



{REST:API} Integration Manual
Revision 1.0.0

AFIS Verification Secured

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National Identity Registration Wing (NIDW)

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General Information

Bangladesh Voter Registration System or BVRS is the central enterprise application solution of Bangladesh Election Commission. It is a custom solution designed and developed specifically for Bangladesh Election commission based on their operational requirements.

The system architecture of BVRS was very well planned and sophisticated, considering the time at which it was designed and developed. But, with time and increased usage and demand, it was unable to meet the new requirements. In continuation of running with different issues at BVRS, considering the technological barriers Bangladesh Election Commission has taken steps to upgrade the entire solution with the Up-to- date & High-tech Sophisticated Enterprise Technologies.

Partner Service Application of the CMS Module caters External Partners Requests for Voter Information and Voter Information Verification using the API and Web Portals. Government Agencies like Special Branch, Police & RAB, Non-Government Partners like Banks and Telco Operators can request for Voter Specific Information or Verify Voter Information under a Service Level Agreement (SLA) with the Bangladesh Election Commission.

This guide is intended for the developers (from authorized organizations) who plan to integrate their system with Bangladesh Election Commission over shared RESTful API to get specific services.

Developers are able to build custom applications and services in their platform of choice that supports the open standard RESTful “Web Services” methodology.

RESTful API Functional Overview

Auth Service (Login)

This RESTful Web Service Handles Authentication Process Securely using a valid Login Credentials shared by Bangladesh Election Commission.

Auth Service (Logout)

This RESTful Web Service Handles Authentication Process Securely using a valid Logout request.

AFIS Service Secured (Verification)

This RESTful Web Service for AFIS to verify NID by fingerprint.

Auth Service (Change Password)

This RESTful Web Service for Handles Authentication Reset Process using a valid Change password request.

Technical Specification of the RESTful API

Base URL

The Base URL is: <https://prportal.nidw.gov.bd/partner-service/>

Auth Service (Login)

API URL: <https://prportal.nidw.gov.bd/partner-service/rest/auth/login>

Request Type: POST

Parameter Content Type: application/json

Parameter Name	Description	Type
Username	Username Provided by EC to access NID Partner Service	MANDATORY
Password	Password Provided by EC to access NID Partner Service	MANDATORY

Sample Request

```
{
  "username": "string",
  "password": "string"
}
```

Sample Response

```
{
  "status": "OK",
  "statusCode": "SUCCESS",
  "success": {
    "data": {
      "username": "afis_user",
      "access_token":
"eyJ0eXAiOiJhY2Nlc3NfdG9rZW4iLCJhbGciOiJIUzI1NiJ9.eyJzdWUiOiJhZmlzX3VzZXliLCJyb2xlcyI6WyJBRklTX1ZFUKlGSUNBVElPTiJdLCJpYXQiOiE1NjY4MjQxNTIsImV4cCI6MTU2NjgyNzcMnO.vrbtvUDDRYREJ0xKmK5auqc0N_6cMsEbmb221K8VbDs",
      "refresh_token":
"eyJ0eXAiOiJyZWZyZXNoX3Rva2VuliwiYWxnIjoiaSMyNTYifQ.eyJzdWUiOiJhZmlzX3VzZXliLCJpYXQiOiE1NjY4MjQxNTIsImV4cCI6MTU2NjgyNjgzMTM1MnO.J6lAxUyWefXTSmxmzivj0CGu0agxy6C1qKVzAcf2AWA"
    }
  }
}
```

Response Code and Messages

Tag: success

- Code: 200
 - Message: Successful

Tag: error

- Code: 201
 - Message: Created
- Code: 400
 - Message: Bad Request
- Code: 401
 - Message: You are not authorized to view the resource
- Code: 403
 - Message: Accessing the resource you were trying to reach is forbidden
- Code: 404
 - Message: The resource you were trying to reach is not found
- Code: 500
 - Message: Internal Server Error

Tag: result

- If the operation was successful, this field will have the result.
 1. Access token
 2. Refresh token
 3. Username

**** Mark that validity of the access token for login authentication is 12 hrs. You should not call the Login API each time or frequently rather use the access token until expired.**

Auth Service (Logout)

API URL: https://prportal.nidw.gov.bd/partner-service/rest/auth/logout

Request Type: POST

Parameter Content Type: application/json

Request Header: Bearer Token

Sample Response

```
{
  "status": "OK",
  "statusCode": "SUCCESS",
  "success": {
    "data": "Logout Successful"
  }
}
```

Response Code and Messages

Tag: success

- Code: 200
- Message: Successful

Tag: error

- Code: 201
- Message: Created
- Code: 400
- Message: Bad Request
- Code: 401
- Message: You are not authorized to view the resource
- Code: 403
- Message: Accessing the resource you were trying to reach is forbidden
- Code: 404
- Message: The resource you were trying to reach is not found
- Code: 500
- Message: Internal Server Error

Tag: result

- If the operation was successful, this field will have the result.
1. Logout success message.

AFIS Service Secured (Verification)

API URL: https://prportal.nidw.gov.bd/partner-service/rest/afis/verification-secured

Request Type: POST

Parameter Content Type: application/json

Request Header: Bearer Token

Parameter Name	Description	Type
nid10Digit	10 digit NID number provided by partner to access detail of NID	MANDATORY (any one)
nid17Digit	17 digit NID number provided by partner to access detail of NID	MANDATORY (any one)
dateOfBirth	Date of Birth of a NID holder provided by partner to access detail of NID	MANDATORY
fingerEnums	List of Fingers Provided by partner to upload fingerprint	MANDATORY

Sample Request

```
{
  "dateOfBirth": "1987-03-01",
  "nid10Digit": "5956750714",
  "nid17Digit": "19875114390226276",
  "fingerEnums":
    [
      "RIGHT_THUMB",
      "RIGHT_INDEX",
      "RIGHT_MIDDLE",
      "RIGHT_RING",
      "RIGHT_LITTLE",
      "LEFT_THUMB",
      "LEFT_INDEX",
      "LEFT_MIDDLE",
      "LEFT_RING",
      "LEFT_LITTLE"
    ]
}
```

Sample Response

```
{
  "status": "ACCEPTED",
  "statusCode": "SUCCESS",
  "success": {
    "data": {
      "fingerUploadUrls":
    [
      {
        "finger": "RIGHT_THUMB",
        "url": "https://prportal.nidw.gov.bd/file-
others/finger_print/MzBkUnABsGiqk1W_h_A_/right_thumb.wsq?X-Amz-Algorithm=AWS4-
HMAC-SHA256&X-Amz-Credential=filetigerit%2F20200217%2Fus-e
ast-1%2Fs3%2Faws4_request&X-Amz-Date=20200217T101336Z&X-Amz-Expires=604800&X-
Amz-SignedHeaders=host&X-Amz-Signature=7925396fee5b2693766a2e4befa253ca1f51289d6
7922bbedfee01c57a1456b8"
      },
      {
        "finger": "RIGHT_INDEX",
        "url": "https://prportal.nidw.gov.bd/file-
others/finger_print/MzBkUnABsGiqk1W_h_A_/right_index.wsq?
X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=filetigerit%2F20200217%2Fus-ea
st-1%2Fs3%2Faws4_request&X-Amz-Date=20200217T101336Z&X-Amz-Expires=604800&X-
Amz-SignedHeaders=host&X-Amz-
Signature=1db18fc2840f898cf70a9a6aeea10e8344649a5abc
dbf78b4a384684c6f6966a"
      },
      {
        "finger": "RIGHT_MIDDLE",
        "url": "https://prportal.nidw.gov.bd/file-
others/finger_print/MzBkUnABsGiqk1W_h_A_/right_middle.wsq
?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=filetigerit%2F20200217%2Fus-e
ast-1%2Fs3%2Faws4_request&X-Amz-Date=20200217T101336Z&X-Amz-
Expires=604800&X-Amz-SignedHeaders=host&X-Amz-
Signature=1956eaa58a130c7f9768318894dc84aea300f290
9d5f67b4b7a2b624b7fa1894"
      },
      {
        "finger": "RIGHT_RING",
        "url": "https://prportal.nidw.gov.bd/file-
others/finger_print/MzBkUnABsGiqk1W_h_A_/right_ring.wsq?X-Amz-Algorithm=AWS4-
HMAC-SHA256&X-Amz-Credential=filetigerit%2F20200217%2Fus-east-
1%2Fs3%2Faws4_request&X-Amz-Date=20200217T101336Z&X-Amz-Expires=604800&X-Amz-
SignedHeaders=host&X-Amz-
Signature=bab88485e481d4b134de024001b8c5c58e9ba4a13749b4ea93b86331663113fb"
      },
      {
        "finger": "RIGHT_LITTLE",
        "url": "https://prportal.nidw.gov.bd/file-
```

```

others/finger_print/MzBkUnABsGiqk1W_h_A_/right_little.wsq?X-Amz-Algorithm=AWS4-
HMAC-SHA256&X-Amz-Credential=filetigerit%2F20200217%2Fus-east-
1%2Fs3%2Faws4_request&X-Amz-Date=20200217T101336Z&X-Amz-Expires=604800&X-Amz-
SignedHeaders=host&X-Amz-
Signature=fcbe120afc09302d7d62dd80b39c680267d78607ff958f40c664e185e22b0dea"
},

{
  "finger": "LEFT_THUMB",
  "url": "https://prportal.nidw.gov.bd/file-
others/finger_print/MzBkUnABsGiqk1W_h_A_/left_thumb.wsq?X-Amz-Algorithm=AWS4-
HMAC-SHA256&X-Amz-Credential=filetigerit%2F20200217%2Fus-east-
1%2Fs3%2Faws4_request&X-Amz-Date=20200217T101336Z&X-Amz-Expires=604800&X-Amz-
SignedHeaders=host&X-Amz-
Signature=fbb1e17ed5be6b815738bd21cf293f560358fc4aaa6197116f713a96c9a9ad77"
},

{
  "finger": "LEFT_INDEX",
  "url": "https://prportal.nidw.gov.bd/file-
others/finger_print/MzBkUnABsGiqk1W_h_A_/left_index.wsq?X-Amz-Algorithm=AWS4-
HMAC-SHA256&X-Amz-Credential=filetigerit%2F20200217%2Fus-east-
1%2Fs3%2Faws4_request&X-Amz-Date=20200217T101336Z&X-Amz-Expires=604800&X-Amz-
SignedHeaders=host&X-Amz-
Signature=c70fc230f14127bd03d57a2610e6404ba76efd6d97127a7038d232cd1343f4e0"
},

{
  "finger": "LEFT_MIDDLE",
  "url": "https://prportal.nidw.gov.bd/file-
others/finger_print/MzBkUnABsGiqk1W_h_A_/left_middle.wsq?X-Amz-Algorithm=AWS4-
HMAC-SHA256&X-Amz-Credential=filetigerit%2F20200217%2Fus-east-
1%2Fs3%2Faws4_request&X-Amz-Date=20200217T101336Z&X-Amz-Expires=604800&X-Amz-
SignedHeaders=host&X-Amz-
Signature=7af235a280b162bcfab8ca5916677de5354c63afa8412b26c0076cc998600dad"
},

{
  "finger": "LEFT_RING",
  "url": "https://prportal.nidw.gov.bd/file-
others/finger_print/MzBkUnABsGiqk1W_h_A_/left_ring.wsq?X-Amz-Algorithm=AWS4-HMAC-
SHA256&X-Amz-Credential=filetigerit%2F20200217%2Fus-east-1%2Fs3%2Faws4_request&X-
Amz-Date=20200217T101336Z&X-Amz-Expires=604800&X-Amz-SignedHeaders=host&X-Amz-
Signature=a99f425b34a7e2798f5b653cdc008164ffc657cd3810cf5b4452395154ea6cc1"
},

{
  "finger": "LEFT_LITTLE",
  "url": "https://prportal.nidw.gov.bd/file-
others/finger_print/MzBkUnABsGiqk1W_h_A_/left_little.wsq?X-Amz-Algorithm=AWS4-
HMAC-SHA256&X-Amz-Credential=filetigerit%2F20200217%2Fus-east-
1%2Fs3%2Faws4_request&X-Amz-Date=20200217T101336Z&X-Amz-Expires=604800&X-Amz-
SignedHeaders=host&X-Amz-

```

```
Signature=ac37489cfa97a7799d68e8ade6a6f4278d46ee19cbc1de1efce3bd966f633d14"
}
],
"resultCheckApi":
"/partner-service/rest/afis/verification/result/12ba38e5-d2a0-4d31-834a-
2121f1915266"
}
}
}
```

Or

```
{
  "status": "FORBIDDEN",
  "statusCode": "ERROR",
  "error": {
    "field": "",
    "message": "Voter is locked. Details cannot be fetched"
  }
}
```

Response Code and Messages

Tag: success

- Code: 200
- Message: Successful

Tag: error

- Code: 201
- Message: Created
- Code: 400
- Message: Bad Request
- Code: 401
- Message: You are not authorized to view the resource
- Code: 403
- Message: Accessing the resource you were trying to reach is forbidden
- Code: 404
- Message: The resource you were trying to reach is not found
- Code: 500
- Message: Internal Server Error

Tag: result

- If the operation was successful, this field will have the result.
- 1. Fingerprint Upload URL with corresponding finger name
- 2. Result Check URL with jobId

Fingerprint Upload

NOTE: Need to upload all the fingerprints (**encrypted**) which were provided in the request body.

API URL: https://prportal.nidw.gov.bd/file-others/finger_print/MzBkUnABsGiqk1W_h_A_/right_thumb.wsq?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=filetigerit%2F20200217%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20200217T101336Z&X-Amz-Expires=604800&X-Amz-SignedHeaders=host&X-Amz-Signature=7925396fee5b2693766a2e4bfa253ca1f51289d67922bbedfee01c57a1456b8
Request Type: PUT

Sample Request

Need to upload file from body as binary mode and file must be in **WSQ** format.

Response

Status: 200 OK

Result Check

API URL: <https://prportal.nidw.gov.bd/partner-service/rest/afis/verification/result/12ba38e5-d2a0-4d31-834a-2121f1915266>
Request Type: GET
Request Header: Bearer Token

Sample Response

```
{
  "status": "OK",
  "statusCode": "SUCCESS",
  "success": {
    "data": {
      "jobId": "746694e5-9c40-4ee7-846a-b6ed729ba0e5",
      "result": "PROCESSING_PENDING"
    }
  }
}
```

OR

```
{
  "status": "OK",
  "statusCode": "SUCCESS",
  "success": {
    "data": {
      "jobId": "5a0b3045-9a89-40e1-ab6e-a3687d392e34",

```

```

        "result": "MATCH FOUND",
        "verificationResponse": {
            "voterInfo": {
                "id": "3ca5d22e-2f37-4527-b3c3-325054af7534",
                "nationalId": "5956750714"
            }
        }
    }
}

```

OR

```

{
  "status": "OK",
  "statusCode": "SUCCESS",
  "success": {
    "data": {
      "jobId": "e2ad4d1d-e28f-41e9-b576-3963ba636121",
      "result": "NO MATCH FOUND",
      "errorReason": "NID_OR_DOB_NOT_MATCH"
    }
  }
}

```

OR

```

{
  "status": "OK",
  "statusCode": "SUCCESS",
  "success": {
    "data": {
      "jobId": "12ba38e5-d2a0-4d31-834a-2121f1915266",
      "result": "NO MATCH FOUND",
      "errorReason": "FINGER_PRINT_NOT_MATCH"
    }
  }
}

```

OR

```

{
  "status": "UNAUTHORIZED",
  "statusCode": "ERROR",
  "error": {
    "field": "Authorization",
    "message": "Full authentication is required to access this resource"
  }
}

```

OR

```
{
  "status": "OK",
  "statusCode": "SUCCESS",
  "success": {
    "data": {
      "jobId": "12ba38e5-d2a0-4d31-834a-2121f1915266",
      "result": "NO MATCH FOUND",
      "errorReason": "FINGER_PRINT_NOT_MATCH"
    }
  }
}
```

Result	Description
PROCESSING_PENDING	Fingerprint uploaded. Will send request to AFIS
MATCH FOUND	Will get the voter details as per SLA
NO MATCH FOUND	If wrong NID or DoB provided "errorReason": "NID_OR_DOB_NOT_MATCH"
NO MATCH FOUND	Fingerprint don't match "errorReason": "FINGER_PRINT_NOT_MATCH"
ERROR	If fingerprints not found in server database
ERROR	If voter is locked

Change User's Password

API URL: https://prportal.nidw.gov.bd/partner-service/rest/common/change-user-password

Request Type: POST

Parameter Content Type: application/json

Request Header: Bearer Token

Parameter Name	Description	Type
currentPassword	User's current password	MANDATORY (Less than 50 character)
newPassword	New password that users want to set	MANDATORY (Less than 50 character)
confirmPassword	Rewrite the new password to confirm	MANDATORY (Less than 50 character)

Sample Request

```
{
  "currentPassword": "string",
  "newPassword": "string",
  "confirmPassword": "string"
}
```

Sample Response

```
{
  "status": "BAD_REQUEST",
  "statusCode": "ERROR",
  "error": {
    "field": "password",
    "message": "Old Password and New Password Cannot Be Same"
  }
}
```

OR

```
{
  "status": "BAD_REQUEST",
  "statusCode": "ERROR",
  "error": {
    "field": "confirmPassword",
    "message": "Password Should Not Be Greater than 50 Character"
  }
}
```

OR


```
{
  "status": "BAD_REQUEST",
  "statusCode": "ERROR",
  "error": {
    "message": "Message not readable or request body is empty"
  }
}

OR

{
  "status": "OK",
  "statusCode": "SUCCESS",
  "success": {
    "data": "Password Updated Successfully"
  }
}
```

[NOTE: If password gets updated successfully, user session will end.]

Response Code and Messages

Tag: success

- Code: 200
- Message: Successful

Tag: error

- Code: 201
 - Message: Created
- Code: 401
 - Message: You are not authorized to view the resource
- Code: 403
 - Message: Accessing the resource you were trying to reach is forbidden
- Code: 404
 - Message: The resource you were trying to reach is not found
- Code: 500
 - Message: Internal Server Error

Tag: result

- If the operation was successful, this field will have the result.

Conclusion

A group of Servers is dedicated to running the Partner Service Application of CMS Module. We are expecting End Users will experience the extraordinary performance with less downtime under the Optimized Application Architecture.

THANK YOU