

**MOLDOVA: POLICY ADVICE AND SUPPORT IN LEGISLATIVE DRAFTING FOR EPROCUREMENT REFORM**

**Assignment: MTender Pilot Phase 2**

**Deliverable: Completion report for MConnect integration for MTender**

February 2020

# Approval page

Chisinau, February 2020

The development completion report for Assignment: MTender Pilot Phase 2 Deliverable: Completing MConnect integration for MTender as well as technical documentation was submitted on the 30th of January 2018 by the TC Project team. Deliverables have been examined by the EBRD OL and are hereby recommended for approval and acceptance.

|  |  |
| --- | --- |
| **Client Name** | EBRD |
| **Project** | MConnect integration for MTender |
| **Date of delivery according to the agreed plan** | 30th January 2019 |
| **Date of submission for Acceptance** | 4th February 2020 |

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| --- | --- | --- |
| **The output is specified in the table below and includes a list of delivered deliverables.**  **The output is in accordance with approved specifications and complies with all conditions defined in the Contract, as per the Terms of Reference.** | | |
| **Deliverable** | **Deliverable Description** | **Acceptance Date** |
| Deliverable | Development completion report for Assignment: MTender Pilot Phase 2 Deliverable: Completing MConnect integration for MTender |  |
| **All deliverables were prepared in required quality and time and are accepted without open points.**  **Other comments** | | |

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| --- | --- | --- |
| **Person responsible for Delivery** | Signature: | Date:\_\_\_\_\_\_\_\_\_\_ |
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| Eliza Niewiadomska, EBRD |

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Document characteristics

|  |  |
| --- | --- |
| **Property** | **Value Proposition** |
| Release date | *04/02/2020* |
| Status: | *Final* |
| Version: | *V1.0* |
| Authors: | *D. Virtosu, D. Gritcan* |
| Reviewed by: | *EBRD* |
| Approved by: |  |

Document history

|  |  |  |
| --- | --- | --- |
| **Version** | **Description** | **Date** |
| 1.0 | *Development completion report.* | *04/02/2020* |
|  |  |  |
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Table of Contents

[Approval page 2](#_Toc31635602)

[1. List of abbreviations 5](#_Toc31635603)

[2. Document objective 5](#_Toc31635604)

[3. Background 5](#_Toc31635605)

[4. Project objectives 6](#_Toc31635606)

[5. Assumptions and risks 7](#_Toc31635607)

[6. Project performance 7](#_Toc31635608)

[7. Project phases and outputs 9](#_Toc31635609)

[7.1 Project outputs 11](#_Toc31635610)

[8. Lessons learned 11](#_Toc31635611)

[9. Summary 12](#_Toc31635612)

[10. Annex 1 Web services data structure 13](#_Toc31635613)

[1. Get Citizen 13](#_Toc31635614)

[2. Public Organization 14](#_Toc31635615)

[3. Private Organization 16](#_Toc31635616)

[4. Get IBAN List 18](#_Toc31635617)

[5. Get Budget 19](#_Toc31635618)

[6. Check Budget 19](#_Toc31635619)

[7. Register Contract 20](#_Toc31635620)

[8. Get Contract Queue 21](#_Toc31635621)

[9. Confirm Contract 22](#_Toc31635622)

[10. Register log 23](#_Toc31635623)

[11. Get Log 24](#_Toc31635624)

# List of abbreviations

*Table 1.1. Definitions, acronyms and abbreviations.*

|  |  |
| --- | --- |
| Terms / abbreviations | Descriptions |
| API | Application Programing Interface |
| DPA | Data path analytics LCC |
| CA | Contracting Authority |
| CDU | Central database unit |
| CTIF | Center of Informational Technologies in Finance |
| EBRD | European Bank for Reconstruction and Development |
| EGOV | Agency for Electronical Governance |
| EU | European Union |
| eProcurement | Electronic Procurement |
| MDL | Moldovan Lei |
| MF | Ministry of Finance of the Republic of Moldova |
| MTender | The e-platform is launched by the Ministry of Finance |
| MConnect | Middleware platform which is used by government of Moldova for ensure the interoperability of data. |
| MSign | The electronic signature service of Moldova |
| MLog | Government platform for log management |
| NEPP | Networking Electronic Procurement Platform |
| PP | Public Procurement |
| PPA | Public Procurement Agency, Ministry of Finance of the Republic of Moldova |
| RM | Republic of Moldova |

# Document objective

The objective of this document is to present the main results of the EBRD Project Moldova: “MConnect integration for MTender” that is prepared by Esempla Systems SRL. This report includes project objectives, achievements, development as well as implementation phases and the overall description of the developed software.

# Background

The project is designed to facilitate the integration of CDU\_2 component with 3rd party state registries in order to collect and cross check of data via MConnect. Data collection and verification were requested to enable MTender user’s identification, data validation for partial ESPD automatization and contract registration procedures developed on the MTender pilot in the public e-procurement national system.

This was aimed to be achieved through the development of a set of web services aimed at extracting data from 4 external state registries, web services aimed to export logs in MLog and providing an API to facilitate CDU integration via MConnect.

The project also aimed to produce a convenient ESPD data validation service for end-users. However, the analysis of data availability in the national registers demonstrate the impossibility of a full automatization of ESPD. An agreement between MF and EGOV was signed to provide a legal framework for existing MConnect data consumption via MTender. The integration works were made in compliance with the official agreement.

Currently, the project is in the closing stage, which will be finalized after delivering the current Project completion report.

# Project objectives

The objective of the Consultant is to work with EGOV, MF, Treasury and CDU developer to design and to develop an integration of the MTender functionality with MConnect to provide:

* stakeholder’s teams’ coordination and facilitating the Agreement between MF and eGov regarding data consumption via MConnect;
* enabling data exposure and access according to the signed Agreement;
* Web services development, testing and deployment
* MTender Integration with MLog - the government audit platform

The MTender – MConnect integration is required to deliver the following features:

1. Get the following data available online:

* Get Citizen – access private individuals data available in State Register
* Public Organization – access public entities data available in State Register
* Private Organization – access commercial entities data available in State Register
* Get IBAN List – receive dedicated IBAN accounts related to budget allocations from Treasury
* Get Budget – access available amounts related to budget allocations from Treasury
* Check Budget – verify available amounts related to budget allocations from Treasury
* Register Contract – transmit contract data to Treasury
* Get Contract Queue – check the contract status in the Treasury
* Confirm Contract – confirm contract registration by the Treasury

1. MTender logs registration in MLog:

* Register log
* Get log

Technical features are aimed to be compliant with following project business requirements:

* Suppliers data validation
* Contracting authorities data validation
* Budgeting data validation
* Provided contract for Treasury validation.
* Registered contract in Treasury.
* MTender logs registration.

Testing results show that project objectives have been achieved, requirements have been met and the MConnect integration has been designed, built and implemented, considering the limited data availability.

# Assumptions and risks

The assumptions made regarding the development objective were: the EGOV supports MConnect data consumption, and the Ministry of Finance, supports integration with MTender; the requested data are not fully available.

The main risk identified was the impossibility to make an automatic ESPD verification for the full data set, as some registers are not electronic, or not integrated yet with MConnect and data cannot be accessed. However, existing data can be used for partial ESPD verification, full users’ identification, budgets validation and contracts registration processes partially used in MTender processes.

The integration of new state registers to MConnect depends on too many factors, there is no deadlines or official road map we can rely on and cannot be influenced by MTender stakeholders.

# Project performance

The business analysis, design and development according the scope of work, including project management has been done by Esempla Systems development team in collaboration with CTIF and EGOV and provided to UStudio team for MTender integration.

The development efforts were preceded by the analysis of requested data set availability together with EGOV. Es result, MF and EBRD teams were informed about the partially missing data. An agreement between MF and eGov regarding MConnect interoperability platform access was signed (02/2018-1 from 07.08.2018) listing the available data for consumption by MTender and usage rationale. Based on the agreement, EGOV published the endpoint for data access.

As was planned, the web services for MTender integration were developed by Esempla team as follow:

* Work package 1. MTender to consume data about citizen and legal entities form ASP registers of citizen (RSP) and legal entities (RSUD), according to Annex 4 of Agreement nr. 3009-99;
* Work package 2. MTender to consume data about IBAN, debts, etc. from National Treasury information systems, according to Annex 5 of Agreement nr. 3009-99;
* Work package 3. MTender to consume and provide data about acquisition contracts to and from National Treasury information systems, according to Annex 6 of Agreement nr. 3009-99;
* Work package 4. API documentation provided to uStudio (EBRD consultant developing the CDU platform) to integrate with developed web services

All web services were developed accordingly and deployed on MConnect Testing platform to be tested and validated by uStudio team. uStudio confirmed via email the readiness of web services to be deployed and technical documentation. EGOV confirmed the testing results via an official letter addressed to EBRD Moldova (nr. 3004-61 from 14.02.2019).

All services were deployed on production environment and are available to be used by MTender platform, can be accessed by NEPPs and provided to final users during the procurement process.

Legal entities and private individual’s data are accessed for MTender user’s identification during the registration process. Despite the lack of full automatic ESPD validation, data from Tax authority and State registers are accessed online (via MTender) and used by CA for supplier’s verification during evaluation process, avoiding the need for documentary evidence collected before. The request for available IBAN list and funding is submitted by CA from MTender during planning stage, so data are automatically filled in the planning forms avoiding human errors and additional efforts.

MLog integration Web services were developed according to eGov integration procedure (MLog Integration Guide).

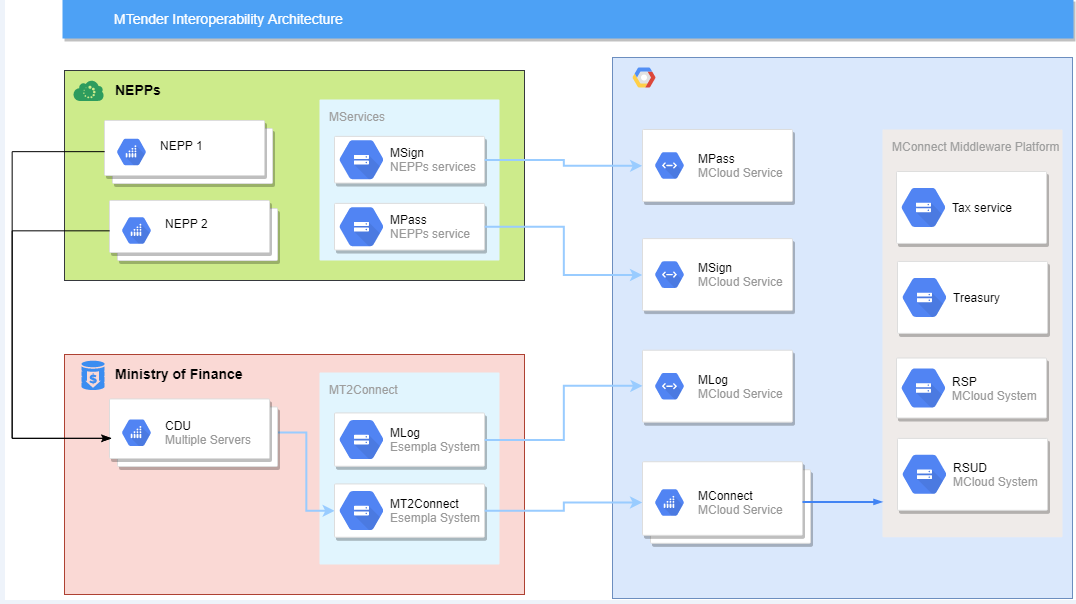


Figure 1 MTender Interoperability Architecture

Table 1 Project elements

|  |  |  |  |
| --- | --- | --- | --- |
| # | CRP element | Completion | Performer |
| 1 | Business Analysis | 100% | Esempla Systems, Moldova |
| 2 | Project management | 100% | Esempla Systems, Moldova |
| 3 | Documentation | 100% | Esempla Systems, Moldova |
| 4 | Web services development and testing | 100% | Esempla Systems, Moldova |
| 5 | Web services validation | 100% | uStudio, LCC |
| 6 | MLog integration | 100% | Esempla Systems, Moldova |
| 7 | Legal framework for data interoperability (agreement) | 100% | EGOV and Ministry of Finance, Moldova |

# Project phases and outputs

This section provides an overview of the phases which were performed during the project.

Table 2 Project main phases and their outputs

| # | Phase | Goal | Completion Timeframe | Result/ deliverable |
| --- | --- | --- | --- | --- |
| 1 | Preliminary estimate | A rough estimate presented for works and their costs. It made possible for project sponsor to decide whether to start project execution or not. | July, 2018 | Project budget |
| 2 | Business Analysis | Business analysis investigation was completed and documented to serve as base for official agreement for data access. | July, 2018 | Data availability report |
| 3 | Legal framework | Agreement between MF and eGov regarding MConnect interoperability platform access, request for MTender to access the MConnect interoperability platform (02/2018-1 from 07.08.2018) | August, 2018 | Signed agreement between MF and eGov |
| 6 | Data exposure and access | Endpoints published by eGov and accessed by Esempla | August, 2018 | Published endpoints |
| 7 | Web services development | All (11) web services developed accordingly and deployed on MConnect Testing platform. | August 2018 – November 2018 | Web service functionalities |
| 8 | Integration/ testing | MTender was integrated with MConnect using the web services, tested and deployed on production. | December, 2018 | Integration between CDU and MConnect.  Test run report. |
| 9 | MTender Integration with MLog | Web services developed according to eGov integration procedure described in document (MLog Integration Guide) | December, 2018 | Web services |
| 10 | Containerization, deployment automation and CI/CD enabling | * All developments containerized (dockers) * Deployment automation and CI/CD (Continuous integration and continuous delivery) enabled on MCloud test and production environments based on the following tools (GitLab, GitLab registry, Jenkins) * Technical documentation ready to provide (API, Swagger UI, DockerFile, CI/CD - gitlab-ci.yaml, testing - docker-compose.yml | January, 2019 | Dockers  Technical documentation |
| 11 | Operational services | All services are available to be accessed on MTender by NEPPs |  | The service is in usage. The Project completion report. |

## Project outputs

* Report on the requested vs available data needed for automated qualification criteria is provided in the following document:



* API documentation for the MConnect integration functionality is available in the following document:



* The source code deposit for this functionality is available at: <https://github.com/MTendereProcurementSystem/MConnect>

# Lessons learned

The important lesson learnt during the period of project implementation are as follows:

* The coordination meeting and close contact among teams’ members could avoid misunderstandings, reduce the issues number and accelerate implementation processes.
* The requirements need to be developed taking into consideration the real technical and legal possibilities and constraints.
* Project implementation efficiency depends on stakeholder’s involvement and collaboration.

# Summary

The integration of MTender platform (CDU\_2 component) with MConnect interoperability platform successfully achieved the project objectives and met business requirements, as is summarized in Project objectives section. Although the MConnect integration was intended initially to allow an ESPD automation, the analysis demonstrated that due to the partial availability of data this automation was not possible. The data usage process had to be adjusted in order to provide maximum opportunities for MTender users to avoid additional efforts and to make another step for a paperless procurement process.

The involvement of project teams during development and implementation stages brought the project to the closure. The integration was designed and developed using modern technologies and in compliance with technological standards. All developments are containerized (dockers) and technical documentation has been provided.

All services are running on production environment, data are available and already used during the procurement process improving MTender users' experience.

# Annex 1 Web services data structure

1. Get Citizen
2. Public Organization
3. Private Organization
4. Get IBAN List
5. Get Budget
6. Check Budget
7. Register Contract
8. Get Contract Queue
9. Confirm Contract
10. Get log
11. Register log

## Get Citizen

Receive data about a citizen from the state register of population.

|  |  |
| --- | --- |
| Name | Get Citizen |
| URL | https://[<SERVER\_DOMAIN>]/api/v1/citizen/get?idnp={idnp} |
| CURL | curl -X GET "http://127.0.0.1:8800/api/v1/citizen/get?idnp=423654897456" -H "accept: application/json;charset=UTF-8" |
| Request | **GET** /api/v1/citizen/get?idnp=423654897456 HTTP/1.1  Host: 127.0.0.1:8800  User-Agent: curl/7.63.0  accept: application/json;charset=UTF-8 |
| Response | HTTP/1.1 200 OK  Server: nginx  Date: Mon, 14 Jan 2019 15:03:14 GMT  Content-Type: text/html; charset=UTF-8  Transfer-Encoding: chunked  Connection: keep-alive  Strict-Transport-Security: max-age=15768000  {  "IDNP": "423654897456",  "FirstName": "NICU",  "LastName": "ANDREI",  "SecondName": "",  "BirthDate": "1989-05-16T00:00:00.000Z",  "BirthDateStatus": {}  } |

## Public Organization

Receive legal entities data from the state register of legal entities.

|  |  |
| --- | --- |
| Name | Public Organization |
| URL | https://[<SERVER\_DOMAIN>]/api/v1/organization/public/?idno={idno} |
| CURL | curl -X GET "http://127.0.0.1:8800/api/v1/organization/public?idno=1008400111879" -H "accept: application/json;charset=UTF-8" |
| Request | **GET** /api/v1/organization/public?idno=1008400111879  HTTP/1.1  Host: 127.0.0.1:8800  User-Agent: curl/7.63.0  accept: application/json;charset=UTF-8 |
| Response | HTTP/1.1 200 OK  Server: nginx  Date: Mon, 14 Jan 2019 14:56:46 GMT  Content-Type: text/html; charset=UTF-8  Transfer-Encoding: chunked  Connection: keep-alive  Strict-Transport-Security: max-age=15768000  {  "IDNO": "1008400111879",  "FiscalCode": "1008400111879",  "Name": "Societatea cu Răspundere Limitată TEST SYSTEMS",  "ShortName": "TEST SYSTEMS S.R.L.",  "LegalFormCode": "530",  "PropertyFormCode": "2",  "RegistrationDate": "2010-09-18T00:00:00.000Z",  "Address": {  "Country": {},  "Region": "CHIŞINĂU CENTRU",  "Locality": "mun. Chişinău",  "LocalityCode": {},  "Street": "Stefan Cel Mare",  "StreetCode": {},  "House": "5",  "Block": {},  "Flat": {}  },  "Activities": {  "Activity": [  {  "ActivityCode": "51900",  "ActivityType": "0",  "OrderNumber": "1"  },  {  "ActivityCode": "52480",  "ActivityType": "0",  "OrderNumber": "2"  },  {  "ActivityCode": "51840",  "ActivityType": "0",  "OrderNumber": "3"  },  {  "ActivityCode": "72500",  "ActivityType": "0",  "OrderNumber": "4"  },  {  "ActivityCode": "72200",  "ActivityType": "0",  "OrderNumber": "5"  },  {  "ActivityCode": "64204",  "ActivityType": "0",  "OrderNumber": "6"  }  ]  },  "Founders": {  "Founder": {  "PersonType": "1",  "PersonShortData": {  "IDNP": "423654897456",  "LastName": "NICU",  "FirstName": "ANDREI"  }  }  },  "Conductors": {  "Conductor": {  "PersonalData": {  "IDNP": "423654897456",  "LastName": "NICU",  "FirstName": "ANDREI"  },  "RoleCode": "18"  }  },  "ChefAccount": {  "PersonalData": {  "IDNP": "2005498433030",  "LastName": "ANDRU ELENA",  "FirstName": {}  }  }  } |

## Private Organization

Receive data from the state register of legal entities and state tax service (VAT code and budget debts).

|  |  |
| --- | --- |
| Name | Private Organization |
| URL | https://[<SERVER\_DOMAIN>]/api/v1/organization/private?idno={idno} |
| CURL | curl -X GET "http://127.0.0.1:8800/api/v1/organization/private?idno=1009600026622" -H "accept: application/json;charset=UTF-8" |
| Request | GET /api/v1/organization/private?idno=1009600026622 HTTP/1.1  Host: 127.0.0.1:8800  User-Agent: curl/7.64.0  accept: application/json;charset=UTF-8 |
| Response | HTTP/1.1 200 OK  Server: nginx  Date: Thu, 04 Apr 2019 06:28:13 GMT  Content-Type: text/html; charset=UTF-8  Transfer-Encoding: chunked  Connection: keep-alive  Strict-Transport-Security: max-age=15768000  {  "IDNO": "1009600026622",  "FiscalCode": "1009600026622",  "Name": "Societatea cu Răspundere Limitată ESEMPLA SYSTEMS",  "ShortName": "ESEMPLA SYSTEMS S.R.L.",  "LegalFormCode": "530",  "PropertyFormCode": "2",  "RegistrationDate": "2009-08-19T00:00:00.000Z",  "VATCode": "0505949",  "BudgetDebt": "false",  "Address": {  "Country": {},  "Region": "CHIŞINĂU BUIUCANI",  "Locality": "mun. Chişinău",  "LocalityCode": {},  "Street": "Calea Ieşilor",  "StreetCode": {},  "House": "10",  "Block": {},  "Flat": {}  },  "Activities": {  "Activity": [  {  "ActivityCode": "51900",  "ActivityType": "0",  "OrderNumber": "1"  },  {  "ActivityCode": "52480",  "ActivityType": "0",  "OrderNumber": "2"  },  {  "ActivityCode": "51840",  "ActivityType": "0",  "OrderNumber": "3"  },  {  "ActivityCode": "72500",  "ActivityType": "0",  "OrderNumber": "4"  },  {  "ActivityCode": "72200",  "ActivityType": "0",  "OrderNumber": "5"  },  {  "ActivityCode": "64204",  "ActivityType": "0",  "OrderNumber": "6"  }  ]  },  "Founders": {  "Founder": {  "PersonType": "1",  "PersonShortData": {  "IDNP": "XXX",  "LastName": "GRIŢCAN",  "FirstName": "DORIN"  }  }  },  "Conductors": {  "Conductor": {  "PersonalData": {  "IDNP": "XXX",  "LastName": "GRIŢCAN",  "FirstName": "DORIN"  },  "RoleCode": "18"  }  },  "ChefAccount": {  "PersonalData": {  "IDNP": "XXX",  "LastName": "DELITANAS ELENA ALEXANDRU",  "FirstName": {}  }  }  } |

## Get IBAN List

Receive IBAN list based on CPV code and Contracting Authority IDNO.

|  |  |
| --- | --- |
| Name | Get IBAN List |
| URL | https://[<SERVER\_DOMAIN>]/api/v1/budget/iban?idno={idno}&cpv={cpv}&year={year} |
| CURL | curl -X GET "http://127.0.0.1:8800/api/v1/budget/iban?idno=1006601243057&cpv=30000000-9&year=2018" -H "accept: application/json;charset=UTF-8" |
| Request | **GET** /api/v1/budget/iban?idno=1006601243057&cpv=30000000-9&year=2018 HTTP/1.1  Host: 127.0.0.1:8800  User-Agent: curl/7.63.0  accept: application/json;charset=UTF-8 |
| Response | HTTP/1.1 200 OK  Server: nginx  Date: Mon, 14 Jan 2019 14:39:27 GMT  Content-Type: text/html; charset=UTF-8  Transfer-Encoding: chunked  Connection: keep-alive  Strict-Transport-Security: max-age=15768000  {  "getIbanList\_response":  {  "iban": [  "MD67JDUPEJ347483D11090PD",  "MD16KDPFUP222400A01225GD"  ]  }  } |

## Get Budget

Receive data about budget based on IBAN and budget year.

|  |  |
| --- | --- |
| Denumire | Get Budget |
| URL | https://[<SERVER\_DOMAIN>]/api/v1/budget/get?iban={iban}&year={year} |
| CURL | curl -X GET  "http://127.0.0.1:8800/api/v1/budget/get?iban=MD67JDUPEJ347483D11090PD&year=2018" -H "accept: application/json; charset=UTF-8" |
| Request | **GET** /api/v1/budget/get?iban=MD67JDUPEJ347483D11090PD&year=2018 HTTP/1.1 Host: 127.0.0.1:8800  User-Agent: curl/7.63.0  accept: application/json;charset=UTF-8 |
| Response | HTTP/1.1 200 OK  Server: nginx  Date: Mon, 14 Jan 2019 14:45:56 GMT  Content-Type: text/html; charset=UTF-8  Transfer-Encoding: chunked  Connection: keep-alive  Strict-Transport-Security: max-age=15768000  {  "sum":"29850.00"  } |

## Check Budget

Receive data about budget from Treasury based on IBAN, year and amount

|  |  |
| --- | --- |
| Name | Check Budget |
| URL | https://[<SERVER\_DOMAIN>]/api/v1/budget/check?iban={iban}&year={year}&sum={sum} |
| CURL | curl -X GET "http://127.0.0.1:8800/api/v1/budget/check?iban=MD67JDUPEJ347483D11090PD&year=2018&sum=500" -H "accept: application/json;charset=UTF-8" |
| Request | **GET** /api/v1/budget/check?iban=MD67JDUPEJ347483D11090PD&year=2018&sum=500 HTTP/1.1 Host: 127.0.0.1:8800  User-Agent: curl/7.63.0  accept: application/json;charset=UTF-8 |
| Request | **GET** /api/v1/budget/check?iban=MD67JDUPEJ347483D11090PD&year=2018&sum=500 HTTP/1.1 Host: 127.0.0.1:8800  User-Agent: curl/7.63.0  accept: application/json;charset=UTF-8 |

## Register Contract

Register the contract in Treasury.

|  |  |
| --- | --- |
| Name | Register Contract |
| URL | https://[<SERVER\_DOMAIN>]/api/v1/contract/register |
| CURL | curl -X POST "http://[<SERVER\_DOMAIN>]/api/v1/contract/register" -H "accept: application/json;charset=UTF-8" -H "Content-Type: application/json" -d "{ \"header\": { \"id\_dok\": \"id123123\", \"nr\_dok\": \"123\", \"da\_dok\": \"2019-01-13T14:16:59+00:00\", \"suma\": 10, \"kd\_val\": \"123\", \"pkd\_fisk\": \"string\", \"pkd\_sdiv\": \"string\", \"pname\": \"string\", \"bkd\_fisk\": \"string\", \"bkd\_sdiv\": \"string\", \"bname\": \"string\", \"desc\": \"string\", \"reg\_nom\": \"123\", \"reg\_date\": \"2019-01-01T14:15:59\", \"achiz\_nom\": \"123\", \"achiz\_date\": \"2019-01-13T14:15:59+00:00\", \"avans\": 5, \"da\_expire\": \"2020-01-14T14:15:59+00:00\", \"c\_link\": \"string\" }, \"benef\": [ { \"id\_dok\": \"string\", \"bbic\": \"string\", \"biban\": 0 } ], \"details\": [ { \"id\_dok\": \"string\", \"suma\": 0, \"piban\": \"string\", \"byear\": 0 } ]}" |
| Request | **POST** /api/v1/contract/register HTTP/1.1 Host: 127.0.0.1:8800 User-Agent: curl/7.63.0 accept: application/json;charset=UTF-8 Content-Type: application/json Content-Length: 604  {  "header":  {  "id\_dok":"id123123",  "nr\_dok":"123",  "da\_dok":"2019-01-13T14:16:59+00:00",  "suma":10,  "kd\_val":"123",  "pkd\_fisk":"string",  "pkd\_sdiv":"string",  "pname":"string",  "bkd\_fisk":"string",  "bkd\_sdiv":"string",  "bname":"string",  "desc":"string",  "reg\_nom":"123",  "reg\_date":"2019-01-01T14:15:59",  "achiz\_nom":"123",  "achiz\_date":"2019-01-13T14:15:59+00:00",  "avans":5,  "da\_expire":"2020-01-14T14:15:59+00:00",  "c\_link":"string"  },  "benef":  [  {  "id\_dok":"id123123",  "bbic":"string",  "biban":0  }  ],  "details":  [  {  "id\_dok":"id123123",  "suma":10,  "piban":"string",  "byear":2019  }  ]  } |
| Response | HTTP/1.1 200 OK  Server: nginx  Date: Mon, 14 Jan 2019 14:23:59 GMT  Content-Type: text/html; charset=UTF-8  Transfer-Encoding: chunked  Connection: keep-alive  Strict-Transport-Security: max-age=15768000  {  "id\_dok":"string",  "num\_row":"1"  } |

## Get Contract Queue

Receive data about contracts queue to be registered in Treasury.

|  |  |
| --- | --- |
| Name | Get Contract Queue |
| URL | http://[<SERVER\_DOMAIN>]/api/v1/contract/queue?status={status} |
| CURL | curl -X GET "http://[<SERVER\_DOMAIN>]/api/v1/contract/queue?status=3001" -H "accept: application/json;charset=UTF-8" |
| Request | **GET** /api/v1/contract/queue?status=3001 HTTP/1.1  Host: 127.0.0.1:8800  User-Agent: curl/7.63.0  accept: application/json;charset=UTF-8 |
| Response | HTTP/1.1 200 OK  Server: nginx  Date: Mon, 14 Jan 2019 14:01:06 GMT  Content-Type: text/html; charset=UTF-8 T  ransfer-Encoding: chunked  Connection: keep-alive  Strict-Transport-Security: max-age=15768000  {  "contract": [  {  "id\_dok": "id123",  "id\_hist": "1006",  "status": "3001",  "st\_date": "2019-01-11T16:15:39.000+02:00",  "reg\_nom": "string",  "reg\_date": "2019-01-11+02:00",  "descr": {}  },  {  "id\_dok": "id144",  "id\_hist": "1007",  "status": "3001",  "st\_date": "2019-01-11T16:16:31.000+02:00",  "reg\_nom": "string",  "reg\_date": "2019-01-11+02:00",  "descr": {}  }  ]  } |

## Confirm Contract

Confirm the contract reception by NEPPs

|  |  |
| --- | --- |
| Name | Confirm Contract |
| URL | http://[<SERVER\_DOMAIN>]/api/v1/contract/confirm |
| CURL | curl -X POST "http://[<SERVER\_DOMAIN>]/api/v1/contract/confirm?id\_dok=id123" -H "accept: application/json;charset=UTF-8" |
| Request | **POST** /api/v1/contract/confirm?id\_dok=id144 HTTP/1.1  Host: 127.0.0.1:8800  User-Agent: curl/7.63.0  accept: application/json;charset=UTF-8 |
| Response | HTTP/1.1 200 OK  connection: keep-alive  content-encoding: gzip  content-type: text/html; charset=UTF-8  date: Mon, 14 Jan 2019 14:04:12 GMT  server: nginx  strict-transport-security: max-age=15768000  transfer-encoding: chunked  {  "id\_dok":"id123",  "num\_row":"1"  } |

## Register log

Register critical events in MLog service.

|  |  |
| --- | --- |
| Name | Register log |
| URL | http://[<SERVER\_DOMAIN>]/api/v1/mlog |
| CURL | curl -X POST "http://[<SERVER\_DOMAIN>]/api/v1/mlog" -H "accept: application/json;charset=UTF-8" -H "Content-Type: application/json" -d "{ \"event\_time\": \"2019-01-14T23:12:37.334+02:00\", \"event\_type\": \"MTender.Bid.Open\", \"event\_source\": \"string\", \"event\_message\": \"string\", \"legal\_entity\": \"string\", \"user\_session\": \"string\", \"user\_address\": \"string\", \"amount\": \"string\", \"documents\": [ \"url1|id1|hash1\" ]}" |
| Request | **POST** /api/v1/mlog HTTP/1.1  Host: 127.0.0.1:8800  User-Agent: curl/7.63.0  accept: application/json;charset=UTF-8  Content-Type: application/json  Content-Length: 268  {  "event\_time": "2019-01-14T23:12:37.334+02:00",  "event\_type": "MTender.Bid.Open",  "event\_source": "string",  "event\_message": "string",  "legal\_entity": "string",  "user\_session": "string",  "user\_address": "string",  "amount": "string",  "documents": [  "url1|id1|hash1"  ]  } |
| Response | Http-Code: 200  Server: nginx  Date: Tue, 15 Jan 2019 09:52:59 GMT  Content-Type: application/json;charset=UTF-8  Transfer-Encoding: chunked  Connection: keep-alive  Vary: Accept-Encoding  Strict-Transport-Security: max-age=31536000  {  "timestamp":"1547545979199",  "UID":"e2c57431-0a53-4b2b-b235-27f4944ed3bf"  } |

## Get Log

Receive data about critical events registered through MLog service.

|  |  |
| --- | --- |
| Denumire | Get Log |
| URL | http://[<SERVER\_DOMAIN>]/api/v1/mlog |
| CURL | curl -X GET "http://[<SERVER\_DOMAIN>]/api/v1/mlog?legal\_entity=Test&legal\_basis=Test&legal\_reason=Test&user=Test&event\_time\_from=2019-01-14&event\_time\_to=2019-01-15" -H "accept: application/json;charset=UTF-8" |
| Request | **GET** /api/v1/mlog?legal\_entity=Test&legal\_basis=Test&legal\_reason=Test&user=Test&event\_time\_from=2019-01-14&event\_time\_to=2019-01-15 HTTP/1.1  Host: 127.0.0.1:8800  User-Agent: curl/7.63.0  accept: application/json;charset=UTF-8 |
| Response | Http-Code: 200  Server: nginx  Date: Tue, 15 Jan 2019 09:58:14 GMT  Content-Type: application/json;charset=UTF-8  Transfer-Encoding: chunked  Connection: keep-alive  Vary: Accept-Encoding  Strict-Transport-Security: max-age=31536000 {"timestamp":"1547546294631","result":[{"user\_session":"string","amount":"string","event\_type":"MTender.Bid.Open","subject\_type":"Organization","documents":["url1|id1|hash1"],"user\_address":"string","event\_level":"info","event\_source":"string","legal\_entity":"string","event\_message":"string","event\_time":"2019-01-14T23:12:37.334+02:00","@uid":"e2c57431-0a53-4b2b-b235-27f4944ed3bf"},{"user\_session":"string","amount":"string","event\_type":"MTender.Bid.Open","subject\_type":"Organization","documents":["url1|id1|hash1"],"user\_address":"string","event\_level":"info","event\_source":"string","legal\_entity":"string","event\_message":"string","event\_time":"2019-01-14T23:12:37.334+02:00","@uid":"219c594b-a8eb-4ab3-943d-128c5bd41225"}],"pagination":{"record-count":2,"page-size":50}} |