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Revision History

Version	Date	Author	Reason for Change
0.1	02-11-14	C-DAC	
0.2	06-01-15	C-DAC	New features added, existing features modified

Purpose of the Document

The SP user manual provides step-by-step instructions to Service Providers for enlistment on e-Pramaan. The document also details steps for SP login and logout once SP account has been created on e-Pramaan. SP profile management as well as addition of SP services on e-Pramaan is also detailed in the document.

Intended Audience

The intended audience for this document are the Service Providers who seek to integrate their services with e-Pramaan for providing a secure authentication mechanism to their respective users.

Comments and Suggestions

For comments, suggestions and feedback on this document, kindly email to epramaan@cdac.in.

Document Overview

This document is organized as follows:

- Chapter 1, Project Overview - This chapter provides an overview of the project objectives.
- Chapter 2, Purpose and Scope - This chapter lays out the overall scope and purpose of e-Pramaan.
- Chapter 3, SP Enlistment and Management – This chapter details the process flow for SP enlistment and management on e-Pramaan is detailed in this section.

Abbreviations

Sr. #	Abbreviation	Full Form
1.	API	Application Programming Interface
2.	ASA	Authentication Service Agency
3.	AUA	Authentication User Agency
4.	C-DAC	Centre for Development of Advanced Computing
5.	DC	Data Center
6.	DeitY	Department of Electronics and Information Technology
7.	DR	Disaster Recovery
8.	MSDG	Mobile e-Governance Service Delivery Gateway
9.	NSDG	National e-Governance Service Delivery Gateway
10.	SP	Service Providers
11.	SSDG	State e- Governance Service Delivery Gateway
12.	SSO	Single Sign On
13.	TLS	Transport Layer Security

Standards & Conventions

- ✓ NSI/IEEE for Integration document Format

References

- ✓ e-Pramaan Standards and Specification Document version 1.2
- ✓ Functional Requirement Document(FRD) v 1.6

1. Project Overview

As a part of National e-Governance Plan (NeGP), a number of central/state government services are accessible through internet as well as through mobile devices. These applications require user authentication in order to receive the intended benefits offered by various e-Governance services. Most of the applications in e-Governance area are implemented in silos, and hence authentication mechanism also differs across various applications. Disparate authentication mechanism results in lack of uniformity, a need for different identity proofs as well as multiple login and passwords to access the services offered by various government departments. Secondly, the authentication mechanisms followed by many applications may be very weak and insecure. There should be a provision for authenticating users as well as the services accessed by these users. A mutual authentication mechanism should exist where users can be authenticated to the application, and at the same time the users remain assured that the services accessed by them are authentic ones.

e-Pramaan is a national e-Authentication framework implemented by C-DAC Mumbai for Department of Electronics and Information Technology (DeitY), Government of India. It is a comprehensive framework to authenticate users of various government services in a safe and secured manner for accessing services through both desktop and mobile platforms.

e-Pramaan is an authentication framework for the purpose of e-Authentication which leverages on State e-Governance Service Delivery Gateway (SSDG), National e-Governance Service Delivery Gateway (NSDG), Mobile Service Delivery Gateway (MSDG), Aadhaar based Authentication and numerous others to bring uniformity across various authentication mechanisms currently in use by Govt. departments. e-Pramaan will not only act as a secured channel to access various services, but will also provide various value added services including Single Sign On (SSO) and transaction auditing for existing as well as for new users of various government services.

2. e-Pramaan Purpose and Scope

e-Pramaan will provide an added layer of security along with a strong authentication mechanism for users and various government departments availing authentication services at various levels. Users and departments interested in availing the services of the e-Authentication framework should initially register themselves on e-Pramaan. Registration process for SPs is described in detail in the subsequent sections of this document. As a part of the framework, various government departments will be able to integrate with this authentication framework through offered Application Programming Interfaces (API)/ Web Service Interfaces in a smooth and convenient manner without affecting the existing architecture of the running applications.

2.1 Authentication Factors

Authentication is a process in which a user's identity is verified based on the credentials provided by the user during registration or later when (s) he modifies the profile or updates the credentials, such as a password where the assurance mechanism makes sure that "I am who I claim to be". e-Pramaan will provide various levels of authentication in the form of single or multi factor. The factors can be chosen by the departmental services on the basis of sensitivity requirements of the service. Users of e-Gov services, integrated with e-Pramaan will be termed as *SP (Service Provider) users*.

The choice of factor(s) for authentication will depend on the requirements as deemed fit by SPs. Use of additional factors will provide higher level of assurance for a safe and secure e-service experience. Multi factor is stronger than two factor which is stronger than a single factor. Government departments have an option of choosing any one or a combination of factors along with Username as per the combinations described below:

1. **Single Factor** - Any one of the following factors: Password/Digital Signature Certificate (DSC)/Biometrics.
2. **Two Factor**- Combination of any two of the following factors with the chosen single factor: Password/One Time Password (OTP) /Digital Signature Certificate (DSC)/Biometrics.

3. **Multi Factor**- Combination of any two and more of the following factors along with the chosen single factor: Password/ Digital Signature Certificate (DSC) /One Time Password (OTP) / Biometrics.

e-Pramaan shall also provide mobile based authentication mechanism for level 1, 2 and 3, apart from the standard PC based access. For level 3 authentication requiring digital certificates, the use of Proxy SIM/ Crypto SIM Card / External SD Card/Software based certificates shall be considered.

Note: In the current release password and various kind of OTP will be available for services.

3. SP Enlistment and Management

The process flow for SP registration and management on e-Pramaan is detailed in this section.

3.1 SP Enlistment and Login

This section details out the process for SP enlistment onto e-Pramaan SP portal as well as the login process for logging in to the portal after successful enlistment.

3.1.1 SP Enlistment

To provide the services through e-Pramaan, Service Provider needs to enlist itself on e-Pramaan through SP portal of e-Pramaan. Service Providers willing to enlist with e-Pramaan need to follow the below process.

- i.) Service Providers (SPs) wanting to avail e-Pramaan authentication services **MUST** enlist on e-Pramaan SP portal using the **Sign Up** feature. An enlistment form as displayed in Figure 1 is displayed. SP needs to fill up and submit this form.

SP enlistment form contains the fields as enlisted in Table 1.

Table 1: SP Enlistment Fields and Description

Field Name	Description
User Name	Unique user name chosen by SP for logging in to e-Pramaan SP portal
Password	Password chosen by SP for logging in to e-Pramaan SP portal
Confirm Password	Repeat the password chosen by SP for logging in to e-Pramaan SP portal
Service Provider Name	Name of the Service Provider
Category Name	Category to which the SP belongs i.e. a Central department or a State department or PSU
Personal Message	SP has to choose a text while registering at e-Pramaan for website verification purpose. This text will be shown to SP as soon as SP enters the SP username during login.
House Or Flat	House or flat number of SP Office
Street	Street address of SP Office
Locality	Locality of SP Office
Landmark	Landmark for locating address of SP Office
City	City name for SP office address

State	State name for SP office address
Pin code	Pin code of SP office address
Contact Person Name	Contact person name for SP
Contact Person Designation	Contact person's designation for SP
Contact Person Email	Email of the contact person for SP
Contact Person Landline	Landline number of contact person for SP
Contact Person Mobile	Mobile number of contact person for SP
Contact Person Fax	Fax number of contact person for SP
Head Of the Department Name	Name of SP's Head Of the Department
Head Of the Department Designation	Designation of SP's Head Of the Department
Head of Department Email	Email of SP's Head Of the Department
Head of Department Landline	Landline number of SP's Head Of the Department
Head Of the Department Mobile	Mobile Number of SP's Head Of the Department
Head of the Department Fax	Fax Number of SP's Head Of the Department
Digital Certificate	Digital Certificate of SP. SP has to make sure that complete root chain of the public certificate gets uploaded while registration. Certificates without a root chain will not be accepted to e-Pramaan.
Enter the text here	Captcha as displayed

- ii.) Only on successful submission of this form, SP will be registered on e-Pramaan SP portal. SP account will be activated by e-Pramaan administrator on receiving administrative approvals i.e. signing of MOU between C-DAC and SP. SP can send an email to epramaan@cdac.in requesting the activation of SP account once the administrative formalities are completed.

- iii.) After successful activation of SP account, SP will be able to add services to its e-Pramaan account for using the authentication services of e-Pramaan.

Service Provider Registration Form

Basic Information

User Name *

Password * Password must be at least 8 characters long and must be a combination of upper case, lower case, numbers, and non-alphanumeric characters.

Confirm password *

Service Provider Name *

Category Name * Central State PSU Private

Personal Message *

Address Information

House or Flat *

Street *

Locality *

Landmark

City *

State *

PinCode *

Contact Person Information

Name *

Designation *

Email *

Land line * The landline number must be 10 digit numeric including STD code without 0 prefix. E.g.: 2212345678

Mobile

Fax

Head of The Department Information

Name *

Designation *

Email *

Land line * The landline number must be 10 digit numeric including STD code without 0 prefix. E.g.: 2212345678

Mobile

Fax

Upload Digital Certificate No file chosen
Only .cer, .crt file type allowed. File size should be below 10kb.

Enter the text here *

Captcha letters are case sensitive




Figure 1: Snapshot of SP Enlistment Form

3.1.2 SP Login on e-Pramaan SP Portal

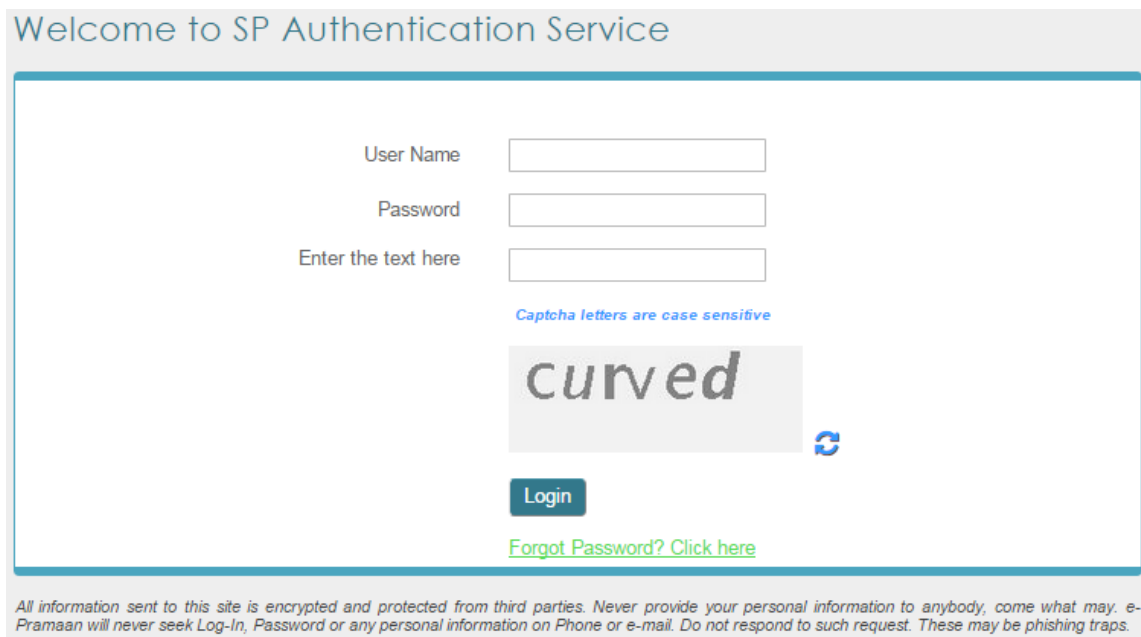
SP logs in to e-Pramaan SP portal using the **Sign In** option provided on the e-Pramaan SP portal.

- i.) SP will login using the chosen username, password and captcha. On successful data validation and credential verification, SP will be logged into respective e-Pramaan account.

The fields appearing on SP Login Form and their description have been enlisted in the following table.

Table 2: SP Login Fields and Description

Field Name	Description
User Name	Unique user name chosen by SP during registration for logging in to e-Pramaan SP portal
Password	Password for logging in to e-Pramaan SP portal
Enter the text here	Captcha as displayed




Welcome to SP Authentication Service

User Name

Password

Enter the text here

Captcha letters are case sensitive

curved 

Login

[Forgot Password? Click here](#)

All information sent to this site is encrypted and protected from third parties. Never provide your personal information to anybody, come what may. e-Pramaan will never seek Log-In, Password or any personal information on Phone or e-mail. Do not respond to such request. These may be phishing traps.

Figure 2: Snapshot of SP Login Form

3.1.3 SP Logout on e-Pramaan SP Portal

SP can log out of e-Pramaan SP portal using **Sign Out** option provided on e-Pramaan SP portal.

3.1.4 SP Forgot Password

SP can reset forgotten password by using the **Forgot Password** link on the login page by following the below process.

- i.) SP user will click on **Forgot Password** link. This will display the Forgot Password form as shown in Figure 3.
- ii.) SP user will enter the username for which to reset the password and click on **Submit** button. System will send password reset link on SP's email id.
- iii.) When the password reset link is clicked by SP user, Reset Password form is displayed as illustrated in Figure 4. SP user needs to enter values for new password and confirm password after which the new password is set.

The fields appearing on SP Forgot Password and Reset Password Forms and their description have been enlisted in the following table.

Table 3: SP Forgot Password and Reset Password Fields and Description

Field Name	Description
User Name	Username of SP for which password is required to be reset.
New Password	Password as chosen by SP during registration for logging in to e-Pramaan SP portal.
Confirm Password	Same as the new password chosen for reset.
Enter the text here	Captcha as displayed

Figure 3: Snapshot of SP Forgot Password Form



The image shows a web form for resetting a password. It consists of two text input fields: the first is labeled 'New Password' and the second is labeled 'Confirm password'. Below these fields is a blue 'Submit' button.

Figure 4: Snapshot of SP Reset Password Form

3.2 SP Profile Management

This section details out the activities involved in management of SP profile on e-Pramaan SP portal. These activities include resetting password, viewing and editing SP profile as well as adding and viewing SP services.

3.2.1 SP Reset Password

The following steps will be followed for resetting password.

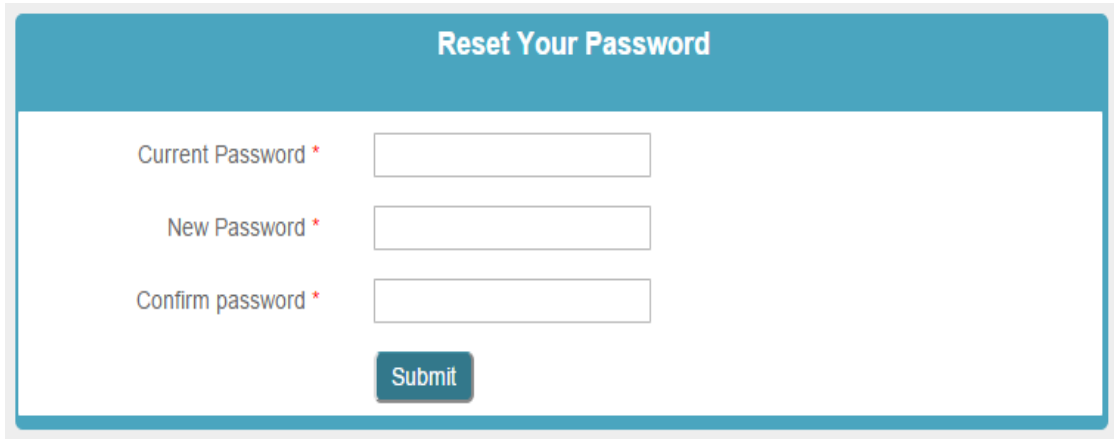
- i.) SP can reset password using the **Reset Password** link after logging into respective e-Pramaan account on e-Pramaan SP portal.

The fields appearing on SP Reset Password Form and their description have been enlisted in the following table.

Table 4: SP Reset Password Fields and Description

Field Name	Description
Current Password	Current password for logging in to e-Pramaan SP portal
New Password	New password chosen by SP for logging in to e-Pramaan SP portal
Confirm password	Same as the new password chosen for reset.

- ii.) On clicking the **Reset Password** link, SP Reset Password form as illustrated in Figure 5 appears. SP is prompted to enter current password, new password and to re-enter new password.
- iii.) On successful verification of the old password, and after syntactical and strength validation of the new password, password is reset.



The image shows a web form titled "Reset Your Password". The form is contained within a teal-bordered box. At the top, there is a teal header with the text "Reset Your Password" in white. Below the header, there are three input fields, each with a label and an asterisk: "Current Password *", "New Password *", and "Confirm password *". Each input field is a simple white rectangle with a thin border. Below the input fields, there is a teal button with the word "Submit" in white text.

Figure 5: Snapshot of SP Reset Password

3.2.2 SP View Profile

The following steps will be followed for viewing profile on e-Pramaan SP portal.

- i.) SP can view profile by logging into e-Pramaan account and clicking on **View Profile** link.
- ii.) SP may also view already registered services using the **View Services** link provided on the profile view page.
- iii.) SP may also add services to its account using the **Add Service** link provided on the profile view page.

Registered Service Provider Details	
Basic Information	
User Name	WinUser
Service Provider Name	Windows Deity Service
Category Name	Central
Ministry Name	Ministry of Aviation
Address Information	
House or Flat	CDAC
Street	Juhu
Locality	Juhu Supreme
Landmark	Gulmohar 9
City	Mumbai
State	MAHARASHTRA
PinCode	400049
Contact Person Information	
Name	Mahesh
Designation	IK
Email	abcde@gmail.com
Land line	1234123412
Head of The Department Information	
Name	Vjay
Designation	LEAD
Email	xyz@gmail.com
Land line	1231231231
<input type="button" value="Add Service"/> <input type="button" value="View Services"/>	

Figure 6: Snapshot of SP View Profile

3.2.3 SP Edit Profile

- i.) SP can update its profile by logging into e-Pramaan SP portal and clicking on **Edit Profile** link. SP Edit Profile form as illustrated in Figure 7 is displayed. SP can update all fields except username and password. Password, however, can be changed or reset using the reset password option. Table 5 lists the fields that can be updated.

Table 5: SP Edit Profile Fields and Description

Field Name	Description
Service Provider Name	Name of the Service Provider
Category Name	Category to which the SP belongs.
Ministry Name	Name of the ministry under which SP is categorised.

Personal Message	Text entered by SP for website verification
House Or Flat	House or flat number of SP office
Street	Street address of SP office
Locality	Locality of SP office
Landmark	Landmark for locating address of SP office
City	City name for SP office address
State	State name for SP office address
Pin code	Pin code of SP office address
Contact Person Name	Contact person's name for SP
Contact Person Designation	Contact person's designation for SP
Contact Person Email	Email of contact person email for SP
Contact Person Landline	Landline number of contact person for SP
Contact Person Mobile	Mobile number of contact person for SP
Contact Person Fax	Fax number of contact person for SP
Head Of the Department Name	Name of SP's Head Of the Department
Head Of the Department Designation	Designation of SP's Head Of the Department
Head of Department Email	Email of SP's Head Of the Department
Head of Department Landline	Landline number of SP's Head Of the Department
Head Of the Department Mobile	Mobile Number of SP's Head Of the Department
Head of Department Fax	Fax Number of SP's Head Of the Department
Digital Certificate	Digital Certificate of SP/service
Enter the text here	Captcha as displayed

- ii.) SP can update multiple fields by changing their values and clicking on **Update**. This will update all fields simultaneously.

Edit Your Profile

Basic Information

User Name: WinUser

Service Provider Name * : Windows Deity Service

Category Name * : Central State PSU Private

Ministry Name * :

Personal Message * : Personal message must be at least 3 to 250 character long and c

Address Information

House or Flat * :

Street * :

Locality * :

Landmark :

City * :

State * :

PinCode * :

Contact Person Information

Name * :

Designation * :

Email * :

Land line * : The landline number must be 10 digit numeric including STD code without 0 prefix. E.g. : 2212345678

Mobile :

Fax :

Head of The Department Information

Name * :

Designation * :

Email * :

Land line * : The landline number must be 10 digit numeric including STD code without 0 prefix. E.g. : 2212345678

Mobile :

Fax :

Digital Certificate Information

Upload Digital Certificate : No file chosen

Only .cer,.crt file type allowed.
File size should be below 10kb.

Enter the text here * :

Captcha letters are case sensitive

v aluer

Figure 7: Snapshot of SP Edit Profile

3.2.4 Add Service

After registration and activation of account at e-Pramaan, SP will be able to add services to be integrated with e-Pramaan. Services can be added by SPs by following the below process.

- i.) SP can add services by clicking on **Manage Profile** and selecting **Add Service** link.
- ii.) SP fills up the form for Add Service with the necessary details required for the service. The fields appearing on SP Add Services Form and their description have been enlisted in the Table 6.
- iii.) SP service will be integrated with e-Pramaan and it will now be available for access through e-Pramaan.

Table 6: SP Add Service Fields and Description

Field Name	Description
Name	Name of the SP service to be added
Description	Description of SP service to be added
Service URL	Service URL of SP service to be added
Logout Success URL	Logout success URL of SP service to be added
SSO Success URL	Single Sign On success URL of SP service to be added
SLO URL	SLO URL of SP service to be added
Logout Failure URL	Logout Failure URL of SP service to be added
SSO Failure URL	SSO Failure URL of SP service to be added
User map options	Options for mapping (correlation) service using either Aadhaar number or through Service ID seeding. For details on user mapping, refer section 4.3.
Authentication Type	Options for choosing type of authentication required by SP service. Authentication Types include: <ol style="list-style-type: none"> i. Password ii. OTP <ul style="list-style-type: none"> - Mobile App based OTP - Email-based OTP - SMS-based OTP
Contact Person	Contact person's name for SP Service

Contact Person Designation	Contact person's designation for Service
Email	Email of the contact person for Service
Contact Person Landline	Landline number of the contact person for Service
Contact Person Mobile	Mobile number of contact person for Service
Contact Person Fax	Fax number of contact person for the Service
Digital Certificate	Digital Certificate of the Service. Service has an option to use the already uploaded digital certificate i.e. a certificate uploaded during registration or if SP wants to use a different certificate for a particular service then SP can upload a digital certificate.
Enter the text here	Captcha as displayed

Add Services Form

Service Information

Name *

Description
Description about the Service.

Service URL *
Application context URL of service.

Logout Success URL *
SAML logout success response consumer URL.

SSO Success URL *
SAML SSO success response consumer URL.

SLO URL *
SAML SLO request consumer URL.

Logout Failure URL *
SAML logout failure response consumer URL.

SSO Failure URL *
SAML SSO failure response consumer URL.

User map options * Aadhaar Number based mapping
 Service User-ID Seeding at e-Pramaan

Authentication Type

PASSWORD * Password

OTP Email
 SMS
 Mobile app

Contact Person Information

Contact person *

Designation *

Email *

Land line *
The landline number must be 10 digit numeric including STD code without 0 prefix. E.g.: 2212345678

Mobile

Fax

Digital Certificate Information

Upload Digital Certificate No file chosen
Only .cer, .crt file type allowed.
File size should be below 10kb.

Enter the text here *
Captcha letters are case sensitive




Figure 8: Snapshot of SP Add Service Form

3.2.5 View Services

- i.) SP can view service details by clicking on **Manage Profile** and selecting **View Services**.
- ii.) All services registered so far will be enlisted.
- iii.) SP may choose to view any service by clicking on the service name.

Registered Services			
Service Name	Service Url	User map option	
DeityService	http://10.210.9.134/WinConnector/WinConnector	Service User-ID Seeding at e-Pramaan	Edit Service
WinServiceMahesh	http://10.210.9.134/pages/login.aspx	Aadhaar Number based mapping	Edit Service
aaa	ccc.com	Aadhaar Number based mapping	Edit Service
New Service	http://10.210.9.134/Webpages/ResponseConsumer.aspx	Aadhaar Number based mapping	Edit Service

Figure 9: Snapshot of SP View Services

3.3 Correlation Mechanism between SP and e-Pramaan

Correlating means mapping the user of an SP service to her (his) e-Pramaan identity. It is essential in order to grant access to SP services to a verified e-Pramaan user. This can be achieved in two ways:

- i.) Using verified Aadhaar number.
- ii.) Using the SP User-ID mapped to the e-Pramaan user.

The choice of the approaches listed above depends on the correlation mechanism chosen by the SP while registering its service on e-Pramaan. If the SP chooses to map the user using:

- i.) *Aadhaar Number* - In this scenario, the user's Aadhaar number should already exist on the SP service. When the user attempts to access SP's service for the first time, e-Pramaan will send a SAML token containing the user's Aadhaar Number and demographic information. If the Aadhaar Number exists in their system, SP grants access to its service to the e-Pramaan user.
- ii.) *SP Service User-ID* - In this scenario, e-Pramaan will send one-time verification request to the SP service along with user's e-Pramaan ID, demographic information, transaction id and source value set to "epramaan". SP service will prompt the user to enter her SP service User-ID and password. Upon successful verification, her SP

service User-ID and e-Pramaan ID will be communicated to e-Pramaan through enrolment web service (<https://up.epramaan.in/rest/epramaan/enrol/response>). e-Pramaan then stores these details for the user. Next time, when the user attempts to use the SP service, e-Pramaan sends a token containing e-Pramaan ID and SP service User-ID to the SP service.

Alternatively, for a new user at SP service, the SP service may populate their registration form with demographic information provided by e-Pramaan. In such a case, the user will have to re-enroll for SP service at e-Pramaan.