TOUCH & SAIL INTEGRATION API SPECIFICATION

UAT Version 1.0.3

Version Control

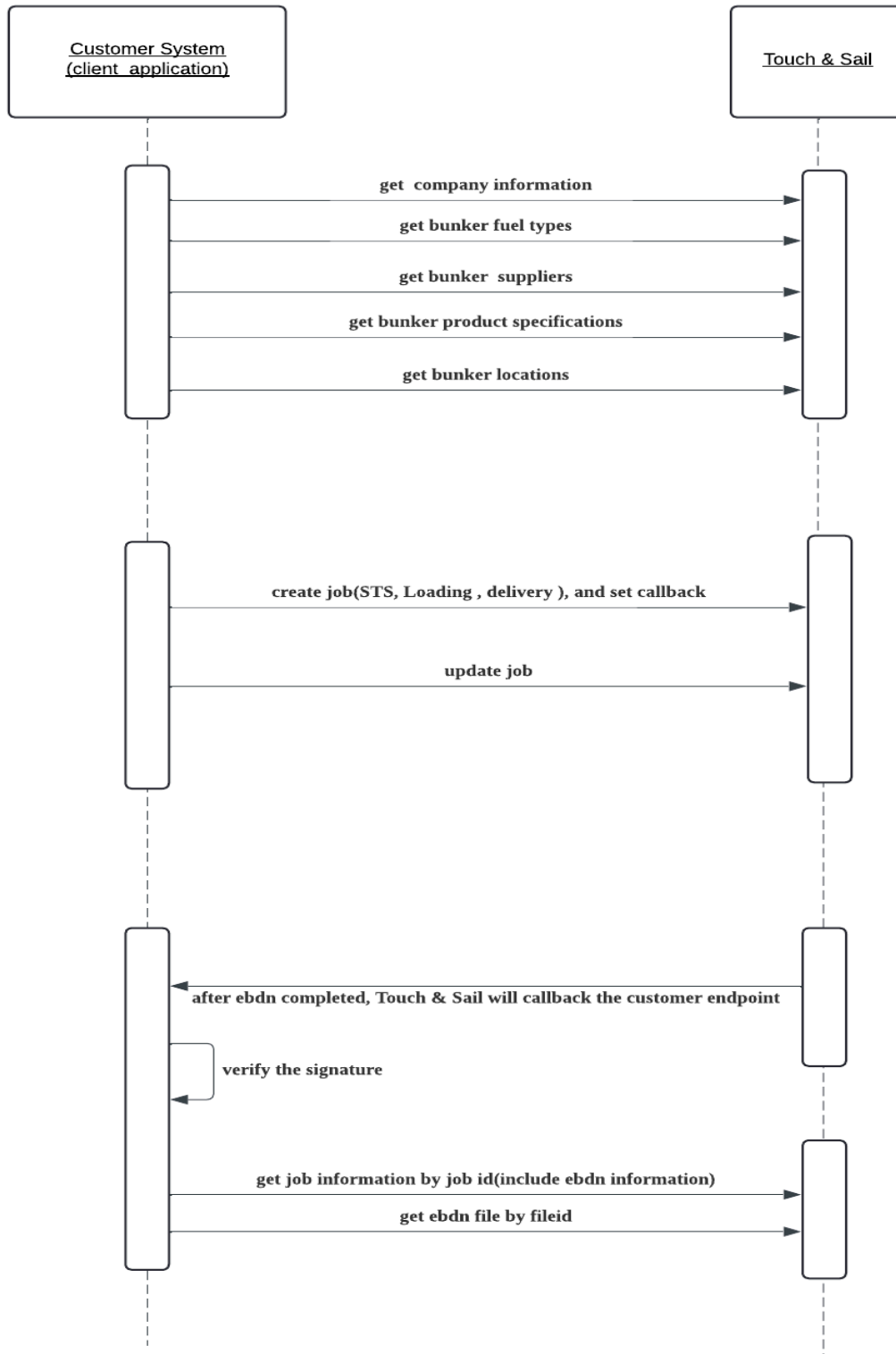| Date	Version	Description
26 March 2024	1.0.0	Initial document containing APIs and details for job integration.
4 April 2024	1.0.1	Add a floaterName field to the loading job
5 May 2024	1.0.2	Added a new job list API
7 June 2024	1.0.2	Annotate the document as UAT and update job list
7 August 2024	1.0.3	Added supplyType

Overview

This document describes how other systems integrate with the Touch & Sail system. By calling the API of Touch & Sail system, the client system retrieves the information that job created and updated needs. After the Touch & Sail system completes the EBDN job, it will automatically call back the client system's endpoint and notify the client system of the job ID and status. The client system gets EBDN information and related pdf files by jobID.

Base URL

URL	https://api.uat.bunkerchain.io

TOUCH AND SAIL

Client application integration Touch & Sail sequence diagram

Client Application

Client Application Info

URL	/api/v1/client-apps/my-info
Method	GET
Description	API to retrieve the current client application information, including the signing public key and key algorithm.

Detail

Request

	Name	Data Type	Mandatory	Description
Header	tns-api-key	String	Yes	API key provided by Bunkerchain

Response

Name	Data Type	Description
id	String	Internal id for the application
name	String	Name of the application
signingPublicKey	String	Base64-encoded public key for verifying the signature
signingKeyAlg	String	Algorithm of the signing key
active	Boolean	Activation status of the application

Example

cURL

```
curl --location '/api/v1/client-apps/my-info' \
--header 'tns-api-key: e9541bedaa05b141c3c99ca9308da89eef7b1bc199b8698d8dfb69b56f0e2c6e'
```

Response Body

```
{
    "code": 1000,
    "message": "success",
```

```
    "data": {
        "id": "1765638578730762240",
        "createdAt": "2024-03-07T07:20:16.372Z",
        "updatedAt": "2024-03-07T07:20:16.372Z",
        "organizationId": "1406801300351410176",
        "name": "transmarine",
        "signingPublicKey":
"MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAorpKLiWQ/KdStffwdCYYYgFyrqn+J6TfGkNGrsaLBEl6+zq
a5Nis3JGBGvnuDBTT4WE+U7VhXYbi99rBmHoSegQBCbAJRv9JNyXNHi1gZ2/Wn038+yEd/lOL5thCM8nOEpsSUgZoKZH
fZBmD+LryaFqcwXm+Yd/zbqeOjm8APXdmzDZ7IpS64gdE+oylgDr5c0+EXjiYiFU7X9KKrReRjR6kd/pSzEv0jaOCduC
bUyfEKjDQ/VzFZmeGgrHi/VbClqzmC3W9M4r2D75tRC5vRbpaiJHtUWw1fvdH0hoHQ0DEhcRsnxEe/K3hQ+vjOzT9l0G
mBd5zGgBRHr+DaRih/QIDAQAB",
        "signingKeyAlg": "RSA",
        "active": true
    },
    "errors": null,
    "traceId": "ef5be519-0081-4c82-bc47-53432a7c65b2"
}
```

Bunker Fuel Types

Get Bunker Fuel Types

URL	/api/v1/bunker-fuel-types
Method	GET
Description	API for retrieving available bunker fuel types in MPA.

Detail

Request

	Name	Data Type	Mandatory	Description
Header	tns-api-key	String	Yes	API key provided by Bunkerchain

Response

Name	Data Type	Description
id	String	Internal id for the fuel type

fuelTypeCode	String	Code of the fuel type
fuelTypeDescription	String	Description of the fuel type

Example

cURL

```
curl --location '/api/v1/bunker-fuel-types' \
--header 'tns-api-key: e9541bedaa05b141c3c99ca9308da89eef7b1bc199b8698d8dfb69b56f0e2c6e'
```

Response Body

```
{
    "code": 1000,
    "message": "success",
    "data": [
        {
            "id": "1771024007859326976",
            "createdAt": "2024-03-22T04:00:02.184Z",
            "updatedAt": "2024-03-22T04:00:02.184Z",
            "createdBy": "system",
            "updatedBy": "system",
            "fuelTypeCode": "MGO",
            "fuelTypeDescription": "Marine Gas Oil"
        },
        {
            "id": "1771024007859326979",
            "createdAt": "2024-03-22T04:00:02.186Z",
            "updatedAt": "2024-03-22T04:00:02.186Z",
            "createdBy": "system",
            "updatedBy": "system",
            "fuelTypeCode": "LSFO180",
            "fuelTypeDescription": "Low Sulphur 180 CSt"
        },
        {
            "id": "1771024007859326990",
            "createdAt": "2024-03-22T04:00:02.192Z",
            "updatedAt": "2024-03-22T04:00:02.192Z",
            "createdBy": "system",
            "updatedBy": "system",
            "fuelTypeCode": "MFO700",
            "fuelTypeDescription": "Fuel Oil 700 CSt"
```

```
        },
        {
            "id": "1771024007859326991",
            "createdAt": "2024-03-22T04:00:02.192Z",
            "updatedAt": "2024-03-22T04:00:02.192Z",
            "createdBy": "system",
            "updatedBy": "system",
            "fuelTypeCode": "ULSFO",
            "fuelTypeDescription": "Ultra-Low Sulphur Fuel Oil"
        }
    ],
    "errors": null,
    "traceId": "fe82cff4-982e-43b6-8028-f751497dcd75"
}
```

Bunker Suppliers

Get Bunker Suppliers

URL	/api/v1/bunker-suppliers
Method	GET
Description	API for retrieving authorized bunker suppliers

Detail

Request

	Name	Data Type	Mandatory	Description
Header	tns-api-key	String	Yes	API key provided by Bunkerchain

Response

Name	Data Type	Description
id	String	Internal id for the bunker supplier
companyName	String	Name of the company
businessIncorporationNumber	String	Business incorporation number

incorporationCountry	String	Country
streetName	String	Name of the street
buildingName	String	Name of the building
unitNumber	String	Unit number
postal	String	Postal code
licenseNumber	String	Bunkering license number
abbreviation	String	Abbreviation of the company

Example

cURL

```
curl --location '/api/v1/bunker-suppliers' \
--header 'tns-api-key: e9541bedaa05b141c3c99ca9308da89eef7b1bc199b8698d8dfb69b56f0e2c6e'
```

Response Body

```
{
    "code": 1000,
    "message": "success",
    "data": [
        {
            "id": "1641277877268897792",
            "updateTime": "2023-03-30 11:15:53",
            "enable": true,
            "active": 1,
            "companyName": "Shell Eastern Petroleum Pte. Ltd.",
            "companyType": "Trading",
            "businessIncorporationNumber": "196000089G",
            "incorporationDate": "1960-08-02 00:00:01",
            "incorporationCountry": "Singapore",
            "streetName": "9 North Buona Vista Drive",
            "buildingName": "The Metropolis",
            "unitNumber": "07-01",
            "postal": "138588",
            "cityOrState": null,
            "fax": null,
            "licenseNumber": "91133",
            "licenseType": true,
```

```
                    "abbreviation": "SHELL",
                    "offline": false,
                    "gstRegistrationNo": "196000089G",
                    "createdByOnlineSysOrganizationId": null,
                    "bdnLogoFileId": "1641277614655135744"
            },
            {
                    "id": "1406801300351410176",
                    "updateTime": "2024-02-14 15:33:00",
                    "enable": true,
                    "active": 1,
                    "companyName": "Transmarine",
                    "companyType": "Trading",
                    "businessIncorporationNumber": "7878787",
                    "incorporationDate": "2022-05-05 00:00:01",
                    "incorporationCountry": "Singapore",
                    "streetName": "Jurong East Street ",
                    "buildingName": "Suntec Tower 7",
                    "unitNumber": "17-08",
                    "postal": "978730",
                    "cityOrState": null,
                    "fax": "065 8787878",
                    "licenseNumber": "787878",
                    "licenseType": true,
                    "abbreviation": "TRNSM",
                    "offline": false,
                    "gstRegistrationNo": "GT453224R",
                    "createdByOnlineSysOrganizationId": null,
                    "bdnLogoFileId": "1757669182119919616"
            }
        ],
        "errors": null,
        "traceId": "95bd6f88-843d-4077-b685-81fee2d97a22"
}
```

Bunker Products

Get Bunker Products

URL	/api/v1/bunker-suppliers
Method	GET
Description	API for retrieving bunker products

Detail

Request

	Name	Data Type	Mandatory	Description
Header	tns-api-key	String	Yes	API key provided by Bunkerchain

Response

Name	Data Type	Description
id	String	Internal id for the bunker product
name	String	Name of the product
oilType	String	FUEL_OIL or GAS_OIL

Example

cURL

```
curl --location '/api/v1/bunker-products' \
--header 'tns-api-key: e9541bedaa05b141c3c99ca9308da89eef7b1bc199b8698d8dfb69b56f0e2c6e'
```

Response Body

```
{
    "code": 1000,
    "message": "success",
    "data": [
        {
            "id": "1514543051161264132",
            "createdAt": "2022-04-14T09:56:17.032Z",
```

```
            "updatedAt": "2023-05-25T02:52:08.966Z",
            "createdBy": "1337219095688028161",
            "updatedBy": "1358658578172350467",
            "name": "HSFO 3.5% S MAX RME180",
            "oilType": "FUEL_OIL",
            "mpaCode": "MFO180",
            "mpaDescription": "Fuel Oil 180 CSt"
        },
        {
            "id": "1514543051161264129",
            "createdAt": "2022-04-14T09:56:17.027Z",
            "updatedAt": "2023-05-25T02:52:47.179Z",
            "createdBy": "1337219095688028161",
            "updatedBy": "1358658578172350467",
            "name": "MGO DMA 0.5%S MAX",
            "oilType": "GAS_OIL",
            "mpaCode": "MGO",
            "mpaDescription": "Marine Gas Oil"
        },
        {
            "id": "1635547777969758208",
            "createdAt": "2023-03-14T07:45:51.941Z",
            "updatedAt": "2023-05-25T02:53:06.360Z",
            "createdBy": "1358658578172350467",
            "updatedBy": "1358658578172350467",
            "name": "VLSFO 0.5% S MAX RMG 380 B24",
            "oilType": "FUEL_OIL",
            "mpaCode": "LSFO380",
            "mpaDescription": "Low Sulphur 380 CSt"
        }
    ],
    "errors": null,
    "traceId": "a0aa104f-7cf2-4f1d-8067-dab905751b9b"
}
```

Bunker Product Specifications

Get Bunker Product Specifications

URL	/api/v1/bunker-suppliers
Method	GET
Description	API for retrieving bunker product specifications

Detail

Request

	Name	Data Type	Mandatory	Description
Header	tns-api-key	String	Yes	API key provided by Bunkerchain

Response

Name	Data Type	Description
id	String	Internal id for the bunker product specification
name	String	Name of the specification
year	String	Year

Example

cURL

```
curl --location '/api/v1/bunker-product-specifications' \
--header 'tns-api-key: e9541bedaa05b141c3c99ca9308da89eef7b1bc199b8698d8dfb69b56f0e2c6e'
```

Response Body

```
{
    "code": 1000,
    "message": "success",
    "data": [
        {
            "id": "1752535163867803648",
            "createdAt": "2024-01-31T03:31:58.257Z",
```

```
            "updatedAt": "2024-01-31T03:31:58.257Z",
            "createdBy": "1358658578172350467",
            "updatedBy": "1358658578172350467",
            "name": "-",
            "year": null
        },
        {
            "id": "1514543063874199552",
            "createdAt": "2022-04-14T09:56:19.958Z",
            "updatedAt": "2022-04-14T09:56:19.958Z",
            "createdBy": "1337219095688028161",
            "updatedBy": "1337219095688028161",
            "name": "ISO 8217:2005",
            "year": "2005"
        },
        {
            "id": "1514543063874199555",
            "createdAt": "2022-04-14T09:56:19.975Z",
            "updatedAt": "2022-04-14T09:56:19.975Z",
            "createdBy": "1337219095688028161",
            "updatedBy": "1337219095688028161",
            "name": "ISO 8217:2017",
            "year": "2017"
        }
    ],
    "errors": null,
    "traceId": "15eb578b-eaa9-4576-b7f0-eb1a54e8386a"
}
```

Bunker Locations

Get Bunker Locations

URL	/api/v1/bunker-locations
Method	GET
Description	API for retrieving bunker locations

Detail

Request

	Name	Data Type	Mandatory	Description
Header	tns-api-key	String	Yes	API key provided by Bunkerchain

Response

Name	Data Type	Description
id	String	Internal id for the bunker location
name	String	Name of the bunker location
groupId	String	Group id
groupName	String	Group name
mpaCode	String	Code from MPA
mpaDescription	String	Description from MPA

Example

cURL

```
curl --location '/api/v1/bunker-locations' \
--header 'tns-api-key: e9541bedaa05b141c3c99ca9308da89eef7b1bc199b8698d8dfb69b56f0e2c6e'
```

Response Body

```
{
    "code": 1000,
    "message": "success",
    "data": [
        {
            "id": "1540270750974390272",
            "createdAt": "2022-06-24T09:48:58.770Z",
            "updatedAt": "2023-05-25T02:54:19.962Z",
            "createdBy": "1358658578172350467",
            "updatedBy": "1358658578172350467",
            "groupId": "1539784335656243200",
            "groupName": "ANCHORAGE",
            "name": "ACBTH",
```

```json
        "mpaCode": "ACBTH",
        "mpaDescription": "CHANGI TEMP HOLDG ANCH"
    },
    {
        "id": "1540270751007944704",
        "createdAt": "2022-06-24T09:48:58.799Z",
        "updatedAt": "2023-05-25T02:54:19.962Z",
        "createdBy": "1358658578172350467",
        "updatedBy": "1358658578172350467",
        "groupId": "1539784335656243200",
        "groupName": "ANCHORAGE",
        "name": "ACGP",
        "mpaCode": "ACGP",
        "mpaDescription": "CHANGI GENPURPOSE ANCH"
    },
    {
        "id": "1540270751146356739",
        "createdAt": "2022-06-24T09:48:58.976Z",
        "updatedAt": "2023-05-25T02:54:19.973Z",
        "createdBy": "1358658578172350467",
        "updatedBy": "1358658578172350467",
        "groupId": "1539784613784735744",
        "groupName": "PASIR PANJANG",
        "name": "P16",
        "mpaCode": "P16",
        "mpaDescription": "P PANJANG CONT TERM 16"
    },
    {
        "id": "1540270751146356740",
        "createdAt": "2022-06-24T09:48:58.978Z",
        "updatedAt": "2023-05-25T02:54:19.972Z",
        "createdBy": "1358658578172350467",
        "updatedBy": "1358658578172350467",
        "groupId": "1539784613784735744",
        "groupName": "PASIR PANJANG",
        "name": "P17",
        "mpaCode": "P17",
        "mpaDescription": "P PANJANG CONT TERM 17"
    },
    {
        "id": "1540270751486095360",
        "createdAt": "2022-06-24T09:48:59.295Z",
        "updatedAt": "2023-05-25T02:54:19.987Z",
```

```
            "createdBy": "1358658578172350467",
            "updatedBy": "1358658578172350467",
            "groupId": "1539784620738891776",
            "groupName": "VOPAK TERMINAL",
            "name": "OVPJ3",
            "mpaCode": "OVPJ3",
            "mpaDescription": "VOPAK TERMINAL BERTH 3"
        }
    ],
    "errors": null,
    "traceId": "d291c482-8b93-4747-a267-469b4bdd0c4f"
}
```

Job

Get Job List

URL	/api/v1/client-app/jobs
Method	GET
Description	API for retrieving a list of jobs

Detail

Request

	Name	Data Type	Mandatory	Description
Header	tns-api-key	String	Yes	API key provided by Bunkerchain
Request Param	pageSize	Integer	Conditional	This pageSize is to retrieve how much data that you want to retrieve at once. Default value: 10
	pageNumber	Integer	Conditional	This pageNumber is to select the page (etc. 1-10 records will be on page 1, 11-20 will be on the next page and so on.) Default value: 1
	bargeImo	String	Conditional	Searching barge IMO number by passing this param. It supports wildcard search. It can be used for combination filters as well.

	vesselImo	String	Conditional	Searching vessel IMO number by passing this param. It supports wildcard search. It can be used for combination filters as well.
	bdnLicenseNumber	String	Conditional	Searching bdn license number by passing this param. It supports wildcard search. It can be used for combination filters as well.
	bargeName	String	Conditional	Searching barge name by passing this param. It supports wildcard search. It can be used for combination filters as well.
	vesselName	String	Conditional	Searching vessel name by passing this param. It supports wildcard search. It can be used for combination filters as well.
	startDate	Date	Conditional	Filtering date range for stem start date. Passing this param just by date with this following format (2024-01-02 (yyyy/MM/dd)). It can be used for combination filters. If you only pass this, you will be retrieving results after this date.
	endDate	Date	Conditional	Filtering date range for stem end date. Passing this param just by date with this following format (2024-01-02 (yyyy/MM/dd)). It can be used for combination filters. If you only pass this, you will be retrieving results before this date.

Response

Name	Data Type	Description
code	Integer	1000 - Success 0001 - Server Error If you received other than this code, please reach out to Bunkerchain team.
message	String	Message for the codes. 1000 - success 0001 - server error
data	JSON Object	Inside will include content, pageable and the elements for pageable.

content	JSON Array	Inside the content will have all of the jobs details.
		id - Internal id for the job
		createdAt - Internal data which this is holding when this record has been created.
		updatedAt - Internal data which this is holding when this record has been updated.
		createdBy - Internal data which this is holding who are the one that creates the records.
		updatedBy - Internal data which this is holding who are the one that updates the records.
		createdBySysOrganization - Internal data for which company created this record.
		updatedBySysOrganization - Internal data for which company updated this record.
		type 1 - Delivery Job 2 - Loading Job 3 - Ship to Ship Transfer Job
		status 1 - Pending 2 - Accepted 3 - In Progress 4 - Completed 5 - Cancelled
		hasSurveyor - Has surveyor onboard
		bargeImo - Barge IMO number
		bargeName - Barge name
		bargeShipId - Barge ship ID **bargeUpdatedAt** - Barge updated time
		mitigatingCompanyOrgId - The job that company belongs to
		port - Port
		locationLevel1 - groupName from the Bunker Locations API
		locationLevel2 - name from the Bunker Locations API
		locationCode - Internal location code
		qtyUnitMetric - Unit of metric of the quantity fields
		minQty - Minimum quantity

maxQty - Maximum quantity

finalQty - Final quantity

sysProductId - id from the [Bunker Products API](#)

sysProductSpecificationId - id from the [Bunker Product Specifications API](#)

productName - Product name in T&S

specs - Product specification name in T&S

productDisplayName - Product display name for internal usage

fuelTypeCode - fuelTypeCode from the [Bunker Fuel Types API](#)

stemStartDate - Format: *YYYY*-*MM*-*DD*T*HH*:*mm*:*ss*.*sss*Z

stemEndDate - Format: *YYYY*-*MM*-*DD*T*HH*:*mm*:*ss*.*sss*Z

remark - Remarks

vesselImo - IMO no. of the receiving vessel

vesselName - Name of the receiving vessel

vesselEta -
Estimated time of arrival of the receiving vessel
Format: YYYY-MM-DDTHH:mm:ss.sssZ

vesselEmail - Email of the receiving vessel

bargeOrgId - id from the [Bunker Suppliers API](#)

agentCompany - Company name of the agent

agentContact - Contact of the agent

surveyorCompany - Company name of the surveyor

surveyorContact - Contact of the surveyor

surveyorEmail - Email of the surveyor

nominationReference - Nomination reference

beginTransactionDt - The date that begin the job

pageable : Paging details
sort, **pageNumber**, **pageSize**, **offset**, **paged**, **unpaged** (Various):
Details about sorting and paging.

totalElements, **totalPages** (Integer): Total number of elements and pages.

last, **first**, **size**, **number**, **empty** (Various): Additional pagination

		details.
errors	String	Error messages for internal usage
traceId	String	Trace ID for internal usage

Example

cURL

```
curl --location '/api/v1/client-app/jobs' \
--header 'tns-api-key: e9541bedaa05b141c3c99ca9308da89eef7b1bc199b8698d8dfb69b56f0e2c6e'
```

Response Body

```
{
    "code": 1000,
    "message": "success",
    "data": {
        "content": [
            {
                "id": "1771081455988957184",
                "createdAt": "2024-03-22T07:48:19.513Z",
                "updatedAt": "2024-03-28T01:00:57.986Z",
                "createdBy": "1770370377327874048",
                "updatedBy": "1605745961802485760",
                "createdBySysOrganization": "1605745949571895296",
                "updatedBySysOrganization": "1605745949571895296",
                "type": 1,
                "status": 5,
                "termContractType": null,
                "termContractId": null,
                "orderType": null,
                "orderId": null,
                "sellerSysOrganizationId": null,
                "seller": null,
                "buyerSysOrganizationId": null,
                "buyer": null,
                "hasSurveyor": true,
                "bargeImo": "8691544",
                "bargeName": "8691544",
```

```
"bargeShipId": null,
"bargeUpdatedAt": "2024-03-22T07:48:19.507Z",
"mitigatingCompanyOrgId": "1605745949571895296",
"port": "Singapore",
"locationLevel1": "SEBAROK ISLAND",
"locationLevel2": "CLEANSEAS SEBAROK PIER",
"locationCode": "SEBAROK ISLAND CLEANSEAS SEBAROK PIER",
"qtyUnitMetric": "MT",
"minQty": 5.0,
"maxQty": 10.0,
"finalQty": 5.0,
"sysProductId": "1514543051161264132",
"sysProductSpecificationId": "1514543063874199552",
"productName": "HSFO 3.5% S MAX RME180",
"specs": "ISO 8217:2005",
"productDisplayName": "HSFO 3.5% S MAX RME180 (2005 SPECS)",
"fuelTypeCode": "MDO",
"stemStartDate": "2024-03-21T16:00:00.000Z",
"stemEndDate": "2024-03-30T16:00:00.000Z",
"remark": "",
"referenceNo": null,
"loadingTime": null,
"loadingQty": 0.0,
"terminal": null,
"cqCoqId": null,
"exWharfType": 0,
"floaterName": null,
"vesselImo": "9793844",
"vesselName": "BANGLAR ARJAN",
"vesselEta": "2024-03-22T16:00:00.000Z",
"vesselEmail": "test@mail.com",
"vesselShipId": null,
"vesselLicenseNo": null,
"vesselUpdatedAt": "2024-03-22T07:48:19.277Z",
"bargeOwnerId": "1605745949571895296",
"bargeOrgId": "1605745949571895296",
"bdnOrganizationName": "Test TS Company One",
"bdnOrganizationLicenseNumber": "LN122333",
"agentCompany": "TEST",
"agentContact": "TEST",
"surveyorCompany": "Test Comp",
"surveyorContact": "TEST",
"surveyorEmail": "test@mail2.com",
```

```
            "bdnId": "1771084087830831104",
            "certSysFileId": null,
            "estimatedLoadingTime": null,
            "operationalRequirement": 0,
            "pilotRequired": false,
            "tugboatRequired": false,
            "numberTugboatRequired": 0,
            "bargeInfo": null,
            "nominationEmails": null,
            "nominationRemark": null,
            "nominationReference": null,
            "createdWithSellerBuyer": false,
            "mobileAppGeneratedId": null,
            "mpaEbdnFileId": null,
            "beginTransactionDt": "2024-03-22T07:58:46.347Z",
            "bdnNoUsageId": "1771084088761966592",
            "mpaTransactionStatus": null,
            "terminalLoading": false,
            "floaterLoading": false
        }
    ],
    "pageable": {
        "sort": {
            "sorted": false,
            "unsorted": true,
            "empty": true
        },
        "pageNumber": 0,
        "pageSize": 10,
        "offset": 0,
        "unpaged": false,
        "paged": true
    },
    "totalElements": 1,
    "totalPages": 1,
    "last": true,
    "sort": {
        "sorted": false,
        "unsorted": true,
        "empty": true
    },
    "numberOfElements": 1,
    "first": true,
```

```
        "size": 10,
        "number": 0,
        "empty": false
    },
    "errors": null,
    "traceId": "4028ce73-444d-4506-8111-c1e9a1c9dbf1"
}
```

Get Specific Job

URL	/api/v1/client-app/jobs/**{jobId}**
Method	GET
Description	API for retrieving a job by its id

Detail

Request

	Name	Data Type	Mandatory	Description
Header	tns-api-key	String	Yes	API key provided by Bunkerchain
Path	jobId	String	Yes	Internal job id from T&S

Response (Delivery)

Name	Data Type	Description
id	String	Internal id for the job
type	Integer	1 = Delivery, 2 = Loading, 3 = STS
bargeImo	String	IMO no. of the bunker barge
bargeName	String	Name of the bunker barge
sysProductId	String	id from the Bunker Products API
productName	String	Product name in T&S
sysProductSpecification Id	String	id from the Bunker Product Specifications API
specs	String	Product specification name in T&S
qtyUnitMetric	String	Unit of metric of the quantity fields

fuelTypeCode	String	fuelTypeCode from the Bunker Fuel Types API
remark	String	Remark
referenceNo	String	Reference no. at the client application
port	String	Port
locationLevel1	String	groupName from the Bunker Locations API
locationLevel2	String	name from the Bunker Locations API
hasSurveyor	Boolean	Has surveyor onboard
minQty	Double	Minimum quantity
maxQty	Double	Maximum quantity
finalQty	Double	Final quantity
stemStartDate	DateTime	Format: *YYYY*-*MM*-*DD*T*HH*:*mm*:*ss*.*sss*Z
stemEndDate	DateTime	Format: *YYYY*-*MM*-*DD*T*HH*:*mm*:*ss*.*sss*Z
vesselImo	String	IMO no. of the receiving vessel
vesselName	String	Name of the receiving vessel
vesselEta	DateTime	Estimated time of arrival of the receiving vessel Format: *YYYY*-*MM*-*DD*T*HH*:*mm*:*ss*.*sss*Z
vesselEmail	String	Email of the receiving vessel
bargeOrgId	String	id from the Bunker Suppliers API
agentCompany	String	Company name of the agent
agentContact	String	Contact of the agent
surveyorCompany	String	Company name of the surveyor
surveyorContact	String	Contact of the surveyor
surveyorEmail	String	Email of the surveyor
nominationReference	String	Nomination reference
beforeDeliveryFileId	String	PDF file id of the before delivery section, content of the file can be retrieved via the Get Job File API
afterDeliveryFileId	String	PDF file id of the after delivery section, content of the file can be retrieved via the Get Job File API
summaryFileId	String	PDF file id of the document generated for MPA, content of the file can be retrieved via the Get Job File API
bunkerMeteringTicketFil	String	Image file id of the BMT, content of the file can be retrieved via the

eId		[Get Job File API](#)
certificateOfQualityFileId	String	Image file id of the certificate of quality, content of the file can be retrieved via the [Get Job File API](#)
bunkerRequisition	Object	Details of Bunker Requisition
preDeliverySafetyChecklist	Object	Details of Pre-Delivery Safety Checklist
mfmSystemSealsChecklist	Object	Details of MFM System Seals Checklist
meterReadingRecord	Object	Details of Meter Reading Record
mfmPreDeliveryTerms	Object	Details of MFM Pre-Delivery Terms
bunkerDeliveryNote	Object	Details of Bunker Delivery Note
timesheet	Object	Details of Timesheet
statementOfFact	Object	Details of Statement of Fact
letterOfProtestBarge	Object	Details of Letter of Protest Barge
letterOfProtestVessel	Object	Details of Letter of Protest Vessel
letterOfProtestOthers	List<Object>	Details of Letter of Protest Others
additionalDocuments	List<Object>	Details of additional documents
beforeDeliveryCargoOfficerSignature	Object	Details of the cargo officer's signature in the before delivery section
beforeDeliveryChiefEngineerSignature	Object	Details of the chief engineer's signature in the before delivery section
beforeDeliverySurveyorSignature	Object	Details of the surveyor's signature in the before delivery section
afterDeliveryCargoOfficerSignature	Object	Details of the cargo officer's signature in the after delivery section
afterDeliveryChiefEngineerSignature	Object	Details of the chief engineer's signature in the after delivery section
afterDeliverySurveyorSignature	Object	Details of the surveyor's signature in the after delivery section

Response (Loading)

Name	Data Type	Description
id	String	Internal id for the job
type	Integer	1 = Delivery, 2 = Loading, 3 = STS

bargeImo	String	IMO no. of the bunker barge
bargeName	String	Name of the bunker barge
sysProductId	String	id from the Bunker Products API
productName	String	Product name in T&S
sysProductSpecificationId	String	id from the Bunker Product Specifications API
specs	String	Product specification name in T&S
qtyUnitMetric	String	Unit of metric of the quantity field
fuelTypeCode	String	fuelTypeCode from the Bunker Fuel Types API
remark	String	Remark
referenceNo	String	Reference no. at the client application
port	String	Port
locationLevel1	String	groupName from the Bunker Locations API
locationLevel2	String	name from the Bunker Locations API
stemStartDate	DateTime	Format: *YYYY*-*MM*-*DD*T*HH*:*mm*:*ss*.*sss*Z
stemEndDate	DateTime	Format: *YYYY*-*MM*-*DD*T*HH*:*mm*:*ss*.*sss*Z
loadingTime	DateTime	Format: *YYYY*-*MM*-*DD*T*HH*:*mm*:*ss*.*sss*Z
loadingQty	Double	Loading quantity
exWharfType	Integer	0 = Terminal, 1 = Floater
floaterName	String	Name of the floater when exWharfType is 1
bunkerMeteringTicketFileId	String	Image file id of the BMT, content of the file can be retrieved via the Get Job File API
certificateOfQualityFileId	String	Image file id of the certificate of quality, content of the file can be retrieved via the Get Job File API
certificateOfQuantityFileId	String	Image file id of the certificate of quantity, content of the file can be retrieved via the Get Job File API
cqCoq	Object	Details of CqCoq
timesheet	Object	Details of Timesheet
additionalDocuments	List<Object>	Details of additional documents

Response (STS)

Name	Data Type	Description
id	String	Internal id for the job
type	Integer	1 = Delivery, 2 = Loading, 3 = STS
bargeImo	String	IMO no. of the bunker barge
bargeName	String	Name of the bunker barge
sysProductId	String	id from the Bunker Products API
productName	String	Product name in T&S
sysProductSpecificationId	String	id from the Bunker Product Specifications API
specs	String	Product specification name in T&S
qtyUnitMetric	String	Unit of metric of the quantity field
fuelTypeCode	String	fuelTypeCode from the Bunker Fuel Types API
remark	String	Remark
referenceNo	String	Reference no. at the client application
port	String	Port
locationLevel1	String	groupName from the Bunker Locations API
locationLevel2	String	name from the Bunker Locations API
finalQty	Double	Final quantity
vesselImo	String	IMO no. of the receiving bunker barge
vesselName	String	Name of the receiving bunker barge
vesselEta	DateTime	Estimated time of arrival of the receiving bunker barge Format: **YYYY**-**MM**-**DD**T**HH**:**mm**:**ss**.**sss**Z
bargeOrgId	String	id from the Bunker Suppliers API
beforeDeliveryFileId	String	PDF file id of the before delivery section, content of the file can be retrieved via the Get Job File API
afterDeliveryFileId	String	PDF file id of the after delivery section, content of the file can be retrieved via the Get Job File API
summaryFileId	String	PDF file id of the document generated for MPA, content of the file can be retrieved via the Get Job File API
bunkerMeteringTicketFileId	String	Image file id of the BMT, content of the file can be retrieved via the Get Job File API

certificateOfQualityFileId	String	Image file id of the certificate of quality, content of the file can be retrieved via the Get Job File API
meterReadingRecord	Object	Details of Meter Reading Record
bunkerDeliveryNote	Object	Details of Bunker Delivery Note
timesheet	Object	Details of Timesheet
letterOfProtestBarge	Object	Details of Letter of Protest Barge
letterOfProtestVessel	Object	Details of Letter of Protest Vessel
letterOfProtestOthers	List<Object>	Details of Letter of Protest Others
additionalDocuments	List<Object>	Details of additional documents
beforeDeliveryCargoOfficerSignature	Object	Details of the cargo officer's signature in the before delivery section
beforeDeliveryChiefEngineerSignature	Object	Details of the chief engineer's signature in the before delivery section
afterDeliveryCargoOfficerSignature	Object	Details of the cargo officer's signature in the after delivery section
afterDeliveryChiefEngineerSignature	Object	Details of the chief engineer's signature in the after delivery section

Example

cURL

```
curl --location '/api/v1/client-app/jobs/1770341518706749440' \
--header 'tns-api-key: e9541bedaa05b141c3c99ca9308da89eef7b1bc199b8698d8dfb69b56f0e2c6e'
```

Save Delivery Job

URL	/api/v1/client-app/jobs/delivery/**{jobId}**
Method	POST
Description	API for creating or updating a delivery job

Detail

Request

	Name	Data Type	Mandatory	Description

Header	tns-api-key	String	Yes	API key provided by Bunkerchain
JSON Body	id	String	Conditional	The id generated by T&S during job creation, which is required for the update operation
	bargeImo	String	No	IMO no. of the bunker barge
	port	String	Yes	Port
	locationLevel1	String	No	groupName from the Bunker Locations API
	locationLevel2	String	No	name from the Bunker Locations API
	minQty	Double	No	Minimum quantity
	maxQty	Double	No	Maximum quantity
	finalQty	Double	Yes	Final quantity
	sysProductId	String	Yes	id from the Bunker Products API
	sysProductSpecificationId	String	Yes	id from the Bunker Product Specifications API
	fuelTypeCode	String	Yes	fuelTypeCode from the Bunker Fuel Types API
	stemStartDate	DateTime	Yes	Format: *YYYY*-*MM*-*DD*T*HH*:*mm*:*ss*.*sss*Z
	stemEndDate	DateTime	Yes	Format: *YYYY*-*MM*-*DD*T*HH*:*mm*:*ss*.*sss*Z
	remark	String	No	Remark
	referenceNo	String	No	Reference no. at the client application
	vesselImo	String	Yes	IMO no. of the receiving vessel
	vesselName	String	Yes	Name of the receiving vessel
	vesselEta	DateTime	No	Estimated time of arrival of the receiving vessel Format: *YYYY*-*MM*-*DD*T*HH*:*mm*:*ss*.*sss*Z
	vesselEmail	String	No	Email of the receiving vessel
	bargeOrgId	String	Yes	id from the Bunker Suppliers API
	agentCompany	String	No	Company name of the agent
	agentContact	String	No	Contact of the agent
	surveyorCompany	String	No	Company name of the surveyor
	surveyorContact	String	No	Contact of the surveyor
	surveyorEmail	String	No	Email of the surveyor
	nominationReference	String	No	The value of this field will be printed at the EBDN

	callbackUrl	String	No	This field accepts a value only during job creation. T&S will make a callback request to the client via this URL after job completion.
	supplyType	String	Yes	"I" for international and "D" for domestic

Response

[Delivery Response](#)

Example

cURL

```
curl --location '/api/v1/client-app/jobs/1770341518706749440' \
--header 'tns-api-key: e9541bedaa05b141c3c99ca9308da89eef7b1bc199b8698d8dfb69b56f0e2c6e'
```

Save Loading Job

URL	/api/v1/client-app/jobs/loading/**{jobId}**
Method	POST
Description	API for creating or updating a loading job

Detail

Request

	Name	Data Type	Mandatory	Description
Header	tns-api-key	String	Yes	API key provided by Bunkerchain
Body	id	String	Conditional	The id generated by T&S during job creation, which is required for the update operation
	bargeImo	String	No	IMO no. of the bunker barge
	port	String	Yes	Port
	locationLevel1	String	No	groupName from the [Bunker Locations API](#)
	locationLevel2	String	No	name from the [Bunker Locations API](#)
	sysProductId	String	Yes	id from the [Bunker Products API](#)
	sysProductSpecificationId	String	Yes	id from the [Bunker Product Specifications API](#)
	fuelTypeCode	String	Yes	fuelTypeCode from the [Bunker Fuel Types API](#)

	stemStartDate	DateTime	Yes	Format: ***YYYY***-***MM***-***DD***T***HH***:***mm***:***ss***.***sss***Z
	stemEndDate	DateTime	Yes	Format: ***YYYY***-***MM***-***DD***T***HH***:***mm***:***ss***.***sss***Z
	remark	String	No	Remark
	referenceNo	String	No	Reference no. at the client application
	loadingTime	DateTime	No	Format: ***YYYY***-***MM***-***DD***T***HH***:***mm***:***ss***.***sss***Z
	loadingQty	Double	Yes	Loading quantity
	exWharfType	Integer	Yes	0 = Terminal, 1 = Floater
	floaterName	String	No	Name of the floater when exWharfType is 1
	callbackUrl	String	No	This field accepts a value only during job creation. T&S will make a callback request to the client via this URL after job completion

Response

[Loading Response](#)

Example

cURL

```
curl --location '/api/v1/client-app/jobs/1770341518706749440' \
--header 'tns-api-key: e9541bedaa05b141c3c99ca9308da89eef7b1bc199b8698d8dfb69b56f0e2c6e'
```

Save STS Job

URL	/api/v1/client-app/jobs/sts/**{jobId}**
Method	POST
Description	API for creating or updating a STS job

Detail

Request

	Name	Data Type	Mandatory	Description
Header	tns-api-key	String	Yes	API key provided by Bunkerchain
Body	id	String	Conditional	The id generated by T&S during job creation. It is required for the update operation

	bargeImo	String	Yes	IMO no. of the supplying bunker barge
	port	String	Yes	Port
	locationLevel1	String	No	groupName from the Bunker Locations API
	locationLevel2	String	No	name from the Bunker Locations API
	finalQty	Double	Yes	Final quantity
	sysProductId	String	Yes	id from the Bunker Products API
	sysProductSpecificationId	String	Yes	id from the Bunker Product Specifications API
	fuelTypeCode	String	Yes	fuelTypeCode from the Bunker Fuel Types API
	remark	String	No	Remark
	referenceNo	String	No	Reference no. at the client application
	vesselImo	String	Yes	IMO no. of the receiving bunker barge
	vesselEta	DateTime	No	Estimated time of arrival of the receiving bunker barge Format: *YYYY*-*MM*-*DD*T*HH*:*mm*:*ss*.*sss*Z
	bargeOrgId	String	Yes	id from the Bunker Suppliers API
	callbackUrl	String	No	This field accepts a value only during job creation. T&S will make a callback request to the client via this URL after job completion.

Response

STS Response

Example

cURL

```
curl --location '/api/v1/client-app/jobs/1770341518706749440' \
--header 'tns-api-key: e9541bedaa05b141c3c99ca9308da89eef7b1bc199b8698d8dfb69b56f0e2c6e'
```

Get Job File

URL	/api/v1/client-app/jobs/**{jobId}**/files/**{fileId}**
Method	POST
Description	API for retrieving a file associated with the given job

Detail

Request

	Name	Data Type	Mandatory	Description
Header	tns-api-key	String	Yes	API key provided by Bunkerchain
Path	jobId	String	Yes	Internal job id in T&S
	fileId	String	Yes	Internal file id in T&S

Response

	Name	Data Type	Description
Header	Content-Type	String	Content type of the file
Body		BLOB	PDF, image

Example

cURL

```
curl --location '/api/v1/client-app/jobs/1768170223177084928/files/1768172604698664960' \
--header 'tns-api-key: e9541bedaa05b141c3c99ca9308da89eef7b1bc199b8698d8dfb69b56f0e2c6e'
```

Callback

Job

URL	The client provides the callback URL during job creation
Method	POST
Description	The client application should provide an API endpoint to receive notifications sent by T&S after job completion

Detail

Request Body

Name	Data Type	Description
signature	String	Digital signature in hexadecimal

hashAlg	String	Algorithm for hashing content
job.id	String	Job id generated by T&S
job.referenceNo	String	Job reference no. provided by the client
job.status	Integer	0 = pending, 1 = accepted by the bunker barge, 3 = in progress, **4 = *completed***, 5 = cancelled

Example

Request Body

```
{
  "signature":
"22be4cafc0f82f14d128aaa88cb988223e494c5ec882087dd01041185357c02f3f97782f2c107b2fa187fc50c2d
0561c3c2d7441b3085d89cf4b19e148b4b8fd0932cdf9ea8390339363ed54d110dd32a75749e348f5d6e52d66b84
0cedf4a67a301a3040362895a37945424f7d8c69b4ead75e00345acd6d2bae17864fcdfbd4f0b33a956d98b5fa31
0f255d093b883ab8f19210f3033adbca27efc89a5182ca4d09282ea59b4c1f8a6199099fed665d44ef89ffaa6c11
b04c68ce047b445b64d57215d1c22008b6d3eb53ced9b1889c55887b076d8c03e4714ab41d3c5cf34006dcc51b95
4a40e4ce043275bf58344dda04c560c34a7dfe2d1e25ab0365e82",
  "hashAlg": "SHA-512",
  "job": {
    "id": "1770341518706749440",
    "referenceNo": "TEST DELIVERY REF 1",
    "status": 4
  }
}
```

Procedures To Validate Request Signature

1. The client application receives a request sent by T&S via the callback URL.
2. The client application generates a hash from the job JSON object sent by T&S in the request body using the provided hashing algorithm.

JSON Object

```
{
    "id": "1770341518706749440",
    "referenceNo": "TEST DELIVERY REF 1",
    "status": 4
}
```

Note: The order of the fields in the JSON object is crucial, it must be exactly the same as shown above.

Hash Generated

```
0ad91113775ac479cc7f0adc30a40a65a3b9214e7d1568a5fbb06524bd647041eadb8ad4ebac8614aa8af
3d2a8b65b5d7d116f85eac5f3a4f6879231f7f67675
```

3. The client application verifies the signature against the hash generated in the previous step using the signing public key and key algorithm obtained from the Client Application Info API.

Signature

```
22be4cafc0f82f14d128aaa88cb988223e494c5ec882087dd01041185357c02f3f97782f2c107b2fa187f
c50c2d0561c3c2d7441b3085d89cf4b19e148b4b8fd0932cdf9ea8390339363ed54d110dd32a75749e348
f5d6e52d66b840cedf4a67a301a3040362895a37945424f7d8c69b4ead75e00345acd6d2bae17864fcdfb
d4f0b33a956d98b5fa310f255d093b883ab8f19210f3033adbca27efc89a5182ca4d09282ea59b4c1f8a6
199099fed665d44ef89ffaa6c11b04c68ce047b445b64d57215d1c22008b6d3eb53ced9b1889c55887b07
6d8c03e4714ab41d3c5cf34006dcc51b954a40e4ce043275bf58344dda04c560c34a7dfe2d1e25ab0365e
82
```

Note: After converting the signature from hexadecimal string to bytes, remove any leading zero byte.

Signing Public Key In Base64 & Signing Key Algorithm

```
{
    "signingPublicKey":
"MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAorpKLiWQ/KdStffwdCYYYgFyrqn+J6TfGkNGrsaL
BEl6+zqa5Nis3JGBGvnuDBTT4WE+U7VhXYbi99rBmHoSegQBCbAJRv9JNyXNHi1gZ2/Wn038+yEd/lOL5thCM
8nOEpsSUgZoKZHfZBmD+LryaFqcwXm+Yd/zbqeOjm8APXdmzDZ7IpS64gdE+oylgDr5c0+EXjiYiFU7X9KKrR
eRjR6kd/pSzEv0jaOCduCbUyfEKjDQ/VzFZmeGgrHi/VbClqzmC3W9M4r2D75tRC5vRbpaiJHtUWw1fvdH0ho
HQ0DEhcRsnxEe/K3hQ+vjOzT9l0GmBd5zGgBRHr+DaRih/QIDAQAB",
    "signingKeyAlg": "RSA"
}
```

4. A successful verification of the signature using the public key confirms that the request originated from T&S.