GAIL - BK225

BLOCKCHAIN POWERED PROCUREMENT SYSTEM
NodeServer API Documentation

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Introduction

For all our core functionalities, we have created REST API endpoints. These REST endpoints provide a means of abstraction between client and blockchain network and also encapsulate business logic. The APIs also have endpoints for payment functionality with third-party services (currently only Paytm is supported).

Broadly we can classify our API endpoints into three groups:
- ➔ Contractor Services
- ➔ GAIL Services
- ➔ Payment Services

Contractor Services

API services under this group cater to the use cases from the Contractor's perspective.

PATH: /contractors/admin/signup
METHOD: POST
BODY: empty
USAGE: To register an admin for contractor users. Needed for the blockchain network wallet for contractors.
RESPONSE: JSON
Contains following fields:
- success: boolean. True if successfully created admin. Otherwise false.

PATH: /contractors/users/signup
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique contractor username.
password	string. Contractor password.
email	string. Contractor email id.

contact	string, Contractor contact number.
address	string. Contractor address.
aboutUs	string. Contains a short description about contractor.
profilePic	string. Path of the contractor profile picture stored in the server.
mid	string. Paytm Merchant ID of the contractor.
mkey	string. Paytm Merchant Key of the contractor.

USAGE: To register a new contractor.
RESPONSE: JSON
Contains following fields:
- success: boolean. True if successfully created admin.Otherwise false.
- username: string. Only returned if the user is successfully created. Contains the username of the new user.
- message: string. Only returned if the user is not created. Contains the error message.

PATH: /contractors/users/login
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique contractor username.
password	string. Contractor password.

USAGE: To authenticate a contractor
RESPONSE: JSON
Contains following fields:
- success: boolean. Only returned if authentication failed.Value is always false.
- message: string. Only returned if authentication failed. Contains the error message.
- username: string. Only returned if authentication success. Unique contractor username.
- password: string. Only returned if authentication success. Contractor password.
- email: string. Only returned if authentication success. Contractor email ID.
- contact: string. Only returned if authentication success. Contractor contact number.
- address: string. Only returned if authentication success. Contractor address.

- **aboutUs:** string. Only returned if authentication success. Contains a short description of the contractor.
- **profilePic**: string. Only returned if authentication success. Path of the contractor profile picture stored in the server.
- **mid:** string. Only returned if authentication success. Paytm Merchant ID of the contractor.
- **mkey:** string. Only returned if authentication success. Paytm Merchant Key of the contractor.

PATH: /contractors/users/profile
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique contractor username.
password	string. Contractor password.

USAGE: To get the contractor profile
RESPONSE: JSON
Contains following fields:
- **success:** boolean.True if successful query.Otherwise false.
- **message:** string. Only returned if the query failed. Contains the error message.
- **Object:** JSON object. Contains contractor profile which contains the following fields:
    - **username**: string. Unique contractor username.
    - **password:** string. Contractor password.
    - **email:** string.Contractor email id.
    - **contact:** string.Contractor contact number.
    - **address:** string.Contractor address.
    - **aboutUs:** string. Contains a short description of the contractor.
    - **profilePic:** string. Path of the contractor profile picture stored in the server.
    - **mid:** string. Paytm Merchant ID of the contractor.
    - **mkey:** string. Paytm Merchant Key of the contractor.

PATH: /contractors/users/updateProfile
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique contractor username.
password	string. Contractor password.
email	string. Contractor email id.
contact	string, Contractor contact number.
address	string. Contractor address.
aboutUs	string. Contains a short description of the contractor.
profilePic	string. Path of the contractor profile picture stored in the server.
mid	string. Paytm Merchant ID of the contractor.
mkey	string. Paytm Merchant Key of the contractor.

USAGE: To update contractor profile
RESPONSE: JSON
Contains following fields:
- success: boolean. Only returned if authentication failed.Value is always false.
- message: string. Only returned if authentication failed. Contains the error message.
- username: string. Only returned if update success. Unique contractor username.
- password: string. Only returned if update success. Contractor password.
- email: string. Only returned if update success. Contractor email id.
- contact: string. Only returned if update success. Contractor contact number.
- address: string. Only returned if update success. Contractor address.
- aboutUs: string. Only returned if update success. Contains a short description about the contractor.
- profilePic: string. Only returned if update success. Path of the contractor profile picture stored in the server.
- mid: string. Only returned if update success. Paytm Merchant ID of the contractor.
- mkey: string. Only returned if update success. Paytm Merchant Key of the contractor.

PATH: /contractors/users/getCompletedProjects
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique contractor username.
password	string. Contractor password.

USAGE: Get all previous projects delivered by the contractor
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Only returned if the query failed. Contains the error message.
- allProjects: JSON array. Contains an array of project JSON objects which are completed by the contractor: Each project object contains the following fields :
  - username: string. Username of GAIL client who created the project.
  - id: string. Project ID.
  - title: string. Project Title.
  - description: string. Project description.
  - status: string. Current project status.
  - contractor_id: string. Username of the contractor to whom the project is allocated.
  - bid_id :string. Winning Bid ID of the project
  - progress: JSON array. Contains an array of message updates by the contractor with timestamp.
  - createTimeStamp: string. Project creation timestamp.
  - deadline: string.Project deadline timestamp.
  - brochurePath: string. Project brochure file path on the server.
  - type: string. Project type.

PATH: /contractors/users/{contractor username}
METHOD: POST
BODY: empty
USAGE: Get the contractor profile.
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Contains query message.
- Object: JSON object. Contains contractor profile which contains the following fields:
  - username: string. Unique contractor username.
  - password: string. Contractor password.
  - email: string.Contractor email id.
  - contact: string.Contractor contact number.
  - address: string.Contractor address.
  - aboutUs: string. Contains a short description of the contractor.

- ○ profilePic: string. Path of the contractor profile picture stored in the server.
- ○ mid: string. Paytm Merchant ID of the contractor.
- ○ mkey: string. Paytm Merchant Key of the contractor.

PATH: /contractors/bids/applyForProject
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique contractor username.
password	string. Contractor password.
projectID	string. Project ID of the project to which bid is applied.
bidDetails	JSON object: Contains bid details with fields like price, completion time etc.

USAGE: To apply a bid for a particular project.
RESPONSE: JSON
Contains following fields:
- ● success: boolean.True if successful query.Otherwise false.
- ● message: string. Contains query message.
- ● bidID: string. Applied Bid ID.

PATH: /contractors/project/
Method: POST
BODY: JSON
Contains following fields:

username	string. Unique contractor username.
password	string. Contractor password.

USAGE: Get current allocated project for a contractor
RESPONSE: JSON
Contains following fields:
- ● success: boolean. Only returned if the query failed. Value is always false.
- ● message: string. Only returned if the query failed. Contains the error message.

The project object is returned if the query is successful. It contains the following fields:
- username: string. Username of GAIL client who created the project.
- id: string. Project ID.
- title: string. Project Title.
- description: string. Project description.
- status: string.Current project status.
- contractor_id: string. Username of the contractor to whom the project is allocated.
- bid_id: string. Winning Bid ID of the project
- progress: JSON array. Contains an array of message updates by the contractor with timestamp.
- createTimeStamp: string. Project creation timestamp.
- deadline: string. Project deadline timestamp.
- brochurePath: string. Project brochure file path on the server.
- type: string. Project type.

PATH: /contractors/project/updateProjectStatus
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique contractor username.
password	string. Contractor password.
status	string. New Project Status.

USAGE: Update status of an allocated project by a contractor
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Contains query message.

PATH: /contractors/project/updateProjectProgress
METHOD: POST
Body: JSON
Contains following fields:

username	string. Unique contractor username.
password	string. Contractor password.
status	string. New Project progress description

USAGE: Add a progress description to an allocated project by a contractor
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Contains query message.

GAIL Services

API services under this group cater to the use-cases from GAIL's perspective.

PATH: /gail/admin/signup
METHOD: POST
BODY: empty
USAGE: To register an admin for GAIL users. Needed for the blockchain network wallet for GAIL.
RESPONSE: JSON
Contains following fields:
- success: boolean. True if successfully created admin.Otherwise false.

PATH: /gail/users/signup
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique GAIL client username.
password	string. User password.
email	string. User email id.

contact	string, User contact number.
address	string. User address.
designation	string. User designation.
profilePic	string. Path of the user profile picture stored in the server.
name	string. User Name
teamname	string. User Team Name.

USAGE: To register a new GAIL user.
RESPONSE: JSON
Contains following fields:
- success: boolean. True if successfully created admin.Otherwise false.
- username: string. Only returned if the user is successfully created. Contains the username of the new user.
- message: string. Only returned if the user is not created. Contains the error message.

PATH: /gail/users/login
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique GAIL client username.
password	string. User password.

USAGE: To authenticate a GAIL client
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful authentication.Otherwise false.
- message: string. Contains query message.

PATH: /gail/users/getUserDetails
METHOD: POST

BODY: JSON
Contains following fields:

username	string. Unique GAIL client username.
password	string. User password.

USAGE: To get GAIL user profile
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Only returned if the query failed. Contains the error message.
- Object: JSON object. Only returned if query successful. Contains GAIL client profile which contains the following fields:
  - username: string. Unique GAIL client username.
  - password: string. User password.
  - email: string. User email id.
  - contact: string, User contact number.
  - address: string. User address.
  - designation: string. User designation.
  - profilePic: string. Path of the user profile picture stored in the server.
  - name: string. User Name
  - teamname: string. User Team Name.

PATH: /gail/users/editUserDetails
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique GAIL client username.
password	string. User password.
email	string. User email id.
contact	string, User contact number.
address	string. User address.
designation	string. User designation.

profilePic	string. Path of the user profile picture stored in the server.
name	string. User Name
teamname	string. User Team Name.

USAGE: To update GAIL user profile
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Only returned if the query failed. Contains the error message.

PATH: /gail/project/createProject
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique GAIL client username.
password	string. User password.
id	string. Project ID.
title	string. Project Title.
description	string. Project description.
createTimeStamp	string. Project creation timestamp.
deadline	string.Project deadline timestamp.
brochurePath	string. Project brochure file path on the server.
type	string. Project type. (Product/Service)

USAGE: To create a new project.
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Contains the query message.

PATH: /gail/project/getProject
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique GAIL client username.
password	string. User password.
id	string. Project ID.

USAGE: To get project details.
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Contains the query message.
- Object: JSON object. Contains project object which contains the following fields:
  - username: string. Username of GAIL client who created the project.
  - id: string. Project ID.
  - title: string. Project Title.
  - description: string. Project description.
  - status: string.Current project status.
  - contractor_id: string. Username of the contractor to whom the project is allocated.
  - bid_id: string. Winning Bid ID of the project
  - progress: JSON array. Contains an array of message updates by the contractor with timestamp.
  - createTimeStamp: string. Project creation timestamp.
  - deadline: string.Project deadline timestamp.
  - brochurePath: string. Project brochure file path on the server.
  - type: string. Project type.

PATH: /gail/project/getAllProjects
METHOD: POST
BODY: empty
USAGE: To get all the project details.
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Only returned on failure. Contains the error message.

- **Object:** JSON object. Contains a dictionary of all projects with project id and project object map. Project object contains the following fields:
    - username: string. Username of GAIL client who created the project.
    - id: string. Project ID.
    - title: string. Project Title.
    - description: string. Project description.
    - status: string.Current project status.
    - contractor_id :string. Username of the contractor to whom the project is allocated.
    - bid_id :string. Winning Bid ID of the project
    - progress: JSON array. Contains an array of message updates by a contractor with timestamp.
    - createTimeStamp : string. Project creation timestamp.
    - deadline: string. Project deadline timestamp.
    - brochurePath :string. Project brochure file path on the server.
    - type: string. Project type.

PATH: /gail/project/acceptProject
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique GAIL client username.
password	string. User password.
id	string. Project ID.

USAGE: To accept project work.
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Contains the query message.

PATH: /gail/project/rejectProject
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique GAIL client username.
password	string. User password.
id	string. Project ID.

USAGE: To reject project work.
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Contains the query message.

PATH: /gail/project/getAllBids
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique GAIL client username.
password	string. User password.
id	string. Project ID.

USAGE: To get all bids for a particular project.
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query. Otherwise false.
- message: string. Only returned on failure. Contains the error message.
- All bids: JSON array. An array of Bid objects which contains bid details with fields like price, completion time etc

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PATH: /gail/bideval/
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique GAIL client username.

password	string. User password.
id	string. Project ID.

USAGE: To get the winning bid for a particular project and allocate that bid to that project.
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Contains query message.

PATH: /gail/bideval/getSingleBid
METHOD: POST
BODY: JSON
Contains following fields:

username	string. Unique GAIL client username.
password	string. User password.
bid_id	string. Bid ID.

USAGE: To get bid details of a particular bid id.
RESPONSE: JSON
Contains following fields:
- success: boolean.True if successful query.Otherwise false.
- message: string. Only returned on failure. Contains error message.
- Object: JSON object.Only returned on success. Contains bid object which contains bid details with fields like price, completion time etc.

Payment Services

API services under this group cater to the use-case for payments. Currently, we are supporting Paytm as a payment gateway.

PATH: /payment/initiateTransaction
METHOD: POST
BODY: JSON
Contains following fields:

mid	string. Paytm Merchant ID of the contractor.
merchantKey	string. Paytm Merchant key of the contractor.
orderID	string. Unique transaction order ID.
value	string. Amount of transaction in INR. Can have up to two decimal places.

USAGE: Initiate transaction on Paytm Payment Gateway and get a Transaction token.
RESPONSE: Returns Paytm Initiate Transaction API response. Details at
https://developer.paytm.com/docs/initiate-transaction-api/#response__attributes

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PATH: /payment/validateTransaction
METHOD: POST
BODY: JSON
Contains following fields:

mid	string. Paytm Merchant ID of the contractor.
merchantKey	string. Paytm Merchant key of the contractor.
orderID	string. Unique transaction order ID.

USAGE: Get status of a previous transaction based on order ID.
RESPONSE: Returns Paytm Transaction Status API response. Details at
https://developer.paytm.com/docs/transaction-status-api/#response__attributes

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