



AADHAAR Authentication Services Delivery Platform Department Integration Staging API Developer Guide

Version 1.0

Revision History

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1. Overview

DITEC is the UIDAI registered AUA/KUA entity which allows to provide the AADHAAR based authentication services to the registered Department to perform AADHAAR based authentication services provided by UIDAI. As part of this DITEC has developed AADHAAR based Authentication Service Framework (DASF) which allows the on- boarded Department to perform AADHAAR based authentication as part of the service delivery to the AADHAAR holders.

This document helps the registered Department to understand the DITEC provided Authentication APIs and how they can be integrated with their platforms.

Pre-Requisites

1. The entities should register with the UIDAI as an Department
2. The Department should follow the UIDAI specified below guidelines as part of availing AADHAAR provided authentication services based on the Department checklist submitted to UIDAI
 - a) The Department used applications should follow the UIDAI guidelines
 - b) All the Department should strictly follow the data sharing guidelines specified by UIDAI
 - c) The Department client application should be Audited by the STQC/CERT-IN agencies
 - d) The PID and Request Data encryption can be done at registered biometric devices as per the Registered Device APIs specifications.

Following are the steps followed by Department to integrate and avail the DITEC provided authentication services

On boarding and Go-Live Steps

1. Collect the Requirements from the Registered Department Entity
2. Finalize the authentication modes, integration and approach
3. Freeze the network connectivity between DITEC Centre and Department location and whitelisting IPs and Ports.
4. Customize the solution
5. Share the Service API URLs and necessary credentials for integration and testing in pre-production environment
6. Application Integration support
7. Conduct end to end test run
8. Rollout and Production migration activities
9. Production IPs, keys integration and configuration
10. Go-Live
11. Run operations

URLs and the access credentials can be provided separately.

2. Services

DITEC Authentication Service Framework (DASF) offers two types of authentication services to the registered sub-AUA and KUA agencies to perform the demographic verification and biometric authentication

AUA Services

Verification Services can be used to verify the Aadhaar holder's demographic / biometric details against UIDAI data at CIDR and provide the Yes/No as response

1. Basic Demographic data - Name Matching
2. Full Demographic data - Demographic data Matching i.e POI (Proof of Identity details) and POA (Proof of Address details) Name, DOB, Gender and Address etc
3. OTP Generation
4. Fingerprint
5. IRIS

eKYC Services

eKYC Services can be used to fetch the electronically available KYC (Know Your Customer) details along with photograph which is available at UIDAI CIDR server. This data can be used as part of Service Delivery to the Aadhaar holders by taking the Aadhaar holder consent. The Aadhaar holders' consent can be given for the following scenarios

1. OTP Validation
2. Fingerprint
3. IRIS

Language codes

The following **language codes** are used in APIs to identify the client-side programming language or platform from which the request originates. This enables the API to handle requests appropriately based on platform-specific needs such as encryption, formatting, or compatibility.

Language	Code	Description
Java	L1	Used when the API is accessed from a Java-based application
.NET	L2	Used when the API is accessed from a .NET-based application
PHP	L3	Used when the API is accessed from a PHP-based application

Staging API URLs and Keys

1. API URL:

<https://stagingaua.assam.gov.in/ekycditecservices/api/v1/{languagecode}/{methodname}>

2. Authentication URL :

<https://stagingaua.assam.gov.in/ekycditecservices/api/v1/auth/authenticate>

3. License key:
XXXXXXXXXXXXXXXXXX (for this please contact DITEC)
4. Agency Code:
XXXXXXXXXXXXXXXXXX (for this please contact DITEC)
5. Password:
XXXXXXXXXXXXXXXXXX (for this please contact DITEC)
6. Department PIN:
XXXX (for this contact DITEC) Example: DITC

3. API Details

This document talks about the Integration API Call details which would help the Department to avail the DITEC provided AADHAAR based authentication services

Authentication:

To get JWT token you must authenticate the agency code with password of below process:

Authenticate URL :

<https://stagingaua.assam.gov.in/ekycditecservices/api/v1/auth/authenticate>

And pass the below json as request body

Request :

```
{
  "username": "xxxxxxxxxxxxxx",
  "password": "xxxxxx"
}
```

Reponse:

```
{
  "token": "XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX"
}
```

Pass this token value as bearer token in authentication header For every API Call is must.

3.1 Demo Graphic Data Basic Authentication:

Url: <https://stagingaua.assam.gov.in/ekycditecservices/api/v1/{languagecode}/vault/demo-basic>

Encrypt Parameters:

Encrypt Parameters	Type	Options	Description	Request Value
uid	String	M	Aadhaar number of your customer	57*****
name	string	M	Name of validation of customer	Ven*****
transactionId	String	M	Must be 16 digits character and starts with four digit subaua pin (DITC)	DITCXXXXXXXXXXXXXX

Options: M(Mandatory), O (Optional)

Request Parameters:

Parameters	Type	Options	Description	Request Value
encData	String	M	As per Annexure 1 using above encryption parameters pass encryption value here	xxxxxxxxxxx
transactionId	String	M	Give the Transaction id which is given in encrypted data	xxxxxxxxxxx
agencyCode	String	M	Ditec given code	xxxxxxxxxxx

Response Parameters:

Field Name	Type	Description	Response Value
status	String	Indicates the status of the transaction 0 means success 1 means failure	“000”
errorCode	String	Represents an error code	TAE0000
errorDescription	String	Describes the nature of the error or the result of the transaction	Success
transactionID	String	Transaction id	XXXXXXXXXX
encResponseData	String	Encrypted e-KYC data	Encrypt data

3.2 Get Vault Data of Demo basic:

Url: <https://stagingaua.assam.gov.in/ekycditecservices/api/v1/{languagecode}/vault/get-demo-basic>

Encrypt Parameters	Type	Options	Description	Request Value
uid	String	M	Aadhaar number of your customer	57*****
name	string	M	Name of validation of customer	Ven*****
transactionId	String	M	Must be 16 digits character and starts with four digit subaua pin (DITC)	DITCXXXXXXXXXXXXXX

Options: M(Mandatory), O (Optional)

Request Parameters:

Parameters	Type	Options	Description	Request Value
encData	String	M	As per Annexure 1 using above encryption parameters pass encryption value here	XXXXXXXXXX
transactionId	String	M	Give the Transaction id which is given in encrypted data	XXXXXXXXXX
agencyCode	String	M	Ditec given code	XXXXXXXXXX

Response Parameters:

Field Name	Type	Description	Response Value
status	String	Indicates the status of the transaction 0 means success 1 means failure	“000”
errorCode	String	Represents an error code	TAE0000
errorDescription	String	Describes the nature of the error or the result of the transaction	Success
transactionID	String	Transaction id	XXXXXXXXXX
encResponseData	String	Encrypted e-KYC data	Encrypt data

3.3 Otp Generate :

Url: <https://stagingaua.assam.gov.in/ekycditecservices/api/v1/{languagecode}/otp-generation>

Encrypt Parameters:

Encrypt Parameters	Type	Options	Description	Request Value
Uid	String	M	Aadhaar number of your customer	57*****
Channel	string	M	“00” – send OTP via both SMS and Email (this is the default) “01” – send OTP via SMS only “02” – send OTP via Email only	01
transactionId	String	M	Must be 16 digits character and starts with four digit subaua pin (DITC)	DITCXXXXXXXXXXXXXX X

Options: M(Mandatory), O (Optional)

Request Parameters:

Parameters	Type	Options	Description	Request Value
encData	String	M	As per Annexure 1 using above encryption parameters pass encryption value here	Encryption
transactionId	String	M	Give the Transaction id which is given in encrypted data	XXXXXXXXXXXXXX
agencyCode	String	M	Ditec given code	12345

Response Parameters:

Field Name	Type	Description	Response Value
Status	string	Indicates the status of the transaction 0 means success 1 means failure	“0”,
errorCode	string	Represents an error code	TAE0000
errorDescription	string	Describes the nature of the error or the result of the transaction	Success
transactionId	string	Transaction id	XXXXXXXXXXXXXX
otptrxId	string	related to an OTP (One-Time Password)	012363
Mobile	string	Represents a mobile number.	990*****
Email	string	Represents an email address	xxxxxxx@xxx.com

3.4 Authentication OTP:

URL: <https://stagingaua.assam.gov.in/ekycditecservices/api/v1/{languagecode}/authentication-otp>

Encrypt Parameters:

Parameter Name	Type	Options	Description	Request Value
Uid	String	M	Aadhaar Number/Virtual ID/UID	XXXXXXXX0123
dynamicPin	String	M	Enter the dynamicpin	012356
otpGenTxn	String	M	Otpgeneration Response “ otptrxid ”	*****
transactionId	String	M	Must be 16 digits character and starts with four digit subaua pin (DITC)	DITCXXXXXXXXXXXXXX

Request Parameters:

Parameter Name	Type	Options	Description	Request Value
encData	String	M	As per Annexure 1 using above encryption parameters pass encryption value here	Encryption Value
transactionId	String	M	Give the Transaction id which is given in encrypted data	XXXXXXXXXXXXXX
agencyCode	String	M	Ditec given code	SUBAUA123
ekycStatus	String	M	If eKYC Data as a response set value “y” only authentication set value as “n”	“y” or “n”
citizenConsent	String	M	This value must in “y” only.	“y”

Authentication (ekycstatus = “n”) Response Parameters:

Parameter Name	Type	Description	Response Value
status	String	Indicates the status of the transaction 0 means success 1 means failure	“0”,
errorCode	String	Represents an error code	TA0001
errorDescription	String	Describes the nature of the error or the result of the transaction	Authentication Approved
transactionId	String	Transaction id	20151512081025
authTxnId	String	Authentication transaction id	Askdf589329893

Authentication (ekycstatus = “Y”) Response Parameters:

Field Name	Type	Description	Response Value
status	String	Indicates the status of the transaction 0 means success 1 means failure	"0"
errorCode	String	Represents an error code	TAE0000
errorDescription	String	Describes the nature of the error or the result of the transaction	Success
transactionID	String	Give the Transaction id which is given in encrypted data	XXXXXXXXXXXXXXXXXX
vaultToken	String	Vault token	*****
vaultPassKey	String	Vault Password Key	*****
encResponseData	String	Encrypted e-KYC data	Encrypt data

That e-KYC sample data json format like below:

```
{
  "uID": "*****",
  "buildingName":
    "*****", "careOf":
    "*****", "district":
    "*****", "dob":
    "*****",
  "gender": "*****",
  "pinCode": "*****",
  "state": "*****",
  "street": "*****",
  "photo": "base64 format of image file",
  "name": "*****",
  "landMark":
    "*****",
  "locality":
    "*****",
  "subDistrict":
    "*****",
  "postOffice":
    "*****",
  "pdf": "*****",
  "village":
    "*****",
  "errorCode": "000",
  "errorMessage":
    "Success",
  "kycTxnId":
    "*****", "tkn":
    "*****",
  "vaultToken":
    "*****",
  " vaultPassKey": "*****"
}
```

You can save vaultToken as UID in your database for further retrieve vault data.

3.5 Get Vault Data:

URL: <https://stagingaua.assam.gov.in/ekycditecservices/api/v1/{languagecode}/get-vault-data>

Encrypt Parameters:

Parameter Name	Type	Options	Description	Request Value
vaultToken	String	M	Vault token	*****
vaultPassKey	String	M	Vault Password Key	*****
transactionId	String	M	Must be 16 digits character and starts with four digit subaua pin (DITC)	DITCXXXXXXXXXX XXXXXX

Options: M(Mandatory), O (Optional)

Request Parameters:

Parameters	Type	Options	Description	Request Value
encData	String	M	As per Annexure 1 using above encryption parameters pass encryption value here	Encryption
transactionId	String	M	Give the Transaction id which is given in encrypted data	20151512081025
agencyCode	String	M	Ditec given code	12345

Response Parameters:

Field Name	Type	Description	Response Value
status	String	Indicates the status of the transaction 0 means success 1 means failure	"0"
errorCode	String	Represents an error code	TAE0000
errorDescription	String	Describes the nature of the error or the result of the transaction	Success
transactionID	String	Transaction id	20151512081025
encResponseData	String	Encrypted e-KYC data	Encrypt data

That e-KYC sample data json format like below:

```
{
  "uID": "*****",
  "buildingName":
  "*****", "careOf":
  "*****", "district":
```

```

"*****", "dob":
"*****",
"gender": "*****",
"pinCode": "*****",
"state": "*****",

"street": "*****",
"photo": "base64 format of image file",
"name": "*****",
"landMark":
"*****",
"locality":
"*****",
"subDistrict":
"*****",
"postOffice":
"*****",
"pdf": "*****",
"village":
"*****",
"errorCode": "000",
"errorMessage":
"Success",
"kycTxnId":
"*****", "tkn":
"*****",
}

```

You can save vault Token as UID in your database for further retrieve vault data.

3.6 Update Vault Data:

URL: <https://stagingaua.assam.gov.in/ekycditecservices/api/v1/{languagecode}/update-vault-data>

Encrypt Parameters:

Parameter Name	Type	Options	Description	Request Value
Uid	String	M	Aadhaar Number/Virtual ID/UID	XXXXXXXX0123
dynamicPin	String	M	Enter the dynamicpin	012356
otpGenTxn	String	M	Otpgeneration Response “ otptrxId ”	*****
transactionId	String	M	Must be 16 digits character and starts with four digit subaua pin (DITC)	DITCXXXXXXXXXXXXXX

Request Parameters:

Parameter Name	Type	Options	Description	Request Value
encData	String	M	As per Annexure 1 using above encryption	Encryption Value

			parameters pass encryption value here	
transactionId	String	M	Give the Transaction id which is given in encrypted data	2024121101155
agencyCode	String	M	Ditec given code	SUBAUA123
citizenConsent	String	M	This value must in “y” only.	“y”

Response Parameters:

Field Name	Type	Description	Response Value
status	String	Indicates the status of the transaction 0 means success 1 means failure	“0”
errorCode	String	Represents an error code	TAE0000
errorDescription	String	Describes the nature of the error or the result of the transaction	Success
transactionID	String	Transaction id	20151512081025
vaultToken	String	Vault token	*****
vaultPassKey	String	Updated Vault Password Key	*****
encResponseData	String	Updated Encrypted e-KYC data	Encrypt data

That e-KYC sample data json format like below:

```
{
  "uID": "*****",
  "buildingName":
    "*****", "careOf":
    "*****", "district":
    "*****", "dob":
    "*****",
  "gender": "*****",
  "pinCode": "*****",
  "state": "*****",
  "street": "*****",
  "photo": "base64 format of image file",
  "name": "*****",
  "landMark":
    "*****",
  "locality":
    "*****",
  "subDistrict":
    "*****",
  "postOffice":
    "*****",
  "pdf": "*****",
  "village":
    "*****",
  "errorCode": "000",
  "errorMessage":
    "Success",
  "kycTxnId":
    "*****", "tkn":
    "*****",
}
```

You can save vaultToken as UID in your database for further retrieve vault data.

4. Annexure 1: Encryption And Decryption Methods

4.1 Java

The following methods are used for encryption and decryption in the java implementation.

1.1 Encryption

```
public static String encBasicValid(String uid, String name, String licenseKey, String agencyCode) {
    String result = "";
    String jsonInString = "{\"uid\":\"" + uid + "\", \"name\":\"" + name + "\"}";
    String plainText = jsonInString;

    logger.info(plainText);

    String password = licenseKey;

    String salt = agencyCode;
    IvParameterSpec ivParameterSpec = AESUtil.generateIv();
    SecretKey key;
    try {

        key = AESUtil.getKeyFromPassword(password, salt);
        result = AESUtil.encryptPasswordBased(plainText, key, ivParameterSpec);
    } catch (Exception e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    }
    return result;
}
```

1.2 Decryption

```
public static String decryptEncString(String encData, String licencekey, String subauaid) {

    String decryptedText = "";
    String password = licencekey;
    String salt = subauaid;

    try {

        SecretKey key = AESUtil.getKeyFromPassword(password, salt);
```

```

        IvParameterSpec ivParameterSpec = AESUtil.generateIv();
        decryptedText = AESUtil.decryptPasswordBased(encData, key, ivParameterSpec);
    } catch (Exception e) {
        e.printStackTrace();
    }
    return decryptedText;
}

```

4.2 .Net

The following methods are used for encryption and decryption in the .net implementation.

2.1 Encryption

```

public static string Encrypt(string plainText, string password)
{
    byte[] salt = Encoding.UTF8.GetBytes("TADITEC@2025"); // Use a fixed or random salt
    byte[] key = GenerateKey(password, salt);
    byte[] iv = GenerateIV();
    using (Aes aesAlg = Aes.Create())
    {
        aesAlg.Key = key;
        aesAlg.IV = iv;
        aesAlg.Mode = CipherMode.CBC;
        swEncrypt.Write(plainText);
    }
    return Convert.ToBase64String(msEncrypt.ToArray());
}
}
}

```

2.2 Decryption

```

public static string Decrypt(string cipherTextBase64, string password)
{
    byte[] fullCipher = Convert.FromBase64String(cipherTextBase64);

    byte[] salt = Encoding.UTF8.GetBytes("TADITEC@2025"); // Same fixed salt as used during encryption

    byte[] key = GenerateKey(password, salt);

    byte[] iv = new byte[16];

```



```

Array.Copy(fullCipher, 0, iv, 0, iv.Length); // Extract IV from the beginning

byte[] cipherText = new byte[fullCipher.Length - iv.Length];

Array.Copy(fullCipher, iv.Length, cipherText, 0, cipherText.Length); // Extract the actual cipher

using (Aes aesAlg = Aes.Create())
{
    aesAlg.Key = key;
    aesAlg.IV = iv;
    aesAlg.Mode = CipherMode.CBC;
    aesAlg.Padding = PaddingMode.PKCS7;

    using (var decryptor = aesAlg.CreateDecryptor(aesAlg.Key, aesAlg.IV))
    using (var msDecrypt = new MemoryStream(cipherText))
    using (var csDecrypt = new CryptoStream(msDecrypt, decryptor, CryptoStreamMode.Read))
    using (var srDecrypt = new StreamReader(csDecrypt))
    {
        return srDecrypt.ReadToEnd();
    }
}
}

```

4.3 PHP

The following methods are used for encryption and decryption in the PHP implementation.

3.1 Encryption

Use below php syntax for encryption

```

$licenseKey = 'xxxxxxxx';(given by ditec) $text = ' {"uid": "999999999999","channel":"01" }' ;
$encrypted = AesCipher::encrypt($licenseKey, $text); Get encrypted data by $encrypted->getData()

```

3.2 Decryption

Use below php syntax for decryption

```

$licenseKey = 'xxxxxxxx';(given by ditec) $decrypted = AesCipher::decrypt($secretKey, $encryptedtext)
Get decrypted data by $decrypted->getData()

```

5. Error Codes

In addition to the above-mentioned Error codes AADHAAR Authentication API provide following error codes as per the UIDAI Specifications.

Error Codes - handled by DITEC

Following are the Error codes along with the description which are handled by for the DITEC Provided auth Services To update it with the error codes handled at our end

Code	Description
TAV4000	Missing or Invalid information
TAV4001	Citizen Concern Must accepted.
TAIS2000	An error has occurred, please try again later
TAV2001	Vault Data Not exist
TAI1500	No data found
TAE2002	Resource cannot be updated.
TAI2003	Content Request found no results
TAI1000	not valid
TAI1001	Agency ID not found!!
TAI1002	Transaction Id already Exist!!
TAV1003	Service Not available Please contact support
TAV1004	Your account Deactivate Please contact Admin
TAV1005	API key Not Found
TAV1006	These API Not available
TAV001	Account Inactive
TAV002	User License Key Inactive
TAV003	Service Inactive.
TAV004	Service License Key Expired.
TAV005	App Settings Error.
TAV006	Something went wrong. Please try again later.
TAV007	Invalid Auth Xml.
TAV008	Input Auth Xml Null.
TAV009	Prepaid Credits Expired.
TAV010	Insufficient Balance cannot perform transaction.
TAV011	Aua License Key Expired.
TAV012	License key not mapped for your account.
TAV013	Invalid Service Code.
TAV014	Auth XSD Validation Failed.
TAV015	Service Permissions Required
TAV016	Invalid License Key.
TAV017	User License Key Blocked.
TAV018	Service License Key Expired
TAV019	Account Blocked
TAV020	Invalid Request
TAV021	Service License Key Expired.
TAV022	Invalid Service License Key
TAV023	Invalid eKyc Xml.
TAV024	Input eKyc Xml Null.
TAV025	Insufficient Balance cannot perform transaction.

TAV026	KycRes tag missing in UIDAI response.
TAV027	Kua License Key Expired.
TAV028	License key not mapped for your account.
TAV029	eKyc XSD Validation Failed.
TAV030	Service Permissions Required
TAV031	Service License Key Expired.
TAV032	Invalid Service License Key.
TAV033	Invalid Otp Xml
TAV034	Input Otp Xml Null.
TAV035	Insufficient Balance cannot perform transaction.
TAV036	Service Permissions Required.
TAV037	Decryption Error. check your api keys
TAV9001	JWT Token Expire.

Error Codes - Handled by UIDAI

Error Code	Description	Provision Required in the Application	Suggested Message to the User	Suggested instructions to the user	Probable Reasons
100	"Pi" (basic) attributes of demographic data did not match	User should be allowed to re- enter his/her personal information attributes like name, lname, gender, dob, dobt, age, phone, email whichever is used for authentication in application	Please re-enter your <name, lname, gender, dob, dobt, age, phone, email>.	Operator should re-enter correct details personal information as per the Aadhaar letter. Ensure correct Aadhaar Information is entered.	One or more personal information attributes not matching.
200	"Pa" (address) attributes of demographic data did not match	User should be allowed to re- enter his/her personal address attribute like co (care of), house, street, lm (land mark), loc (locality), vtc, subdist, dist, state, pc (postal pin code), po (post office) whichever is used for authentication in application	Please re-enter your <co (care of), house, street, lm (land mark), loc (locality), vtc, subdist, dist, state, pc (postal pin code), po (post office)>.	Operator should re-enter correct details personal information as per the Aadhaar letter. Ensure correct Aadhaar Information is entered.	One or more personal address attributes not matching.
300	Biometric data did not match	User should be allowed to give his finger prints "n" number of times. N should be configurable and should be set as per application requirement. (E.g. For Banking Applications it can be set at a maximum of 5 times)	Please give your finger prints again.	Ensure correct Aadhaar number is entered and try authenticating again with another finger; ensure finger is placed correctly; ensure fingers are clean; ensure finger is not very dry; ensure fingerprint scanner is clean. After repeated failure, if the resident is genuine, exception handling provision would need to be	Finger print is not given properly, scanner has some dust accumulated, fingers were wet, position of finger not appropriate, scanned finger NFIQ not good

				<p>followed to provide service.</p> <p>Please contact UIDAI helpdesk to inform about the issue and to understand the steps for the updation of the biometric information in CIDR.</p>	
310	Duplicate fingers used	Application should prompt user to try again with distinct fingers.	Please try again with distinct fingers.	Operator should insure that the resident is providing distinct fingers (two different fingers) for "two finger" authentication.	Error occurs when same finger is sent as two or more separate records within same request. For two-finger auth, if resident puts same finger again, then this happens.
311	Duplicate Irises used	Application should prompt user to try again with distinct irises.	Please try again with distinct irises.	Operator should ensure that the resident is providing distinct irises (two different irises) for authentication.	Error occurs when same iris is sent as two or more separate records within same request.
312	FMR and FIR cannot be used in same transaction	Application should ensure that authentication request does not mix FMR and FIR in the same transaction e.g. in case of two finger authentication, data for two distinct fingers should either be sent in FMR format or in FIR format.	Technical Exception <No>	Contact technical helpdesk.	Auth packet cannot mix fingerprint "image" records (FIR) and fingerprint "minutiae" records (FMR). AUA app should choose either one or another. FMR is recommended.
313	Single FIR record contains more than one finger	Application should prompt user to try again by placing single finger.	Please try again by placing Single finger on the authentication device.	Operator should ensure that the resident is providing single finger for authentication.	As per ISO spec, one FIR can contain one or more finger images within itself (like slap, etc). UIDAI currently supports single finger record only. If there is a requirement to send 2 fingers, 2 different biometric records should be sent.
314	Number of FMR/FIR should not exceed 10	Application should ensure that one auth request should not contain more than 10 FMR/FIR records.			Auth Request has more than 10 finger records
315	Number of IIR should not exceed 2	Application should ensure that one auth request should not contain more than 2 IIR records.			Auth Request has more than 2 iris records
400	"OTP" validation failed	Application should have provision for allowing user to provide OTP value again and after some retries (configurable) option to generate OTP again.	Please provide correct OTP value.	If there are repeated failures user is advised to generate new OTP and send the authentication request using the new OTP.	Incorrect OTP value is entered. Input not matching with the value in CIDR.
401	"Tkn" validation failed	Application should derive the value of tkn (currently only mobile number) from			Provided "Tkn" details are not matching with registered values in CIDR.

		network. This element is meant for self-service transactions on mobile (SMS/USSD, etc) where AUA derives the mobile number from the network provider and passes it on as part of API to use it as a factor.			
500	Invalid Skeyencryption	Application should not have hard coded digital certificate information. It should be configurable.	Technical Exception <No> Note: Application can throw Auth API error code number on screen. So that contact centre or application support helpline can understand the reason.	Contact technical helpdesk.	Use of wrong digital certificate for encryption of AES-256 Key (session key).
501	Invalid value for “ci” attribute in “Skey” element	Application should not have hard coded “ci” attribute value. It should be configurable.	Technical Exception <>		Ensure that expiry date of UIDAI certificate used for encryption of Skey is specified as “ci” value.
502	Invalid Pid Encryption	Application should do extensive testing using UIDAI Test Auth Service to ensure compliance with auth API.	Technical Exception <No>		Ensure that correct AES encryption has been used. Ensure that AES key used for encryption of “Pid” XML was encrypted and specified as value for Skey.
503	Invalid HMac encryption	Application should do extensive testing using UIDAI Test Auth Service to ensure compliance with auth API.	Technical Exception <No>		Ensure that correct AES encryption has been used. Ensure that AES key used for encryption of “Hmac” was encrypted and specified as value for Skey. Ensure that same AES key is used for encryption of Pid and Hmac.
504	Session key re-initiation required due to expiry or key out of sync	Application should have a provision to send full session key and initiate a new session in case of such failure.	Technical Exception <No>	Please try again.	When Synchronized Session Key scheme is used, this can happen if either session is expired (currently configured to max 4 hrs) or if the key goes out of sync.
505	Synchronized Skey usage is not allowed	Application should use full skey	Technical Exception <No>	Switch to full skey scheme	This happens when AUA does not have privilege to use SSK scheme

510	Invalid Auth XML format	Application Authentication request should comply to Authentication API latest version and application should validate its structure before sending it to CIDR for authentication.	Technical Exception <No>	Please ensure that the latest recommended API is used for application development. Refer UIDAI website for the latest version of API. If this does not resolve the issue than please contact technical helpdesk.	Non compliance with supported Authentication API version structure in CIDR.
511	Invalid PID XML format	Application Authentication request should comply to PID XML format defined in Authentication API latest version and structural validation should be done before encryption of PID XML.	Technical Exception <No>	Please ensure that the latest recommended API is used for application development. Refer UIDAI website for the latest version of API. If this does not resolve the issue than please contact technical helpdesk.	Non compliance with supported Authentication API version structure in CIDR.
520	Invalid device	Application should ensure that “tid” attribute in Auth XML has value “public”	Technical Exception <No>		Using any other value other than “public” (all lower case, no spaces or special char) will result in this error.
521	Invalid Finger device (fdc in Meta element)	Application should obtain proper code from fingerprint sensor vendor and use it	Technical Exception <No>		FDC codes are assigned as part of certification and application developer should use proper fdc code given by the fingerprint sensor/extractor vendor
522	Invalid Iris device (idc in Meta element)	Application should obtain proper code from iris sensor vendor and use it	Technical Exception <No>		IDC codes are assigned as part of certification and application developer should use proper idc code given by the iris sensor/extractor vendor
530	Invalid authenticator code	Application should pass valid AUA code in authentication request which is registered with UIDAI. Value of this code should be configurable.	Technical Exception <No>		AUA code used in Authentication request is invalid or AUA code used in the Auth URL is not same as the AUA code used in the Auth XML.
540	Invalid Auth XML version	Application should pass supported valid API version in authentication request. Value of this should be configurable.	Technical Exception <No>		API version used in Auth XML (Authentication request) is either not supported or invalid.
541	Invalid PID XML version	Application should pass supported valid API PID XML version in	Technical Exception <No>		Version of the “Pid” element used

		authentication request. Value of this should be configurable.			In the PID XML (Authentication request) is either not supported or invalid.
542	AUA not authorized for ASA.	Application should ensure link is in place between AUA-ASA before sending request to CIDR.		<p>Ensure the authentication request is being sent through the authorized ASA as per the records of UIDAI.</p> <p>or</p> <p>Please contact UIDAI helpdesk to report the issue and to understand further steps for the updation of ASA-AUA linkage.</p>	This error will be returned if AUA and ASA do not have linking in the portal
543	Department not associated with "AUA"	Application should ensure Department is added and associated with correct AUA before sending request to CIDR.		<p>Ensure the authentication request is being sent through the associated AUA as per the records of UIDAI.</p> <p>or</p> <p>Please contact UIDAI helpdesk to report the issue and to understand further steps for the updation of ASA-AUA linkage.</p>	This error will be returned if Department specified in "sa" attribute is not added as "Sub-AUA" in portal
550	Invalid "Uses" element attributes	Application should use valid attributes defined in API for <Uses> tag and validation on Auth request should be done before sending request to CIDR.	Technical Exception <No>		<p>Invalid attributes used in Uses tag.</p> <p>This error is typically reported if "bt" attribute has been specified but bio="n" in Uses element. "bt" attribute is required only if bio="y" in Uses element.</p>
561	Request expired ("Pid->ts" value is older than N hours where N is a configured threshold in authentication server)	AUA application should not store Pid block and in case of application which are using thick client there should be a provision to sync up date with server at start.	<p>1. In case of Device/Client based Application</p> <p>a. Either device date/time is behind current date/time or request is old. Please try again.</p>	Please verify that the device/client date/time is synchronised with Indian Standard Time (IST) and resend the authentication request.	Either Device/Client/Server date/time is behind current one or old stored pid is getting sent.

			2. In case of web based Application a. Technical Exception <No>		
562	Timestamp value is future time (value specified "Pid->ts" is ahead of authentication server time beyond acceptable threshold)	AUA application should not store Pid block and in case of application which are using thick client there should be a provision to sync up date with server at start.	1. In case of Device/Client based Application a. Either device date/time is ahead current date/time or request is old. Please try again. 2. In case of web based Application a. Technical Exception <No>	Please verify that the device/client date/time is synchronised with Indian Standard Time (IST) and resend the authentication request.	Device/Client/server date/time is ahead than current date/time.
563	Duplicate request (this error occurs when exactly same authentication request was re-sent by AUA)	Application should ask user to try again.	Please submit your request again.	User is required to send the authentication request once again.	If same "Auth XML" is sent more than once to server, then, 2 nd and subsequent requests will fail with this error.
564	HMAC Validation failed	Application should create HMAC using SHA-256	Technical Exception <No>		HMAC is not calculated using API defined algorithm
565	License key has expired	Application should have a configurable License key management feature through which one can manage Key without changing application.	Technical Exception <No>		Current License has expired.
566	Invalid license key	Application should have a License key management feature through which one can manage Key without changing application.	Technical Exception <No>		License key used in application is invalid.
567	Invalid input (this error occurs when some unsupported characters were found in Indian language values, "lname" or "lav")	Application should have client/server level checks to stop users to input unsupported characters.	Technical Exception <No>		some unsupported characters were found in Indian language values, "lname" or "lav" in Auth request XML

568	Unsupported Language	Application should have client/server level checks to restrict users to only select language from API supported local Language.	Technical Exception <No>		Value of “lang” attribute is not from the list supported by authapi.
569	Digital signature verification failed (this means that authentication request XML was modified after it was signed)	Application should ensure security of data end to end ie. From client/device to CIDR server by using appropriate communication protocol.	Technical Exception <No>		Authentication request XML was modified after it was signed.
570	Invalid key info in digital signature (this means that certificate used for signing the authentication request is not valid –it is either expired, or does not belong to the AUA or is not created by a well-known Certification Authority)	Application should have an independent module for signing Auth XML and certificate should be stored and manage outside of the application.	Technical Exception <No>		Certificate used for signing the authentication request is not valid –it is either expired, or does not belong to the AUA or is not created by a well-known Certification Authority
571	PIN Requires reset (this error will be returned if resident is using the default PIN which needs to be reset before usage)		Please reset your PIN in UIDAI updation application and use new PIN in this application.	Please change your default PIN through UIDAI updation client and resend your authentication request.	This error will be returned if resident is using the default PIN which needs to be reset before usage.
572	Invalid biometric position (This error is returned if biometric position value - “pos” attribute in “Bio” element - is not applicable for a given biometric type - “type”)	Application should have client level validation to check “type” and corresponding valid “pos” values before creating PID block.	Technical Exception <no>		This error is returned if biometric position value - “pos” attribute in “Bio” element - is not applicable for a given biometric type - “type” attribute in “Bio” element

	attribute in “Bio” element.)				
573	Pi usage not allowed as per license	Application should have a configurable business rule which can restrict the usage of Pi attribute based on AUA license authorization.	Technical Exception <No>		Pi usage not allowed as per license
574	Pa usage not allowed as per license	Application can have a client level check to restrict/allow entry of “pa” attribute as per license of AUA.	Technical Exception <No>		Pa usage not allowed as per license
575	Pfa usage not allowed as per license	Application can have a client level check to restrict/allow entry of “pfa” attribute as per license of AUA.	Technical Exception <No>		Pfa usage not allowed as per license
576	FMR usage not allowed as per license	Application can have a client level check to restrict/allow entry of “FMR” attribute as per license of AUA.	Technical Exception <No>		FMR usage not allowed as per license
577	FIR usage not allowed as per license	Application can have a client level check to restrict/allow entry of “FIR” attribute as per license of AUA.	Technical Exception <No>		FIR usage not allowed as per license
578	IIR usage not allowed as per license	Application can have a client level check to restrict/allow entry of “IIR” attribute as per license of AUA.	Technical Exception <No>		IIR usage not allowed as per license
579	OTP usage not allowed as per license	Application can have a client level check to restrict/allow entry of “OTP” attribute as per license of AUA.	Technical Exception <No>		OTP usage not allowed as per license
580	PIN usage not allowed as per license	Application can have a client level check to restrict/allow entry of “PIN” attribute as per license of AUA.	Technical Exception <No>		PIN usage not allowed as per license
581	Fuzzy matching usage not allowed as per license	Application can have a client level check to restrict/allow entry of “ms” attribute in pi, pa and pfa element as per license of AUA.	Technical Exception <No>		Fuzzy matching usage not allowed as per license
582	Local language usage not allowed as per license	Application can have a client level check to restrict/allow entry of local language attribute in pi, pa and pfa element as per license of AUA.	Technical Exception <No>		Local language usage not allowed as per license
584	Invalid Pin code in Meta element	Pincode should have a valid value (in lov attribute)	Technical Exception <No>		If pincode value is not one of the valid values in UIDAI system, this error occurs

585	Invalid Geo code in Meta element	Geo code value must be a valid lat.long value in decimal format as per spec (in lov attribute)	Technical Exception <No>		If geo code does not have proper format as per spec (decimal representation with precision upto 4 decimal values for lat and long), this error occurs
710	Missing “Pi” data as specified in “Uses”	Application should validate pid block before encrypting data with API specified PID block structure and “Uses” element attributes values to ensure PID block have all the elements and attributes. Client level validation should also be put to check all mandatory and conditional fields of API XML.	Technical Exception <No>		Missing “Pi” data as specified in “Uses”
720	Missing “Pa” data as specified in “Uses”	Same as 710	Technical Exception <No>		Missing “Pa” data as specified in “Uses”
721	Missing “Pfa” data as specified in “Uses”	Same as 710	Technical Exception <No>		Missing “Pfa” data as specified in “Uses”
730	Missing PIN data as specified in “Uses”	Same as 710	Technical Exception <No>		Missing PIN data as specified in “Uses”
740	Missing OTP data as specified in “Uses”	Same as 710	Technical Exception <No>		Missing OTP data as specified in “Uses”
800	Invalid biometric data	AUA to review biometric device being used and whether templates are ISO compliant.	Technical Exception <No>		FMR value is not ISO compliant –bad header or other issue with templates. FIR/IIR value is not compliant, or templates could not be extracted for the given FIR/IIR for matching purposes.
810	Missing biometric data as specified in “Uses”	Same as 710	Technical Exception <No>		Missing biometric data as specified in “Uses”
811	Missing biometric data in CIDR for the given Aadhaar number		Your Biometric data is not available in CIDR.	Ensure correct Aadhaar number is entered and try authenticating again. After repeated failure, if the resident is genuine, exception handling provision	

				would need to be followed to provide service. Please contact UIDAI helpdesk to inform about the issue and to understand the steps for the updation of biometric information in CIDR.	
812	Resident has not done “Best Finger Detection”. Application should initiate BFD application to help resident identify their best fingers. See Aadhaar Best Finger Detection API specification.	Application should make provision to initiate BFD application based on the error code to help resident identify their best fingers.	You have not done best finger detection so kindly proceed with the BFD process for successful authentication.	Refer Aadhaar Best Detection API specifications for details on the BFD process.	Resident has not done “Best Finger Detection”.
820	Missing or empty value for “bt” attribute in “Uses” element	Same as 710	Technical Exception <No>		Missing or empty value for “bt” attribute in “Uses” element
821	Invalid value in the “bt” attribute of “Uses” element	Same as 710	Technical Exception <No>		Invalid value in the “bt” attribute of “Uses” element
901	No authentication data found in the request (this corresponds to a scenario wherein none of the auth data -Demo, Pv, or Bios – is present)	Application should validate that User give atleast one auth factor before encryption of PID block.	Technical Exception <No>		All factors of Auth are optional. Hence, it is possible to attempt an auth without specify any values for any of the factors -Pi, Pa, Pfa, Bio or Pv. If none of these elements have any value that can be used for authentication purposes, then, this error will be reported.
902	Invalid “dob” value in the “Pi” element (this corresponds to a scenarios wherein	Application should have a client level check to check dob date format and age business rules specified (Current Rule is that age should not be less than 0 and greater than 150 years)	Please enter dob in specified date format or enter age in specified range.	Re-enter the date of birth or age and resend a new authentication request.	“dob” attribute is not of the format “YYYY” or “YYYY-MM-DD”, or the age of resident is not in valid range.

	“dob” attribute is not of the format “YYYY” or “YYYY-MM-DD”, or the age of resident is not in valid range)				
910	Invalid “mv” value in the “Pi” element	Same as 710	Technical Exception <No>		
911	Invalid “mv” value in the “Pfa” element	Same as 710	Technical Exception <No>		
912	Invalid “ms” value	Same as 710	Technical Exception <No>		
913	Both “Pa” and “Pfa” are present in the authentication request (Pa and Pfa are mutually exclusive)	Same as 710			Attempt to use Pa and Pfa both in the same request can result in this error.
930-939	Technical error that are internal to authentication server	AUA/ASA should call UIDAI tech support.	Technical Exception <No>		UIDAI server side issues. UIDAI tech support to review the scenario and take appropriate action.
940	Unauthorized ASA channel	AUA should consult ASA.	Technical Exception <No>		
941	Unspecified ASA channel	AUA should consult ASA.	Technical Exception <No>		
980	Unsupported option	AUA to review the auth client to check whether any dev feature is being used in prod	Technical Exception <No>		Currently this error is not reported. Can be used in future.
997	Invalid Aadhaar Status	AUA application should have mechanism to handle this scenario as Aadhaar number is valid but its status is not active.	Your Aadhaar number status is not active. Kindly contact UIDAI Helpline.		Aadhaar number status is either lost, deceased etc. and currently not active.
998	Invalid Aadhaar Number	AUA application should have a client level validation for Aadhaar number validity ie. should be 12 digits and conform to Verhoeff algorithm.	Ensure you have entered correct Aadhaar number. Please retry with correct Aadhaar number after sometime.	Ensure you have entered correct Aadhaar number. Please retry with correct Aadhaar number after sometime.	If client level validations are done then Aadhaar number does not exist in CIDR.

999	Unknown error		Technical Exception <No>	Please contact authsupport team of UIDAI	
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5.1.1 BFD Service Error Codes

Error Code	Description
B-300	Biometric data did not match
B-314	Number of fingers should not exceed 10
B-500	Invalid encryption of Skey
B-501	Invalid certificate identifier in “ci” attribute of “Skey”
B-502	Invalid encryption of Rbd
B-503	Invalid encryption of Hmac
B-504	Session key re-initiation required due to expiry or key out of sync
B-510	Invalid “Bfd” XML format
B-511	Invalid “Rbd” XML format
B-520	Invalid device
B-530	Invalid AUA code
B-540	Invalid BFD XML version
B-541	Invalid RBD XML version
B-542	AUA not authorized for ASA. This error will be returned if AUA and ASA do not have linking in the portal
B-543	Sub-AUA not associated with “AUA”. This error will be returned if Sub-AUA specified in “sa” attribute is not added as “Sub-AUA” in portal
B-561	Request expired (“Rbd->ts” value is older than N hours where N is a configured threshold in BFD server)
B-562	Timestamp value is future time (value specified “Rbd->ts” is ahead of BFD server time beyond acceptable threshold)
B-563	Duplicate request (this error occurs when exactly same BFD request was re-sent by AUA)
B-564	HMAC Validation failed
B-566	ASA license key has expired or is invalid
B-570	Invalid key info in digital signature (this means that certificate used for signing the BFD request is not valid it is either expired, or does not belong to the AUA or is not created by a CA)
B-583	Best finger detection not allowed as per license
B-811	Missing biometric data in CIDR for the given Aadhaar number
B-941	Unspecified ASA channel

5.1.2 OTP Service Error Codes

Error Code	Description
O-110	Aadhaar number does not have verified mobile/email
O-111	Aadhaar number does not have verified mobile
O-112	Aadhaar number does not have both email and mobile.
O-510	Invalid “otp” XML format
O-520	Invalid device
O-521	Invalid mobile number
O-522	Invalid “type” attribute
O-530	Invalid AUA code
O-540	Invalid TP XML version

O-542	AUA not authorized for ASA. This error will be returned if AUA and ASA d not have linking in the portal
O-543	Sub-AUA not associated with “AUA”. This error will be returned if Sub-AUA specified in “sa” attribute is not added as “Sub-AUA” in portal
O-565	AUA License key has expired or is invalid
O-566	ASA license key has expired or is invalid
O-569	Digital signature verification failed
O-570	Invalid key info in digital signature (this means that certificate used for signing the TP request is not valid it is either expired, or does not belong to the AUA or is not created by a CA)
O-940	Unauthorized ASA channel
O-941	Unspecified ASA channel
O-950	Could not generate and/or send OTP
O-999	Unknown error

5.1.3 KUA/KSA Service Error Codes

Error code	Description
K-100	Resident authentication failed
K-200	Resident data currently not available
K-540	Invalid KYC XML
K-541	Invalid KYC API version
K-542	Invalid resident consent (“rc” attribute in “Kyc” element)
K-543	Invalid timestamp (“ts” attribute in “Kyc” element)
K-544	Invalid resident auth type (“ra” attribute in “Kyc” element)
K-545	Resident has opted out of this service
K-550	Invalid “Uses” element attributes – must have either bio or otp enabled for resident authentication
K-551	Invalid “Txn” namespace (should be “UKC”)
K-552	Invalid license key
K-569	Digital signature verification failed for KYC XML (means that authentication request XML was modified after it was signed)
K-570	Invalid key info in digital signature for KYC XML (it is either expired, or does not belong to the KUA or is not created by a well known Certification Authority)
K-600	AUA is invalid or not an authorized KUA
K-601	ASA is invalid or not an authorized KSA
K-602	KUA encryption key not available
K-603	KSA encryption key not available
K-604	KSA not allowed to sign
K-999	Unknown error
K-955	Technical error

6. Annexure 2: Useful links

https://uidai.gov.in/images/resource/aadhaar_authentication_api_2_5.pdf

https://uidai.gov.in/images/resource/aadhaar_ekyc_api_2_5.pdf

https://uidai.gov.in/images/resource/aadhaar_otp_request_api_2_5.pdf