC ENROLL application.

How to Read this System Manual

This document is organized in a manner to help you get familiar with the COSEC ENROLL application, learn how to install it, connect the external devices, and make full use of its functionalities.

This User Manual is presented in a manner that will help you find the information you need easily and quickly.

You may use the table of contents to navigate through this document to the relevant topic or information you want to look up.

- **Instructions**

The instructions in this document are written in a step-by-step format. Each step, its outcome and indication/notification, wherever applicable, have been described.

- **Notices**

The following symbols have been used for notices to draw your attention to important items.



Important: to indicate something that requires your special attention or to remind you of something you might need to do when you are using the system.



Caution: to indicate an action or condition that is likely to result in malfunction or damage to the system or your property.



Warning: to indicate a hazard or an action that will cause damage to the system and or cause bodily harm to the user.



Tip: to indicate a helpful hint giving you an alternative way to operate the system or carry out a procedure, or use a feature more efficiently.

Technical Support

If you cannot find the answer to your question in this manual or in the Help files, we recommend you contact your system installer. Your installer is familiar with your system configuration and should be able to answer any of your questions.

If you need additional information or technical assistance with the COSEC system and other Matrix products, contact our Technical Support Help desk, Monday to Saturday 9:00 AM to 6:00 PM (GMT +5:30) except company holidays.

Phone	(+91)18002587747
Internet	www.matrixaccesscontrol.com
E-mail	Tech.Support@MatrixComSec.com

The COSEC ENROLL is a fast, full featured user credential management solution designed to enhance security in commercial physical access control systems in conjunction with the COSEC Access Control application.

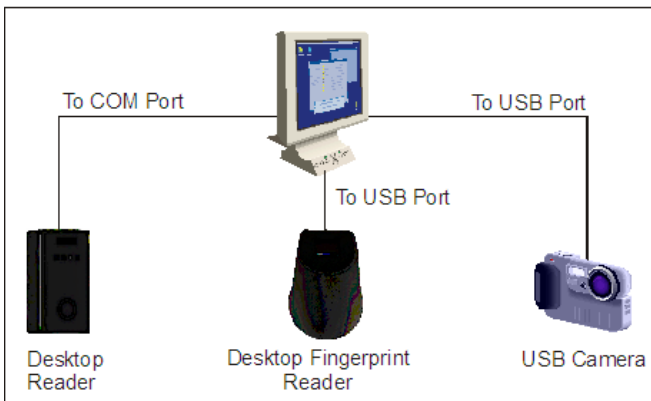
COSEC Enroll Utility supports language translation using the Multi Language Utility. To know more, refer to the Multi Language Utility User Guide.

The COSEC ENROLL application enables the operator to:

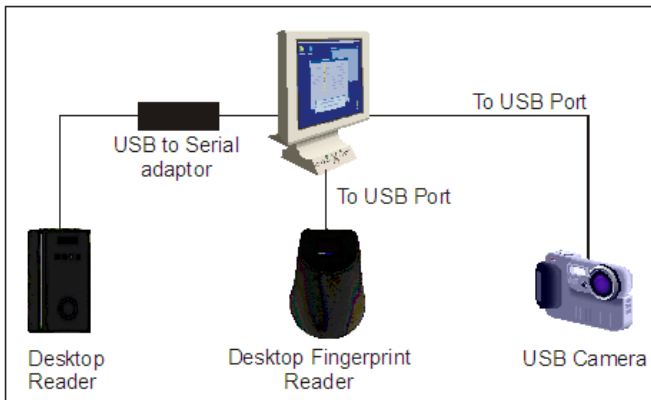
- Capture biometric fingerprint data via the desktop fingerprint reader
- Write Enrollment data to HID I-class or MIFARE 1K or 4K contactless cards (using the Matrix COSEC desktop Card Reader)
- Enroll and assign EM-Prox proximity cards to users.
- Connect to the COSEC database
- Check for duplicate card Enrollment data
- Upload Enrollment data to the COSEC PANELS and DIRECT Doors through the COSEC Monitor application.
- Capture and store the User photographs using the USB camera or upload the picture files to the COSEC database.

Enrollment Station Layouts

Desktop Mifare reader connecting directly to COM port



Desktop Mifare reader connecting to USB port



Pre-Requisites

Computer Hardware Platform

- **Processor:** Recommended is dual core processor and above
- **RAM:** Minimum available is 512 MB RAM
- **Hard disk:** Minimum available is 40 GB
- **Screen resolution:** Minimum Recommended is 1366 x 768
- **DVD/CD-ROM** drive
- **Network Interface card:** 10/100 Base-T network adapter
- **Microsoft .Net Framework** version 4.0

Operating Systems

- Windows7 Professional and above



If you are using large number of devices, more number of users and bulky data in COSEC Application, then it is advisable to upgrade your computer system configuration to get good performance result.

Pre-Requisites for Face Enrollment

Computer Hardware Platform

For Windows with CPU:

- 6th and above generation Intel Core processors and Intel Xeon processors.
- Intel Xeon processor E family (formerly code named Sandy Bridge, Ivy Bridge, Haswell and Broadwell)
- 3rd generation Intel Xeon Scalable processor (formerly code named Cooper Lake)
- Intel Xeon Scalable processor (formerly Skylake and Cascade Lake).



Processor graphics are not included in all processors.

A chipset that supports processor graphics is required if you're using an Intel Xeon processor.

For Windows with GPU:

- Nvidia GeForce FTX 1050 Ti-4GB onwards

Operating System

- Microsoft Windows 10 64-bit

Installing COSEC ENROLL Utility

Before commencing the installation, make sure that the computer on which the COSEC Enroll software will be installed meets the necessary requirements.

System Requirements

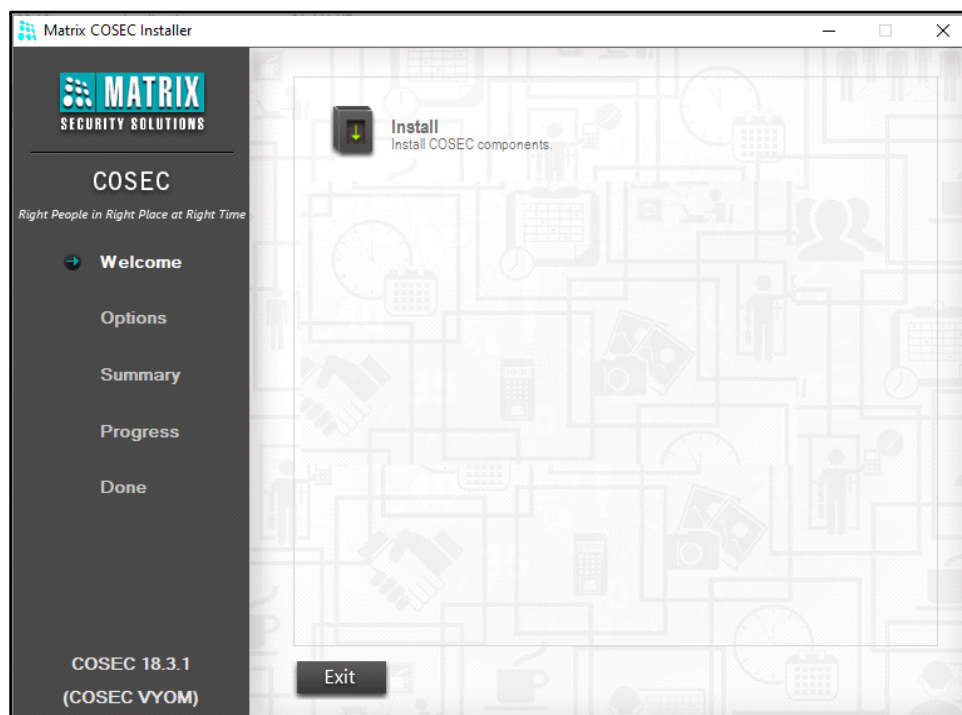
- Operating Systems: Windows7 Professional and above
- Processor: Recommended is dual core processor and above
- RAM: Minimum available is 512 MB RAM
- Hard disk: Minimum available is 40 GB
- Screen resolution: Minimum Recommended is 1366 x 768
- DVD/CD-ROM drive
- Network Interface card: 10/100 Base-T network adaptor
- Microsoft .Net Framework ver 4.0

Installing COSEC Enroll Utility

To install COSEC Enroll Utility Application, first run the COSEC Installer setup.

Name	Date modified	Type	Size
Prerequisites	1/25/2017 12:41 PM	File folder	
Software	1/25/2017 12:42 PM	File folder	
COSEC 64-bit Upgrade	1/24/2017 12:26 PM	Application	13,799 KB
InstallLogs	1/27/2017 3:30 PM	Text Document	40 KB
Setup	1/24/2017 12:38 PM	Application	571 KB

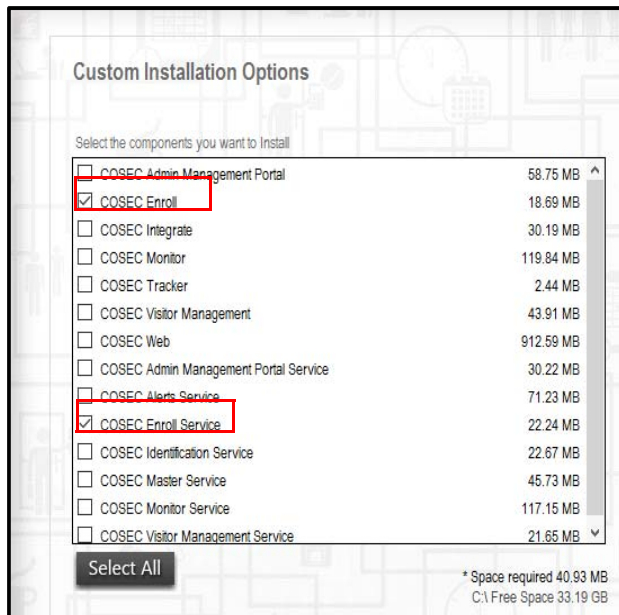
Click **Install**.



You can select **Complete** or **Custom** Installation. We will proceed further with **Custom** option.



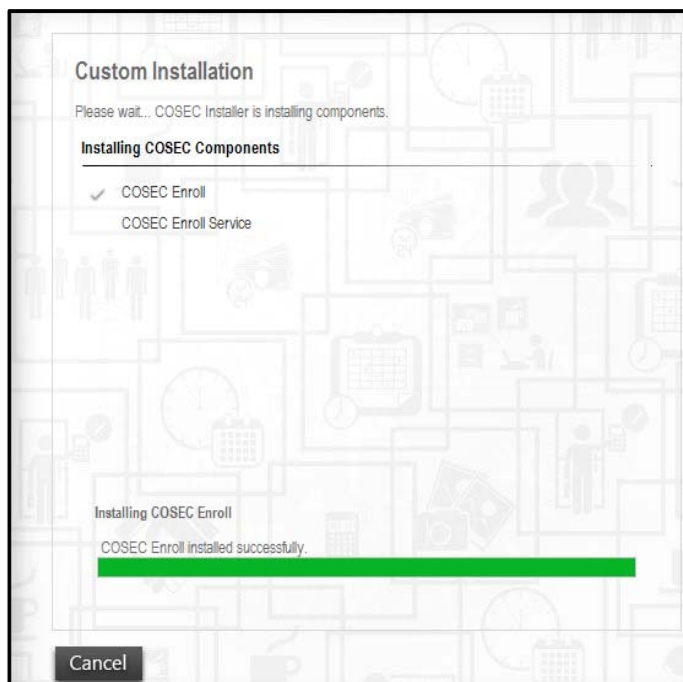
Select **COSEC Enroll** and **COSEC Enroll Service** to install COSEC Enroll Utility and COSEC Enroll Service respectively.



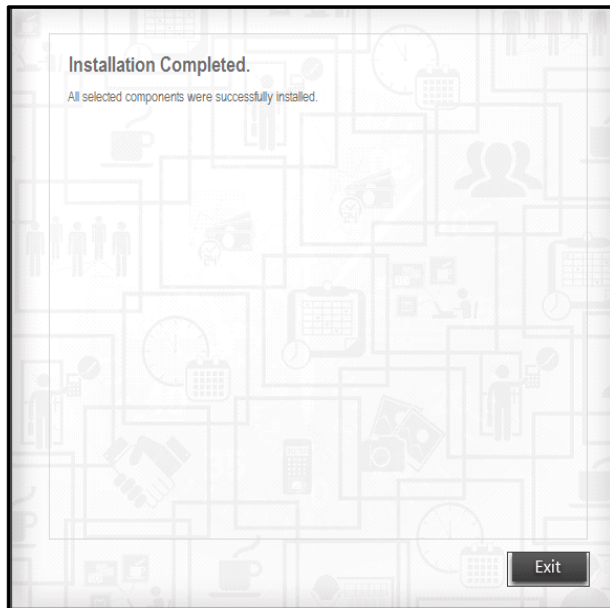
To install COSEC Enroll Service, the FIPS Algorithm Policy must be disabled. To know more, refer ["Installing Enroll Service"](#).

Click **Next** to install the setup.

The confirmation window appears. Click **Install** to proceed with the Installation and the Custom Installation procedure begins.



After the successful installation of COSEC Enroll and COSEC Enroll Service, **Installation Complete** window appears as shown below.



Click **Exit**.

After the successful Installation, a shortcut icon for Enroll Utility



will be created on your desktop.



1. Enroll Utility will work only if Enroll Service is running.
2. Enroll Service will be active and running only if Master service is running.

After the installation of the COSEC Enroll application, other accessories required for Enrollment can be installed in the following order:

1. Install the COSEC Enroll software.
2. Connect the optional Matrix Desktop readers if applicable.
3. Install the optional Suprema fingerprint reader if available.



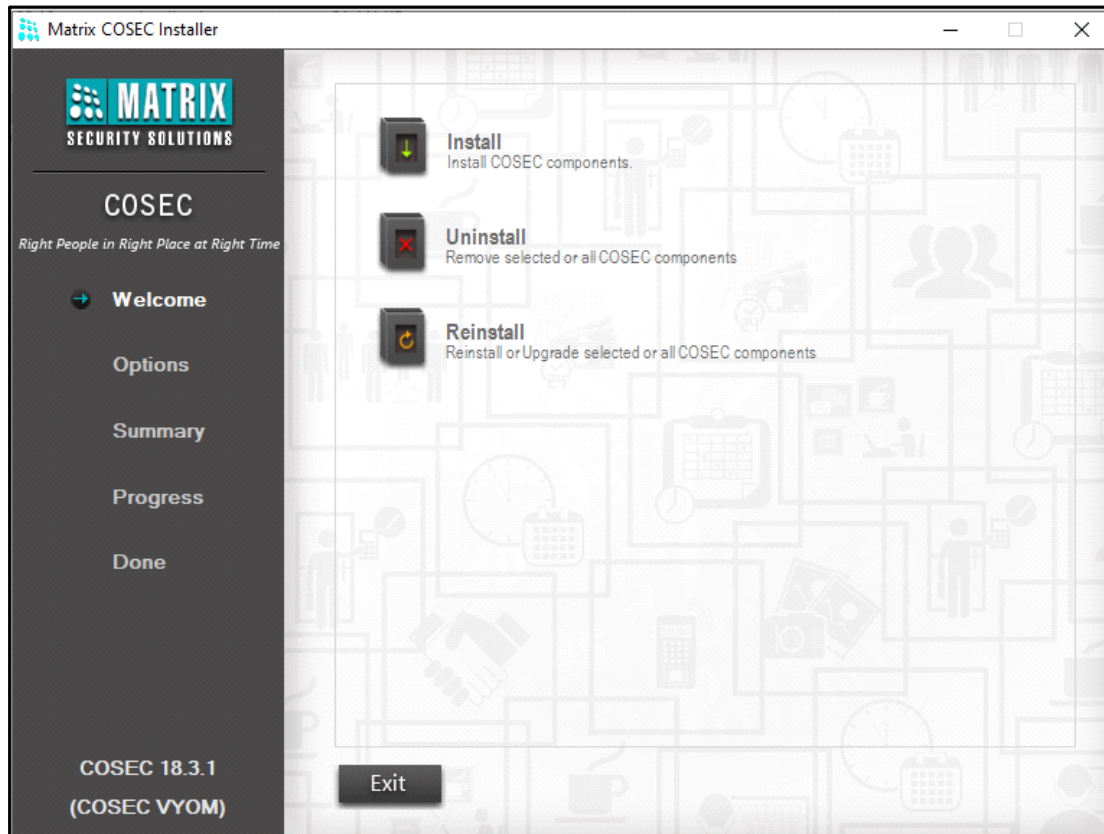
*The support of Suprema Bio Mini Plus 2 is added in Enroll Utility.
If at any point of time the operating 'FP Template Type' is changed then application (Utility/Web) must be restarted before enrollment.*

4. Install the optional Web Camera if available.
5. Start the COSEC Enroll application.

Uninstalling/Reinstalling COSEC Enroll Utility and COSEC Enroll Service

To uninstall COSEC Enroll and COSEC Enroll Service, click **Uninstall**.

To reinstall COSEC Enroll and COSEC Enroll Service, click **Reinstall**.



Installing Enroll Service

To install the Enroll Service make sure you complete the steps mentioned in the pre-requisites and then install the same.

Enroll Service will be active and run only if Master Service is running.

Pre-requisite for Installation

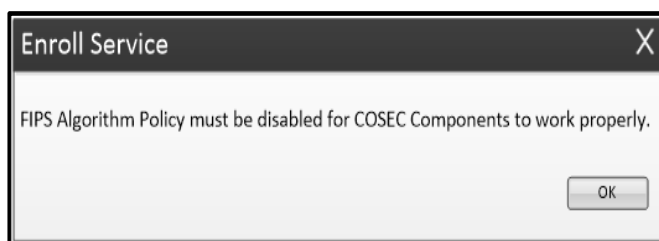
You must disable the FIPS Algorithm Flag. To do so, follow the steps mentioned below.

FIPS Algorithm Policy Check

To install COSEC Enroll Service, the FIPS Algorithm Flag must be disabled.

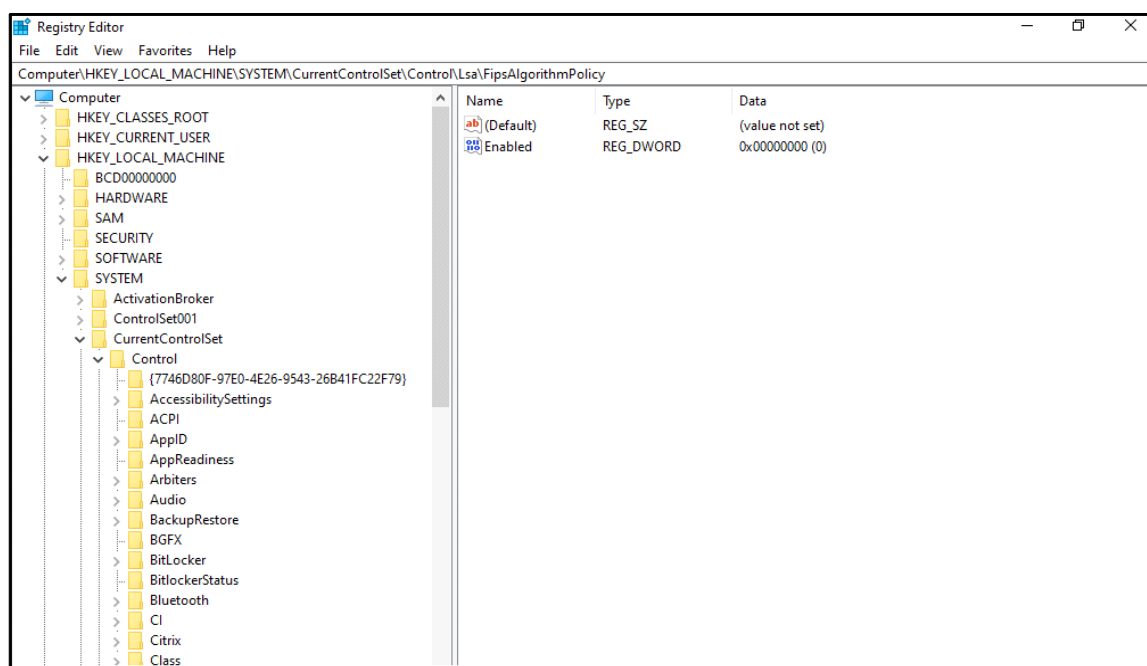


If you have started installing the Enroll Service and if the FIPS Algorithm flag is enabled then following pop up will appear.

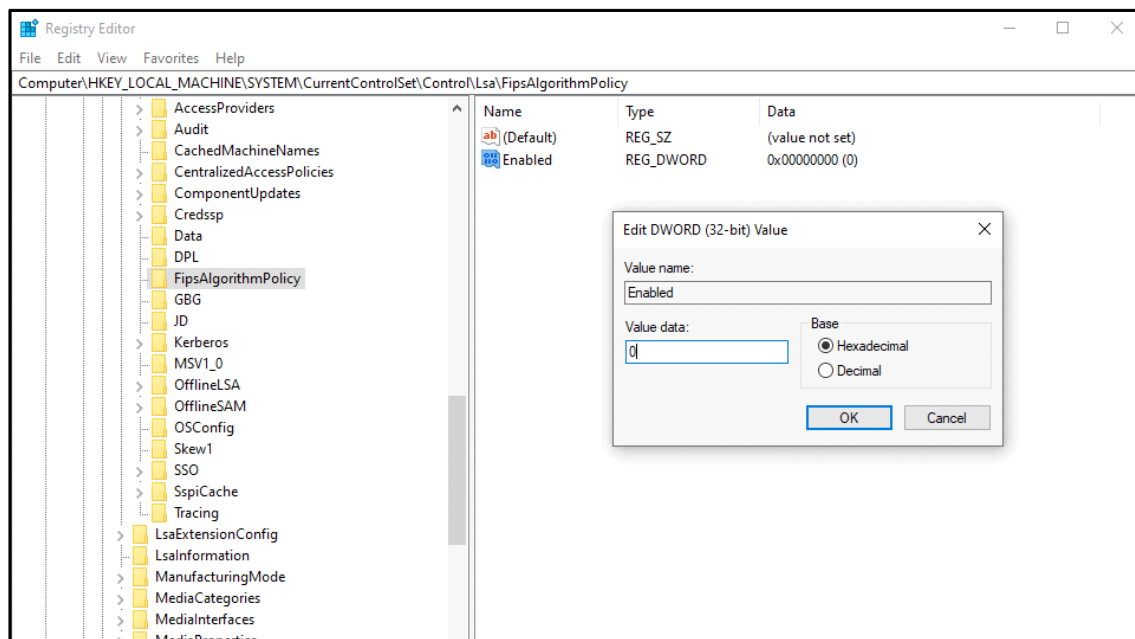


To disable FIPS Algorithm Policy, select **Registry Editor** (or search regedit) from the start menu of your computer. Then in the **Registry Editor** follow this path:

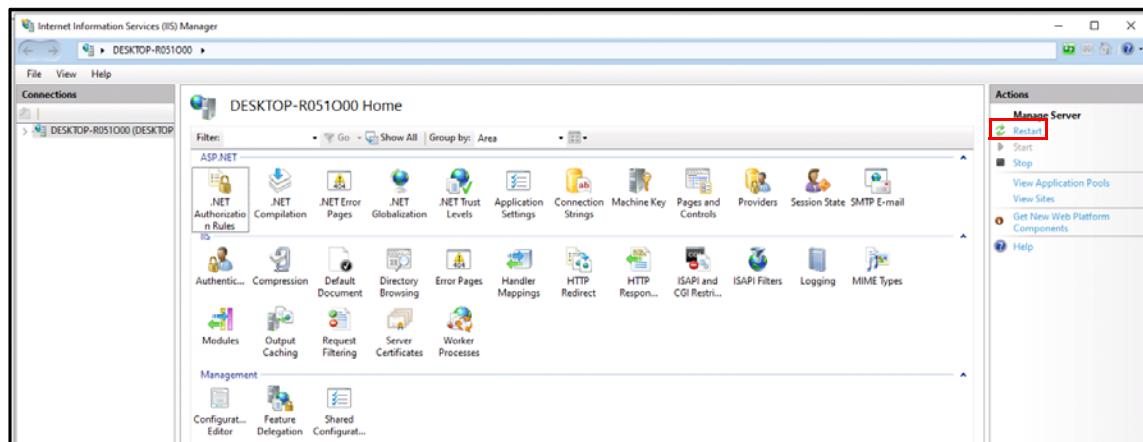
Computer\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa\FipsAlgorithmPolicy.



Double click on **Enabled** and the **Edit DWORD (32-bit) Value** dialog box appears as shown below:



- Enter 0 as the **Value data** to disable the FIPS Algorithm Policy.
- Now you need to reset the **Internet Information Services (IIS) Server**. To do so, search **Internet Information Services (IIS) Manager** from the start menu of your computer.





- To reset the IIS Server, click **Reset** under Actions > Manager Server.


Now you can proceed with the installation of the Enroll Service.

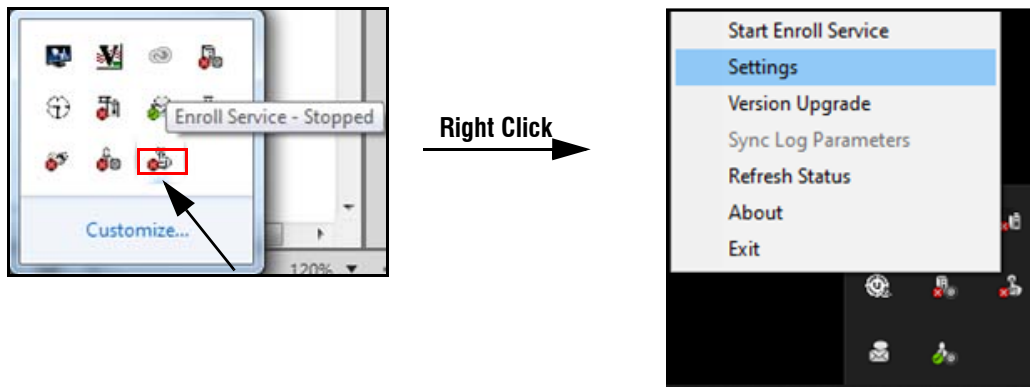
Accessing the Enroll Service from the Tray

To install the Enroll Service, refer [“Installing COSEC Enroll Utility”](#).

After the installation, you can start the COSEC Enroll Service Application by browsing the folder from **C:\Program Files (x86)\Matrix\COSEC Enroll Service**

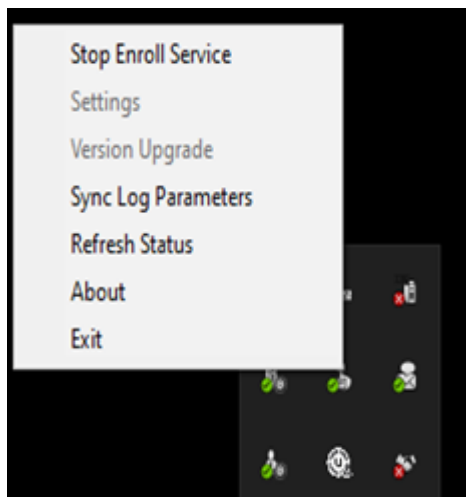
When Enroll Service starts, Enroll Service's  icon will be displayed in the System Tray (Notification area) on the right side of the taskbar. When Enroll Service stops, Enroll Service's  icon will be displayed.

Right click on this  icon.



The options displayed are — Start/Stop Enroll Service, Settings, Version Upgrade, Sync Log Parameters, Refresh Status, About and Exit.

- To start this service through the Service Manager Tray, click on **Start Enroll Service**.
- To configure the settings of Enroll Service, first stop this service by clicking **Stop Enroll Service**, and then click **Settings**. To know more, refer [“Settings”](#).



- To upgrade the version of Enroll Service, click **Version Upgrade**.
- To enable debug logs of the Enroll Service, click **Sync Log Parameters**. This is used for trouble-shooting by the Technical Support Team.
- To refresh the status of this service, click **Refresh Status**.

- To view the service details, click **About**.
- To close the Service Manager Tray window, click **Exit**.



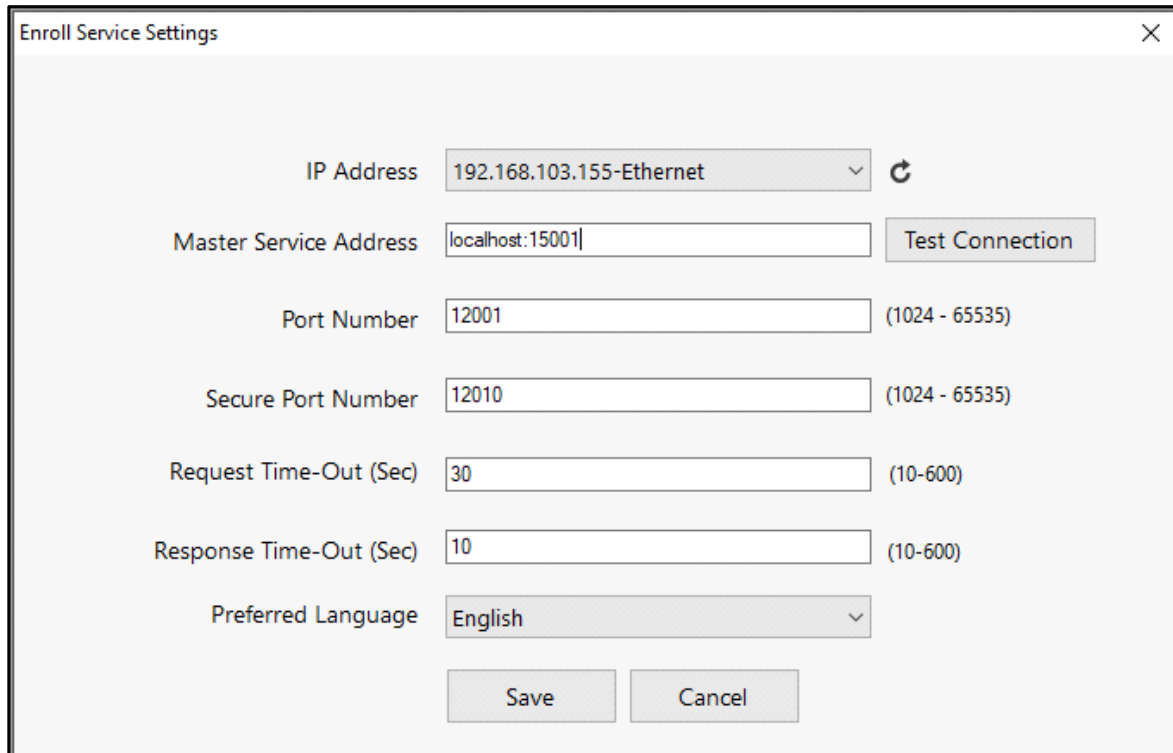
When service is running and Admin database loses connectivity or is unavailable then the service will keep running for 24 hours by default after which it will stop.

*The maximum hours allowed for service is given as the configurable tag in Settings.xml file from **C:\Program Files (x86)\Matrix\COSEC Enroll Service**.*

Settings

To configure the settings of Enroll Service, first stop this service, then click on **Settings** from the Service Manager Tray option.

Enroll Service Settings window appears as shown below.



Configure the following parameters:

- **IP Address:** If your PC is having multiple network connections, the IP Addresses of these networks will be displayed in the drop down list. Select the desired IP Address.

The IP Address of the first enabled network will be set as the default IP Address for this service.



If none of the network connections are enabled, then IP Address of the running service will get updated to 127.0.0.1 - Localhost and the services will continue running.

To restore the IP Address to the desired one, you must first enable the connection from network connections and then select its IP Address from the drop down list manually.




As the Windows10 PC boots up fast, so services will check and retry for the availability of assigned IP address before finally moving to 127.0.0.1



If more than one network connections are enabled then the first enabled network connections IP Address will be assigned to all the services on service startup after installation.



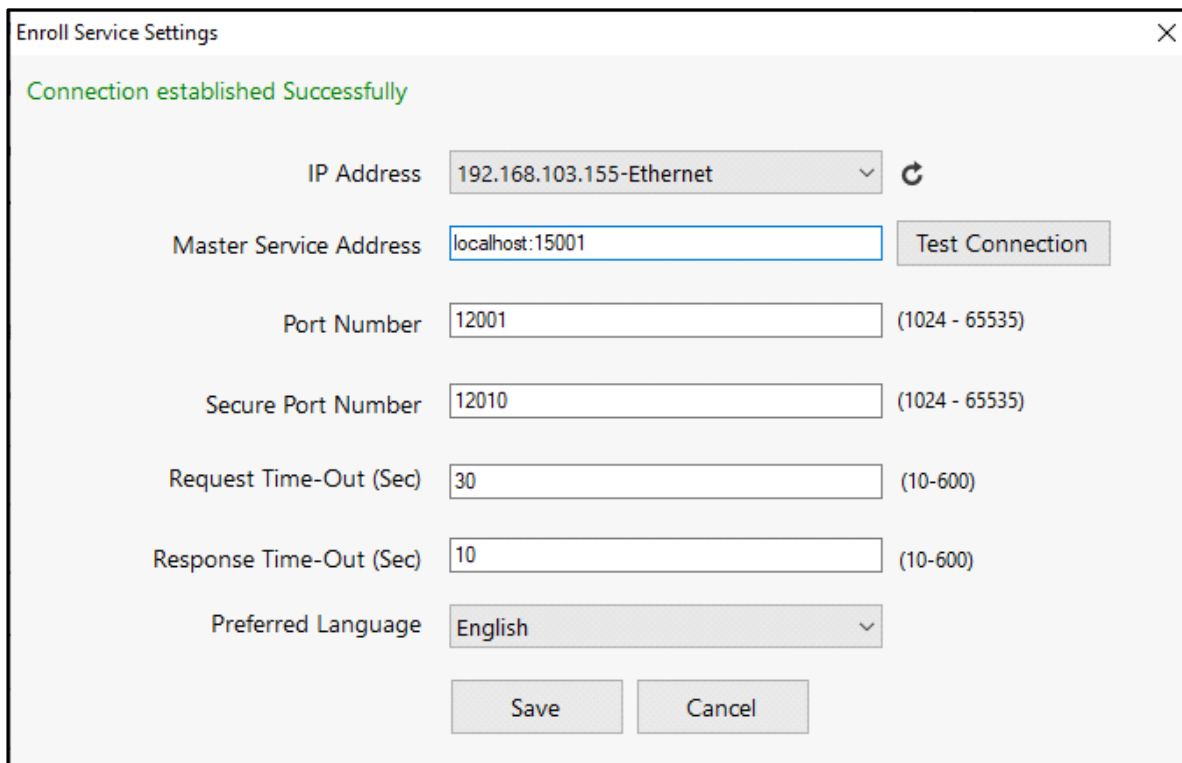
If the PC is assigned a DHCP Addressing scheme, then whenever the IP Address changes, the same will be updated against every service.

Click **Refresh IP List**  to update the list of all network adapters (network connections).

- **Master Service Address:** Enter the IP Address or URL of the Master Service.


On changing or updating the Master Service Address, connection with the Master Service must be tested.

Click **Test Connection** to test the connection of Enroll Service with Master service.



Enroll Service Settings

Connection established Successfully

IP Address: 192.168.103.155-Ethernet 

Master Service Address: localhost:15001 **Test Connection**

Port Number: 12001 (1024 - 65535)

Secure Port Number: 12010 (1024 - 65535)

Request Time-Out (Sec): 30 (10-600)

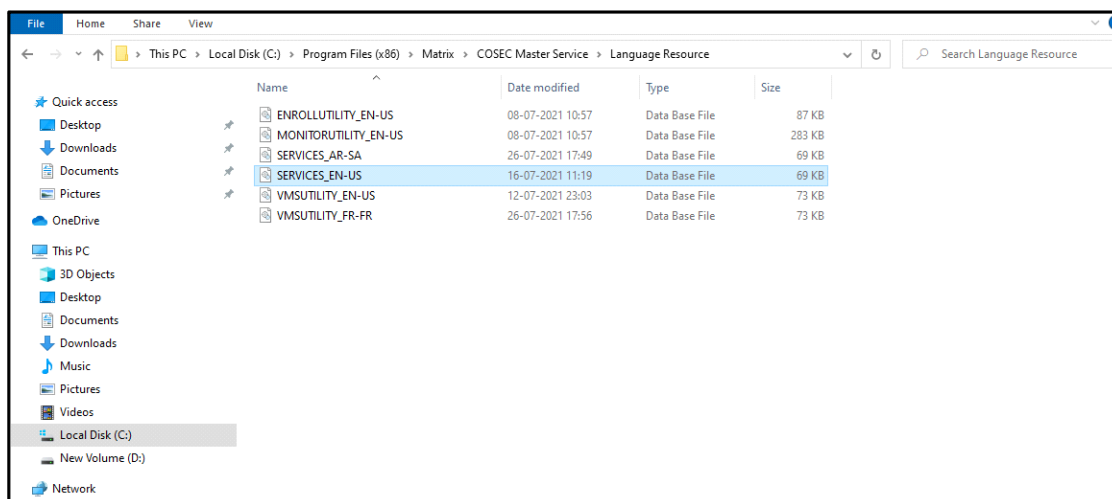
Response Time-Out (Sec): 10 (10-600)

Preferred Language: English

Save **Cancel**

- **Port Number:** Enter the port number at which the Enroll Service is accessible.
- **Secured Port Number:** Enter the port number at which the Enroll Service is accessible on the SSL mode.
- **Request Time-Out (Sec):** Enter the request time-out duration in seconds for the Enroll Service approaching Master Service for connection.
- **Response Time-Out (Sec):** Enter the response time-out duration in seconds for the Enroll Service approaching Master Service for connection.
- **Preferred Language:** Select the desired language from the provided dropdown list.

The languages listed here will be as per the language files present in the *C:\Program Files (x86)\Matrix\COSEC Master Service\Language Resource*.



The default language file provided will be of English language.

Name of the English language file for services will be: SERVICES_EN-US.

Name of the language file differs as per the language. For example, name of the Arabic (Saudi Arabia) language file for services will be SERVICES_AR-SA.



If you prefer a different language other than the default language file (i.e. English), you can translate this default language into the desired language with the help of COSEC Multi-Language Utility. To know more, refer to the Multi-Language Utility User Guide.

Click **Save** to save the settings.

Service Tray in Multiple User login

When you log into your computer with different user other than Administrator who has installed COSEC; then service tray will be launched in the new user login as well but tray tool-tip messages and balloon messages will not be displayed to the new user.

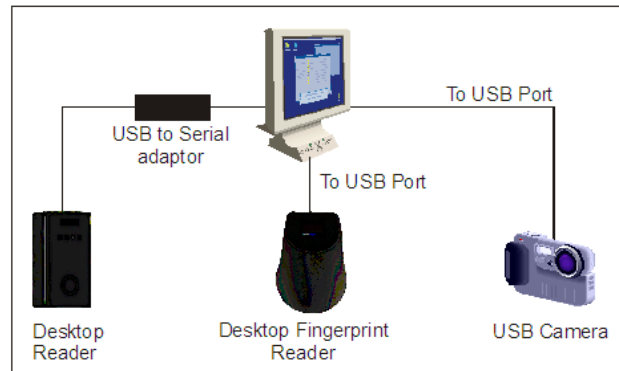
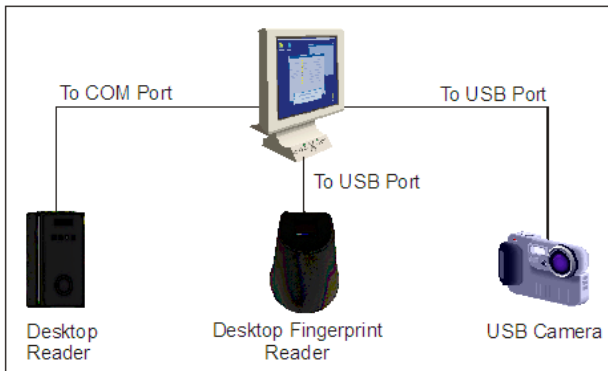
This new user will have the rights to start/stop the service and make changes to the settings of service.

When you exit from the Enroll Service Tray Application manually then this service will not be visible in the tray for that particular windows login session. When you log in to windows session again, the service tray will be launched again.

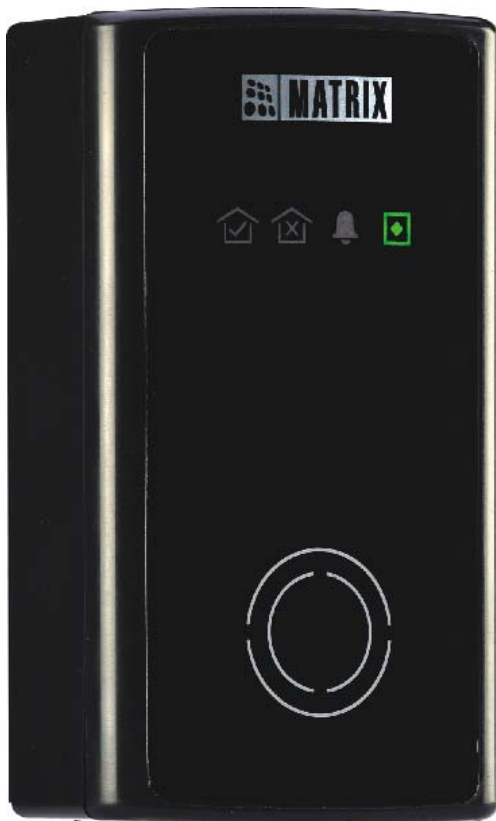
Connect Optional Desktop Reader

If you are using the Matrix Desktop MIFARE Reader and/or the HID i-class reader, there are two options available for connecting them to the COSEC ENROLL computer.

- Connect directly to the **COM** port of the computer.
- Connect it to the **USB** port using a USB to Serial adapter.



The Matrix Desktop MIFARE, HID i-class as well as the EM-Prox readers comes with a male 9 pin DB connector which can be directly connected to the COM port of the computer using appropriate serial cable. In the absence of a serial port on the computer the operator can use a USB to serial converter which needs to be procured separately.



Installing the USB to Serial Adapter

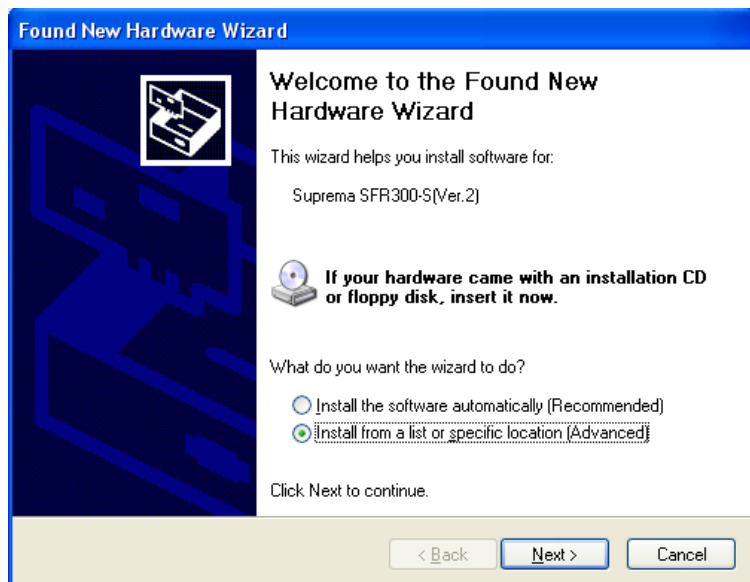
Prior to commencing the installation of the adapter, insert the driver CD which has been shipped along with the adapter, into the CD drive. Open the appropriate folder based on the operating system and install the driver for the USB to Serial Adapter.

Connect the USB to Serial adapter to the USB port on the Enrollment PC. The computer will automatically detect the adapter and create a serial port for the same.

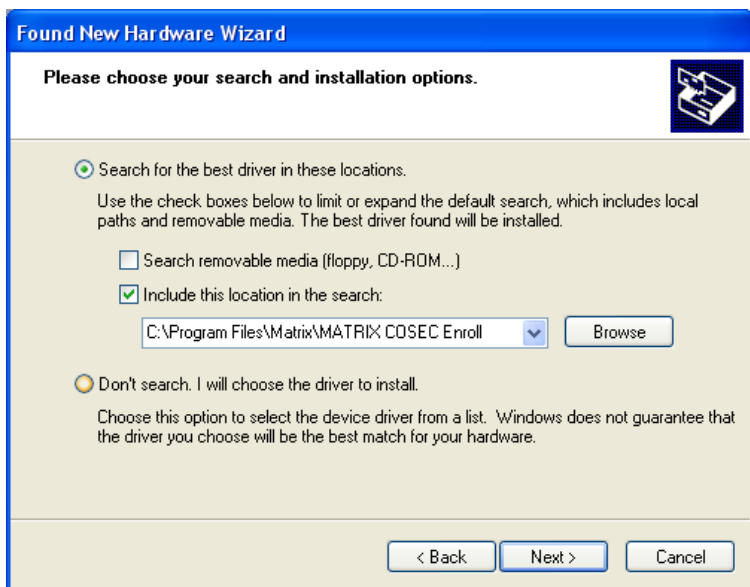
Connect Optional Desktop Fingerprint Reader

The user now needs to install the Suprema SFR300-S fingerprint reader on the Enrollment PC. This is required in the event of the user fingerprints being Enrolled as one of the user credentials.

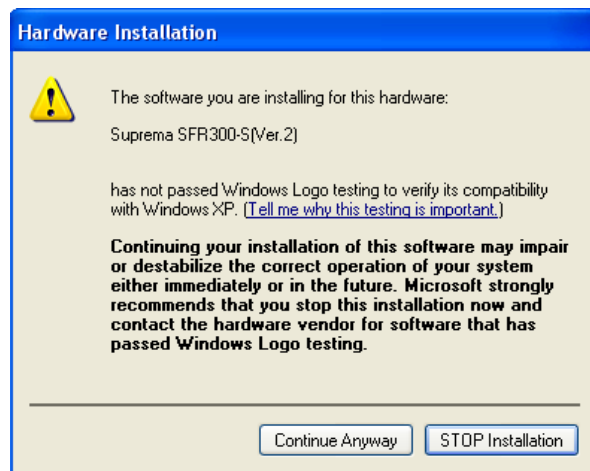
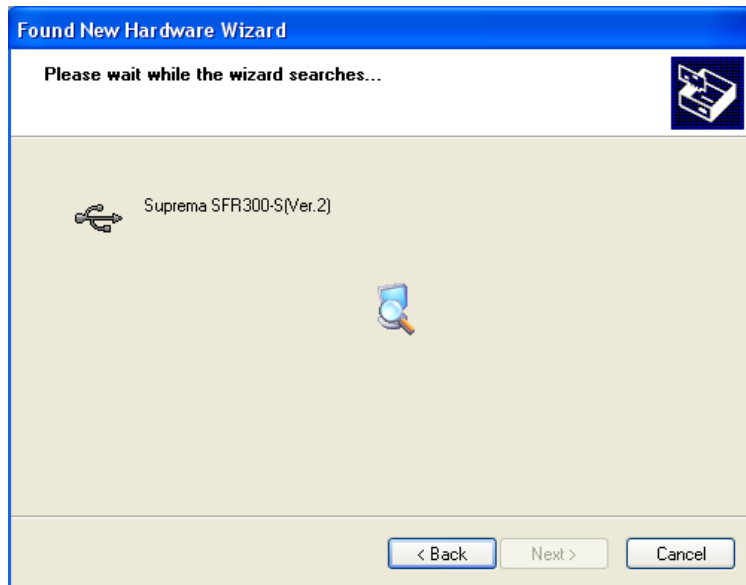
Connect the reader to the USB port on the Enrollment PC. The **Found New Hardware Wizard** window appears as shown. Select the "Install from a list or specific location (Advanced)" options as shown and click **Next** to continue.



The following window appears. Browse for the **"Matrix COSEC Enroll"** folder path and click on Next to continue.

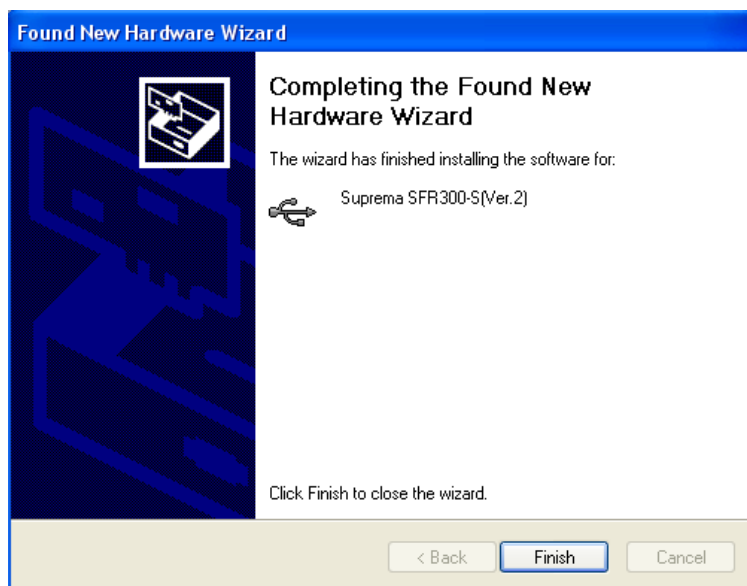


The system searches for the appropriate driver files in the target folder as the following pages appear.



Click on **Continue Anyway** to proceed with the installation. The system goes through with the installation of the reader as shown.





Click on **Finish** to complete the installation process. The Suprema reader is now ready to work with the COSEC ENROLL application.

Install the Other Accessories

Camera: Refer to the installation guide that comes with the camera. Install the camera driver as per the instructions in the installation guide. Connect the camera to the PC as per the instruction in the camera installation guide.

Signature Pad: Connect the signature pad to the USB port of the Enroll computer.

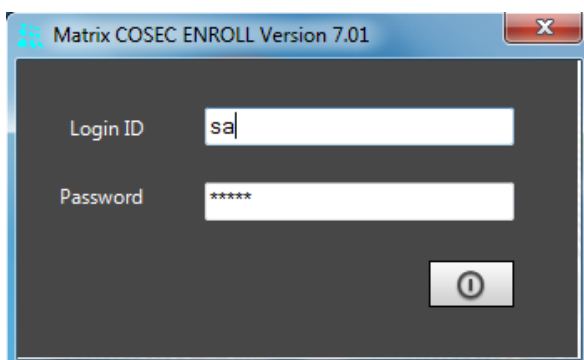
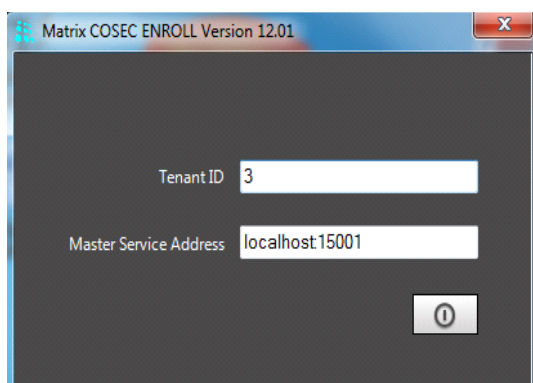
Starting the COSEC Enroll Utility

To start the COSEC Enrollment desktop application, click on the following COSEC ENROLL icon on the desktop.



The Enrollment application's login window appears as shown.

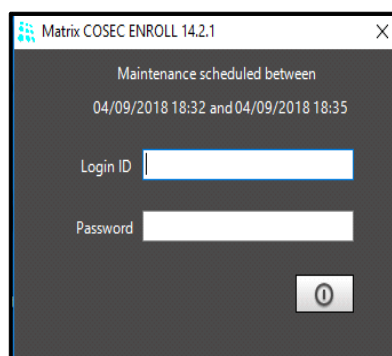
For COSEC VYOM, Enter the **Tenant ID** and **Master Service Address** as shown below. Both the parameters are available in Tenant activation Email sent to the Tenant by the Tenant administrator.



Enter the Login ID and password as set in the web application module. The COSEC ENROLL window appears as shown.



If the COSEC application is under maintenance; then user will not be allowed to access the Enroll Utility till the end of maintenance duration unless the scheduling is reset by the Admin in Admin Portal.



Enable Logs: This option located on the upper right corner of the window allows the user to enable the system event logger function. Enabling this option would allow the system to save all system event logs to a separate database which can be viewed at a later date as and when required. Select this checkbox to enable this functionality.

General Data Protection Regulation

General Data Protection Regulation (GDPR) aims in providing security and privacy to a users personal data. They limit the access to a users personal data.

By enabling GDPR, set of defined fields revealing users personal data will be masked and the data will be encrypted, accordingly a dummy image will be displayed in place of the user's profile picture.

If you desire enabling GDPR, select the **Personal Data Protection** checkbox in COSEC Web > Admin > System Configuration > Global Policy > Basic.

To know more about GDPR refer, COSEC System Manual.

For reflections of GDPR on Enroll Utility, refer to the link mentioned below:

- [“GDPR Reflections”](#)

The **Select Category** pull down has the following three options:

- User
- Visitor
- Special Functions

The screenshot shows a web form with a 'Select Category:' label and a dropdown menu. The dropdown menu is open, displaying three options: 'User' (highlighted in blue), 'Visitor', and 'Special Functions'. To the right of the dropdown is a 'Name' label and a text input field. Further right is a 'Search' button.

Based on the Category selected the appropriate search filter options will be available as shown.

This screenshot shows the search filter options for the 'User' category. The 'Select Category:' dropdown is set to 'User'. The 'Name' dropdown is open, showing options: 'Name' (highlighted), 'UserID', 'ShortName', 'Department', and 'Designation'. The 'Search', 'Clear', and 'Help' buttons are visible to the right.

This screenshot shows the search filter options for the 'Visitor' category. The 'Select Category:' dropdown is set to 'Visitor'. The 'Name' dropdown is open, showing options: 'Name' (highlighted), 'VisitorID', and 'ShortName'. The 'Search', 'Clear', and 'Help' buttons are visible to the right.


This screenshot shows the search filter options for the 'Special Functions' category. The 'Select Category:' dropdown is set to 'Special Functions'. The 'Name' dropdown is open, showing a list of door types: 'lite', 'direct door v2', 'direct door 123', 'Main Door', 'wireless', and 'PVR door'. To the right of the dropdown is a 'Panel Lite' dropdown menu with options: 'Panel Lite', 'Compact Lite', 'Direct Door v2', 'Direct Door', 'NGT Direct Door', 'Wireless Door', and 'PVR Door'. The 'Search', 'Clear', and 'Help' buttons are visible to the right.

Click on the **Search** button after entering a string to specify the search criteria to display the complete list of users defined in the system in the upper half of the screen as shown.

The screenshot shows the search results table after a search for 'Namrata'. The table has columns: 'User ID', 'Name', 'Short Name', 'Enrolled Fingers', 'Card 1', 'Card 2', 'Blood Group', and 'Medical History'. A single row is displayed with the following data:

User ID	Name	Short Name	Enrolled Fingers	Card 1	Card 2	Blood Group	Medical History
502	Namrata	Namrata	0			O+	

If you have configured GDPR in COSEC Web > Admin > System Configuration > Global Policy > Basic then, the details of the **Data Protection Manager** will be displayed in the **About**.

Click **About**  on the top bar, to view the details of the **Data Protection Manager**.

About

Version : 18.6.1

Data Protection Manager Details

Name : john

Designation : abc



Organization Name : xyz

Organization Address : Vadodara



Email ID : abc@gmail.com

Contact No : 123456

Privacy Policy :

If you have uploaded the Privacy Policy document then,

- click **Preview**  to view the document.
- click **Download**  to download the document.

The grid on the top half displays the list of users as defined using the COSEC web application. The filter criteria for displaying the list of users is provided in the **Select User Type** section on the top left of the page as shown.

Select Category: User
UserID: 153
Search
Clear
Card Template
Setting
Help
Enable Logs

User ID	Name	Short Name	Enrolled Fingers	Enrolled Palms	Card 1	Card 2	Blood Group	Medical History	Personal Mobile
1153	RESHMA TIWARI	RESHMA TIWARI	5	1	1666737735		O+		7874505561
153	DEVANAND NAIR	DEVANAND NAIR	2	4			A+		9898505948
1530	TEJAL RAVAL	TEJAL RAVAL	5	2			NA		
1531	ROSHAN CHRISTY	ROSHAN CHRISTY	5	2			B+		7405527971
1532	ANUPAM RAY	ANUPAM RAY	5	2			NA		
1533	PARTH KANANI	PARTH KANANI	5	5			B+		7405475432
1534	NIRAV KATESHIYA	NIRAV KATESHIYA	5	2			NA		
1535	NIRAL PRAJAPATI	NIRAL PRAJAPATI	5	2			B+		+918460459726
1536	PRACHI KSHRISAGAR	PRACHI KSHRISAG	4	2			O+		
1537	Akash Gupta	Akash Gupta	5	2			B+		
2153	Vasava Ajay, P	Vasava Ajay, P	3	1			NA		


Finger Enrollment
Palm Enrollment
Card Enrollment
Capture Photo
Signature
Cafeteria

Enroll
Identify

Start
Enroll
Verify
Stop

Optional Settings
☐ Save FP Image
Finger Name: Right - Index Finger

Selected User Profile



User ID: 1153
Name: RESHMA TIWARI

Browse

Enrolled Fingers: 5
Enrolled Palms: 1
Date of Joining: 29/10/2012
Department: Marketing
Designation: Team Leader


Select the field and specify the value in the field provided. Click on **Search** to continue. The list of Users/Visitors meeting the specified filter criteria are listed in the grid. In the case of the Special Functions select the PANEL or DIRECT DOOR from the dropdown list to Special Functions in the grid.

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Matrix COSEC VMS User Manual

Select a user from the list by clicking on the user entry in the list. The user details are displayed in the **User Profile** section located at the bottom right of the page as shown. In the event of the user photograph not being uploaded in the COSEC database the same can be done as described in the following section.

Selected User Profile



User ID: 1153

Name: RESHMA TIWARI

Browse

Enrolled Fingers: 5

Date of Joining: 29/10/2012

Enrolled Palms: 1

Department: Marketing

Designation: Team Leader

Similarly select the **workers** from the search box. The contractor, work order and status details are displayed in finger enrollment> identify tab. The profile of worker is displayed in selected user profile section.

Select Category: User

Name: sunil

Search

Clear

Card Template

Help

Enable Logs

User ID	Name	Short Name	Enrolled Fingers	Card 1	Card 2	Blood Group	Medical History	Personal Mobile
W1	Sunil	Sunil	0			A+		9511255386

Finger Enrollment

Card Enrollment

Capture Photo

Signature

e-Carteen

Enroll

Identify

Start

Identify

Stop

Settings

Manual Scanning

Continuous Scanning

User ID:

Name:

Contractor:


Work Order:

Status:

Enroll

Identify

Selected User Profile



User ID: W1

Name: Sunil

Browse

Enrolled Fingers: 0

Date of Joining: 2014/08/21

DEPARTMENT: Department-1

DESIGNATION: Designation-1

Contractor: LandT

Work Order: Designing

Status: Approved

The system displays the user details of the selected user in the **User Profile** section as shown. This section also provides the option to browse to the picture file of the selected user and upload the same.



The screenshot displays the 'Selected User Profile' section. It includes a user photo of a woman with dark hair wearing a blue and white checkered shirt. To the right of the photo, the 'User ID' is 1153 and the 'Name' is RESHMA TIWARI. Below the photo is a 'Browse' button. To the right of the button is a large empty rectangular box for the profile picture. Below the photo and button, the following details are listed: 'Enrolled Fingers: 5', 'Date of Joining: 29/10/2012', 'Enrolled Palms: 1', 'Department: Marketing', and 'Designation: Team Leader'.

To upload the user photograph:

- Click on the **Browse** button in the User Profile section
- Navigate to the folder containing the picture files.
- Select the appropriate picture file
- Click on Open. The system will upload the user photograph to the COSEC database.

The system supports the JPG and the BMP file formats for the picture files with the maximum file size limit being 50KB.

You can also update User Photo from API. To know more, read the API Document.

The Enrollment section located below the User details grid enables the operator to register various user credentials as well as capture the photo image of the users. The Matrix COSEC ENROLL application offers the following functionalities as part of the Enrollment process:

- Finger Enrollment/Verification, [See “Finger Enrollment” on page 40.](#)
- Palm Enrollment, [See “Palm Enrollment” on page 45.](#)
- Card Enrollment/Verification, [See “Card Enrollment” on page 48.](#)
- Photo capture, [See “Capture Photo” on page 54.](#)
- Signature Capture, [See “Signature Capture” on page 55.](#)
- Cafeteria, [See “Cafeteria” on page 56.](#)
- Face Enrollment, [See “Face Enrollment” on page 57.](#)

The Finger and Card Enrollment functionalities enable the operator to enroll the following credentials against the registered users.

- Fingerprint templates
- Mifare cards
- HID cards
- EM-Prox cards

The capture photo option enables the operator to capture a picture of the user, using the installed camera on the Enrollment computer.

Settings

On the COSEC Enroll toolbar, the **Setting** button enables the user to define identification parameters for Finger, Palm, Card enrollment and FR Settings.

Select Category: User Name Search Clear Card Template Settings Help

Settings

Service Connection Settings

Retry Interval (Sec) 10

Retry Count 3

Identification Settings

Finger Enrollment/Identification Settings

Card Enrollment Settings

Blacklisting Database Settings

FR Settings

Save

Identification Settings

Select the **Normal** mode for COSEC Enroll application to handle finger/palm identification by itself. Select the **Identification Server** mode to enable the configured Identification Server to handle the identification of finger/palm/face. To know more about Identification Servers, refer to the “COSEC Manual”.

Service Connection Settings

Identification Settings

Identification Mode Identification Server ⓘ

Identification Server IP 192.168.104.12

Identification Server Port 11005

Max Response Time Out (Sec) 10

Enable Secure Communication ☐

Setting enrollment on Identification Server enables a faster process of user identification.

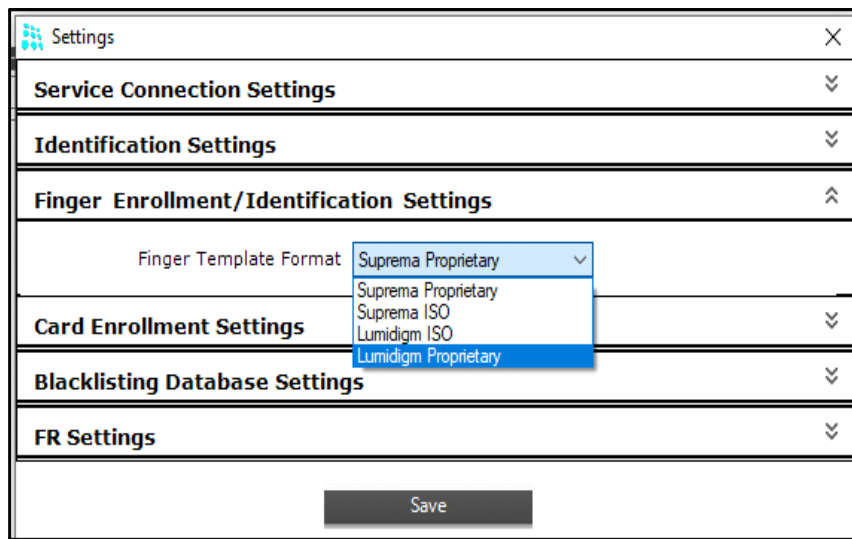
Define the **IP Address** and **Port** of the Identification Server for communication.

User can also define a maximum duration in seconds for which COSEC Enroll should wait for a response from the Identification Server (“**Max Response Time Out**”).

For secured connection, check the **Enable Secure Communication** box.

On saving these settings, all enrolled FP/Palm/Face should not only be sent to the COSEC database, but also to the specified Identification Server’s memory to be saved locally.

Finger Enrollment/ Identification Settings



Settings

Service Connection Settings

Identification Settings

Finger Enrollment/Identification Settings

Finger Template Format: Suprema Proprietary

Card Enrollment Settings

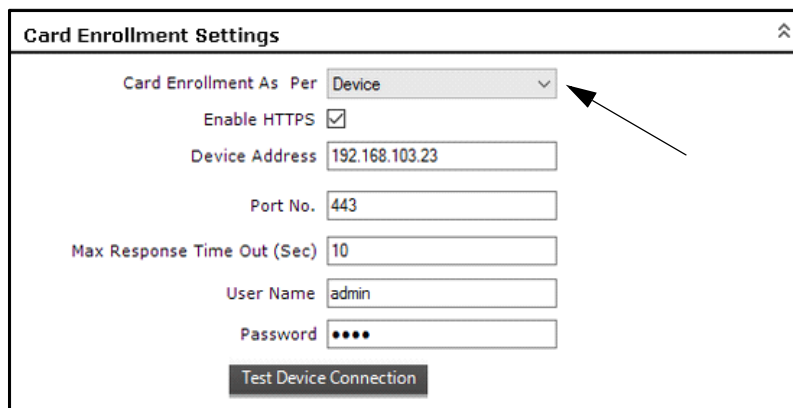
Blacklisting Database Settings

FR Settings

Save

Finger Template Format: Select the finger template format as Suprema Proprietary, Suprema ISO, Lumidigm ISO or Lumidigm Proprietary in which finger is to be enrolled and identified.

Card Enrollment Settings



Card Enrollment Settings

Card Enrollment As Per: Device

Enable HTTPS: ☒

Device Address: 192.168.103.23

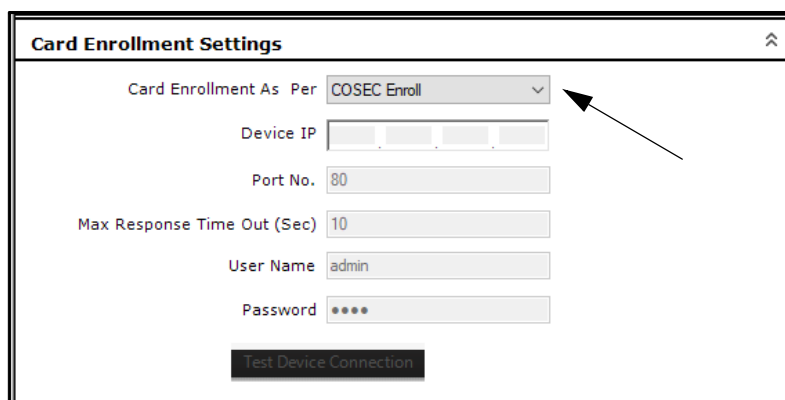
Port No.: 443

Max Response Time Out (Sec): 10

User Name: admin

Password:

Test Device Connection



Card Enrollment Settings

Card Enrollment As Per: COSEC Enroll

Device IP:

Port No.: 80

Max Response Time Out (Sec): 10

User Name: admin

Password:

Test Device Connection

Card Enrollment As Per: Select the enrollment of card as per **COSEC Enroll** (where reader is connected) or **Device**.

The applicable devices are: NGT, Wireless Door, Direct Door V3, Path Controller, PVR, Vega Controller, ARGO, ARGO Face.

Enable HTTPS: Select this checkbox to enable secure communication.

There will be secure communication over HTTPS using the configured **Port No.** The default Port No. will be 443.

If **Enable HTTPS** is disabled, then the communication will be over HTTP using the configured **Port No.** The default Port No. will be 80.

Device Address: If card enrollment is done through device, then specify the IP address of device.

Port No.: Specify the Device Port no.for communication. If SSL is enabled by SA in *COSEC Server> Admin> System Configuration> Global Policy*, then the port number must be same as that defined in *COSEC Server> Admin> System Configuration> Global Policy> Security*.

Max Response Time Out (Sec): Specify the maximum duration in seconds for which COSEC device should wait for a response from the Identification Server.

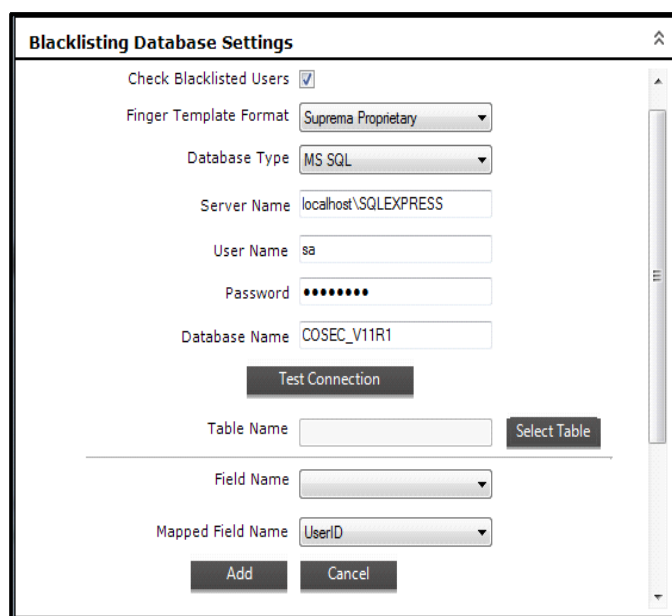
User Name: Specify the user-name of device.

Password: Specify the password of device. The default password is 1234.

Finally Click **Test Device Connection** and **Save** the settings.

Blacklisting Database Settings

Check Blacklisted Users box to enable checking of blacklist users.



The screenshot shows a dialog box titled "Blacklisting Database Settings". It contains the following fields and controls:

- Check Blacklisted Users:** A checkbox that is checked.
- Finger Template Format:** A dropdown menu with "Suprema Proprietary" selected.
- Database Type:** A dropdown menu with "MS SQL" selected.
- Server Name:** A text box containing "localhost\SQLEXPRESS".
- User Name:** A text box containing "sa".
- Password:** A text box with masked characters (dots).
- Database Name:** A text box containing "COSEC_V11R1".
- Test Connection:** A button.
- Table Name:** A text box.
- Select Table:** A button.
- Field Name:** A dropdown menu.
- Mapped Field Name:** A dropdown menu with "UserID" selected.
- Add:** A button.
- Cancel:** A button.

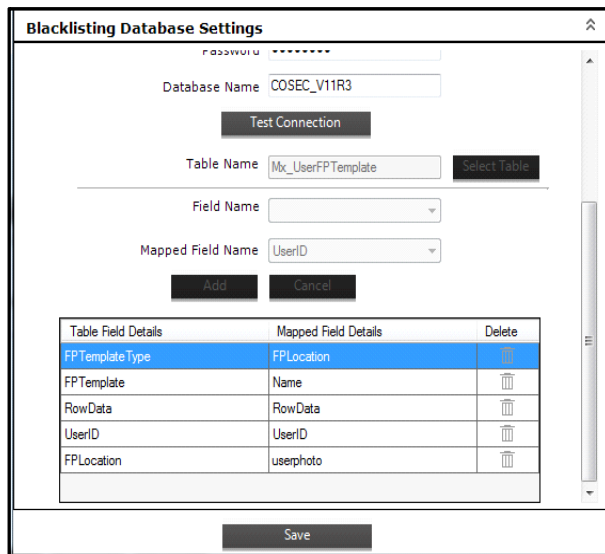
Select the **Finger template format** at which the finger enrollment was done.

Select the **Database Type** and **Server Name**.

Enter the **User Name** and **Password** for connecting the database.

Enter the name of the database in **Database Name** where Enrollment or Verification is to be done.

Click **Test Connection** to connect with database.



The 'Blacklisting Database Settings' window contains the following fields and controls:

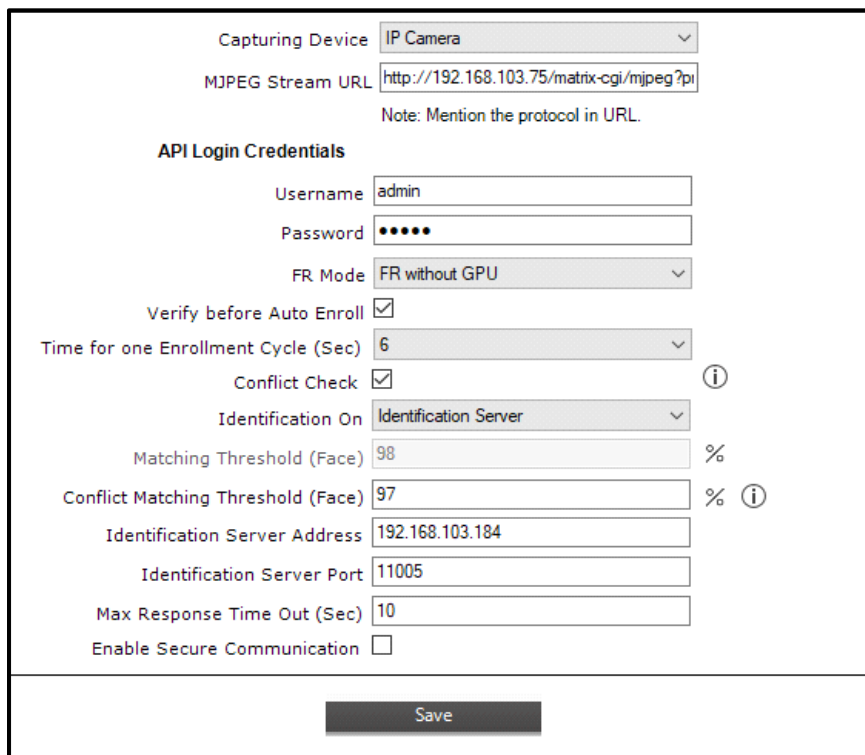
- Database Name:** COSEC_V11R3
- Test Connection:** Button
- Table Name:** Mx_UserFPTemplate
- Select Table:** Button
- Field Name:** (Empty dropdown)
- Mapped Field Name:** UserID
- Add / Cancel:** Buttons
- Table Field Details:**

Table Field Details	Mapped Field Details	Delete
FPTemplateType	FPLocation	
FPTemplate	Name	
RowData	RowData	
UserID	UserID	
FPLocation	userphoto	
- Save:** Button

Now select the Table and Map the fields. If the finger template of blacklisted user is available in the selected table, then it will be shown while checking for the blacklisted user.

FR Settings

Face Recognition settings must be done to enable enrollment of new Face and identification of face of a user.



The 'FR Settings' window contains the following fields and controls:

- Capturing Device:** IP Camera
- MJPEG Stream URL:** http://192.168.103.75/matrix-cgi/mjpeg?pi
- Note:** Mention the protocol in URL.
- API Login Credentials:**
 - Username:** admin
 - Password:** (Masked)
 - FR Mode:** FR without GPU
- Verify before Auto Enroll:** ☒
- Time for one Enrollment Cycle (Sec):** 6
- Conflict Check:** ☒
- Identification On:** Identification Server
- Matching Threshold (Face):** 98 %
- Conflict Matching Threshold (Face):** 97 %
- Identification Server Address:** 192.168.103.184
- Identification Server Port:** 11005
- Max Response Time Out (Sec):** 10
- Enable Secure Communication:** ☐
- Save:** Button

Capturing Device: Select the device to be used for capturing face template for enrollment of face. You can select the option as **IP Camera** or **In-built Camera/USB Camera**.

If Capturing device is selected as **IP Camera** then specify all the details in the fields provided below.

The screenshot shows a configuration form for an IP Camera. The 'Capturing Device' dropdown is set to 'IP Camera'. The 'MJPEG Stream URL' is 'http://192.168.103.75/matrix-cgi/mjpeg?pi'. A note below it says 'Note: Mention the protocol in URL.' Under 'API Login Credentials', the 'Username' is 'admin' and the 'Password' is masked with dots. The 'FR Mode' dropdown is set to 'FR without GPU'. The 'Verify before Auto Enroll' checkbox is checked. The 'Time for one Enrollment Cycle (Sec)' dropdown is set to '6'. The 'Conflict Check' checkbox is checked. The 'Identification On' dropdown is set to 'Identification Server'. The 'Matching Threshold (Face)' is '98' with a '%' symbol next to it.

If Capturing device is selected as **Inbuilt camera/USB Camera** then except for MJPEG Stream URL, User name and password, enter all the details provided below.

The screenshot shows a configuration form for an In-built camera/USB Camera. The 'Capturing Device' dropdown is set to 'In-built Camera/USB Camera'. The 'MJPEG Stream URL' is 'http://192.168.103.75/matrix-cgi/mjpeg?pi'. A note below it says 'Note: Mention the protocol in URL.' Under 'API Login Credentials', the 'Username' is 'admin' and the 'Password' is masked with dots. The 'FR Mode' dropdown is not visible in this screenshot.

- **MJPEG Stream URL:** Enter the URL to connect to the IP camera for taking the Snapshot. You can use any camera for capturing the snapshot/photo. The API for capturing snapshot will be available in the API document of camera. The valid characters are **A-Z a-z 0-9 ~ ` ! @ # \$ % ^ & * () _ + { } | : " < > ? - = [] \ ; ' , . /**
- **User Name:** Enter the user-name for accessing URL i.e. by accessing API for taking the Snapshot through IP Camera.
- **Password:** Enter the Password for accessing API for taking the Snapshot through IP Camera.



It is the same user-name and password using which IP camera login is done. Eg: user-name as Admin and password as Admin.

- **FR Mode:** Select the mode of FR from the drop-down. The modes available are, FR using GPU and FR without GPU.

FR Mode	FR without GPU	▼
Verify before Auto Enroll	FR without GPU	▼
Time for one Enrollment Cycle (Sec)	6	▼
Conflict Check	<input checked="" type="checkbox"/>	



It is recommended to choose FR using GPU for fast processing if your system is supported with GPU.

- **Verify Before Auto-Enroll:** Enable this check-box, if a verification step is to be provided to a user before completing the Auto Enrollment Process.
 - If it is enabled, then a user will receive an option to select the images from the list of all previously captured images and then the selected image is to be enrolled.
 - If it is disabled, then the user will not receive an option to select the images from the list of all previously captured images for the enrollment. Instead system will automatically enroll the best captured images by considering the factors like matching score, conflict, etc.
- **Time for one Enrollment Cycle:** Set the value of time for which capturing should be done in one enrollment cycle during Auto Enrollment Process only.

Time for one Enrollment Cycle (Sec)	3	▼
Conflict Check	3	▼
Identification On	4	▼
Matching Threshold (Face)	98	%

- **Conflict Check:** Enable this check-box, if conflict is mandatory to be checked during the enrollment of new faces with already enrolled faces of all the users. It will be helpful during identification process to avoid any conflict.
- **Identification On:** Enable this check-box for identification face process as well as conflict check process. There are 2 options available for these processes:
 1. Through Local Database
 2. Through IDS Server

Identification On	Local Database	▼	↺
Matching Threshold (Face)	Local Database	▼	%
Conflict Matching Threshold (Face)	97	▼	% ⓘ
Identification Server Address	192.168.103.184		
Identification Server Port	11005		
Max Response Time Out (Sec)	10		
Enable Secure Communication	<input type="checkbox"/>		

- If **Local Database** is set, then Enroll Utility will fetch all the face templates from the table of COSEC Database and store it locally for identification and conflict check.
- When Local Database is set, then 'Sync' icon will be displayed for manual template sync. During restart of the application, the faces will be synced automatically. This icon will be helpful to Admin in case of syncing the templates without restarting the application
- During Face Identification, if 'Identification-On' is set as '**Local Database**', then face identification will be done on Local database and also for Conflict checking.
- If 'Identification-On' is set as '**Identification Server**', then face identification will be sent to IDS Server and also for Conflict checking.
- Identification Server enables the configured Identification Server to handle the identification of face templates.
- Conflict Check Request and Face Identification Request will be sent to the defined IDS.

Identification On: Identification Server

Matching Threshold (Face): 98 %

Conflict Matching Threshold (Face): 97 % ⓘ

Identification Server Address: 192.168.103.184

Identification Server Port: 11005

Max Response Time Out (Sec): 10

Enable Secure Communication: ☒

- Identification Server is a Global IDS having face templates of all the users, due to which it gives accurate results.
- IDS Setting is used for Palm, Finger and Face.
- If IDS is selected then enter the respective details accordingly;
 1. Identification Server Address: Specify the Identification server address i.e. PC's IP address.
 2. Identification Server Port: Specify the port number of the particular server address of Identification mentioned above.
 3. Max Response Time Out (Sec): Specify the maximum duration in seconds for which Enroll Utility should wait for a response from the Identification Server.
 4. Enable Secure Communication: For secured connection, check the Enable Secure Communication box.
- **Matching Threshold:** Enter the matching threshold in percentage for face identification.

If you set Matching threshold as low (eg: 20%) then your Face may match with other person. But if you set matching at high percentage (eg: 98%) then more accurate matching of your template will be done.



When “Identification On” is set as “Local Database”, then matching threshold defined here would be considered.

In case of “Identification On” set as “Identification Server”, matching threshold defined in the COSEC Server will be considered.

- **Conflict Matching Threshold:** Set the Matching Threshold in percentage for face Conflict checking during enrollment.
This parameter is used to identify same face during enrollment and check conflict with other users.



It is recommended to set the Conflict Matching Threshold less than the Matching Threshold to avoid conflict between users during identification.

Finger Enrollment

The Finger ENROLL option enables the operator to ENROLL the fingerprint templates of the users. The system allows the operator to enroll up to a maximum of ten fingerprints per user depending on the number as defined in the Global Policy on the COSEC Web Application.

Fingerprint Registration

When using the optical USB fingerprint reader for registering users, please read the details below before commencing.



When using the fingerprint readers please bear in mind the following:

Care needs to be taken when setting up users for the fingerprint reader. The more meticulous the approach taken with this procedure, the clearer and sharper the image will be. The stronger the quality of data that is stored, the more reliable and consistent will be the access capability of the user.

Below are some tips to help achieve this:

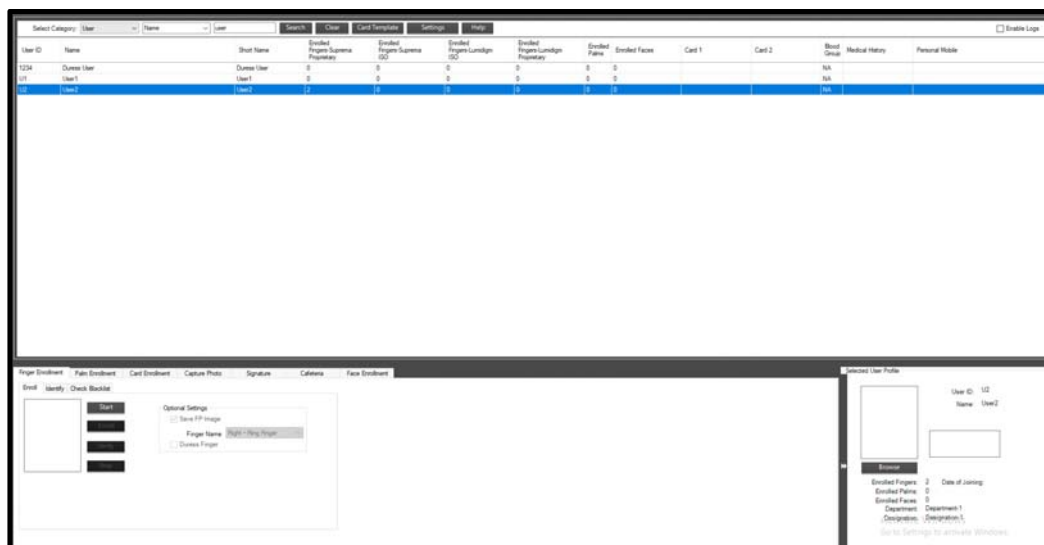
- Ensure the fingerprint sensor is clean (use scotch tape) before starting.
- User's fingers should be clean (if their hands are washed prior to the start of the procedure, approx. 15 minutes will be needed for the moisture content of the skin to recover).
- The lights inside the reader will flash while it is reading a fingerprint. The finger should be held on the sensor till the operator clicks on the Enroll button.
- The fingerprint should cover as much of the sensor as possible. Place the finger directly on the sensor without sliding across the surface and maintain an even pressure, just enough to get a good full contact. Above all, keep the finger still.
- Present the finger flat to the sensor as shown below:



Movement of the finger while it is in contact with the sensor will stretch the skin and thus distort the fingerprint, making a clear reading more difficult. Similarly, pressing too hard on the sensor will also distort the fingerprint. Avoiding these common mistakes can greatly improve the consistency of recognition.

- It is recommended that each individual register two fingers. There will then be a backup fingerprint that can be used in the event of one of the fingerprints becomes temporarily or permanently altered (for example by a paper cut or minor burn).
- It is advisable to have the fingerprint reader close to the COSEC ENROLL PC when Enrolling the user credentials.

Use the following procedure to enroll a fingerprint:

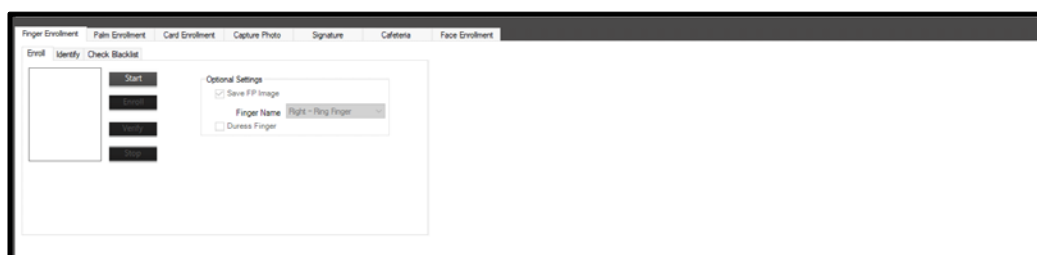


To start the fingerprint Enrollment process:

- Select the user from the user list displayed in the grid. The user details will be displayed in the **User Profile** section as explained earlier.

Enroll

- In **Finger Enrollment**, the **Enroll** tab is selected by default.
- Click on **Start** to initiate the Enrollment process. The sensor LED illuminates.



- The user needs to now place the Enrollment finger on the fingerprint reader sensor. The fingerprint of the user will be displayed.
- Click on **Enroll** to Enroll the scanned fingerprint. The user can now remove the finger from the sensor.
- The system will display the Enrollment Successful message along with the Fingerprint quality measurement in percentage.
- The **Stop** button is provided to abort the Enrollment process and start the process again.

The above procedure can now be repeated to Enroll another fingerprint.

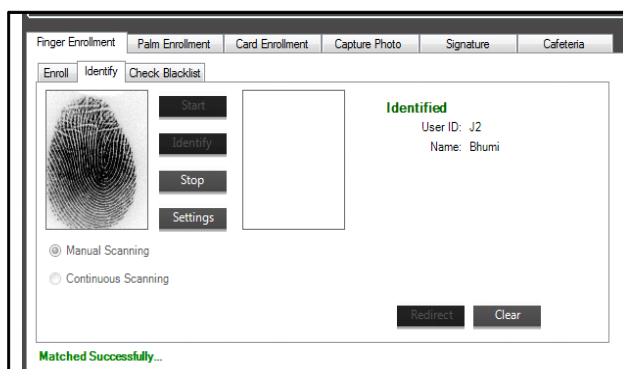
The **Verify** button is provided to check whether the fingerprint has already been registered against the selected User. Click on **Start** followed by clicking on the **Verify** button, after the user has placed the finger on the sensor.

The **Optional Settings** option allows the user to save the FP image as well as select the finger name from the pull down list as shown above.

- **Save FP Image**- Select the checkbox to save the enrolled FP images.
- **Finger Name**- Select the name of the enrolled finger that you are saving from the dropdown list.
- **Duress Finger**- Select the checkbox to save the enrolled finger(s) as Duress Finger. Maximum 2 enrolled fingers can be saved as Duress Finger.

Identify

In **Identify** tab, the user can check whether the finger template has been registered against any user in the COSEC database. To start the fingerprint identification process:

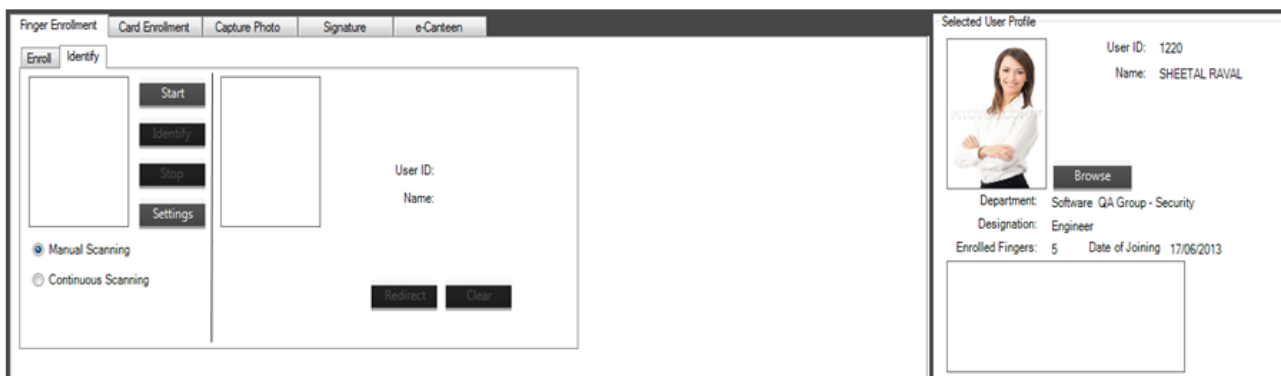


- The user needs to now place the finger on the fingerprint reader sensor. The fingerprint of the user will be displayed.
- Click on **Identify** button to identify the scanned fingerprint. The user can now remove the finger from the sensor.
- The **Stop** button is provided to abort the identification process.

The above procedure can now be repeated to Enroll another fingerprint.

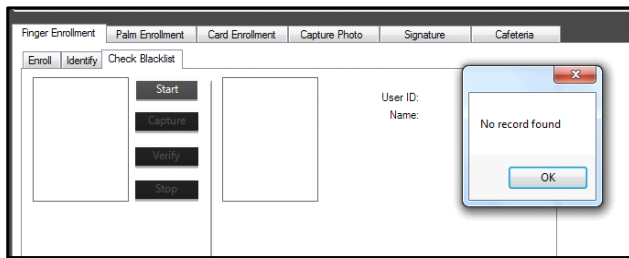
In the event of the logged in user not being the admin user, then the Identify tab will remain disabled.

Also the user can configure the module to be in either continuous scan mode or scan only on manual trigger. Select the appropriate radio button as shown:



Check Blacklist

During enrollment you can check; whether the user who has come to enroll finger has been blacklisted or not.



Select Check Blacklist tab. Click Start button.

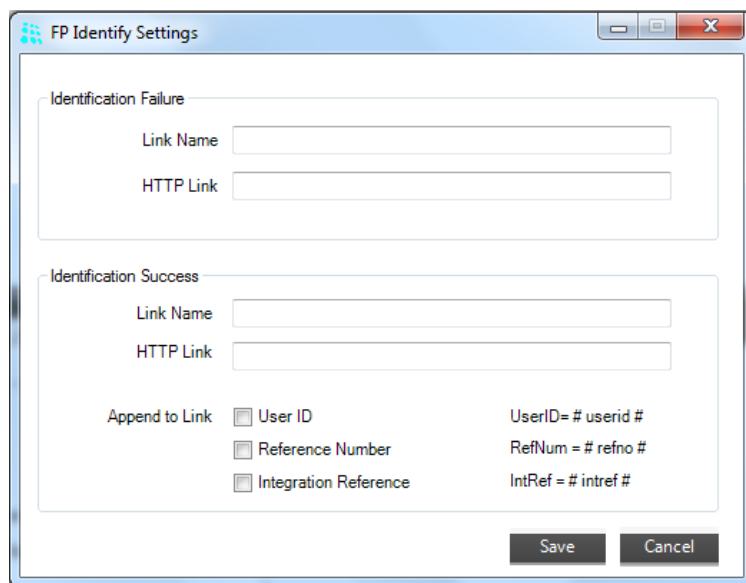
Procedure:

The user can be blacklisted from COSEC Web application. The FP template of blacklisted user has to be exported through COSEC Integrate using "Export FP Template to File".

Now create a new database. Then import that FP template file to new database.

Before Enrollment you can click "Check Blacklist" tab to check whether the user is blacklisted or not. Then Click Start button and Verify the user status.

Click on **Settings** button to configure the links to which the user has to be diverted to. A pop up window appears as shown.



Specify the **Link Name** and **HTTP Link** to be displayed on screen for both identification success and failure. The **Append to Link** option allows the administrator to append parameters such as **User ID**, **Reference Number** and **Integration Reference** to the HTTP link mentioned by enabling the appropriate checkboxes. The additional values appended to the success link will be separated by '&'.

Click on **Save** button to commit the changes done.

The Identified/Not Identified label will only be displayed after the identify process is complete, and the appropriate message is displayed depending on the process result. The **Redirect** and **Clear** buttons will be enabled only after the identification process.

If the links are not provided, then the **Redirect** button on the identify tab will be disabled and only clear button will be active. Click on **Redirect** button to display the **Link Name** and **HTTP Link** depending on identification success or failure. Click on **Clear** button to clear the process.

Palm Enrollment

This option enables the enrollment of palm templates of users. The system allows the operator to enroll up to a maximum of ten palm templates per user depending on the number of templates as defined in the Global Policy in the COSEC Web Application.



When using a palm reader, care must be taken for the following:

- Make sure that the palm and fingers are placed correctly. Recommended to use the palm guide to enroll palm with good quality.
- Hold your palm steady and do not move it until the palm is captured.
- Do not enroll the palm if it is dirty, scarred, wet or covered with a glove, bandage, jewellery etc.
- Enroll both palms to prevent identification errors due to temporary or permanent alterations (such as paper cut, minor burn etc.).

To enroll a palm template, select a user and go to the **Palm Enrollment** option.

The screenshot displays the COSEC Web Application interface. At the top, there is a search bar with 'Select Category: User', 'UserID: 123', and buttons for 'Search', 'Clear', 'Card Template', and 'Help'. Below this is a table listing users with columns for User ID, Name, Short Name, Enrolled Fingers, Enrolled Palms, Card 1, Card 2, Blood Group, and Me. The user 'KIRTI MAKWANA' (ID 1236) is highlighted in blue. Below the table, there are tabs for 'Finger Enrollment', 'Palm Enrollment', 'Card Enrollment', 'Capture Photo', 'Signature', and 'Cafeteria'. The 'Palm Enrollment' tab is active, showing a large empty box for the palm reader and a vertical stack of buttons: 'Initialize', 'Identify', 'Enroll', and 'Cancel'. At the bottom right, there are two empty input fields.

User ID	Name	Short Name	Enrolled Fingers	Enrolled Palms	Card 1	Card 2	Blood Group	Me
1230	PRAVEEN KUMAR	PRAVEEN KUMAR	5	0			O+	
1231	DRASHTI NANDASANA	DRASHTI	5	1			AB+	
1232	NIDHI NAIR	NIDHI NAIR	5	0			NA	
1233	UDIT AJBANI	UDIT AJBANI	5	0			O+	
1234	ALPESH BORAD	ALPESH BORAD	5	0			O+	
123456	Arvind	Arvind	0	0			NA	
1235	NISHI SHAH	NISHI SHAH	5	0			B+	
1236	KIRTI MAKWANA	KIRTI MAKWANA	5	0			B+	
1237	CHETAN CHAWHAN	CHETAN	0	0			NA	
1238	CHETHANA RAVEENDRAN	CHETHANA	5	0			O+	
1239	JASMIN VAGHASIYA	JASMIN	5	0			O+	
CWM123	B.Shama	B.Shama	0	0			NA	

User ID	Name	Short Name	Enrolled Fingers	Enrolled Palms	Card 1	Card 2	Blood Group	Medical History	Personal Mobile
1220	SHEETAL RAVAL	SHEETAL RAVAL	5	5			A+		9687624826

Finger Enrollment
Palm Enrollment
Card Enrollment
Capture Photo
Signature
Cafeteria

Initialize
Identify
Enroll
Cancel
Stop

User ID: #

Name: #

Contractor: #

Work Order: #

Status: #

☒ Enroll in Adaptive Mode ⓘ

User ID: 1220

Name: SHEETAL RAVAL

Enrolled Fingers: 5

Enrolled Palms: 5

Date of Joining: 17/06/2013

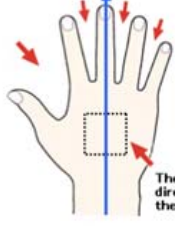
Department: Software QA Group - Security

Designation: Engineer

Once the user's palm is placed correctly at the enrollment station, click the **Initialize** button to activate the palm sensor for enrollment.

You can enable the '**Enroll In Adaptive Mode**' checkbox once initialized. This will allow the Palm Templates to be compressed and saved into the COSEC server for the identification through the smart card (Mifare 4k). Refer *COSEC Server User Guide* for more details about Door PVR in an Adaptive mode.

Finger Enrollment
Palm Enrollment
Card Enrollment
Capture Photo
Signature
Cafeteria

Fit your middle finger with the central axis of the sensor.

The sensor should be directly under the palm center.

Initialize
Identify
Enroll
Cancel
Stop

User ID: #

Name: #

Contractor: #

Work Order: #

Status: #

☒ Enroll in Adaptive Mode ⓘ

User ID: #

Name: #

Contractor: #

Work Order: #

Status: #

User ID: #

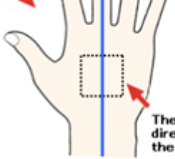
Name: #

Contractor: #

Work Order: #

Status: #

Click the **Identify** button to check the user's palm against existing templates. If there is a match with an existing user, the application will retrieve the details of the user.

Fit your middle finger with the central axis of the sensor.

The sensor should be directly under the palm center.

Initialize
Identify
Enroll
Cancel
Stop

User ID: #

Name: #

Contractor: #

Work Order: #

Status: #

☒ Enroll in Adaptive Mode ⓘ

User ID: #

Name: #

Contractor: #

Work Order: #

Status: #

User ID: #

Name: #

Contractor: #

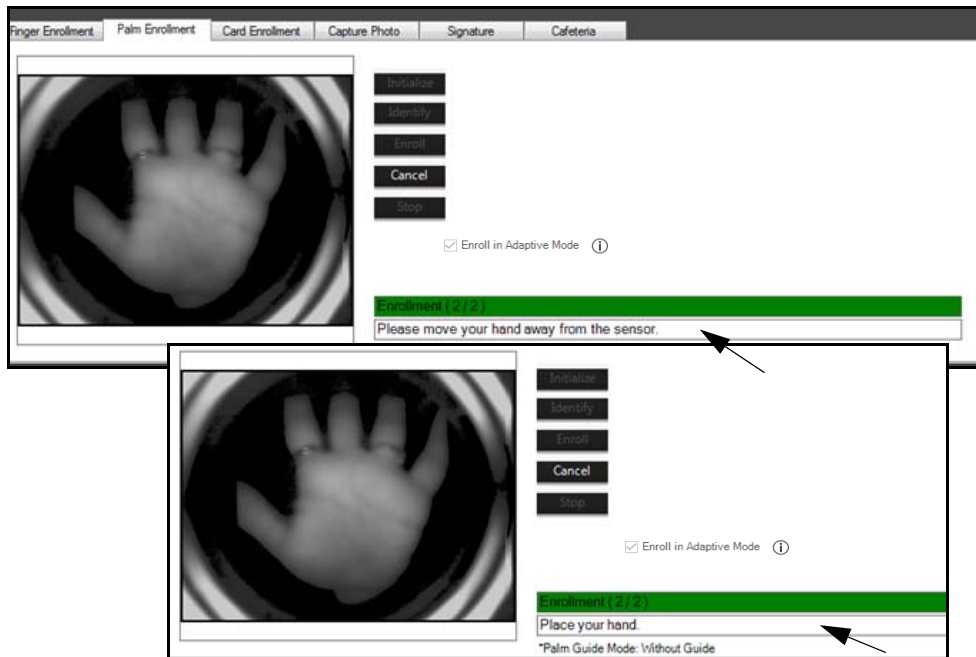
Work Order: #

Status: #

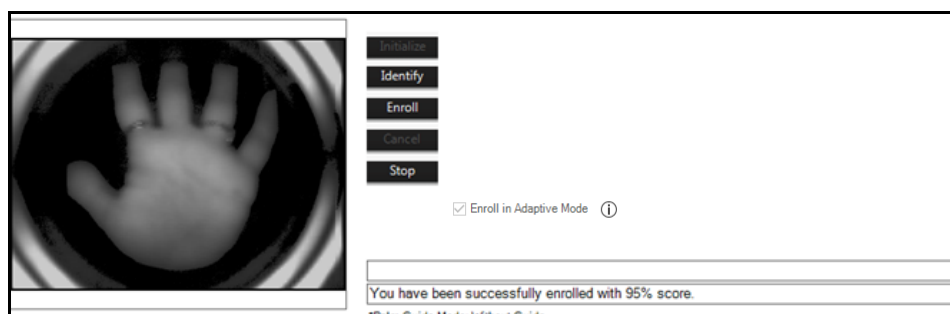
46

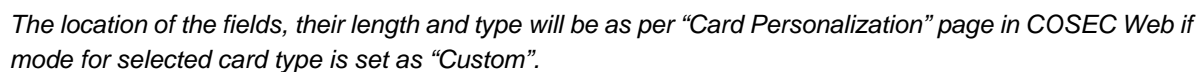
Matrix COSEC ENROLL User Manual

Click on **Enroll** button to capture the palm template. Place your palm on Palm Enrollment station. Follow the guidelines as shown below to place the palm correctly.



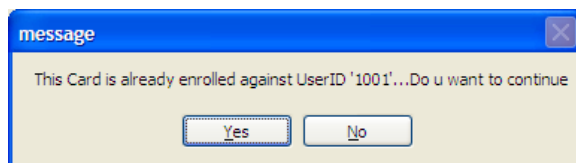
You will get palm enrollment success message as shown below. Finally click on Stop to complete the process.



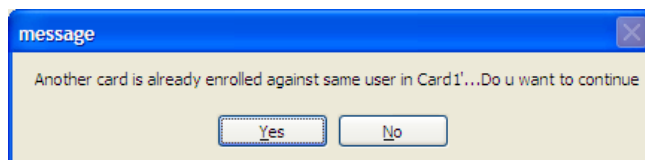


- Select the number of finger template (maximum 2) to be enrolled on the Card from the **Finger Print Template** dropdown list. Only normal fingers can be enrolled on the card and not the Duress finger(s).
- In the event of enrolling a user under the SI functionality, select the appropriate options from the **Smart Identification** section. This option is only available for the Mifare and HID i-Class cards. The **Validity Date** and **User Access Level** are default fields and cannot be edited.
 - If the checkbox of 'Smart Access Route ID' is enabled, then checkbox for 'Max Route Level' will also be enabled automatically.
- Click on **Enroll**. The COSEC ENROLL application prompts the operator to display the card at the reader for writing the selected user details. The smart card now needs to be held at a maximum distance of 2cms from the reader. The system will display the **WRITING ON CARD** message while the writing is in progress.
- On completion of the process the system will display the **ENROLLMENT SUCCESSFUL** message as shown at the bottom of the section. The operator can now remove the card and issue it to the enrolled user.
- The CSN as displayed in the **Card No.** field is now registered against the selected user and will appear in the relevant card column in the upper grid.

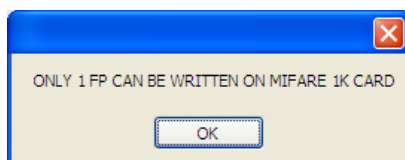
Prior to writing on the card the system checks for duplication and if the card is already registered then it gives one of the following messages. On selecting the Yes option the system deletes the earlier entry and makes a fresh Enrollment entry for the selected user.



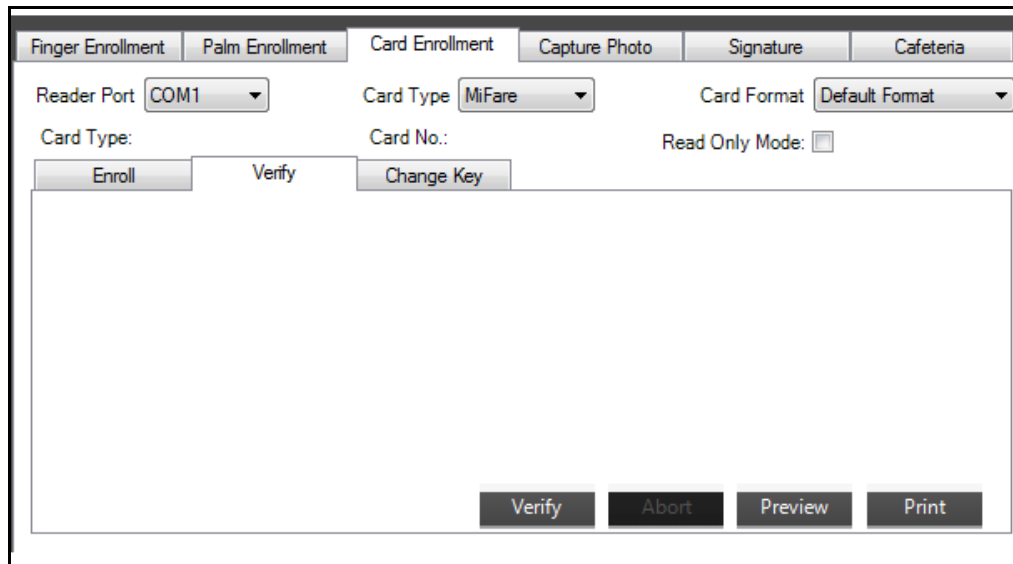
In the event of another card already being Enrolled at that position, then the system displays the following message.





In the event of having 1K cards, the system can write a maximum of one fingerprint template on the card. If the operator selects two fingerprint templates to be written on the card then the following error message is displayed.

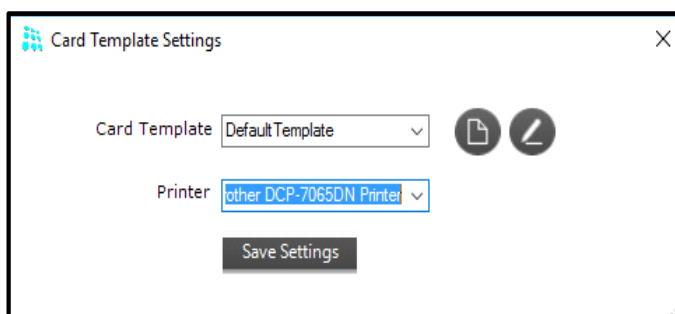


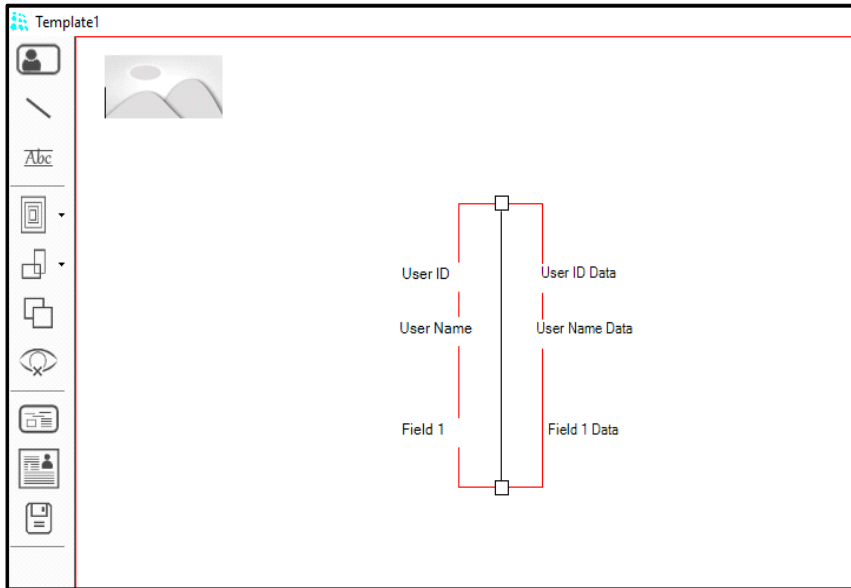
In case of the reader not being connected to the computer the application gives the error message in the ScanResults section as shown in the following figure.



Click on **Verify** tab under Card Enrollment. Then click on **Preview**. The preview of the template is displayed.

Click on **Card Template** from the buttons at top as shown below. The card template settings window appears. From this window, the card template settings can be done. The new templates can be created by clicking  and existing template can be edited by clicking .





The template can be designed by using controls from left side of Template page.

You can select the Page Layout as Portrait or Landscape. And Page size as A4, A5, A6,A7,CR80, CR100 or System defined in which card is to be printed.

- CR80: Page size- 2.125" x 3.375", Pixels = 204 x 324
- CR100: Page size- 2.63" x 3.88", Pixels = 252 x 372

Changing Smart Card Key

For HID and MiFare Smart Cards, you can either use the default Matrix key or customize the key. You can define two custom keys—one for HID and one for MiFare cards. You can also change the Smart Card keys as many times as you want or revert to the default Matrix Smart Card key.

To configure a custom key,

- First, configure the new key in **Smart Card Key Settings**, under *Global System Policy*.
- In **Card Enrollment**, click the **Change Key** tab.

- Enter Old key configured on the card. If the old key was already a custom one, type the hexadecimal digits. If the old key was the default key, select **Matrix key**.
- In **Enter New Key**, select **Smart card key defined in System Policy**. Select Matrix key only if you want to revert to the default key.
- Select the **Read Only Mode** checkbox to specify that the card is a read-only card and no key verification is required.
- Click the **Process** button.

Enrolling an EM-Prox Card

In the event of selecting the EM-Prox option from the pull down list for enrollment, the following options appear in the enroll section as shown.

- Select the **COM port** on which the reader is connected.
- Click on the **Card1** or the **Card2** radio button based on the card to be enrolled followed by the **Enroll** button.

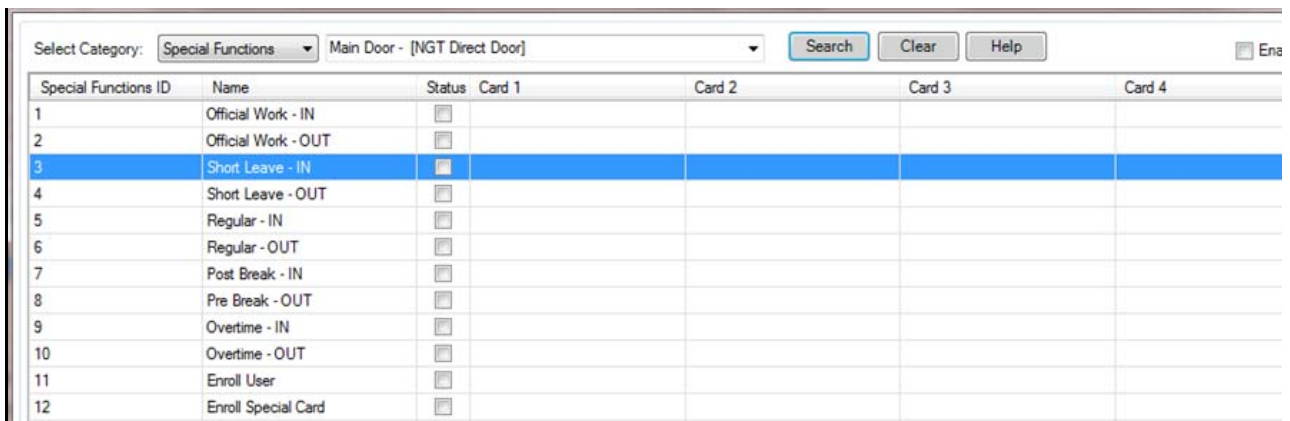
Show the proximity card to the reader within the 10 seconds

Enrolling Special Functions: The COSEC Enroll application also enables the administrator to enroll cards against selected special functions. In order to start the enrollment process select the **Special Function** option from the Select Category drop down list as shown.



The screenshot shows a web interface with a 'Select Category:' label followed by a dropdown menu. The dropdown menu is open, showing three options: 'User', 'Visitor', and 'Special Functions'. The 'Special Functions' option is highlighted in blue. To the right of the dropdown menu is a 'Search' button and a partially visible 'Clear' button.

Select the PANEL or DIRECT DOOR from the pull down list and click on the Search button to display the list in the upper half of the screen as shown below.



The screenshot shows the COSEC Enroll application interface. At the top, there is a 'Select Category:' dropdown menu set to 'Special Functions', a location dropdown menu set to 'Main Door - [NGT Direct Door]', and buttons for 'Search', 'Clear', and 'Help'. Below this is a table with 12 rows of special functions. The third row, 'Short Leave - IN', is highlighted in blue. The table has columns for 'Special Functions ID', 'Name', 'Status', and four card slots (Card 1, Card 2, Card 3, Card 4).

Special Functions ID	Name	Status	Card 1	Card 2	Card 3	Card 4
1	Official Work - IN	<input type="checkbox"/>				
2	Official Work - OUT	<input type="checkbox"/>				
3	Short Leave - IN	<input checked="" type="checkbox"/>				
4	Short Leave - OUT	<input type="checkbox"/>				
5	Regular - IN	<input type="checkbox"/>				
6	Regular - OUT	<input type="checkbox"/>				
7	Post Break - IN	<input type="checkbox"/>				
8	Pre Break - OUT	<input type="checkbox"/>				
9	Overtime - IN	<input type="checkbox"/>				
10	Overtime - OUT	<input type="checkbox"/>				
11	Enroll User	<input type="checkbox"/>				
12	Enroll Special Card	<input type="checkbox"/>				

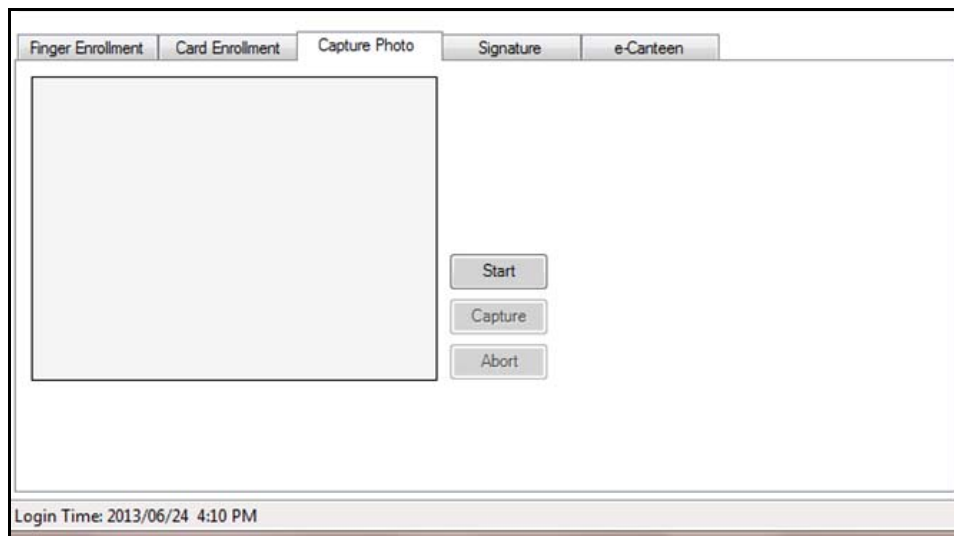
Highlight the Special Function whose cards are to be enrolled and then proceed with the card enrollment as described earlier.

Capture Photo

This option enables the operator to capture the photograph of the user and store it in the COSEC database. The user needs to have a camera installed and connected on the PC to proceed with the photo capture process.

To start the photo capture process:

- Select the user from the user list displayed in the grid in the upper half of the screen. The user details will be displayed in the **User Profile** section as explained earlier.
- Click on the **Capture Photo** tab as shown.



- Point the camera towards the user and click on **Start** to initiate the photo capture process as shown.



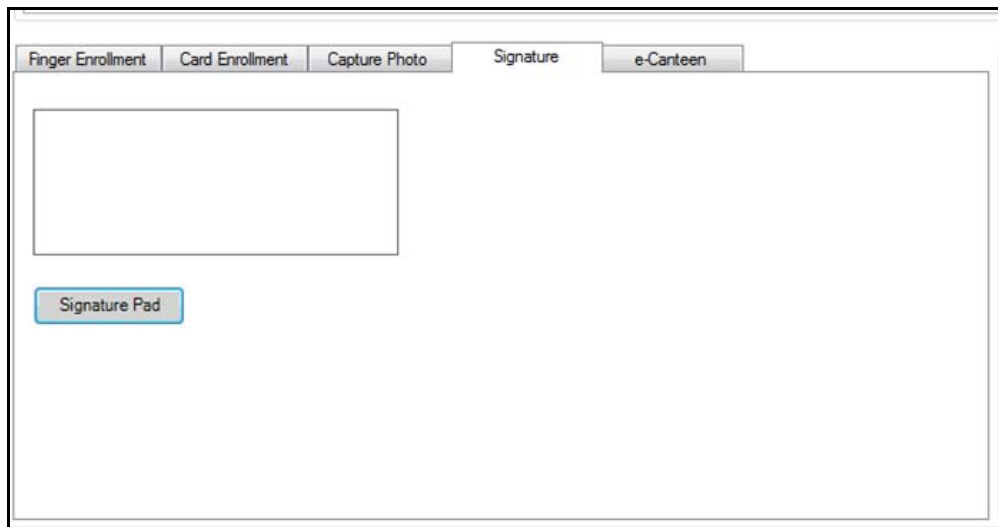
- The live image of the user appears as shown. Click on **Capture** to grab the image of the user and store it to the database. The captured image will now be displayed in the user profile section along with the other user details.

The above procedure can now be repeated to capture the photograph of another user. Click on **Abort** to cancel the photo capture process.

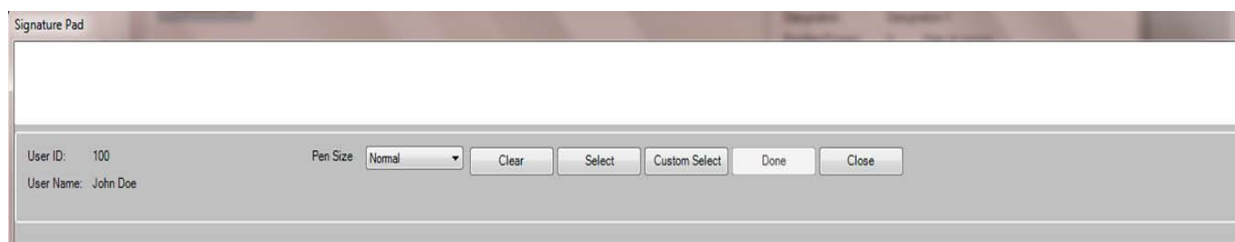
In order to enlarge or reduce the capture frame, right click on the frame and highlight the **Capture Window Size** option. Now select the appropriate percentage option to enlarge or reduce the capture frame.

Signature Capture

This option enables the operator to capture the signature of the user and store it in the COSEC database. The user needs to have a signature pad installed and connected on the PC to proceed with the signature capture process. Highlight the user and click on the Signature tab as shown.



Click on the Signature Pad button. The Signature Pad page appears with the following options as shown.



Clear button clears the signature image on the signature pad.

Select button has a fixed area within which the signature will be captured.

Custom Select option offers the flexibility to select the area from which the signature is to be captured. Drag and drop the mouse to select the signature on the pad.

Done button saves the captured signature to the COSEC database.

Close button closes the signature pad.

Cafeteria

The user needs to have the Desktop Mifare or HID reader connected with the COSEC Enroll computer in order to start the Card Enrollment process for *Cafeteria* users. The users need to be enabled for the *Cafeteria* application before their cards can be recharged or reset using this option.

Click on the **Cafeteria** tab. The following page appears as shown.

The screenshot shows the 'Cafeteria' tab selected in the top navigation bar. Below the navigation bar, there are three dropdown menus: 'Reader Port' set to 'COM1', 'Card Type' set to 'MiFare', and 'Card Format' set to 'Default Form'. Below these are 'Card Type:' and 'Card No.:' labels. There are two buttons: 'Enroll' and 'Verify'. The 'Process' section has two radio buttons: 'Recharge' (selected) and 'Reset'. Below this, there are several input fields: 'Amount:' (empty), 'Max Recharge Amount:' (100000.0), 'Refund Amount:' (0), 'Amount on Card:' (empty), 'Total Recharge Amount:' (empty), and 'Card Amount after Recharge:' (empty). At the bottom right of the form are two buttons: 'Read' and 'Recharge'.

Click on the **Read** button to read the details written on the card.

Click on the **Recharge** button to recharge the card for the entered Amount.

In the event of selecting the Reset option the following options appear as shown.

The screenshot shows the 'Cafeteria' tab selected. The 'Process' section now has 'Reset' selected instead of 'Recharge'. Below this, there are two radio buttons: 'Reset the Account to ZERO (0)' (selected) and 'Reset the Account to Available Balance'. Below these are two input fields: 'Amount on Card' (empty) and 'Card Amount after reset' (0). At the bottom right of the form are two buttons: 'Read' and 'Reset'.

Select the appropriate option and click on the **Read** button followed by the **Reset** button once the card has been read.

Face Enrollment

This option enables the enrollment of face templates of users and visitors. The system allows the operator to enroll up to a maximum of 30 Face templates per user depending on the number of templates as defined in the Global Policy > Users > Maximum No. of Faces in the COSEC Web Application. These are enrolled against Index Number 1 to 30.

The system enrolls Adaptive Faces from Index Number 31 to 40. This is dependent on the number of templates defined in the Global Policy > Face Recognition > Adaptive Face Templates Per User in the COSEC Web Application. These are visible as enrolled faces from Index Number 31 to 40 in the Enroll Utility.

If you have enabled Exceptional Faces in the Server, the faces are enrolled from Index Number 1 to 30. Only the Admin can assign these face to an existing/new user/visitor. These are visible as enrolled faces from Index Number 1 to 30 in the Enroll Utility.

Refer **“FR Settings”** for all the settings related to Face Enrollment will be done in the Settings tab.

To enroll a Face template, select a User/Visitor and go to the **Face Enrollment** option.



*The faces enrolled through COSEC Web, from User > User Configuration > Face Recognition > Face Enrollment or Worker > Worker Profile > Face Recognition > Face Enrollment respectively, will be displayed under **Face Enrollment** option in the Enroll Utility. For more details refer COSEC System Manual.*

User ID	Name	Short Name	Enrolled Fingers-Super Proprietary	Enrolled Fingers-Super ISO	Enrolled Fingers-Lumidi ISO	Enrolled Palms	Enrolled Faces	Card 1	Card 2	Blood Group	Medical History	Personal Mobile
234	Athira	Athira	0	0	0	0	0			NA		
583	shiba	shiba	0	0	0	0	0			NA		
687	Aditi Gupta	Aditi Gupta	0	0	0	0	0			NA		
W1	Sunil	Sunil	0	0	0	0	0			NA		

Enrolled Faces	

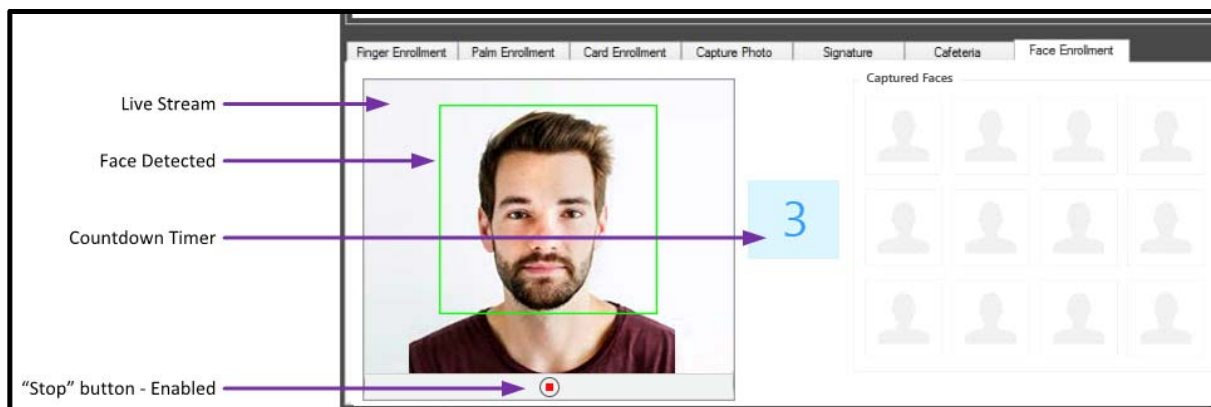
Selected User Profile
User ID: 1234
Name: Athira

Browse
Enrolled Fingers: 0
Enrolled Palms: 0
Enrolled Faces: 0
Date of Joining:
Department: Department-1
Designation: Designation-1

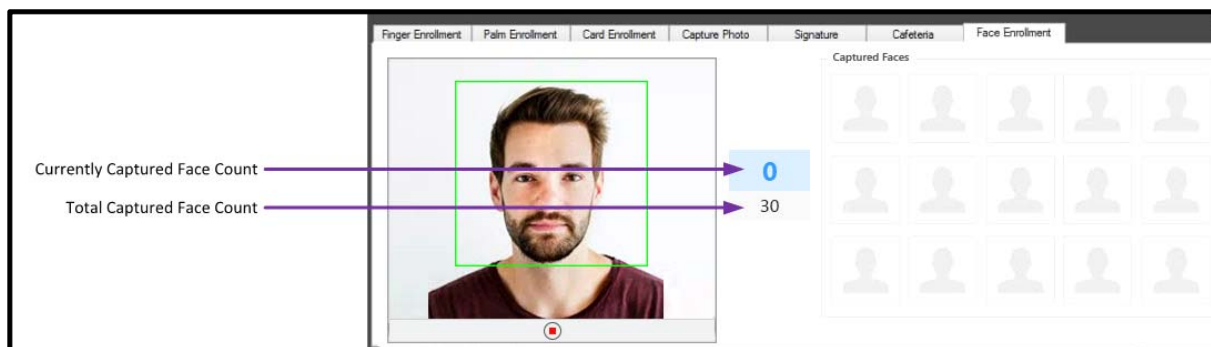
For new enrollment, 3 methods for capturing an image of user's face are provided, which are: **AUTO**, **MANUAL** and **BROWSE**

1. Enrollment via Automatic Face capturing: This option will automatically capture the images from the IP Camera and/or USB Camera.

- On click on 'Auto' button, Automatic enrollment screen appears.
- A countdown timer will be displayed, after which Enrollment process will begin. So, be ready in front of camera to capture your face image.



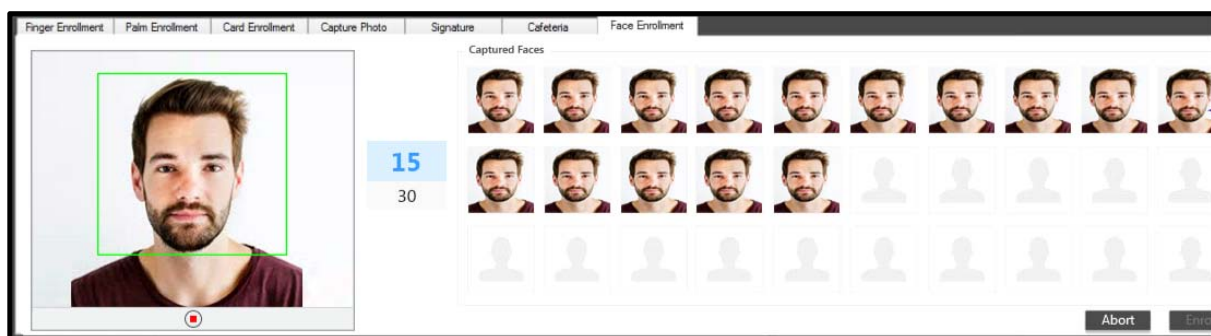
- As the enrollment process begins, status of captured image count and total captured image count will be displayed.
- For auto, total captured face count will be as per the time configured in Settings. e.g. If Time for one Enrollment Cycle is selected as 6, face count displayed will be 30.



- The captured image count will be updated along with the enrollment process.
- Captured face will be displayed in the 'Enrolled Faces' grid.



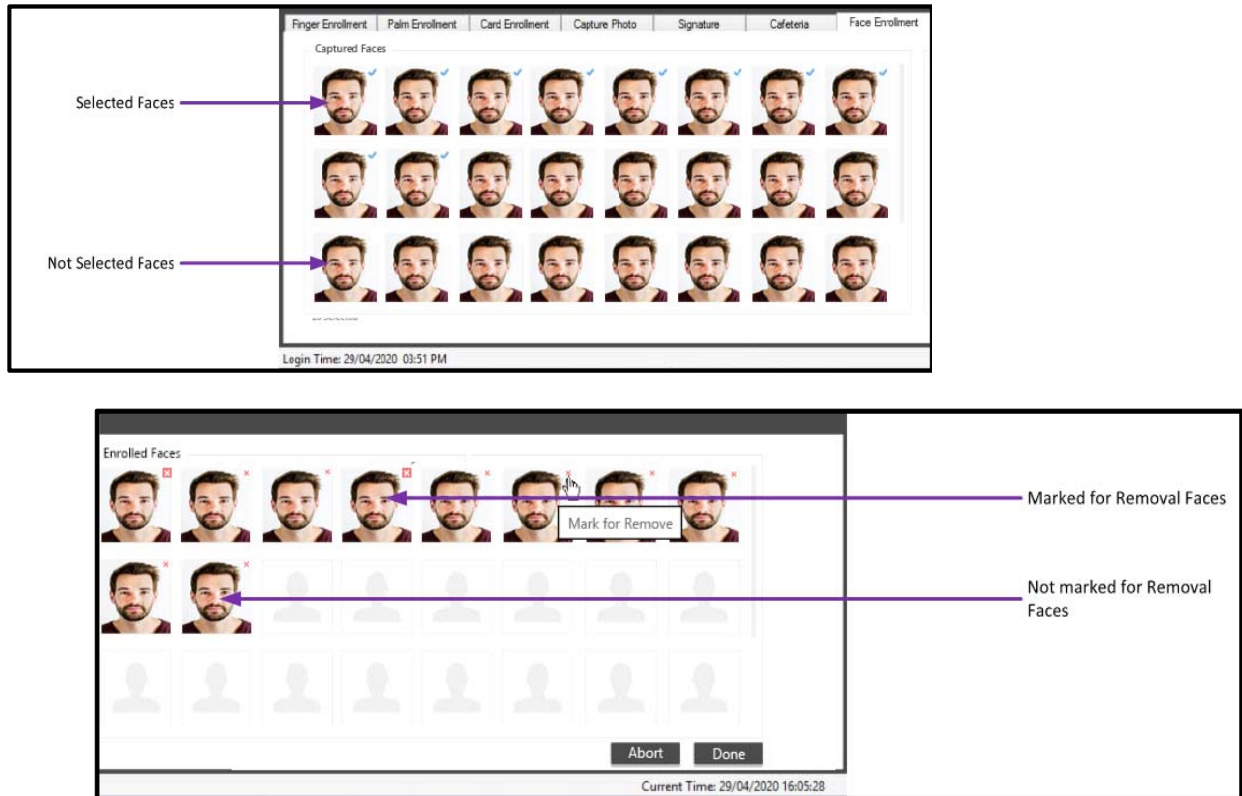
At Face Count 0 (that is Index Number 0), make sure you enroll the desired face image of a user as it will be set as User's Profile Photo if the **Auto Add/Update Enrolled Face as Profile Photo** checkbox is enabled in the COSEC Web (Admin Module> System Configuration> Global Policy).



In Settings > FR Settings, **Verify before Auto Enroll** is enabled, below page will be displayed automatically after capturing of certain no. of faces is done.

Then, **Stop** button below the live stream and the **Enroll** button will be enabled.

This actually is a verification process of the captured faces during automatic enrollment process.



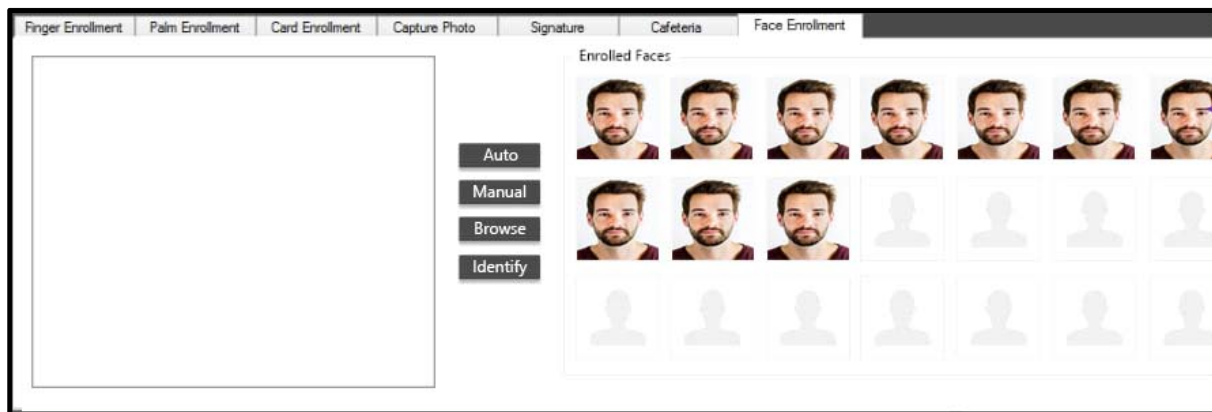
The above page will be displayed, where on right side of the page are the Captured Faces and on the left side, already Enrolled faces will be displayed if any.

- Now on the Captured Faces grid, there will be ticks on the left top corner on face image which shows the respective faces are selected for enrollment while the ones with no ticks are not selected for enrollment.
- On the Enrolled faces grid, there will be cross on the left top corner on the face image which shows the respective faces are marked for removal.

In other case, when **Verify before Auto Enroll** is disabled in FR Settings tab, enrollment of the Captured Faces will be done directly without any verification process only on the click of the **Enroll** button.

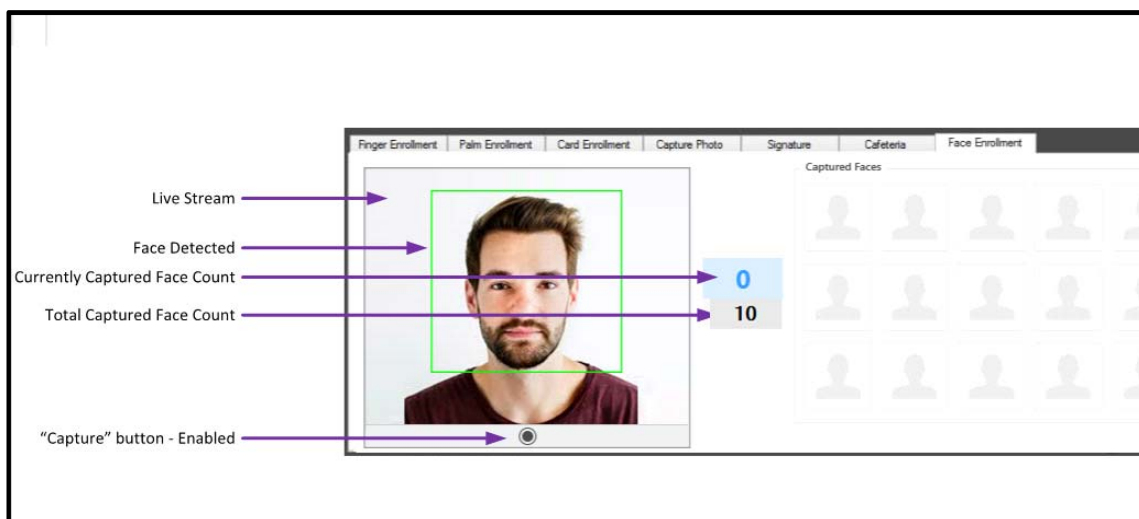
- Click on '**Done**' button for enrolling the captured images and click on '**Abort**' button to remove the captured images and to stop the enrollment process.

After the process is completed, below page will be displayed and the Automatic Enrollment process will be ended.

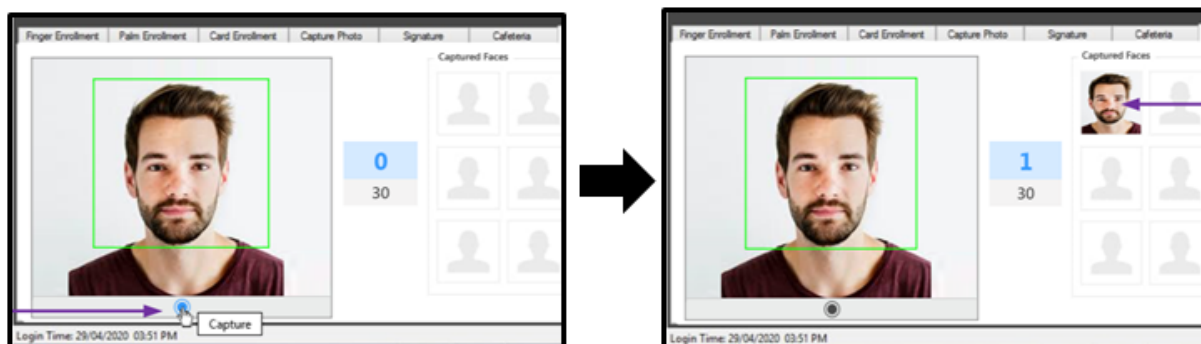


2. Enrollment via Manual Face capturing: This option will manually capture the images from the IP Camera and/or USB Camera.

- On click on '**Manual**' button, Manual enrollment screen appears.
- As the enrollment process begins, status of captured image count and total captured image count will be displayed.

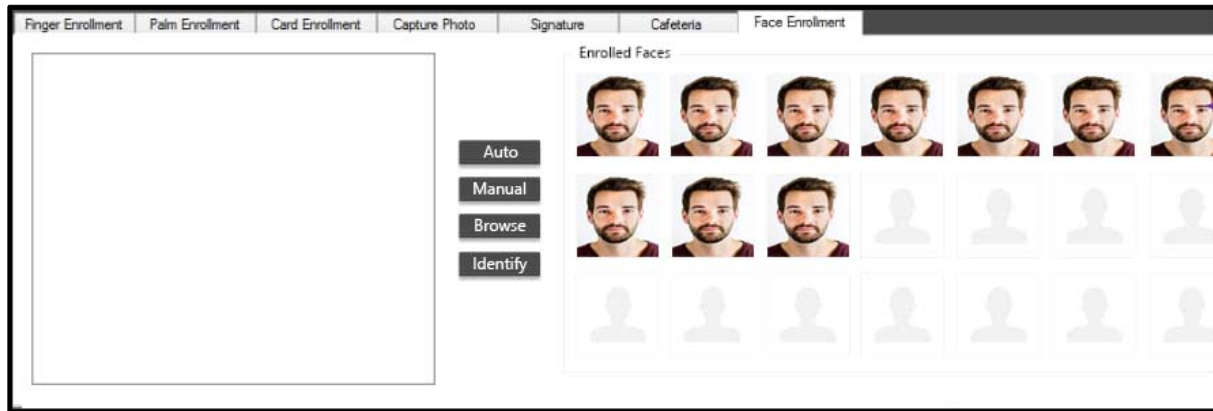


- The captured image count will be updated along with the enrollment process.



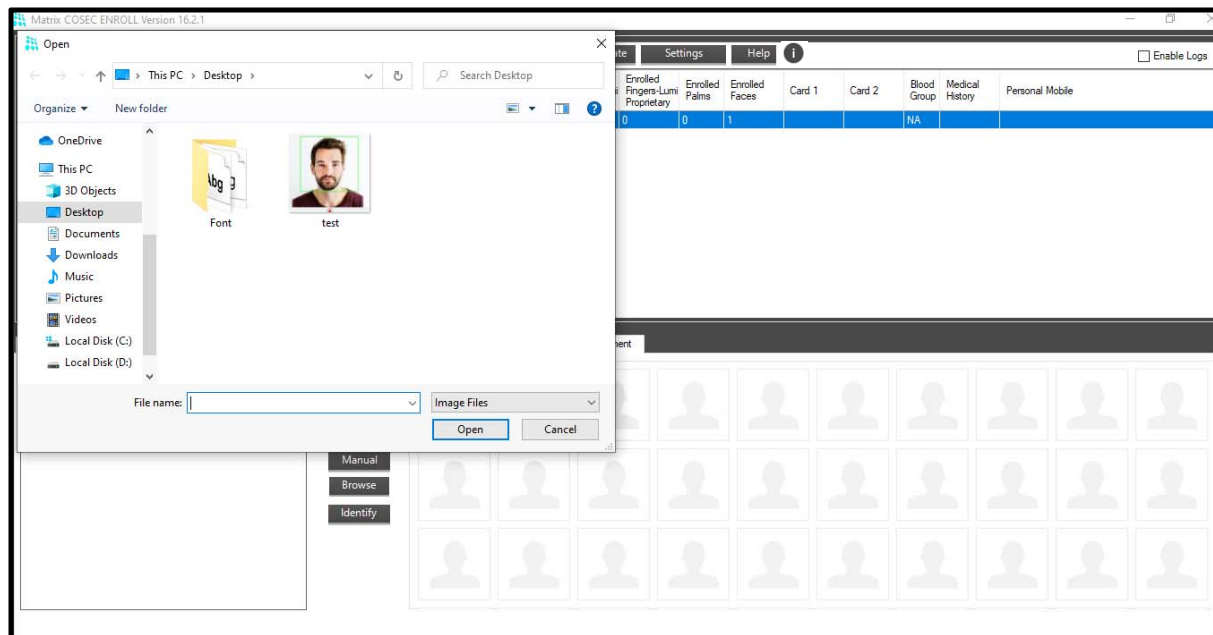
- After completing the process, verification view will be displayed with the selected faces same as Automatic enrollment.

- Click on '**Done**' button for enrolling the captured images and click on '**Abort**' button to remove the captured images and stop the enrollment process.
- After the process is completed, below image will be displayed and the Manual Enrollment process is ended.

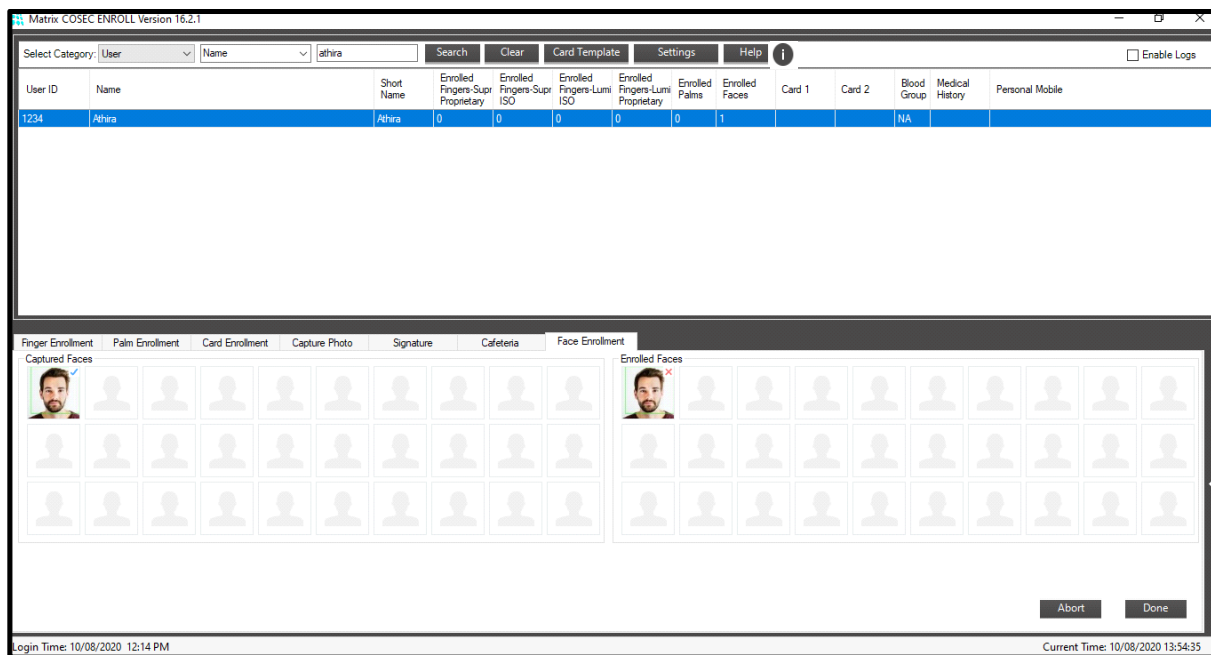


3. Enrollment via Browsing Face Image: This option allows enrolling images which are already available in the Computer through browsing.

- On click on **Browse** button, browse dialogue box will be displayed.
- Multiple images can be enrolled through browsing for enrollment.



- All selected images will be verified and verified images will be displayed in the Enrolled Faces grid.



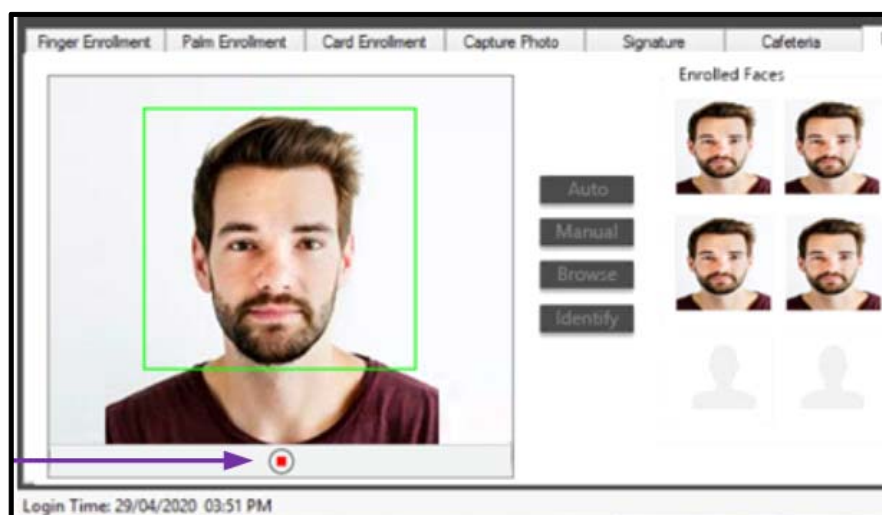
- Click on '**Done**' button for enrolling the captured images and click on '**Abort**' button to remove the captured images and to stop the enrollment process.

4. Enrollment via Face Identification: This option is used to identify the User from the Live Stream.

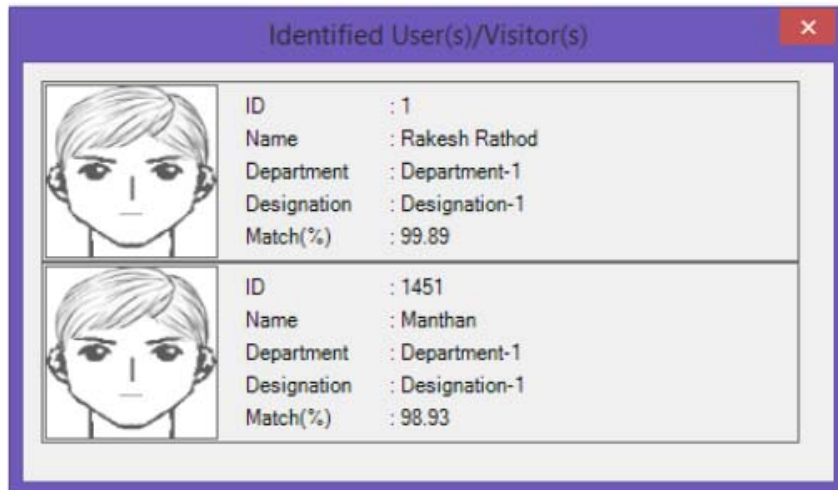
- If in sever settings, FR is disabled for any user, user will not be considered for Identification checking process.
- When you click on Identify button, Auto, Manual, Browse and Identify button will be disabled and the Live streaming will start.

So be ready in front of the camera for the identification process.

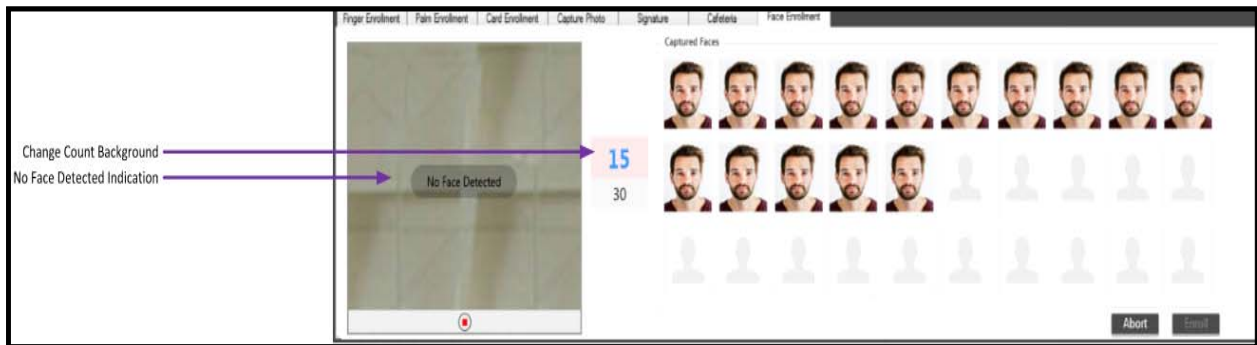
Click on **Start** button below the live stream.



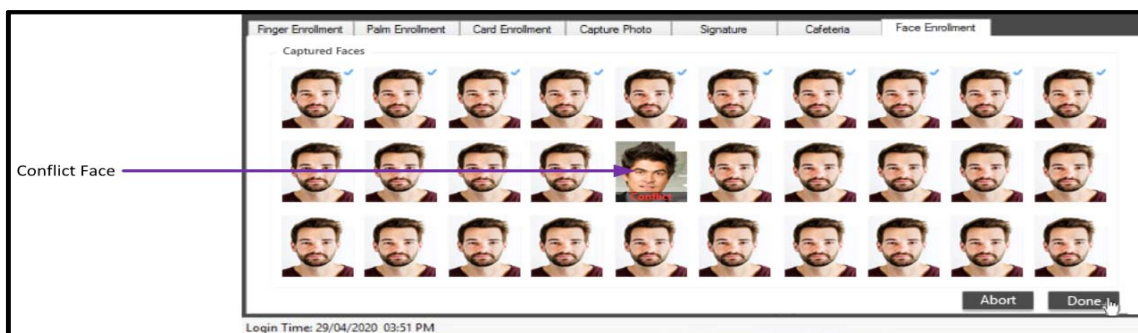
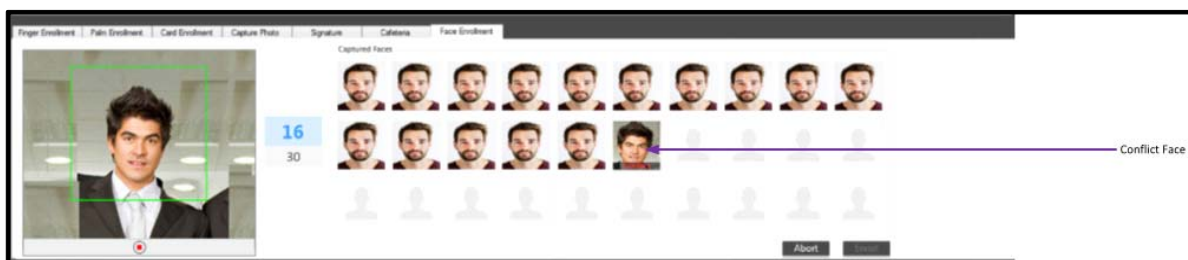
.After the user's face is shown in Live stream, click on **Stop** button, then a list of identified users will be displayed as shown below.



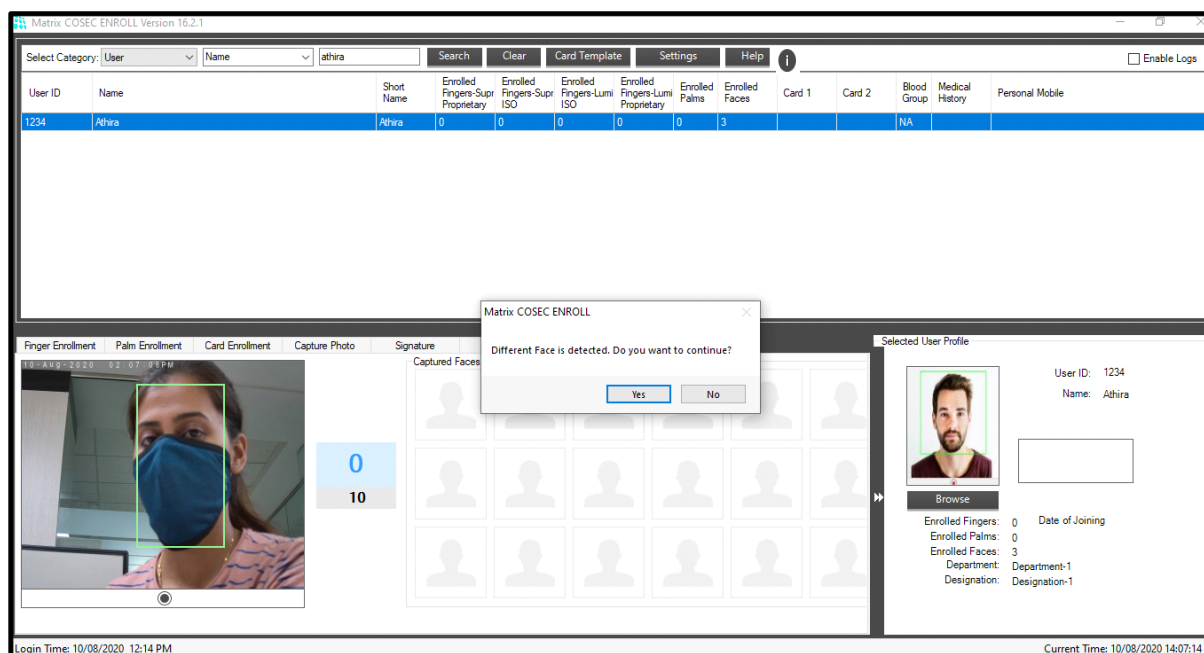
When No Face is Detected: When face is not detected in Auto or Manual, then enrollment process will be paused. Display will be as shown below.
In case of Browse, image will be discarded.



Conflict Checking: When any conflict is detected with other user during enrollment process, below shown image will be displayed, and such images will not be counted for final enrollment.



While enrolling process, if a different user's face is detected or the existing user wears/removes spectacles and/or mask, a dialogue box will be displayed as shown below.

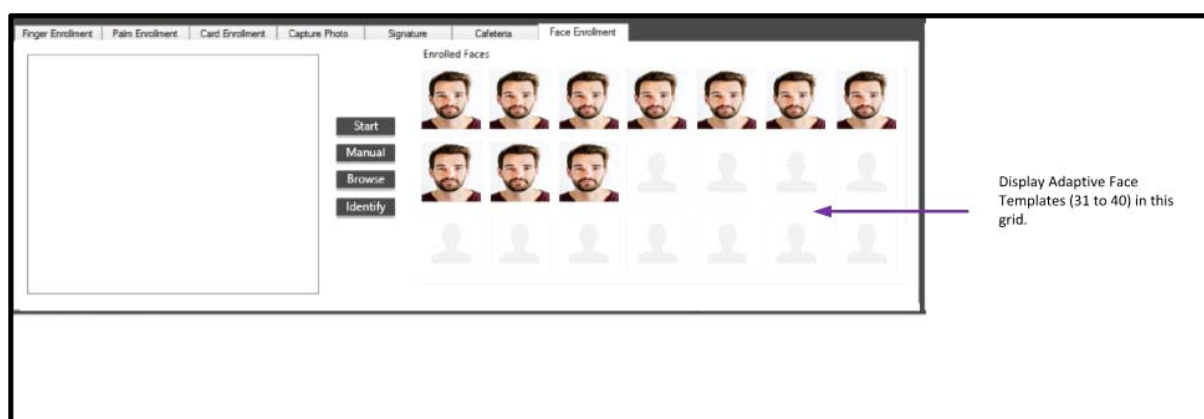


- If the face detected is of the same existing user, then continue the enrollment process and if not, click 'No' and end the enrollment process.

Adaptive Face Enrollment: Its purpose is to make system learn, adapt and maintain face template by making face enrollment process adaptive.

To avail this feature, enable Adaptive Face Enrollment parameter in **COSEC Server > System Admin > System Configuration > Identification Server Configuration > Adaptive Face Enrollment**.

Adaptive face templates will be displayed along with the enrolled faces in Enroll Utility.



Admin can view and delete Adaptive Face Templates. Admin cannot enroll any face in Face Index 31 to 40.



Adaptive Faces cannot be enrolled manually. They can only be enrolled by System during Adaptive Face Enrollment process and Admin can delete unwanted faces from Enroll Utility during some cases where false acceptance occurs due to Adaptive Enrollment.



Regardless of **Face Mask Compulsion** is Enabled/Disabled in COSEC Web (**Device Configuration> Advanced> Face Mask Compulsion**), if Adaptive Face Enrollment (in **Admin> System Configuration> Identification Server Configuration> Adaptive Face Enrollment**) is enabled, then before continuing further with the Adaptive Face Enrollment process, the system will first check whether the detected Face contains Face Mask or not.

For detecting face mask “Face Mask Detection Threshold (Enrollment)” percentage will be considered by the system.

If Face Mask is not detected, then only the system will proceed further for Adaptive Face Enrollment.

If Face Mask is detected, then Adaptive Face Enrollment will not be completed until and unless the user removes his/her Mask.

So while any Face Enrollment processes, if Face Mask is detected, then the process of Enrollment will not be fulfilled.

GDPR Reflections

General Data Protection Regulation basically ensures security to a users personal data. If you desire implicating GDPR norms, select the **Personal Data Protection** checkbox in COSEC Web > Admin > System Configuration > Global Policy > Basic.

Enabling GDPR will result to data masking. Set of defined fields revealing users personal data from the respective modules will be considered for masking on server end, at the same time encrypted in the database.

To know more about GDPR refer, COSEC System Manual

Depending on the roles and rights provided to the respective users in COSEC Web > Admin> System Accounts > Roles And Rights Configuration, the user data will be considered for masking.

- For all user defined System Account Users or system defined System Engineer/Operator having the roles and rights as **View**, the data will be displayed in masked form.
- For all user defined System Account Users or system defined System Engineer/Operator having the roles and rights as **View, Edit** and **Add**, the data will be displayed in unmasked form. These users can edit data for the desired module as existing.



*If you have enabled GDPR and you desire editing any field of Enroll Utility, make sure you have provided **View, Edit** and **Add** right to the User Configuration page in COSEC Web > Admin> System Accounts > Roles And Rights Configuration.*

When we search for the desired User/Visitor then the details under the following fields will be masked.

The symbol indicate the following action:

✓	Masked
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For User

DESCRIPTION	SUB TABS	FIELD	REFLECTION
Selected User Profile	Image Preview	Image	Dummy Image
User Details	-	Card 1	✓
User Details	-	Card 2	✓
User Details	-	Personal Mobile	✓
User Details	-	Medical History	✓
Finger Enrollment	-	-	Hidden

DESCRIPTION	SUB TABS	FIELD	REFLECTION
Palm Enrollment	-	-	Hidden
Card Enrollment	-	-	Hidden
Capture Photo	-	-	Hidden
Signature	-	-	Hidden
Cafeteria	-	-	Hidden
Face Enrollment	-	-	Hidden

For Visitor

TABS	SUB TABS	FIELD	REFLECTION	PAGE RIGHTS
Visitor Details	-	Access Card 1	✓	Visitor Profile
Visitor Details	-	Access Card 2	✓	Visitor Profile



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