PHILLIP SECURITIES PTE LTD
(INCORPORATED IN THE REPUBLIC OF SINGAPORE)
STOCK & SHARE BROKERS
MEMBER OF THE STOCK EXCHANGE OF SINGAPORE LTD

PHILLIP SECURITIES PTE LTD

POEMS Mobile 2.0 Futures REST API

Program Design Specifications

For:	*Phillip Securities Pte Ltd*	Project Ref:	
Author:	*Keyfe Ang*	Doc Ref:	*POEMS Mobile 2.0 Futures REST API - Program Design Specifications.doc*
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To:		Cc:	

Document Revision History

Document Title :

Version	Revised by	Effective Date	Summary of Change	Reason for change
1.0	Keyfe Ang	17-May 2016	Initial Draft	
1.1	Keyfe Ang	15-Jul 2016	Minor document update	
1.2	Jerry Butiong	19-Jul 2016	Minor document update	
1.3	Jerry Butiong	26-Jul 2016	Added Phase 4 modules	
1.4	Jerry Butiong	19-Aug 2016	Minor document update	
1.5	Jerry Butiong	22-Aug 2016	Updated the format for clearer details. Minor updates to modules	
1.6	Jerry Butiong	26-Aug 2016	Minor updates	
1.7	Jerry Butiong	30-Aug 2016	Minor updates	
1.8	Jerry Butiong	2-Sep 2016	Minor updates	
1.9	Jerry Butiong	15-Sep 2016	Minor updates	
1.10	Jerry Butiong	27-Sep 2016	Minor updates	
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1.12	Jerry Butiong	23-Oct 2016	Minor updates	
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1.16	Jerry Butiong	23-Dec 2016	Minor updates	
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1.18	Jerry Butiong	3-Jan 2017	Minor updates	
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1.21	Jerry Butiong	16-Jan 2017	Minor updates	
1.22	Jerry Butiong	17-Jan 2017	Minor updates	
1.23	Jerry Butiong	26-Jan 2017	Minor updates	
1.24	Jerry Butiong	2-Feb 2017	Minor updates	
1.25	Jerry Butiong	3-Mar 2017	Minor updates	
1.26	Jerry Butiong	23-Mar 2017	Minor updates	

Change Logs

1.1 :
- **Orders/Submit**
  - Updated response details in submit order

1.2 :
- **Contract/Contract Details**
  - Added Price and Marketdepth as parameter of the request

1.3 :
- Added Phase 4 modules

1.4 :
- **Orders/TradeInfo**
  - Updated the URI of getting the contract trade information for trade.

1.5 :
- Updated the document based on template format for more clearer details
- Added Change Logs section
- Changed the versioning of the document
- **Contract/Contract Details**
  - Updated the response properties for each of the product
  - Removed the *marketdepth* property as market depth data can be only retrieve from PMP once contract is subscribed.
  - Added additional properties for FT and FX contracts

- **Orders/TradeInfo**
  - Updated the response property of Trade Info between Futures and Forex contracts.
  - Changed the data type of *tickSize* from String to *BigDecimal*
  - Added *initialMargin* and *maintenanceMargin* for Forex and added *marginCurrency* property for both FT and FX trade info

- **Orders/Validate**
  - Updated the parameters to be pass for Futures/Forex

1.6 :
- **Orders/Validate**
  - For consistency, changed the request header parameter from "`encryptedPassword`" to "`encryptedPIN`"
  - Updated the parameters to be pass for Futures/Forex. Removed `ocoType` parameter
- **Orders/Amend Order**
  - Updated the URI from `{product}/orders/{type}/{orderNo}` to `{product}/orders/amend/{orderNo}`
- **Orders/Withdraw Order**
  - Updated the URI from `{product}/orders/{type}/{orderNo}` to `{product}/orders/withdraw/{orderNo}`
- **FXInvest/Submit Order**
  - For consistency, changed the request header parameter from "`encryptedPassword`" to "`encryptedPIN`"
- **FXInvest/Amend Order**
  - For consistency, changed the request header parameter from "`encryptedPassword`" to "`encryptedPIN`"
  - Changed the URI from `NFX/conversion{cOrderNo}/{orderNo}` to `NFX/conversion/amend/{cOrderNo}/{orderNo}`
- **FXinvest/Withdraw Order**
  - For consistency, changed the request header parameter from "`encryptedPassword`" to "`encryptedPIN`"
  - Changed the URI from `NFX/conversion/{cOrderNo}/{orderNo}` to `NFX/conversion/withdraw/ {cOrderNo}/{orderNo}`

1.7 :

- Updated Environment section
- **Contract/Contract Details**
  - o Updated the format of counterID value for Futures contract to `<product>/<exchange>/<exchange>/symbol`

- **Orders/Trade Info**
  - o Added `actions` property to the response
- Orders/Validate
  - o Changed the value of expiry `Day` to `0`
- **Orders/Submit Order**
  - o Updated the response properties
- **News**
  - o Added search functionality
- **News/News Headline**
  - o Added new URI to search all news from all categories

1.8 :

- **HTTP Request**
  - o Added the common parameter in request header and query parameter for GET, PUT , POST Request methods for `osVersion` and `language`
- **Orders/Trade Info**
  - o Added `defaultQuantity`, `askPrice`, `bidPrice` in trade info for both FX and FT contracts
- **News**
  - o Set the News URI `@PathVariable {product}` for FX or FXMN only
  - o Remove `{product}/news/search` URI as the search is supported in news headlines URI
- **News/Get News Headlines**
  - o Added `contentURI` property to the response
  - o Added `keyword` query parameter to allow search
  - o Supports all news headlines search with `{product}/news/all` URI
  - o Supports single/multiple `categoryID` separated with pipe "|" delimiter

1.9 :

- **Account/Account Details**
  - o Rename property names
- **Orders/Trade Info**
  - o Added `passwordRequired` and `twoFARequired` properties in response
- **Orders/Submit Order**
  - o Added `passwordRequired` and `twoFARequired` properties in response
- **Orders/Amend Order**
  - o Added `passwordRequired` and `twoFARequired` properties in response
- **Orders/Withdraw Order**
  - o Added `passwordRequired` and `twoFARequired` properties in response
- **Orders/Order Details**
  - o Added `passwordRequired` and `twoFARequired` properties in response
- **Fund Withdrawal**
  - o Changed the title from Fund Withdrawal to Online Withdrawal
  - o Changed the URI from `{url}/fundwithdrawal` to `{url}/onlinewithdrawal` for all methods

1.10 :

- **PreLogin**
  - o Added section for PreLogin method

1.11 :

- **FXInvest**
  - o Added Get FXInvest Trading Info
  - o Added Validate Currency Ledger Balance

1.12 :

- **Account**
  - o Added `{product}` in Equity Balance, Account Details and Account Remisier URI
- **Order/Order Details**

- o Updated the response in FT and FX/FXMN order details based on Order History Log changes
- **FXInvest**
  - o Added new methods to support add/remove/move counters and sort watch list.
- **FXInvest/Amend**
  - o Updated the URI and request parameters
- **FXInvest/Withdraw**
  - o Updated the URI
- **Transaction History**
  - o Added this new section for FXInvest/Online Withdrawal Transaction History
  - o API methods to get the FXInvest/Online Withdrawal order details

1.13 :
- **Online Withdrawal**
  - o Added method for validating order
- **Online Withdrawal/Submit Order**
  - o Updated the request body and response

1.14 :
- **Net Position**
  - o Updated the net position method.
  - o Added methods to get all (consolidated) list of net positions
- **FXInvest**
  - o Added method for contract search
- **FXInvest / Watchlist**
  - o Renamed the Contract and Watchlist response from `exchageDisplay` to `exchangeDisplay` and `counterId` to `counterID`

1.15 :
- **Alert**
  - o Change the URI from `/alerts` to `/alert`
- **Alert / Account**
  - o Grouped the response for margin call and fund deficit

1.16 :
- **Chart**
  - o Updated the response property for both FT/FX chart data
- **Account**
  - o Added NFX, to get the user account balance
  - o Updated the response properties

1.17 :
- **Transaction History**
  - o Updated the URI of FXInvest and Online Withdrawal Order Details

1.18 :
- **Online Withdrawal / Funds**
  - o Added `passwordRequire` and `twoFARequire` properties on response
- **Transaction History**
  - o Added `passwordRequire` and `twoFARequire` properties on response

1.19 :
- **Position Details**
  - o Added `currency` and `expiry` properties for Futures Net Position Detail
  - o Added `currencyPair` property for Forex Net Position Detail

1.20 :
- **Position Details**
  - o Added `broughtForward` and `intraDay` properties in Futures/Forex Net Position Detail

1.21 :
- **Account / Account Details**
  - o Added `clientName` property in response
- **Account / Equity Balance**

    o   Added `termsAndCondition` property in response
- **Order Details**
  - o   Added `product` and `productIcon` properties in Futures/Forex Order Details response

1.22   :
- **Alerts / Account Alerts**
  - o   Added `note` property for fund deficit
  - o   Added `foreMoreInfo` property to the For more information details

1.23   :
- **Order / Trade Info**
  - o   Changed the data type of `tickSize` property from `Decimal` to `String`. This is to return properly the `tickSize` value especially those with long values (eg. 0.0000005) to avoid returning as exponential value (eg. 5.0E-7)
- **Order / Order Details**
  - o   Added `tickSize` property for FX and FXMN order details response.
- **FXInvest / Trade Info**
  - o   Changed the data type of `tickSize` property from `Decimal` to `String` for consistency of `tickSize` data type in Trade Info

1.24   :
- **Contract / Contract Details**
  - o   Added new properties `highlightStartPosition`, `highlightLengthOfCharacters` and `noOfDecimalsDisplay` in FXInvest contract details response
  - o   Removed unused properties `pointPosition`, `ticksForLimit`, `ticksForMarket`, `tickSizeForLimit` and `tickSizeForMarket` in FXInvest Contract details
- **Order / Trade Info**
  - o   Added new properties `currency` and `noOfDecimalsDisplay` in FX/FXMN Trade info
  - o   Added new property `noOfDecimalsDisplay` in FT Trade info
- **FXInvest / Trade Info**
  - o   Added new properties `currency` and `noOfDecimalsDisplay` in FXInvest Trade info
- **Transaction History / FXInvest Order**
  - o   Added new property `unitMultiplier` in FXInvest order details

1.25   :
- **Access**
  - o   AddAdd new API method to validate FXInvest access rights. Refer to EPS-465
- **Transaction History / FXInvest Order Details**
  - o   Added new property `noOfDecimalsDispay` for setting the limit of decimal places in amend. Reference EPS-661
- **Online Withdrawal / Validate Order**
  - o   Added new properties `confirmationMessage`, `note`, `passwordRequired` and `twoFARequired` in validate response. Refer to EPS-817 for the request of new properties.

1.26   :
- **Order / Amend Order**
  - o   Add new `orderDetailURI` response property. Reference on EPS-1025 and EPS-1026

Table of Contents

I.   Program Definition

PFPL POEMS Mobile 2.0 API – This API will be used to support POEMS Mobile 2.0 application for both Android and iPhone platforms.

This API will support the following modules:
- Futures (FT)
- Forex (FX/FXMN)
- FXInvest (NFX)
- Funds Withdrawal/Online Withdrawal

1.1   Program Description and the module in Design Specification this program is based on

1.1.1 PreLogin

Provide API functions to supports pre-login functions to retrieve information for FX pre-login watchlist and News

1.1.2 Account

Provide API functions to supports all account related information retrieval such as Account Details, Account Remisier or Account Executive and Equity Balance

1.1.3 Settings

Provide API function to get the product specific settings like PMP settings

1.1.4 Contract

Provide API function to support all contract information retrieval for Futures/Forex.

1.1.5 Chart

Provide API function to support the retrieval of chart data for Futures/Forex

1.1.6 Order

Provide API functions to support Futures/Forex operations to submit , amend and withdraw order, retrieval of order history and order details.

1.1.7 News

Provide API function to support the retrieval of Futures/Forex related News

1.1.8 Net Position

Provide API functions to support the retrieval of Futures/Forex Net Position summary and details

1.1.9 Alerts

Provide API functions to support the retrieval of Announcement, Account alerts and acknowledging alerts.

1.1.10 FXInvest

Provide API functions to support the FXInvest such as watchlist, validate/submit order, amend, withdrawal, order history/order details retrieval

1.1.11 Online Withdrawal

Provide API functions to support the Online Withdrawal such as order submission, retrieval of information.

1.2　Programming Language/Version

For this REST API, the following language is used
- Java / SpringMVC

1.3　Drivers Required/Version

N/A

II.   Structure Design

2.1   Block Chart or Flow Chart on top level structure of the program

To be updated

2.2   Description of each module

2.2.1 REST Architecture

2.2.1.1 HTTP Request

Section	Component		
Action	HTTP Methods	*GET* – retrieve a resource *PUT* – update a resource *POST* – create a resource *DELETE* – delete a resource	
	HTTPS	Protocol for secure communication over a network.	
Request Header	accountNo	The Client account no. Identifies/Authorize client using & accessing application resource.	
	sessionID	The session ID. Identifies the current active account's session.	
	deviceID	The device ID. Identifies the user's specific device identifier.	
	apiKey	The application Key. Indentifies the calling application.	
	versionNo	The mobile app version no.	
Request Body	Common parameter for **POST** request only		
	Content-Type	*JSON*	application/json
		form	Application/x-www-form-urlencoded
	osVersion	Mobile OS version no.	
	language	Optional	Yes
		Values	1 – English 2 – Simplified Chinese
		Default Value	1
Parameters	Common query parameter for **GET** request only		
	osVersion	Mobile OS version no.	
	language	Language	
		Optional	Yes
		Values	1 – English 2 – Simplified Chinese
		Default Value	1

2.2.1.2 HTTP Response

Section	Component	
Response Body	HTTP Status	200 – OK 400 – Bad Request 401 – Un-authorize 404 – Resource not found 500 – Internal Server Error
	Response status: code	Defines the specific status code. Refer to Return Code
	Response Message: message	A detailed description about the response.
		Nullable	Yes

Response data: `data`	Defines the resources requested.	
	Nullable	Yes

```
{
  "code": 1,
  "msg": "Successful Transaction",
  "data": [
    {
      /* The resource requested. */
    }
  ]
}
```

2.2.2 Environment

2.2.2.1 Application Server

Application Server	`https://.../PMobile2API`

2.2.2.2 URI

Product	URI Product Prefix	Sample Request URI
Futures	`/FT`	`{url}/FT/contract`
Forex Regular	`/FX`	`{url}/FX/contract`
Forex Mini	`/FXMN`	`{url}/FXMN/contract`
FXInvest	`/NFX`	`{url}/NFX/contract`
All	`/`	`{url}/contract`

2.2.2.3 Supported Product

As this API supports the multi-product on POEMS Mobile 2.0 application, the following codes and flags are setup along with the other products.

Product Key	Name	Product Icon	Product Code	Remarks
FT	Futures	FT	8	
FX	Reg Forex	FX	16	
FXMN	Mini Forex	FXMN	32	
NFX	FXInvest	NFX	128	

2.2.2.4 Supported Platforms

Platform	Version No.	API Key
POEMS Mobile 2.0 Android	2.0.0	3FA5B748-9EC7-41EF-93FA-8C93AC349312
POEMS Mobile 2.0 iPhone	2.0.0	A4AB8B23-735E-4ABC-9E26-9F78292E25CC

2.2.2.5 Supported Language

Language ID	Language Name
1	EN (English)
2	CN (Simplified Chinese)
3	JP (Japanese)

2.2.2.6 Return Code

Code	Description
1	*Successful Request*
-1	Error or Request Failed
-42	Session Expired
-333	Confirmation or Warning

2.2.3 PreLogin

2.2.3.1 PreLogin Watchlist

Description: Get the pre-login Forex watchlist

Request:

Section	Component		
URI	`/FX/contract/watchlist/prelogin`		
Verb	`GET`		
Request Header	Field	Description	Type
	`deviceID`	The device ID. Identifies the user's specific device identifier.	String
	`apiKey`	The application Key. Indentifies the calling application.	String
	`versionNo`	The mobile app version no.	String
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in HTTP Request		

Response:

PreLog watchlist Details			
Property	**Description**		**Type**
`code`	Response code		Integer
`msg`	Response message		String
`pmpURL`	FX PMP URL		String
`columns`	List of columns to be displayed		List
	Property	**Description**	
	`title`	Column name to be displayed. This will change based on selected language	String
	`property`	Column property value	String
`counterData`	List of contract or counter details		List
	Property	**Description**	
	`counterID`	Unique identifier for contract across multiple products. Format: `<product>/<market>/<exchange>/<counterID>`	String
	`name`	Contract display name	String
	`productIcon`	Product icon	String
	`market`	Market where the contract belong	String
	`product`	Product where the contract belong	String
	`pmpTopic`	Contract topic name for subscribing to PMP	String
	`symbol`	Contract symbol	String
	`spread`	Contract calculated spread	String
	`bid`	Bid price	String
	`ask`	Ask price	String
	`high`	High price	String

	low	Low price	String

Result			

```
{
  "code": Integer,
  "msg": String,
  "pmpURL": String,
  "columns": [
    {
      "title": String,
      "property": String
    },
    ...
  ],
  "counterData": [
    {
      "counterID": String,
      "name": String,
      "productIcon": String,
      "market": String,
      "product": String,
      "pmpTopic": String,
      "symbol": String,
      "bid": String,
      "spread": String,
      "ask": String,
      "high": String,
      "low": String
    },
    ...
  ]
}
```

2.2.4 Access

2.2.4.1 FXInvest / Online Withdrawal Access

Description: Get account access to FXInvest and Online Withdrawal

Request:

Section	Component
URI	NFX/access
Verb	GET
Request Header	Refer to common request header parameter in [HTTP Request]
Request Body	N/A
Parameters	Refer to the common Parameter of GET request method in [HTTP Request]

Response:

Access response			
Property	**Description**		**Type**
code	Response code		Integer
msg	Response message		String
data	Data container		Object
	Property	**Description**	
	hasAccess	Flag whether account has FXInvest access	Boolean
	accessMessage	Message to displayed if account doesn't have access to FXInvest module	String

	hasTradingAccess	Flag whether account has FXInvest Trading access	Boolean
	tradingAccessMessage	Message to displayed if account doesn't have access to FXInvest trading module	String
	hasOnlineWithdrawalAccess	Flag whether account has Online Withdrawal access	Boolean
	onlineWithdrawalAccessMessage	Message to displayed if account doesn't have access to Online withdrawal module	String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "hasAccess": Boolean,
    "accessMessage": String,
    "hasTradingAccess": Booelan,
    "tradingAccessMessage": String,
    "hasOnlineWithdrawalAccess": Boolean,
    "onlineWithdrawalAccessMessage": String
  }
}
```

2.2.5 Account

2.2.5.1 Account Details

Description: Get the account portfolio of the client

Request:

Section	Component	
URI	{product}/account	
	{product}	FT/FX/FXMN/NFX **Note:** Module is common to all products, can use any of it
Verb	GET	
Request Header	Refer to common request header parameter in HTTP Request	
Request Body	N/A	
Parameters	Refer to the common Parameter of GET request method in HTTP Request	

Response:

Account Details			
Property	**Description**		**Type**
code	Response code		Integer
msg	Response message		String
data	Data container		Object
	Property	**Description**	
	accountNo	Account number	String
	accountName	Account name	String
	baseCurrency	Account base currency	String
	legderBalance	Account ledger balance	String
	accountBalance	Account balance	String

	unrealizedPL	Unrealized P/L	String
	marginExcessDeficit	Margin deficit/excess	String
	initialMargin	Portfolio initial margin	String
	maintenanceMargin	Portfolio maintenance margin	String
	utilization	Margin utilization	String
	lastUpdatedTime	Last account detail update timestamp	String
	needDisclaimer	Flag whether disclaimer is needed	Boolean
	disclaimers	List of disclaimer information	List of String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "accountNo": String,
    "accountName": String,
    "baseCurrency": String,
    "ledgerBalance": String,
    "accountBalance": String,
    "unrealizedPL": String,
    "marginExcessDeficit": String,
    "initialMargin": String,
    "maintenanceMargin": String,
    "utilization": String,
    "lastUpdatedTime": String,
    "needDisclaimer": Boolean,
    "disclaimers": [
      "String",
      "String"
      …
    ]
  }
}
```

2.2.5.2   Account Remisier

Description: Get the Remisier or Account Executive details for Futures account

Request:

Section	Component	
URI	{product}/account/remisier	
	{product}	FT/FX/FXMN **Note:** Module is common to all products, can use any of it
Verb	GET	
Request Header	Refer to common request header parameter in HTTP Request	
Request Body	N/A	
Parameters	Refer to the common Parameter of GET request method in HTTP Request	

Response:

Remisier details		
Property	**Description**	**Type**
code	Response code	Integer
msg	Response message	String

data	Data container		Object
	Property	**Description**	
	code	Remisier code.	String
	name	Remisier name.	String
	email	Email address.	String
	officeNumber	Office contact number.	String
	mobileNumber	Mobile contact number.	String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "code": String,
    "name": String,
    "email": String,
    "officeNumber": String,
    "mobileNumber": String
  }
}
```

2.2.5.3   Equity Balance

Description: Get client's portfolio

Request:

Section	Component	
URI	{product}/account/equitybalance	
	{product}	FT/FX/FXMN **Note:** Module is common to all products, can use any of it
Verb	**GET**	
Request Header	Refer to common request header parameter in HTTP Request	
Request Body	N/A	
Parameters	Refer to the common Parameter of GET request method in HTTP Request	

Response:

Account Equity balance response			
Property	**Description**		**Type**
code	Response code		Integer
msg	Response message		String
data	Data container		Object
	Property	**Description**	
	accountNo	Account reference no.	String
	name	Account name	String
	currency	Account base currency	String
	balance	Account balance	String
	ledgerBalance	Account ledger balance	String
	updatedTime	Equity balance last updated time.	String

ledgers		Account ledger balance breakdown.		List
		Property	**Description**	
		currency	Ledger currency	String
		balance	Ledger balance	String
		withdrawable	Flag whether the currency is allowed for Online Withdrawal via POEMS platform	Boolean
		message	If withdrawable is true, this message should be displayed	String
termsAndCondition		Terms and Condition details		String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "accountNo": String,
    "name": String,
    "currency": String,
    "balance": String,
    "ledgerBalance": String,
    "updatedTime": String,
    "ledgers": [
      {
        "currency": String,
        "balance": String,
        "withdrawable": Boolean,
        "message": String
      },
      ...
    ],
    "termsAndCondition": String
  }
}
```

2.2.6 Settings

2.2.6.1   PMP Settings

Description: Get the PMP settings of all or specific product

Request:

Section	Component	
URI	{product}/settings	
	{product}	FT/FX/FXMN/NFX
Verb	**GET**	
Request Header	Refer to common request header parameter in HTTP Request	
Request Body	N/A	
Parameters	Refer to the common Parameter of GET request method in HTTP Request	

Response:

Property	Description	Type
	Contains the PMP settings results.	
	Description	**Type**
code	Response code	Integer

msg	Response message	String
data	Data container	Object

	Property	Description	
	product	Product	String
	market	List of markets FT –shows list of markets or exchanges FX – default to "*FX*" FXMN – default to "*FXMN*" NFX – defaults to "*NFX*"	String
	primaryURL	Primary PMP url	String
	alternativeURLs	List of alternative PMP URL	List of String

Result

All	`/settings`

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "ft": {
      "product": String,
      "market": String,
      "primaryURL": String,
      "alternativeURLs": [
        String,
        String,
        ...
      ]
    },
    "fx": {
      "product": String,
      "market": String,
      "primaryURL": String,
      "alternativeURLs": [
        String,
        String,
        ...
      ]
    },
    "fxmn": {
      "product": String,
      "market": String,
      "alternativeURLs": [
        String,
        String,
        ...
      ]
    },
    "nfx": {
      "product": String,
      "market": String,
      "alternativeURLs": [
        String,
        String,
        ...
      ]
    }
  }
}
```

FT	`FT/settings`

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "product": String,
```

```
      "market": String,
      "primaryURL": String,
      "alternativeURLs": [
        String,
        String,
        ...
      ]
    }
}
```

FX	FX/settings

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "product": String,
    "market": String,
    "primaryURL": String,
    "alternativeURLs": [
      String,
      String,
      ...
    ]
  }
}
```

FXMN	FXMN/settings

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "product": String,
    "market": String,
    "primaryURL": String,
    "alternativeURLs": [
      String,
      String,
      ...
    ]
  }
}
```

NFX	NFX/settings

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "product": String,
    "market": String,
    "primaryURL": String,
    "alternativeURLs": [
      String,
      String,
      ...
    ]
  }
}
```

2.2.7 Contract

2.2.7.1 Contract Details

Description: Get Futures, Forex (Regular/Mini) and FXInvest contract details.

Request:

Section	Component

URI	{product}/contract?counterIDs={counterIDs}&price=	
	{product}	FT/FX/FXMN/NFX
Verb	GET	
Request Header	Refer to common request header parameter in HTTP Request	
Request Body	N/A	
Parameters	Refer to the common Parameter of GET request method in HTTP Request	
	counterIDs	A comma delimited counters ID's.
		Format	`<product>/<market>/<exchange>/<counter ID>`
		Eg: • **Futures** – FT/BURSA/BURSA/FGLDG17 • **Forex (Reg)** – FX/FX/FX/EURUSD • **Forex (Mini)** – FXMN/FX/FXMN/AUDCAD • **FXInvest** – NFX/NFX/NFX/AUDJPY
		Optional	No
	price	Flag to determine whether to include contract price.
		Optional	Yes
		Values	1	true – Will include contract price
			0	false – will NOT include contract price
		Default Value	1

Response:

Property	Description		Type
	Contains the contract details results.		
code	Response code		Integer
msg	Response message		String
data	Data container		Object
	Common Contract Properties (applies to FT/FX/FXMN/NFX)		
	Property	**Description**	
	productIcon	Product icon	String
	product	Product where the contract belong	String
	market	Market where the contract belong	String
	exchange	Contract exchange	String
	exchageDisplay	Contract exchange display name	String
	symbol	Contract symbol	String
	code	Contract code.	String
	counterID	Unique identifier for contract across multiple products	String
		Format	`<product>/<market>/<exchange>/<counterID>`	
	name	Contract display name	String
	pmpTopic	Contract topic name for subscribing to PMP	String
	disabled	Flag that determines whether the client request the request has access or the contract has been disabled.	Boolean
		Values	true	Client has no access to the contract or the contract has already disabled/expired.

		`fals e`	Client has access to the contract or the contract is NOT disabled / expired.	
	delayIndicator	Delay indicator. *Not applicable for FT/FX/FXMN/NFX contracts*		String

Futures Contract Properties (applicable to FT contracts only)		
Property	**Description**	
commodityCode	Contract commodity code	String
month	Contract month	Integer
year	Contract year.	Integer
monthYear	Combination of month and year properties	String
commodity	Contract commodity code	String
ticksize	Contract tick size	Decimal
preSettlementPrice	Contract pre-settlement price	Decimal
initialMargin	Contract initial margin	Decimal
maintenanceMargin	Contract maintenance margin	Decimal
marginCurrency	Contract margin currency	String
tickNumerator	Contract tick numerator	Decimal
tickDenominator	Contract tick denominator	Decimal
isEnabled	Flag whether the contract is enabled or disabled	Boolean
orderTypes	List of order types applicable for the future contract	List of Integer
price	Futures contract price snapshot details	Object

	Property	**Description**	
	bid	Bid price	String
	ask	Ask price	String
	open	Open price	String
	high	High price	String
	low	Low price	String
	close	Previous close price	String
	lastDone	Last done price	String
	change	Change	String
	percentageChange	Percentage change	String
	bVolK	Buy volume	String
	sVolK	Sell volume	String
	volK	Total volume	String
	time	Price time updated	String

Forex Properties (applicable to FX/FXMN contracts only)		
Property	**Description**	
feedCode	Contract feed code	String
productType	Forex contract product type	Integer
spread	Contract calculated spread	Decimal

lotSize	Contract lot size	String
displayLotSize	Contract display lot size	String
displayUnit	Contract display unit	String
displayLotSizeAndUnit	Combination of displayLotSize and displayUnit properties Eg. " x 10K"	String
tickSize	Contract tick size	Decimal
spTickSize	Contract SP tick size	Decimal
highlightStartPosition	Highlight start position indicator. This indicator tells from which would the price decimal should be highlighted	Integer
highlightLengthOfCharacters	Highlight length of characters. Indicator of how many characters should be highlighted from the price decimals	Integer
noOfDecimalsDisplay	Contract number of decimal display indicator	Integer
priceRequestId	Contract price request ID	String

price	Forex contract price snapshot information	
Property	**Description**	
bid	Bid price	String
ask	Ask price	String
open	Open price	String
high	High price	String
low	Low price	String
close	Previous close price	String
time	Price time updated	String

FXInvest Properties (applicable to NFX contracts only)		
Property	**Description**	**Type**
commodityCode	Contract commodity code	String
feedCode	Contract feed code	String
nfxFeedCode	Formatted feed code used for PMP subscription. Contract feed code appended with "[NFX]" Eg. "[NFX]USDVS"	String
tickSize	Contract tick size	Decimal
unitMultiplier	Contract unit multiplier	Decimal
highlightStartPosition	Highlight start position indicator. This indicator tells from which would the price decimal should be highlighted	Integer
highlightLengthOfCharacters	Highlight length of characters. Indicator of how many characters should be highlighted from the price decimals	Integer
noOfDecimalsDisplay	Contract number of decimal display indicator	Integer
isTradable	Flag if contract is tradable or not	Boolean
isTradableMessage	Message if the isTradable flag is false	String
price	FXInvest contract price snapshot information	
	Property	**Description**	
	symbol	Contract symbol	String
	feedcode	Contract feed code	String

		bid	Bid price	String
		ask	Ask price	String
		open	Open price	String
		high	High price	String
		low	Low price	String
		close	Previous close price	String
		time	Price time updated	String

Result				
FT	`FT/contract?counterIDs={counterIDs}&price=`			

```
{
  "code": Integer,
  "msg": String,
  "data": [
    {
      "productIcon": String,
      "product": String,
      "market": String,
      "exchange": String,
      "exchageDisplay": String,
      "symbol": String,
      "code": String,
      "counterId": String,
      "name": String,
      "pmpTopic": String,
      "disabled": Boolean,
      "delayIndicator": String,
      "commodityCode": String,
      "month": Integer,
      "year": Integer,
      "monthYear": String,
      "tickSize": Decimal,
      "preSettlementPrice": Decimal,
      "initialMargin": Decimal,
      "maintenanceMargin": Decimal,
      "tickNumerator": Decimal,
      "tickDenominator": Decimal,
      "isEnabled": Boolean,
      "orderTypes": List< Integer >,
      "price": {
        "symbol": String,
        "bid": String,
        "ask": String,
        "open": String,
        "high": String,
        "low": String,
        "close": String,
        "lastDone": String,
        "change": String,
        "percentChange": String,
        "bVolK": String,
        "sVolK": String,
        "volK": String,
        "time": String
      }
    }
  ]
}
```

FX	`FX/contract?counterIDs={counterIDs}&price=`			

```
{
  "code": Integer,
  "msg": String,
  "data": [
    {
      "productIcon": String,
      "product": String,
      "market": String,
      "exchange": String,
      "exchageDisplay": String,
      "symbol": String,
      "code": String,
      "counterId": String,
      "name": String,
      "pmpTopic": String,
      "disabled": Boolean,
      "delayIndicator": String,
      "feedCode": String,
      "productType": Integer,
      "spread": Decimal,
      "lotSize": String,
      "displayLotSize": String,
      "displayUnit": String,
      "displayLotSizeAndUnit": String,
      "tickSize": Decimal,
      "spTickSize": Decimal
      "highlightStartPosition": Integer,
      "highlightLengthOfCharacters": Integer,
      "noOfDecimalsDisplay": Integer,
      "priceRequestId": String,
      "price": {
        "symbol": String,
        "bid": String,
        "ask": String,
        "open": String,
        "high": String,
        "low": String,
        "close": String,
        "time": String,
      }
    }
  ]
}
```

FXMN	FXMN/contract?counterIDs={counterIDs}&price=

```
{
  "code": Integer,
  "msg": String,
  "data": [
    {
      "productIcon": String,
      "product": String,
      "market": String,
      "exchange": String,
      "exchageDisplay": String,
      "symbol": String,
      "code": String,
      "counterId": String,
      "name": String,
      "pmpTopic": String,
      "disabled": Boolean,
      "delayIndicator": String,
      "feedCode": String,
      "productType": int,
      "spread": BigDecimal,
      "lotSize": String,
      "displayLotSize": String,
      "displayUnit": String,
```

```
        "displayLotSizeAndUnit": String,
        "tickSize": BigDecimal,
        "spTickSize": BigDecimal
        "highlightStartPosition": int,
        "highlightLengthOfCharacters": int,
        "noOfDecimalsDisplay": int,
        "priceRequestId": String,
        "price": {
          "symbol": String,
          "bid": String,
          "ask": String,
          "open": String,
          "high": String,
          "low": String,
          "close": String,
          "time": String,
        }
      }
    ]
}
```

NFX	NFX/contract?counterIDs={counterIDs}&price=

```
{
  "code": Integer,
  "msg": String,
  "data": [
    {
      "productIcon": String,
      "product": String,
      "market": String,
      "exchange": String,
      "exchageDisplay": String,
      "symbol": String,
      "code": String,
      "counterID": String,
      "name": String,
      "pmpTopic": String,
      "disabled": Boolean,
      "delayIndicator": String,
      "commodityCode": String,
      "feedCode": String,
      "nfxFeedCode": String,
      "tickSize": Decimal,
      "unitMultiplier": Decimal,
      "highlightStartPosition": Integer,
      "highlightLengthOfCharacters": Integer,
      "noOfDecimalsDisplay": Integer,
      "isTradable": Boolean,
      "isTradableMessage": String,
      "price": {
        "symbol": String
        "feedcode": String,
        "bid": String,
        "ask": String,
        "open": String,
        "high": String,
        "low": String,
        "close": String,
        "time": String
      }
    }
  ]
}
```

2.2.3 Chart

2.2.3.1 Get chart data

Description: Get FT and FX contract chart data

Request:

Section	Component	
URI	`{product}/chart?counterID={counterID}&interval={interval}`	
	`{product}`	`FT/FX/FXMN`
Verb	`GET`	
Request Header	Refer to common request header parameter in HTTP Request	
Request Body	N/A	
Parameters	Refer to the common Parameter of GET request method in HTTP Request	

Parameters detail table:

Field	Description		
`counterID`	Contract counters Id		
	Format	`<product>/<market>/<exchange>/<counterID>`	
	Eg: **Futures** - `FT/BURSA/BURSA/FGLDG17` **Forex (Reg)** – `FX/FX/FX/EURUSD` **Forex (Mini)** – `FXMN/FX/FXMN/AUDCAD`		
	Optional	No	
`interval`	Indicator for the chart interval		
	Optional	Yes	
	Values	**Interval ID**	**Interval Name**
		1	Minutely
		2	Five minutes
		3	Fifteen minutes
		4	Thirty minutes
		5	Hourly
		6	Daily
		7	Weekly
		8	Monthly
	Default Value	1	

Response:

Contains the chart info results for Futures and Forex

Forex Chart Data Response

Property	Description	Type
`dttm`	Chart Date time in string	String
`time`	UTC time in milliseconds.	String
`open`	Open price.	String
`close`	Close price.	String
`high`	Highest price.	String
`low`	Lowest price.	String

```
{
  "code": Integer,
  "data": [
    {
```

```
      "dttm": String,
      "time": String,
      "open": String,
      "close": String,
      "high": String,
      "low": String,
    },
    ...
}
```

Futures Chart Data Response

Property	Description	Type
date	Chart Date	String
time	UTC time in milliseconds.	String
open	Open price.	String
close	Close price.	String
high	Highest price.	String
low	Lowest price.	String
volume	Volume.	String

Result

```
{
  "code": Integer,
  "data": [
    {
      "date": String,
      "time": String,
      "open": String,
      "close": String,
      "high": String,
      "low": String,
      "volume": String
    },
    ...
}
```

2.2.4 Order

2.2.4.1   Get FT/FX/FXMN Trading Info

Description: Get Futures and Forex contract trading information

Request:

Section	Component		
URI	{product}/orders/tradeinfo?counterID={counterID}		
	{product}	FT/FX/FXMN	
Verb	GET		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in HTTP Request		
	Field	Description	
	counterID	Contract counters Id	
		Format	\<product>/\<market>/\<exchange>/\<counterID>
		Eg:	

		Futures - `FT/BURSA/BURSA/FGLDG17` *Forex (Reg)* – `FX/FX/FX/EURUSD` *Forex (Mini)* – `FXMN/FX/FXMN/AUDCAD`

Response:

Contains trading info response.			
FT Trading Info			
Property	**Description**		**Type**
`tickSize`	Contract tick size		String
`preSettlementPrice`	Pre-settlement price.		String
`initialMargin`	Contract initial price margin (IM)		String
`maintenanceMargin`	Contract maintenance price margin (MM)		String
`marginCurrency`	Contract margin currency for IM and MM		String
`noOfDecimalsDisplay`	Contract price decimal limit		Integer
`askPrice`	Contract static ask price		String
`bidPrice`	Contract static bid price		String
`deafultQuantity`	Contract default or minimum quantity		Integer
`orderTypes`	Contract order types		List
	Property	**Description**	
	id	Order type ID	Integer
	display	Order type description	String
`expiry`	Contract order expiry		List
	Property	**Description**	
	id	Expiry ID	Integer
	display	Expiry description	String

`actions`	Trade action
	
	Action Type
	`1 – BUY`
	`0 - SELL`		

	Property	**Description**	
	`value`	Action ID	Integer
	`text`	Action description	String
`passwordRequired`	Flag if password is required for the account		Boolean
`twoFARequired`	Flag if the 2FA is required for the account		Boolean
Forex Trading Info (Applicable for FX/FXMN contracts only)			
Property	**Description**		**Type**
`tickSize`	Contract tick size		String
`displayLotSizeAndUnit`	Contract Lot size and Unit display		String
`currency`	Contract currency		
`initialMargin`	Contract initial price margin (IM)		String
`maintenanceMargin`	Contract maintenance price margin (MM)		String
`marginCurrency`	Contract margin currency for IM and MM		String

noOfDecimalsDisplay	Contract price decimal limit			Integer
askPrice	Contract static ask price			String
bidPrice	Contract static bid price			String
deafultQuantity	Contract default or minimum quantity			Integer
orderTypes	Contract order types			List
	Property	Description		
	id	Order type ID		Integer
	display	Order type description		String
expiry	Contract order expiry			List
	Property	Description		
	id	Expiry ID		Integer
	display	Expiry description		String
action	Trade action **Action Type** 1 – BUY 0 – SELL			
	Property	Description		
	value	Trade action ID		Integer
	text	Trade action description		String
passwordRequired	Flag if password is required for the account			Boolean
twoFARequired	Flag if the 2FA is required for the account			Boolean

Result

FT	FT/orders/tradeinfo?counterID={counterID}

```
{
  "code": Integer,
  "data": {
    "tickSize": String,
    "preSettlementPrice": String,
    "initialMargin": String,
    "maintenanceMargin": String,
    "marginCurrency": String,
    "noOfDecimalsDisplay": Integer,
    "askPrice": String,
    "bidPrice": String,
    "lastDone": String,
    "defaultQuantity": Integer,
    "orderTypes": [
      {
        "id": Integer,
        "display": String
      },
      ...
    ],
    "expiry": [
      {
        "id": Integer,
        "display": String
      }
    ],
    "actions": [
      {
        "value": Integer,
        "text": String
      }
      ...
```

```
    ] ,
    "passwordRequired": Boolean,
    "twoFARequired": Boolean
  }
}
```

FX	FX/orders/tradeinfo?counterID={counterID}

```
{
  "code": Integer,
  "data": {
    "tickSize": String,
    "displayLotSizeAndUnit": String,
    "currency": String,
    "initialMargin": String
    "maintenanceMargin": String
    "marginCurrency": String,
    "noOfDecimalsDisplay": Integer,
    "askPrice": String,
    "bidPrice": String,
    "defaultQuantity": Integer,
    "orderTypes": List<Item>[
      {
        "id": Integer,
        "display": String
      },
      ...
    ],
    "expiry": List<Item>[
      {
        "id": Integer,
        "display": String
      },
      ...
    ] ,
    "actions": [
      {
        "value": Integer,
        "text": String
      }
      ...
    ] ,
    "passwordRequired": Boolean,
    "twoFARequired": Boolean
  }
}
```

FXMN	FXMN/orders/tradeinfo?counterID={counterID}

```
{
  "code": Integer,
  "data": {
    "tickSize": String,
    "displayLotSizeAndUnit": String,
    "currency": String,
    "initialMargin": String
    "maintenanceMargin": String
    "marginCurrency": String,
    "noOfDecimalsDisplay": Integer,
    "askPrice": String,
    "bidPrice": String,
    "defaultQuantity": Integer,
    "orderTypes": List<Item>[
      {
        "id": Integer,
        "display": String
      },
      ...
    ],
    "expiry": List<Item>[
```

```
      {
        "id": Integer,
        "display": String
      },
      ...
    ],
    "actions": [
      {
        "value": Integer,
        "text": String
      }
      ...
    ],
    "passwordRequired": Boolean,
    "twoFARequired": Boolean
  }
}
```

2.2.4.2 Validate Order

Description: Perform order validation for Futures and Forex

Request:

Section	Component		
URI	{product}/orders/validate		
	{product}	FT/FX/FXMN	
Verb	POST		
Request Header	Refer to the common request header parameter in <u>HTTP Request</u>		
	Field	Description	Type
	encryptedPIN	Encrypted PIN	String
	Content-Type	application/x-www-form-urlencoded	String
Request Body	Refer to the common Parameter of POST request method in <u>HTTP Request</u>		
	Field	Description	Type
	orderNo	Order number	String
	action	Trade action	Integer
		Values	1 – Buy Action 2 – Sell Action	
	orderType	Order type	Integer
		Values	**FX Order Types** 1 – Market 2 – Limit 3 – Stop On Bid 4 – Stop On Offer 5 – OCO Stop On Bid 6 – OCO Stop On Offer **FT Order Types** 2 – Limit 3 – Stop 4 – Stop Limit	
	symbol	Contract symbol	String
	exchange	Contract Exchange. Only applicable for Futures transaction	String
	expiry	Represents the Expiry or Validity	Integer
		Values	**FX Expiry** 1 – Day	

		2 – GTC **FT Expiry** 0 – Day	
`qty`	Quantity		Integer
`price`	Represents Price, Limit Price and Stop Price		String
`stopLimitPrice`	Represents Stop Limit Price		String
`ocoPrice`	Represents OCO Price		String

Futures		
Submit Order		
Limit	• `exchange` • `symbol` • `orderType` • `action` • `price` • `qty` • `expiry`	
Stop	• `exchange` • `symbol` • `orderType` • `action` • `price` • `qty` • `expiry`	
Stop Limit	• `exchange` • `symbol` • `orderType` • `action` • `price` • `stopLimitPrice` • `qty` • `expiry`	
Forex		
Submit Order		
Limit	• `symbol` • `orderType` • `action` • `price` • `qty` • `expiry`	
Stop On Bid	• `symbol` • `orderType` • `action` • `price` • `qty` • `expiry`	
Stop On Offer	• `symbol` • `orderType` • `action` • `price` • `qty` • `expiry`	

	OCO Stop On Bid	`symbol` `orderType` `action` `price` `qty` `ocoPrice` `expiry`
	OCO Stop On Offer	`symbol` `orderType` `action` `price` `qty` `ocoPrice` `expiry`
	Amend Order - orderNo - price - ocoPrice	
Parameters	`N/A`	

Response:

Validation response		
Property	**Description**	**Type**
`Code`	Response code	Integer
`Message`	Response message	String
`data`	Generated "auth-token" to be use to submit order	String
Result		

```
{
  "code": Integer,
  "message": String
  "data": String
}
```

1.2.4.3 Submit Order

Description: Submit Futures or Forex order

Request:

Section	Component		
URI	`{product}/orders`		
	`{product}`	`FT/FX/FXMN`	
Verb	`POST`		
Request Header	Refer to the common request header parameter in <u>HTTP Request</u>		
	Field	Description	Type
	`authToken`	Auth token generated from validate order.	String
	`encryptedPIN`	Encrypted PIN	String
	`Content-Type`	`application/x-www-form-urlencoded`	

Request Body	Refer to the common Parameter of POST request method in HTTP Request		
	Field	Description	Type
	`symbol`	Contract symbol	
	`exchange`	Contract exchange. Null for non-exchange contracts.	
	`action`	1 BUY	int
		0 SELL	
	`orderType`	Order type. See tradeInfo API.	Int
	`price`	Order price.	
	`qty`	Order quantity.	int
	`expiry`	Order expiry. See traderInfo API.	Int
	`stopLimitPrice`	Stop limit price.	
	`ocoType`	OCO type. Null for non OCO type orders.	
	`ocoPrice`	OCO price. Null for non OCO type orders.	
Parameter	N/A		

Response:

Submit response		
Property	**Description**	**Type**
`code`	Response code	Integer
`msg`	Response message	String
`orderDetailURI`	Order detail URI. This will be available if order is successfully submitted	String
`passwordRequired`	Flag if password is required for the account	Boolean
`twoFARequired`	Flag if the 2FA is required for the account	Boolean
Result		

```
{
  "code": Integer,
  "msg": String
  "orderDetailURI": String,
  "passwordRequired": Boolean,
  "twoFARequired": Boolean
}
```

1.2.4.4 Amend Order

Description: Perform amendment for Forex order only

Request:

Section	Component		
URI	`{product}/orders/amend/{orderNo}`		
	Field	Description	Type
	`{product}`	FX/FXMN	String
	`{orderNo}`	Order number	Integer
		Constraint `regexp={[0-9]+}`	
Verb	**POST**		

Request Header	Refer to the common request header parameter in HTTP Request		
	Field	Description	Type
	encryptedPIN	encrypted PIN	String
Request Body	Refer to the common Parameter of POST request method in HTTP Request		
	Field	Description	Type
	price	Limit price	String
	ocoPrice	OCO price	String
Parameters	N/A		

Response:

Order amendment response		
Property	**Description**	**Type**
code	Response code	Integer
msg	Result message of amendment of order	String
orderDetailURI	Order detail URI	String
passwordRequired	Flag if password is required for the account	Boolean
twoFARequired	Flag if the 2FA is required for the account	Boolean
Result		

```
{
  "code": Integer,
  "msg": String,
  "orderDetailURI": Boolean,
  "passwordRequired": Boolean,
  "twoFARequired": Boolean
}
```

1.2.4.5   Withdraw Order

Description: Perform order withdrawal for Futures and Forex order

Request:

Section	Component		
URI	{product}/orders/withdraw/{orderNo}		
	Field	Description	Type
	{product}	FT/FX/FXMN	String
	{orderNo}	Order number	Integer
		Constraints	regexp={[0-9]+}]
Verb	**POST**		
Request Header	Refer to the common request header parameter in HTTP Request		
	Field	Description	Type
	encryptedPIN	Encrypted PIN	String
Request Body	N/A		
Parameters	N/A		

Response:

Order withdrawal response

Property	Description	Type
code	Response code	Integer
msg	Result message of withdrawal of order	String
passwordRequired	Flag if password is required for the account	Boolean
twoFARequired	Flag if the 2FA is required for the account	Boolean
Result		

```
{
  "code": Integer,
  "msg": String,
  "passwordRequired": Boolean,
  "twoFARequired": Boolean
}
```

1.2.4.6   Order Details

Description: Get Futures/Forex order details

Request:

Section	Component			
URI	{product}/orders/{type}/{orderNo}			
	{product}	FT/FX/FXMN		
	{type}	History Type		
		Values	• today • past	
	{orderNo}	Order no. [Constriants: regexp={[0-9]+}]		
Verb	**GET**			
Request Header	Refer to common request header parameter in [HTTP Request](#)			
Request Body	N/A			
Parameters	Refer to the common Parameter of GET request method in [HTTP Request](#)			

Response:

Property	Description	Type
Contains the order status information.		
Futures Order Details Response		
productIcon	Product icon	String
product	Product where the contract belong	String
orderNo	Order unique identifier	String
counterID	Contract counter ID	String
symbol	Contract symbol	String
name	Contract display name	String
exchange	Contract exchange	String
orderType	Order order type name	String
action	Order action	String
submittedPrice	Order submitted price	String
stopLimitPrice	Order stop limit price	String

currency	Contract margin currency	String
submittedQty	Order submitted quantity	String
submittedTime	Order submitted time	String
executedPrice	Order executed price	String
executedQty	Order executed quantity	String
executedTime	Order executed time	String
expiry	Order validity	String
status	Order status code	String
statusDescription	Order status description	String
statusColor	Order status color hex code	String
statusColorName	Order status color name	String
message	Order message/remarks	String
orderDetailURI	Order detail URI	String
withdrawURI	Order withdrawal URI	String
passwordRequired	Flag if password is required for the account	Boolean
twoFARequired	Flag if the 2FA is required for the account	Boolean

	List of Order Log History		List
	Field	**Description**	
	status	Order status code	String
	statusDescription	Order status description	String
	statusColor	Order status color hex code	String
orderHistory	statusColorName	Order status color name	String
	price	Order submitted/executed price	String
	triggerPrice	Order stop limit price	String
	qty	Order submitted/executed quantity	String
	remaining	Order remaining quantity	String
	datetime	Order executed time	String
	message	Order remarks	String

FX / FXMN Response		
productIcon	Product icon	String
product	Product where the contract belong	String
orderNo	Order unique identifier	String
counterID	Contract counter ID	String
symbol	Contract symbol	String
name	Contract display name	String
exchange	Contract exchange	String
orderType	Order order type name	String
action	Order action	String
submittedPrice	Order submitted price	String
ocoPrice	OCO price.	String

	This will be NULL if order type is Limit/Stop Limit	
currency	Contract margin currency	String
submittedQty	Order submitted quantity	String
submittedTime	Order submitted time	String
executedPrice	Order executed price	String
executedQty	Order executed quantity	String
executedTime	Order executed time	String
expiry	Order validity	String
status	Order status code	String
statusDescription	Order status description	String
statusColor	Order status color hex code	String
statusColorName	Order status color name	String
displayUnit	Contract display unit	String
displayLotSize	Contract display lot size	String
message	Order message/remarks	String
tickSize	Contract Tick Size	String
orderDetailURI	Order detail URI	String
amendURI	Order amend URI	String
withdrawURI	Order withdrawal URI	String
passwordRequired	Flag if password is required for the account	Boolean
twoFARequired	Flag if the 2FA is required for the account	Boolean
orerHistory	Order log history	List

Field	Description	
status	Order status code	String
statusDescription	Order status description	String
statusColor	Order status color hex code	String
statusColorName	Order status color name	String
price	Order submitted/executed price	String
ocoPrice	Order OCO price	String
qty	Order submitted/executed quantity	String
remaining	Order remaining quantity	String
datetime	Order executed time	String
message	Order remarks	String

Result

Futures:
```
{
  "code": 1,
  "data": {
    "productIcon": String,
    "product": String,
    "orderNo": String,
    "counterID": String,
    "symbol": String,
```

```
      "name": String,
      "exchange": String,
      "orderType": String,
      "action": String,
      "submittedPrice": String,
      "stopLimitPrice": String,
      "currency": String,
      "submittedQty": String,
      "submittedTime": String,
      "executedPrice": String,
      "executedQty": String,
      "executedTime": String,
      "expiry": String,
      "status": String,
      "statusDescription": String,
      "statusColor": String,
      "statusColorName": String,
      "message": String,
      "orderDetailURI": String,
      "withdrawURI": String,
      "passwordRequired": Boolean,
      "twoFARequired": Boolean,
      "orderHistory": [
        {
          "status": String,
          "statusDescription": String,
          "statusColor": String,
          "statusColorName": " String,
          "price": String,
          "triggerPrice": String,
          "quantity": String,
          "remainingQuantity": String,
          "datetime": String,
          "message": String
        },
        ...
      ]
    }
}
```

```
FX / FXMN :
{
  "code": Integer,
  "data": {
    "productIcon": String,
    "product": String,
    "orderNo": String,
    "counterID": String,
    "symbol": String,
    "name": String,
    "exchange": String,
    "orderType": String,
    "action": String,
    "submittedPrice": String,
    "ocoPrice": String,
    "ocoType": String,
    "currency": String,
    "submittedQty": String,
    "submittedTime": String,
    "executedPrice": String,
    "executedQty": String,
    "executedTime": String,
    "expiry": String,
    "status": String,
    "statusDescription": String,
    "statusColor": String,
    "statusColorName": String,
    "displayUnit": String,
    "displayLotSize": String,
```

```
    "message": String,
    "tickSize": String,
    "orderDetailURI": " String,
    "amendURI": String,
    "withdrawURI": String,
    "passwordRequired": Boolean,
    "twoFARequired": Boolean
    "orderHistory": [
      {
        "status": String,
        "statusDescription": String,
        "statusColor": String,
        "statusColorName": String,
        "price": String,
        "ocoPrice": String,
        "quantity": String,
        "remainingQuantity": String,
        "transactionDateTime": String,
        "message": String
      }
    ]
  }
}
```

1.2.5 News

2.2.5.1 Get News Category

Description: Get all news category

Request:

Section	Component		
URI	All product	/news/category	
	Product Specific	{product}/news/category	
		{product}	FX or FXMN
Verb	**GET**		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in HTTP Request		

Response:

Contains the news category information.		
Property	**Description**	**Type**
id	Category unique ID	String
name	Category name	String
description	Category description	String
Result		

All	/news/category

```
{
  "code": Integer,
  "data": [
    {
      "id": String,
      "name": String,
      "description": String
```

```
        },
        ...
    ]
}
```

FX	FX/news/category

```
{
    "code": Integer,
    "data": [
        {
            "id": String,
            "name": String,
            "description": String
        },
        ...
    ]
}
```

2.2.5.2 Get News Headline

Description: Get news headlines list per category

Request:

Section	Component		
URI	All news headlines from all Category	{product}/news/all?count={count}&keyword={keyword}	
	Single or multiple category ID	{product}/news/{categoryID}?count={count}&keyword={keyword}	
		{categoryID}	Category ID delimited with pipe "|" Eg: "0|1|2"
		{product}	FX or FXMN
Verb	GET		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in HTTP Request		
	Field	Description	Type
	count	Number of return news	Integer
		Default Value	30	
	keyword	Search keyword	String
		Optional	Yes If no value, it will return all	

Response:

Contains the news headlines per category		
Property	**Description**	**Type**
categoryID	News category ID	String
id	News ID	String
title	News title	String
publishedTime	News published date time	String
contentURI	News details URI	String

Result
| ```
{
  "code": 1,
  "data": [
    {
      "categoryID": String,
      "id": String,
      "title": String,
      "publishedTime": String,
      "contentURI": String
    },
    ...
  ]
}
``` |

2.2.5.3 Get News Details

Description: Get news details

Request:

Section	Component	
URI	{product}/news/{categoryID}/{newsID}	
	{product}	FX or FXMN
	{categoryID}	Category ID. [Constraints: regexp={[0-9]+}]
	{newsID}	News ID. [Constraints: regexp={[0-9]+}]
Verb	**GET**	
Request Header	Refer to common request header parameter in HTTP Request	
Request Body	N/A	
Parameters	Refer to the common Parameter of GET request method in HTTP Request	

Response:

Contains the news details information.		
Property	**Description**	**Type**
categoryID	News category ID	String
id	News ID	String
title	News title.	String
content	News full content details	String
publishedTime	News published date time	String
Result		
| ```
{
  "code": Integer,
  "data": {
    "categoryID": String,
    "id": String,
    "title": String,
    "content": String,
    "publishedTime": String
  }
}
``` | | |

1.2.6 Net Position

2.2.6.1 Net Position Disclaimer

Description: Get net position disclaimer

Request:

Section	Component	
URI	{product}/position/disclaimer	
	{product}	FT/FX/FXMN
Verb	GET	
Request Header	Refer to common request header parameter in HTTP Request	
Request Body	N/A	
Parameters	Refer to the common Parameter of GET request method in HTTP Request	

Response:

Net Position disclaimer details		
Property	**Description**	**Type**
code	Response code	Integer
msg	Response message	String
data	Net Position disclaimer	String
Result		

```
{
  "code": Integer,
  "msg": String
  "data": String
}
```

2.2.6.2 Get All Net Position Summary

Description: Get all product products Net Position summary

Request:

Section	Component	
URI	{product}/position/all	
	{product}	FT/FX/FXMN
Verb	GET	
Request Header	Refer to common request header parameter in HTTP Request	
Request Body	N/A	
Parameters	Refer to the common Parameter of GET request method in HTTP Request	

Response:

Response for Net Position summary		
Property	**Description**	**Type**
code	Response code	Integer
msg	Response message	String
data	Response data container	

ft	List of Futures Net Position Summary		List
	Field	**Description**	
	`productIcon`	Product icon	String
	`product`	Product where the contract belong	String
	`market`	Market where the contract belong	String
	`exchange`	Contract exchange	String
	`exchangeDisplay`	Contract exchange display name	String
	`symbol`	Contract symbol	String
	`code`	Contract code	String
	`counterID`	Unique identifier for contract across multiple products	String
		Format `<product>/<market>/<exchange>/<counterID>`	
	`name`	Contract display name	String
	`commodityType`	Contract commodity type	String
	`pmpTopic`	PMP topic	String
	`delayIndicator`	Delay Indicator	String
	`accountNo`	Client account number	String
	`commodityCode`	Contract commodity code	String
	`month`	Contract month	String
	`year`	Contract year	String
	`broughtForward`	brought forward amount	String
	`intraday`	Intraday amount	String
	`net`	Net amount	String
	`netPositionList`	List of Futures Net position summary details	List
		Field	**Description**	
		`productIcon`	Product icon	String
		`product`	Product where the contract belong	String
		`market`	Market where the contract belong	String
		`exchange`	Contract exchange	String
		`exchangeDisplay`	Contract exchange display name	String
		`symbol`	Contract symbol	String
		`code`	Contract code	String
		`counterID`	Unique identifier for contract across multiple products	String
		`name`	Contract display name	String
		`commodityType`	Contract commodity type	String
		`pmpTopic`	PMP topic	String
		`delayIndicator`	Delay Indicator	String
		`broughtForward`	Position brought forward	String
		`intraday`	Position intraday	String

		transactionID	Transaction Id	String
		orderID	Order Id	String
		commodityCode	Contract commodity code	String
		action	Action	String
		netPosition	Net position amount	String
		quantity	Quantity	String
		price	Price	String
		month	Contract month	String
		year	Contract year	String
		expiry	Contract expiry	String
		transactionTime	Transaction Time	String
		positionDetailURI	Position detail URI	String
fx	List of Regular Forex Net Position Summary			List
	Field	**Description**		
	productIcon	Product icon		String
	product	Product where the contract belong		String
	market	Market where the contract belong		String
	exchange	Contract exchange		String
	exchangeDisplay	Contract exchange display name		String
	symbol	Contract symbol		String
	code	Contract code		String
	counterID	Unique identifier for contract across multiple products		String
		Format	`<product>/<market>/<exchange>/` `<counterID>`	
	name	Contract display name		String
	commodityType	Contract commodity type		String
	pmpTopic	PMP topic		String
	delayIndicator	Delay Indicator		String
	accountNo	Client account number		String
	broughtForward	brought forward amount		String
	intraday	Intraday amount		String
	net	Net amount		String
	productType	Product Type		String
	displayUnits	Display unit		String
	displayLotSize	Display lot size		String
	netPositionList	List of Regular Forex Net position summary details		List
		Field	**Description**	

		productIcon	Product icon	String
		product	Product where the contract belong	String
		market	Market where the contract belong	String
		exchange	Contract exchange	String
		exchangeDisplay	Contract exchange display name	String
		symbol	Contract symbol	String
		code	Contract code	String
		counterID	Unique identifier for contract across multiple products	String
		name	Contract display name	String
		commodityType	Contract commodity type	String
		pmpTopic	PMP topic	String
		delayIndicator	Delay Indicator	String
		broughtForward	Position brought forward	String
		intraday	Position intraday	String
		currencyPair	Currency Pair	String
		transactionID	Transaction Id	String
		orderID	Order Id	String
		productType	Product type	String
		netPosition	Net position amount	String
		quantity	Quantity	String
		price	Price	String
		action	Action	String
		displayUnits	Display unit	String
		displayLotSize	Display lot size	String
		transactionTime	Transaction Time	String
		positionDetailURI	Position detail URI	String
fxmn	List of Mini Forex Net Position Summary			List
	Field	**Description**		
	productIcon	Product icon		String
	product	Product where the contract belong		String
	market	Market where the contract belong		String
	exchange	Contract exchange		String
	exchangeDisplay	Contract exchange display name		String

`symbol`	Contract symbol		String
`code`	Contract code		String
`counterID`	Unique identifier for contract across multiple products		String
	Format	`<product>/<market>/<exchange>/` `<counterID>`	
`name`	Contract display name		String
`commodityType`	Contract commodity type		String
`pmpTopic`	PMP topic		String
`delayIndicator`	Delay Indicator		String
`accountNo`	Client account number		String
`broughtForward`	brought forward amount		String
`intraday`	Intraday amount		String
`net`	Net amount		String
productType	Product Type		String
displayUnits	Display unit		String
displayLotSize	Display lot size		String
netPositionList	List of Mini Forex Net position summary details		List
	Field	Description	
	`productIcon`	Product icon	String
	`product`	Product where the contract belong	String
	`market`	Market where the contract belong	String
	`exchange`	Contract exchange	String
	`exchangeDisplay`	Contract exchange display name	String
	`symbol`	Contract symbol	String
	`code`	Contract code	String
	`counterID`	Unique identifier for contract across multiple products	String
	`name`	Contract display name	String
	`commodityType`	Contract commodity type	String
	`pmpTopic`	PMP topic	String
	`delayIndicator`	Delay Indicator	String
	`broughtForward`	Position brought forward	String
	`intraday`	Position intraday	String
	`currencyPair`	Currency Pair	String
	`transactionID`	Transaction Id	String

		orderID	Order Id	String
		productType	Product type	String
		netPosition	Net position amount	String
		quantity	Quantity	String
		price	Price	String
		action	Action	String
		displayUnits	Display unit	String
		displayLotSize	Display lot size	String
		transactionTime	Transaction Time	String
		positionDetailURI	Position detail URI	String
needDisclaimer	Flag if disclaimer is need to be displayed			Boolean
disclaimers	List of disclaimer			List of String
Result				

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "ft": [
      {
      "productIcon": String,
      "product": String,
      "market": String,
      "exchange": String,
      "exchangeDisplay": String,
      "symbol": String,
      "code": String,
      "counterID": String,
      "name": String,
      "commodityType": String,
      "accountNo": String,
      "commodityCode": String,
      "pmpTopic": String,
      "delayIndicator": String,
      "month": String,
      "year": String,
      "broughtForward": String,
      "intraday": String,
      "net": String,
      "netPositionList": [
        {
        "productIcon": String,
        "product": String,
        "market": String,
        "exchange": String,
        "exchangeDisplay": String,
        "symbol": String,
        "code": String,
        "counterID": String,
        "name": String,
        "commodityType": String,
        "pmpTopic": String,
        "delayIndicator": String,
        "broughtForward": String,
        "intraDay": String,
        "currency": String,
```

```
                "transactionID": String,
                "orderID": String,
                "commodityCode": String,
                "action": String,
                "netPosition": String,
                "quantity": String,
                "price": String,
                "month": String,
                "year": String,
                "expiry": String,
                "transactionTime": String,
                "positionDetailURI": String,
            },
            ...
            ]
        }
    ],
    "fx": [
      {
        "productIcon": String,
        "product": String,
        "market": String,
        "exchange": String,
        "exchangeDisplay": String,
        "symbol": String,
        "code": String,
        "counterID": String,
        "name": String,
        "commodityType": String,
        "pmpTopic": String,
        "delayIndicator": String,
        "accountNo": String,
        "broughtForward": String,
        "intraday": String,
        "net": String,
        "productType": String,
        "displayUnits": String,
        "displayLotSize": String,
        "netPositionList": [
          {
            "productIcon": String,
            "product": String,
            "market": String,
            "exchange": String,
            "exchangeDisplay": String,
            "symbol": String,
            "code": String,
            "counterID": String,
            "name": String,
            "commodityType": String,
            "pmpTopic": String,
            "delayIndicator": String,
            "broughtForward": String,
            "intraDay": String,
            "currencyPair": String,
            "transactionID": String,
            "orderID": String,
            "productType": String,
            "netPosition": String,
            "quantity": String,
            "price": String,
            "action": String,
            "displayUnits": String,
            "displayLotSize": String,
            "transactionTime": String,
            "positionDetailURI": String
          },
          ...
```

```
            ]
         }
      ],
      "fxmn": [
       {
        "productIcon": String,
        "product": String,
        "market": String,
        "exchange": String,
        "exchangeDisplay": String,
        "symbol": String,
        "code": String,
        "counterID": String,
        "name": String,
        "commodityType": String,
        "pmpTopic": String,
        "delayIndicator": String,
        "accountNo": String,
        "broughtForward": String,
        "intraday": String,
        "net": String,
        "productType": String,
        "displayUnits": String,
        "displayLotSize": String,
        "netPositionList": [
          {
            "productIcon": String,
            "product": String,
            "market": String,
            "exchange": String,
            "exchangeDisplay": String,
            "symbol": String,
            "code": String,
            "counterID": String,
            "name": String,
            "commodityType": String,
            "pmpTopic": String,
            "delayIndicator": String,
            "broughtForward": String,
            "intraDay": String,
            "currencyPair": String,
            "transactionID": String,
            "orderID": String,
            "productType": String,
            "netPosition": String,
            "quantity": String,
            "price": String,
            "action": String,
            "displayUnits": String,
            "displayLotSize": String,
            "transactionTime": String,
            "positionDetailURI": String
          },
          ...
        ],
      "needDisclaimer": Booelan,
      "disclaimers": [
        "String",
        "String",
        ...
      ]
      }
    }
  }
}
```

2.2.6.3 Get Futures Net Position Detail

Description: Get Futures Net Position detail

Request:

Section	Component		
URI	FT/position/{symbol}/{transactionID}/{orderID}		
	Field	Description	Type
	{symbol}	Contract symbol	String
	{transactionID}	Net position transaction id	Integer
	{orderID}	Net position order id	Integer
Verb	**GET**		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in HTTP Request		
	Parameter	Description	Type
	exchangeCode	Contract Exchange code	String
	Month	Contract month	Integer
	year	Contract year	Integer

Response:

Property	Description	Type
Response for Futures Net Position detail		
code	Response code	Integer
msg	Response message	String
data	Response data container	
productIcon	Product icon	String
product	Product where the contract belong	String
market	Market where the contract belong	String
exchange	Contract exchange	String
exchangeDisplay	Contract exchange display name	String
symbol	Contract symbol	String
code	Contract code	String
counterID	Unique identifier for contract across multiple products	String
name	Contract display name	String
commodityType	Contract commodity type	String
pmpTopic	PMP Topic	String
delayIndicator	Delay Indicator	String
broughtForward	Position brought forward	String
intraDay	Position Intraday	String
currency	Contract currency	String
transactionID	Transaction Id	String
Ordered	Order Id	String

commodityCode	Contract commodity code	String
action	Action	String
netPosition	Net position amount	String
quantity	Quantity	String
price	Price	String
month	Contract month	String
year	Contract year	String
expiry	Contract expiry	
transactionTime	Transaction Time	String
positionDetailURI	Position detail URI	String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "productIcon": String,
    "product": String,
    "market": String,
    "exchange": String,
    "exchangeDisplay": String,
    "symbol": String,
    "code": String,
    "counterID": String,
    "name": String,
    "commodityType": String,
    "pmpTopic": String,
    "delayIndicator": String,
    "broughtForward": String,
    "intraDay": String,
    "currency": String,
    "transactionID": String,
    "orderID": String,
    "commodityCode": String,
    "action": String,
    "netPosition": String,
    "quantity": String,
    "price": String,
    "month": String,
    "year": String,
    "expiry": String,
    "transactionTime": String,
    "positionDetailURI": String
  }
}
```

2.2.6.1 Get Forex/MiniFX Net Position Detail

Description: Get Regular and Mini Forex Net Position detail

Request:

Section	Component		
URI	Regular FX	FX/position/{symbol}/{transactionID}/{orderID}	
	Mini FX	FXMN/position/{symbol}/{transactionID}/{orderID}	
	Field	Description	Type

	{symbol}	Contract symbol	String
	{transactionID}	Net position transaction id	Integer
	{orderID}	Net position order id	Integer
Verb	**GET**		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in HTTP Request		

Response:

Response for Regular/Mini Forex Net Position detail		
Property	**Description**	**Type**
code	Response code	Integer
msg	Response message	String
data	Response data container	
productIcon	Product icon	String
product	Product where the contract belong	String
market	Market where the contract belong	String
exchange	Contract exchange	String
exchangeDisplay	Contract exchange display name	String
symbol	Contract symbol	String
code	Contract code	String
counterID	Unique identifier for contract across multiple products	String
name	Contract display name	String
commodityType	Contract commodity type	String
delayIndicator	Delay Indicator	String
broughtForward	Position brought forward	String
intraDay	Position Intraday	String
currencyPair	Contract currency pair (symbol1 / symbol2)	String
currency	Contract currency (right currency)	String
transactionID	Transaction Id	String
ordered	Order Id	String
productType	Product type	String
netPosition	Net position amount	String
quantity	Quantity	String
price	Price	String
action	Action	String
displayUnits	Display unit	String
displayLotSize	Display lot size	String
transactionTime	Transaction Time	String
positionDetailURI	Position detail URI	String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "productIcon": String,
    "product": String,
    "market": String,
    "exchange": String,
    "exchangeDisplay": String,
    "symbol": String,
    "code": String,
    "counterID": String,
    "name": String,
    "commodityType": String,
    "pmpTopic": String,
    "delayIndicator": String,
    "broughtForward": String,
    "intraDay": String,
    "currencyPair": String,
    "currency": String,
    "transactionID": String,
    "orderID": String,
    "productType": String,
    "netPosition": String,
    "quantity": String,
    "price": String,
    "action": String,
    "displayUnits": String,
    "displayLotSize": String,
    "transactionTime": String,
    "positionDetailURI": String
  }
}
```

2.2.7 Alerts

2.2.7.1 Announcement Alerts

Description:

Request:

Section	Component		
URI	{product}/alert/announcement		
	{product}	FT or FX Either the two products can be and return the same response	
Verb	**GET**		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in HTTP Request		
	Field	Description	Type
	timestamp	Timestamp	
		Optional / Yes	
		Constraints / yyyyMMddHHmmss	

Response:

Contains announcement alert information.

Property	Description	Type
code	Response code	Integer
id	The announcement ID.	String
title	Announcement title.	String
time	Announcement time.	String
hightlight	Determines announcement read flag. *true* if read, otherwise, *false*.	Boolean
product	Product identifier.	String
type	Announcement	String
detailURI	Announcement details URI.	String

Result

```
{
  "code": Integer,
  "data": {
    {
      "id": String,
      "title": String,
      "time": String,
      "hightlight": Boolean,
      "product": String,
      "type": String,
      "detailURI": String,
    },
    …
  ]
}
```

2.2.7.2   Announcement Details

Description: Get the announcement details

Request:

Section	Component		
URI	{product}/alert/announcement/{alertID}		
	{product}	FT/FX	
	{alertID}	Alert ID	
		Constraints	[0-9]+
Verb	**GET**		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in HTTP Request		

Response:

Contains announcement alert information.		
Property	**Description**	**Type**
code	Response code	Integer
timestamp	Timestamp	String
id	The announcement ID.	String

title	Announcement title.	String
content	Announcement content.	String
time	Announcement time.	String
product	Product identifier.	String
type	Type announcement	String

Result

```
{
  "code": Integer,
  "data": {
    "id": String,
    "title": String,
    "content": String,
    "time": String,
    "product": String,
    "type": String
  }
}
```

2.2.7.3 Account Alerts

Description: Get all account related alerts

Request:

Section	Component		
URI	{product}/alert/account		
	{product}	FT or FX Either the two products can be and return the same response	
Verb	**GET**		
Request Header	Refer to common request header parameter in <u>HTTP Request</u>		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in <u>HTTP Request</u>		
	Field	Description	Type
	timestamp	Timestamp	String
		Optional	Yes	
		Constraints	yyyyMMddHHmmss(24 hours format)	

Response:

Contains all account related alerts		
Property	**Description**	**Type**
code	Response code	Integer
msg	Response message	String
timestamp	Timestamp	String
marginCall	Container of margin call alert	
	name	Client name	String
	amount	Margin call amount	String
	lastUpdated	Last date and time when margin call updated	String

	highLight	Flag whether the alert is read or not		Boolean
`fundDeficit`	Container of fund deficit			
	`deficitAmount`	List of fund deficits		List
		Property	**Description**	
		`currency`	Fund deficit currency	String
		`amount`	Fund deficit amount	String
	lastUpdated	Last date and time when margin call updated		String
	highLight	Flag whether the alert is read or not		Boolean
	note	Fund deficit note		String
`forMoreInfo`	For more information note			String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "marginCall": {
      "name": String,
      "amount": String,
      "lastUpdated": String,
      "highLight": Boolean
    },
    "fundDeficit": {
      "deficitAmount": [
        {
          "currency": String,
          "amount": String,
        },
        ...
      ],
      "lastUpdated": String,
      "highLight": Boolean,
      "note": String
    }
    "forMoreInfo": String
  }
}
```

2.2.7.4 Acknowledge Alert

Description: Perform alert acknowledgement to all alert type

Request:

Section	Component		
URI	`{product}/alert/{type}/acknowledge`		
	`{product}`	`FT/FX`	
	`{type}`	`Alert type`	
		Constraints	account announcement price order marginCall fundDeficit
Verb	**POST**		
Request	Refer to the common request header parameter in HTTP Request		

Header			
Request Body	Refer to the common Parameter of POST request method in HTTP Request		
	Field	Description	Type
	remarks	Remarks	String
		Optional	Yes	
Parameters	N/A		

Response:

Contains alert acknowledge result info.		
Property	**Description**	**Type**
code	Response code	Integer
data	*true* - Successful *false* – Not successful	Boolean
Result		

``{
  "code": Integer,
  "data": Boolean
}```		

2.2.8 FXInvest

2.2.8.1 Search FXInvest Contract

Description: Search FXInvest contract

Request:

Section	Component	
URI	NFX/contract/search/{keyword}	
	keyword	Search keyword
Verb	**GET**	
Request Header	Refer to common request header parameter in HTTP Request	
Request Body	N/A	
Parameters	Refer to the common Parameter of GET request method in HTTP Request	
	Parameter	Details	Type
	count	Result count number	Integer
		Default	10	

Response:

Response for FXInvest search contract		
Property	**Description**	**Type**
code	Response code	Integer
msg	Response message	String
counterList	List of counters	List
	Field	Property	

	productIcon	Product icon	String
	product	Product where the contract belong	String
	market	Market where the contract belong	String
	exchange	Contract exchange	String
	exchangeDisplay	Contract exchange display name	String
	symbol	Contract symbol	String
	code	Contract code	String
	counterID	Unique identifier for contract across multiple products	String
		Format: `<product>/<market>/<exchange>/<counterID>`	
	name	Contract display name	String
	pmpTopic	Contract topic name for subscribing to PMP	String
	disabled	Flag that determines whether the client request the request has access or the contract has been disabled.	Boolean
		Values — true: Client has no access to the contract or the contract has already disabled/expired.	
		false: Client has access to the contract or the contract is NOT disabled / expired	
	delayIndicator	Delay indicator. *Not applicable for NFX contracts*	String
	rank	Result rank	Integer

Result

```
{
  "code": Integer,
  "msg": String,
  "counterList": [
    {
      "productIcon": String,
      "product": String,
      "market": String,
      "exchange": String,
      "exchangeDisplay": String,
      "symbol": String,
      "code": String,
      "counterID": String,
      "name": String,
      "pmpTopic": String,
      "disabled": Boolean,
      "delayIndicator": String,
      "rank": Integer
    },
    ...
  ]
}
```

2.2.8.2 Get Watchlist

Description: Get FXInvest watch list

Request:

Section	Component

URI	NFX/watchlist
Verb	**GET**
Request Header	Refer to common request header parameter in HTTP Request
Request Body	N/A
Parameters	Refer to the common Parameter of GET request method in HTTP Request

Response:

Response for FXInvest watch list		
Property	**Description**	**Type**
watchlistID	Watch list id	Integer
watchlistName	Watch list name	String
counterListURI	Watch list Detail URI	String
index	Watch list order number	Integer
Result		

```
{
  "code": Integer,
  "data": [
    {
      "watchlistID": Integer,
      "watchlistName": String,
      "counterListURI": String,
      "index": Integer
    },
    {
      "watchlistID": Integer,
      "watchlistName": String,
      "counterListURI": String,
      "index": Integer
    },
    ...
  ]
}
```

2.2.8.3 Get Watchlist Details by ID

Description: Get FXInvest watch list details ny ID

Request:

Section	Component		
URI	NFX/watchlist/{watchListID}		
	{watchListID}	FXInvest watch list ID	
		Constraint	regexp={[0-9]+}
Verb	**GET**		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in HTTP Request		

Response:

Get watchlist by ID response		
Property	**Description**	**Type**
code	Response code	Integer
msg	Response message	String
data	Response data container	Object

	Property	**Description**	
	watchlistId	Watch list ID	Integer
	watchlistName	Watch list name	String
	counters	Watch list items	List

		Property	**Description**	
		name	Contract name	String
		code	Contract code	String
		index	Order number	Integer
		symbol	Contract symbol	String
		feedCode	Contract feed code	String
		product	Product name	String
		exchange	Exchange code	String
		exchangeDisplay	Exchange display	String
		market	Contract market	String
		counterID	Contract counter Id	String
		pmpTopic	PMP topic name	String
		isTradable	Flag, whether contract is allowed for conversion	Boolean
		isTradableMessage	Message is contract is not allowed for conversion If isTradable is false, display this message	String
		ask	Ask Price	String
		bid	Bid price	String
		open	Open price	String
		high	High price	String
		low	Low price	String
		close	Previous close price	String
		time	Last update time	String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "watchlistId": Integer,
    "watchlistName": String,
    "counters": [
      {
        "name": String,
        "code": String,
        "index": Integer,
```

```
        "symbol": String,
        "feedCode": String,
        "product": String,
        "exchange": String,
        "exchangeDisplay": String,
        "market": String,
        "counterID": String,
        "pmpTopic": String,
        "isTradable": Boolean,
        "isTradableMessage": String,
        "ask": String,
        "bid": String,
        "open": String,
        "high": String,
        "low": String,
        "close": String,
        " close ": String,
      },
      ...
    ]
  }
}
```

2.2.8.4 Add Counter to Watch list

Description: Add counter to FXInvest watch list and return updated watchlist

Request:

Section	Component			
URI	NFX/watchlist/add/{watchListID}			
	watchListID	FXInvest watch list ID		
		Constraint	regexp={[0-9]+}	
Verb	**POST**			
Request Header	Refer to common request header parameter in HTTP Request			
Request Body	Refer to the common Parameter of POST request method in HTTP Request			
	Field	Description		Type
	counterIDs	Comma delimited list of counterIDs		String
Parameters	Refer to the common Parameter of GET request method in HTTP Request			

Response:

Add watchlist response			
Property	**Description**		**Type**
code	Response code		Integer
msg	Response message		String
data	Response data container		Object
	Property	**Description**	
	watchlistId	Watch list ID	Integer
	watchlistName	Watch list name	String
	counters	Watch list items	List
		Property	**Description**	

		name	Contract name	String
		code	Contract code	String
		index	Order number	Integer
		symbol	Contract symbol	String
		feedCode	Contract feed code	String
		product	Product name	String
		exchange	Exchange code	String
		exchangeDisplay	Exchange display	String
		market	Contract market	String
		counterID	Contract counter Id	String
		pmpTopic	PMP topic name	String
		isTradable	Flag, whether contract is allowed for conversion	Boolean
		isTradableMessage	Message is contract is not allowed for conversion If isTradable is false, display this message	String
		ask	Ask Price	String
		bid	Bid price	String
		open	Open price	String
		high	High price	String
		low	Low price	String
		close	Previous close price	String
		time	Last update time	String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "watchlistId": Integer,
    "watchlistName": String,
    "counters": [
      {
        "name": String,
        "code": String,
        "index": Integer,
        "symbol": String,
        "feedCode": String,
        "product": String,
        "exchange": String,
        "exchangeDisplay": String,
        "market": String,
        "counterID": String,
        "pmpTopic": String,
        "isTradable": Boolean,
        "isTradableMessage": String,
        "ask": String,
        "bid": String,
        "open": String,
        "high": String,
        "low": String,
        "close": String,
        " close ": String,
```

```
        },
        ...
    ]
  }
}
```

2.2.6.1 Rename Watch list

Description: Rename FXInvest watch list name

Request:

Section	Component		
URI	`NFX/watchlist/rename/{watchListID}`		
	`watchListID`	FXInvest watch list ID	
		Constraint	regexp={[0-9]+}
Verb	**POST**		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	Refer to the common Parameter of POST request method in HTTP Request		
	Field	Description	Type
	`watchlistName`	New watchlist name	String
Parameters	Refer to the common Parameter of GET request method in HTTP Request		

Response:

Property	Description			Type
Rename watchlist response				
`code`	Response code			Integer
`msg`	Response message			String
`data`	Response data container			Object
	Property	**Description**		
	`watchlistId`	Watch list ID		Integer
	`watchlistName`	Watch list name		String
	`counters`	Watch list items		List
		Property	**Description**	
		`name`	Contract name	String
		`code`	Contract code	String
		`index`	Order number	Integer
		`symbol`	Contract symbol	String
		`feedCode`	Contract feed code	String
		`product`	Product name	String
		`exchange`	Exchange code	String
		`exchangeDisplay`	Exchange display	String
		`market`	Contract market	String

		counterID	Contract counter Id	String
		pmpTopic	PMP topic name	String
		isTradable	Flag, whether contract is allowed for conversion	Boolean
		isTradableMessage	Message is contract is not allowed for conversion If isTradable is false, display this message	String
		ask	Ask Price	String
		bid	Bid price	String
		open	Open price	String
		high	High price	String
		low	Low price	String
		close	Previous close price	String
		time	Last update time	String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "watchlistId": Integer,
    "watchlistName": String,
    "counters": [
      {
        "name": String,
        "code": String,
        "index": Integer,
        "symbol": String,
        "feedCode": String,
        "product": String,
        "exchange": String,
        "exchangeDisplay": String,
        "market": String,
        "counterID": String,
        "pmpTopic": String,
        "isTradable": Boolean,
        "isTradableMessage": String,
        "ask": String,
        "bid": String,
        "open": String,
        "high": String,
        "low": String,
        "close": String,
        " close ": String,
      },
      ...
    ]
  }
}
```

2.2.6.2 Remove Counter from Watch list

Description: Remove/Delete counter from FXInvest watch list and return updated watch list

Request:

Section	Component		
URI	NFX/watchlist/remove/{watchListID}		
	watchListID	FXInvest watch list ID	
		Constraint	regexp={[0-9]+}
Verb	**POST**		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	Refer to the common Parameter of POST request method in HTTP Request		
	Field	Description	Type
	counterIDs	Comma delimited list of counterIDs	String
Parameters	Refer to the common Parameter of GET request method in HTTP Request		

Response:

Property	Description			Type
Remove watchlist response				
Property	**Description**			**Type**
code	Response code			Integer
msg	Response message			String
data	Response data container			Object
	Property	**Description**		
	watchlistId	Watch list ID		Integer
	watchlistName	Watch list name		String
	counters	Watch list items		List
		Property	**Description**	
		name	Contract name	String
		code	Contract code	String
		index	Order number	Integer
		symbol	Contract symbol	String
		feedCode	Contract feed code	String
		product	Product name	String
		exchange	Exchange code	String
		exchangeDisplay	Exchange display	String
		market	Contract market	String
		counterID	Contract counter Id	String
		pmpTopic	PMP topic name	String
		isTradable	Flag, whether contract is allowed for conversion	Boolean
		isTradableMessage	Message is contract is not allowed for conversion If isTradable is false, display this message	String
		ask	Ask Price	String
		bid	Bid price	String
		open	Open price	String

		high	High price	String
		low	Low price	String
		close	Previous close price	String
		time	Last update time	String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "watchlistId": Integer,
    "watchlistName": String,
    "counters": [
      {
        "name": String,
        "code": String,
        "index": Integer,
        "symbol": String,
        "feedCode": String,
        "product": String,
        "exchange": String,
        "exchangeDisplay": String,
        "market": String,
        "counterID": String,
        "pmpTopic": String,
        "isTradable": Boolean,
        "isTradableMessage": String,
        "ask": String,
        "bid": String,
        "open": String,
        "high": String,
        "low": String,
        "close": String,
        " close ": String,
      },
      ...
    ]
  }
}
```

2.2.6.3 Move Counters to another Watch list

Description: Move counters from one watch list to another FXInvest watch list and return updated watch list

Request:

Section	Component		
URI	NFX/watchlist/move		
Verb	**POST**		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	Refer to the common Parameter of POST request method in HTTP Request		
	Field	Description	Type
	counterIDs	Comma delimited list of counterIDs	String
	fromWatchlistID	Source watch list	Integer
	toWatchlistID	Destination watch list	Integer
Parameters	Refer to the common Parameter of GET request method in HTTP Request		

Response:

Move counter to another watch list response			
Property	**Description**		**Type**
code	Response code		Integer
msg	Response message		String
data	Response data container		Object
	Property	**Description**	
	watchlistId	Watch list ID	Integer
	watchlistName	Watch list name	String
	counters	Watch list items	List
		Property	**Description**	
		name	Contract name	String
		code	Contract code	String
		index	Order number	Integer
		symbol	Contract symbol	String
		feedCode	Contract feed code	String
		product	Product name	String
		exchange	Exchange code	String
		exchangeDisplay	Exchange display	String
		market	Contract market	String
		counterID	Contract counter Id	String
		pmpTopic	PMP topic name	String
		isTradable	Flag, whether contract is allowed for conversion	Boolean
		isTradableMessage	Message is contract is not allowed for conversion If isTradable is false, display this message	String
		ask	Ask Price	String
		bid	Bid price	String
		open	Open price	String
		high	High price	String
		low	Low price	String
		close	Previous close price	String
		time	Last update time	String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "watchlistId": Integer,
    "watchlistName": String,
    "counters": [
      {
        "name": String,
        "code": String,
```

```
            "index": Integer,
            "symbol": String,
            "feedCode": String,
            "product": String,
            "exchange": String,
            "exchangeDisplay": String,
            "market": String,
            "counterID": String,
            "pmpTopic": String,
            "isTradable": Boolean,
            "isTradableMessage": String,
            "ask": String,
            "bid": String,
            "open": String,
            "high": String,
            "low": String,
            "close": String,
            " close ": String,
        },
        ...
      ]
    }
}
```

2.2.6.4 Sort Watch list

Description: Sort FXInvest watch list items and return the updated watchlist

Request:

Section	Component			
URI	NFX/watchlist/sort/{watchListID}			
	watchListID	FXInvest watch list ID		
		Constraint	regexp={[0-9]+}	
Verb	**POST**			
Request Header	Refer to common request header parameter in <u>HTTP Request</u>			
Request Body	Refer to the common Parameter of POST request method in <u>HTTP Request</u>			
	Field	Description		Type
	counterIDs	Sorted comma delimited list of counterIDs		String
Parameters	Refer to the common Parameter of GET request method in <u>HTTP Request</u>			

Response:

Property	Description		Type
Sort watch list response			
code	Response code		Integer
msg	Response message		String
data	Response data container		Object
	Property	**Description**	
	watchlistId	Watch list ID	Integer
	watchlistName	Watch list name	String
	counters	Watch list items	List
		Property	**Description**	

name	Contract name	String
code	Contract code	String
index	Order number	Integer
symbol	Contract symbol	String
feedCode	Contract feed code	String
product	Product name	String
exchange	Exchange code	String
exchangeDisplay	Exchange display	String
market	Contract market	String
counterID	Contract counter Id	String
pmpTopic	PMP topic name	String
isTradable	Flag, whether contract is allowed for conversion	Boolean
isTradableMessage	Message is contract is not allowed for conversion If isTradable is false, display this message	String
ask	Ask Price	String
bid	Bid price	String
open	Open price	String
high	High price	String
low	Low price	String
close	Previous close price	String
time	Last update time	String

Result

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "watchlistId": Integer,
    "watchlistName": String,
    "counters": [
      {
        "name": String,
        "code": String,
        "index": Integer,
        "symbol": String,
        "feedCode": String,
        "product": String,
        "exchange": String,
        "exchangeDisplay": String,
        "market": String,
        "counterID": String,
        "pmpTopic": String,
        "isTradable": Boolean,
        "isTradableMessage": String,
        "ask": String,
        "bid": String,
        "open": String,
        "high": String,
        "low": String,
        "close": String,
        " close ": String,
```

```
        },
        ...
    ]
  }
}
```

2.2.6.5 Validate Currency Ledger Balance

Description: Validate if the account has fund on currency ledger. This method can be called if Ask or Bid price is clicked from the watchlist before loading the Conversion Trade page.

Request:

Section	Component		
URI	`NFX/conversion/validateledger?currency={currency}`		
Verb	`GET`		
Request Header	Refer to common request header parameter in <u>HTTP Request</u>		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in <u>HTTP Request</u>		
	Field	Description	
	`Currency`	Currency	
		Eg: `SGD, USD, JPY etc.`	

Response:

Contains validation of ledger balance response		
FXInvest Trading Info		
Property	**Description**	**Type**
`code`	Response code	Integer
`msg`	Response message	String
`hasAvailableFund`	Flag if the account has available fund for the currency ledger	String
`validationMessage`	Validation message	String
Result		

```
{
  "code": Integer,
  "msg": String,
  "hasAvailableFund": Booelan,
  "validationMessage": String
}
```

2.2.6.6 Get FXInvest Trading Info

Description: Get FXInvest contract trading information

Request:

Section	Component
URI	`NFX/conversion/tradeinfo?counterID={counterID}&currency={currency}`

Verb	**GET**
Request Header	Refer to common request header parameter in <u>HTTP Request</u>
Request Body	N/A
Parameters	Refer to the common Parameter of GET request method in <u>HTTP Request</u>

Field	Description	
counterID	Contract counters Id	
	Format	`<product>/<market>/<exchange>/<counterID>`
	Eg: `NFX/NFX/NFX/EURUSD`	
currency	Currency 3 characters symbol	
	Eg: For currency pair `AUDSGD` • If `Bid` price is tapped from watchlist, currency is `AUD` • If `Ask` price is tapped from watchlist, currency is `SGD`	

Response:

Contains FXInvest trading info response.

FXInvest Trading Info

Property	Description	Type
name	Contract name	String
symbol	Contract symbol	String
counterID	Contract counter ID	String
feedCode	Contract feed code	String
currency	Contract currency	String
pmpTopic	Contract PMP Topic	String
unitMultiplier	Contract unit multiplier	Decimal
tickSize	Contract tick size	String
noOfDecimalsDisplay	Contract price decimal limit	Integer
askPrice	Contract static ask price	String
bidPrice	Contract static bid price	String

orderTypes	Contract order types		List
	Property	Description	
	value	Order type ID	Integer
	text	Order type description	String

actions	Trade action
	
	Action Type
	`1 – BUY`
	`0 – SELL`		

	Property	Description	
	value	Action ID	Integer
	text	Action description	String

ledgerBalances	List of currency ledger balances of the account		
	Field	Description	Type
	currency	Currency	String

	ledgerBalance	Currency Ledger Balance	String
	isTransactionAllowed	Flag whether the currency can transact for conversion	Boolean
	message	Message to be displayed if `isTransactionAllowed` flag is false	String
passwordRequired		Flag if password is required for the account	Boolean
twoFARequired		Flag if the 2FA is required for the account	Boolean
Result			

```
{
  "code": Integer,
  "msg": String,
  "data": {
    "name": String,
    "symbol": String,
    "counterID": String,
    "feedCode": String,
    "currency": String,
    "pmpTopic": String,
    "unitMultiplier": Decimal,
    "tickSize": String,
    "askPrice": String,
    "bidPrice": String,
    "orderTypes": [
      {
        "value": Integer,
        "text": String
      },
      ...
    ],
    "actions": [
      {
        "value": Integer,
        "text": String
      },
      ...
    ],
    "ledgerBalance": [
      {
        "currency": String,
        "ledgerBalance": String,
        "isTransactionAllowed": Boolean,
        "message": String
      },
      ...
    ],
    "passwordRequired": Boolean,
    "twoFARequired": Boolean
  }
}
```

2.2.6.7 Validate Order

Description: Perform order validation for FXInvest

Request:

Section	Component		
URI	`/NFX/conversion/validate`		
Verb	**POST**		
Request Header	Refer to the common request header parameter in HTTP Request		
	Field	Description	Type

	encryptedPIN	Encrypted PIN		String
	Content-Type	application/x-www-form-urlencoded		String
Request Body	Refer to the common Parameter of POST request method in HTTP Request			
	Property	Description		Type
	action	Trade action type		Integer
		1	BUY action	
		0	SELL action	
	orderType	Order Type		Integer
		1	Market	
		2	Limit	
	price	Market or Limit price		Decimal
	fromCurrency	Currency to convert		String
	fromAmount	Amount to convert		Decimal
	toCurrency	Currency converted		String
	toAmount	Amount converted		Decimal
	symbol	Contract symbol		String
Parameters	N/A			

Response:

Validation response		
Property	**Description**	**Type**
code	Response code	Integer
message	Response message	String
data	Generated "auth-token" to be use to submit order	String
Result		

{
  "code": Integer,
  "message": String,
  "data": String
}		

2.2.6.8   Submit Order

Description: Submit FXInvest conversion order

Request:

Section	Component		
URI	NFX/conversion		
Verb	**POST**		
Request Header	Refer to the common request header parameter in HTTP Request		
	Field	**Description**	**Type**
	encryptedPIN	Encrypted PIN	String
	authToken	Authentication token retrieved from validation.	String
	Content-Type	application/x-www-form-urlencoded	

Request Body	Refer to the common Parameter of POST request method in HTTP Request		
	Field	**Description**	**Type**
	`action`	Trade action type	Integer
		1	BUY action	
		0	SELL action	
	`orderType`	Order Type	Integer
		1	Market	
		2	Limit	
	`price`	Market or Limit price	Decimal
	`fromCurrency`	Currency to convert	String
	`fromAmount`	Amount to convert	Decimal
	`toCurrency`	Currency converted	String
	`toAmount`	Amount converted	Decimal
	`symbol`	Contract symbol	String
Parameters	N/A		

Response:

Order submission response		
Property	**Description**	**Type**
`code`	Response code	Integer
`msg`	Response message	String
`orderDetailURI`	Order detail URI. This will be available if order is successfully submitted	String
`passwordRequired`	Flag if password is required for the account	Boolean
`twoFARequired`	Flag if the 2FA is required for the account	Boolean
Result		

```
{
  "code": Integer,
  "msg": String
  "orderDetailURI": String,
  "passwordRequired": Boolean,
  "twoFARequired": Boolean
}
```

2.2.6.9 Amend Order

Description: Perform amendment of FXInvest order. This action is only applicable for "Limit" order.

Request:

Section	Component		
URI	`NFX/conversion/amend/{orderNo}`		
	Field	**Description**	**Type**
	`{orderNo}`	`Order number`	Integer
Verb	**POST**		
Request	Refer to the common request header in HTTP Request		

Header	Field	Description	Type
	encryptedPIN	Encrypted PIN	String
Request Body	Refer to the common Parameter of POST request method in HTTP Request		
	Field	**Description**	**Type**
	newPrice	Amended price	Decimal
	toAmount	Amount converted	Decimal
Parameters	N/A		

Response:

Amendment response		
Property	**Description**	**Type**
code	Response code	Integer
msg	Response message	String
passwordRequired	Flag if password is required for the account	Boolean
twoFARequired	Flag if the 2FA is required for the account	Boolean
Result		

{
  "code": Integer,
  "msg": String,
  "passwordRequired": Boolean,
  "twoFARequired": Boolean
}		

2.2.6.10 Withdraw Order

Description:

Request:

Section	Component		
URI	NFX/conversion/withdraw/{orderNo}		
	Field	**Description**	**Type**
	{orderNo}	Order number	Integer
Verb	**POST**		
Request Header	Refer to the common request header parameter in HTTP Request		
	Field	Description	Type
	encryptedPIN	Encrypted PIN	String
Request Body	N/A		
Parameters	N/A		

Response:

Withdrawal response		
Property	**Description**	**Type**
Code	Response code	Integer
Data	Response message	Boolean
passwordRequired	Flag if password is required for the account	Boolean

twoFARequired	Flag if the 2FA is required for the account	Boolean

Result

```
{
  "code": Integer,
  "msg": String,
  "passwordRequired": Boolean,
  "twoFARequired": Boolean
}
```

2.2.7 Online Withdrawal

2.2.7.1 Get Online Withdrawal Ledger

Description: Get account ledger for online withdrawal

Request:

Section	Component
URI	NFX/onlinewithdrawal/funds
Verb	**GET**
Request Header	Refer to common request header parameter in HTTP Request
Request Body	N/A
Parameters	Refer to the common Parameter of GET request method in HTTP Request

Response:

Contains account ledgers for online withdrawal			
Property	**Description**		**Type**
Code			
msg			
ledgers	List of ledgers		List
	Field	**Description**	
	currency	Ledger currency	String
	balance	Ledger balance	String
	withdrawable	Indicator if the currency ledger is allowed for Online Withdrawal or not	Boolean
		Property | **Description**	
		True | Allowed to submit online withdrawal	
		False | NOT allowed to submit online withdrawal	

Result

```
{
  "code": Integer,
  "data": {
    "ledgers": [
      {
        "currency": String,
        "balance": String,
        "withdrawable": Boolean,
```

```
        "message": String
      },
      …
    ],
    "passwordRequired": Boolean,
    "twoFARequired": Boolean
  }
}
```

2.2.7.2 Get Withdrawal Types

Description: Get the list of Withdrawal type used for Online Withdrawal

Request:

Section	Component		
URI	NFX/onlinewithdrawal/withdrawaltype/{currency}		
	{currency}	Currency symbol (eg. USD, SGD etc..)	String
Verb	**GET**		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in HTTP Request		

Response:

List of Withdrawal types applicable per currency		
Property	**Description**	**Type**
code	Response code	Integer
id	Withdrawal type id.	Integer
display	Withdrawal Type display name.	String
Result		

```
{
  "code": Integer,
  "data": [
    {
      "id": Integer,
      "display": String
    },
    {
      "id": Integer,
      "display": String
    },
    ...
  ]
}
```

2.2.7.3 Get Online Withdrawal Important Notes

Description: Get the Important Notes details for Online Withdrawal

Request:

Section	Component
URI	NFX/onlinewithdrawal/notes
Verb	**GET**
Request Header	Refer to common request header parameter in HTTP Request

Request Body	N/A
Parameters	Refer to the common Parameter of GET request method in <u>HTTP Request</u>

Response:

Contains the details of Online Withdrawal Important Notes		
Property	**Description**	**Type**
Code	Response code	Integer
data	Online Withdrawal Important Notes details	String
Result		

{
  "code": Integer,
  "data": String
}		

2.2.7.4   Get Online Withdrawal Terms and Conditions

Description: Get Online Withdrawal Terms and Conditions

Request:

Section	Component
URI	NFX/onlinewithdrawal/terms
Verb	**GET**
Request Header	Refer to common request header parameter in <u>HTTP Request</u>
Request Body	N/A
Parameters	Refer to the common Parameter of GET request method in <u>HTTP Request</u>

Response:

Contains the details of Online Withdrawal Terms and Conditions		
Property	**Description**	**Type**
Code	Response code	Integer
data	Online Withdrawal Important Notes details	String
Result		

{
  "code": Integer,
  "data": String
}		

2.2.7.5   Get Online Withdrawal Interest Rates

Description: Get the URL of Online Withdrawal Interest Rate

Request:

Section	Component
URI	NFX/onlinewithdrawal/interestrate
Verb	**GET**
Request Header	Refer to common request header parameter in <u>HTTP Request</u>
Request Body	N/A

Parameters	Refer to the common Parameter of GET request method in HTTP Request

Response:

Contains the URL of Online Withdrawal Interest Rate		
Property	**Description**	**Type**
Code	Response code	Integer
data	Online Withdrawal Important Notes details	String
Result		

```
{
  "code": Integer,
  "data": String
}
```

2.2.7.6 Get Bank List

Description: Get list of banks. This is only applicable for withdrawal type "*Quick Cheque Deposit*"

Request:

Section	**Component**
URI	NFX/onlinewithdrawal/banks
Verb	**GET**
Request Header	Refer to common request header parameter in HTTP Request
Request Body	N/A
Parameters	Refer to the common Parameter of GET request method in HTTP Request

Response:

Contains the list of banks that use by the withdrawal type "*Quick Cheque Deposit*"		
Property	**Description**	**Type**
code	Bank code.	String
displayName	Bank display name.	String
Result		

```
{
  "code": Integer,
  "data": [
    {
      "code": String,
      "displayName": String
    },
    {
      "code": String,
      "displayName": String
    },
    ...
  ]
}
```

2.2.7.7 Get Phillip Group List

Description: Get the list of Phillip Group accounts. This is only applicable for withdrawal type "*Internal transfer within Phillip group*"

Request:

Section	Component
URI	`NFX/onlinewithdrawal/phillipgroups`
Verb	**GET**
Request Header	Refer to common request header parameter in HTTP Request
Request Body	N/A
Parameters	Refer to the common Parameter of GET request method in HTTP Request

Response:

Contains the list of Phillip Group accounts that use by the withdrawal type "*Internal transfer within Phillip group*"

Property	Description	Type
`code`	Group code.	String
`displayName`	Group Display name.	String
Result		

```
{
  "code": 1,
  "data": [
    {
      "code": String,
      "displayName": String
    },
    {
      "code": String,
      "displayName": String
    },
    ...
  ]
}
```

2.2.7.8 Validate Order

Description: Validate Online Withdrawal order

Request:

Section	Component		
URI	`NFX/onlinewithdrawal/validate`		
Verb	**POST**		
Request Header	Refer to the common request header parameter in HTTP Request		
	Field	Description	Type
	`encryptedPIN`	Encrypted PIN	String
	`Content-Type`	application/x-www-form-urlencoded	String
Request Body	Refer to the common Parameter of POST request method in HTTP Request		
	Field	Description	Type
	`currency`	Currency to be withdrawn.	String

		Required	Yes	
	`amountWithdrawn`	Total amount to withdraw		Decimal
		Required	Yes	
	`withdrawalType`	Withdrawal type		Integer
		Required	Yes	
	`bankName`	Bank name		String
	`bankAccountNo`	Bank account number		String
	`accountNo`	Represents Phillip account		String
	`name`	Represents account name		String
	`nricPassport`	NRIC or Passport		String
	`swiftCode`	Swift code		String
	`beneficiary`	Beneficiary name		String
	`otherInfo`	Represents other information		String
	Withdrawal Type parameter mapping			
	Parameter	Withdrawal Option Form Fields		
	Quick Cheque Deposit			
	`bankName`	`Bank Name`		
	`bankAccountNo`	`Bank A/C No`		
	`Cheque to be collected personally`			
	`N/A.`			
	`Authorisation for cheque collection`			
	`name`	`Name`		
	`nricPassport`	`NRIC/Passport No.`		
	`Internal transfer within Phillip`			
	`accountNo`	`A/C No.`		
	`name`	`Name`		
	`Internal transfer with Phillip Group`			
	`accountNo`	`A/C No.`		
	`otherInfo`	`Others, please specify`		
	`Remittance to bank`			
	`bankName`	`Bank`		
	`bankAccountNo`	`A/C No.`		
	`swiftCode`	`Swift Code`		
	`beneficiary`	`Beneficiary`		
	`otherInfo`	`Other Information(Eg:IBAN No, BIC Code, ABA No, Chips UID,Address etc.)`		
Parameters	N/A			

Response:

Validation response		
Property	**Description**	**Type**

code	Response code	Integer
message	Response message	String
data	Generated "auth-token" to be use to submit order	String
confirmationMessage	Confirmation message	String
note	Note message	String
passwordRequired	Flag if password is required for the account	Boolean
twoFARequired	Flag if the 2FA is required for the account	Boolean

Result

```
{
  "code": Integer,
  "msg": String,
  "data": String,
  "confirmationMessage": String,
  "note": String,
  "passwordRequired": Booelan,
  "twoFARequired": Boolean
}
```

2.2.7.9 Submit Order

Description: Submit Online Withdrawal order

Request:

Section	Component		
URI	NFX/onlinewithdrawal/		
Verb	**POST**		
Request Header	Refer to the common request header parameter in HTTP Request		
	Field	Description	Type
	encryptedPIN	Encrypted PIN	String
	authToken	Authentication token	String
	Content-Type	application/x-www-form-urlencoded	String
Request Body	Refer to the common Parameter of POST request method in HTTP Request		
	Field	Description	Type
	currency	Currency to be withdrawn.	String
		Required	Yes	
	amountWithdrawn	Total amount to withdraw	Decimal
		Required	Yes	
	withdrawalType	Withdrawal type	Integer
		Required	Yes	
	bankName	Bank name	String
	bankAccountNo	Bank account number	String
	accountNo	Represents Phillip account number	String
	name	Represents account name	String

	nricPassport	NRIC or Passport	String
	swiftCode	Swift code	String
	beneficiary	Beneficiary name	String
	otherInfo	Represents other information	String
	Withdrawal Type parameter mapping		
	Parameter	Withdrawal Option Form Fields	
	Quick Cheque Deposit		
	bankName	Bank Name	
	bankAccountNo	Bank A/C No	
	Cheque to be collected personally		
	N/A.		
	Authorisation for cheque collection		
	name	Name	
	nricPassport	NRIC/Passport No.	
	Internal transfer within Phillip		
	accountNo	A/C No.	
	name	Name	
	Internal transfer with Phillip Group		
	accountNo	A/C No.	
	otherInfo	Others, please specify	
	Remittance to bank		
	bankName	Bank	
	bankAccountNo	A/C No.	
	swiftCode	Swift Code	
	beneficiary	Beneficiary	
	otherInfo	Other Information(Eg:IBAN No, BIC Code, ABA No, Chips UID,Address etc.)	
Parameters	N/A		

Response:

Contains the response for Online Withdrawal order submission		
Property	**Description**	**Type**
code	Response code	Integer
data	Submission result	Boolean
passwordRequired	Flag if password is required for the account	Booelan
twoFARequired	Flag if the 2FA is required for the account	Boolean
Result		

<pre>{
  "code": Integer,
  "msg": String
  "passwordRequired": Boolean,
  "twoFARequired": Boolean
}</pre>		

2.2.8 Online Withdrawal / FXInvest Transaction History

2.2.8.1 Get Transaction History

Description: Get the list of FXInvest and Online Withdrawal order history by history type

Request:

Section	Component		
URI	NFX/history/{type}		
	type	History Type	
		Values	TD – Today's Order YD – Yesterday's Order CM – Current Month Order PM – Previous Month Order
		Default	TD
Verb	**GET**		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in HTTP Request		

Response:

Property	Description		Type
\	Contains the list of FXInvest and Online Withdrawal order history		
code	Response code		Integer
msg	Response message		String
data	Response data container		Object
fxInvest	List of FXInvest Order History		List
	Field	Description	
	Symbol	Contract symbol	String
	orderNo	Order number	String
	Price	Order price	String
	fromCurrency	From Currency (Amount Sold)	String
	fromAmount	From Amount (Currency Sold)	String
	toCurrency	To Currency (Bought Currency)	String
	toAmount	To Amount (Bought Amount)	String
	Status	Order status code	String
	statusDescription	Order status description	String
	statusColor	Status HEX color code	String
	statusColorName	Status color name	String
	orderType	Order type	String
	orderTypeDescription	Order type Description	String
	hasMultipleCurrency	This is for Online Withdrawal use only.	N/A
	orderDetailURI	Order detail URI	String

onlineWithdrawal	List of Online Withdrawal Order History		List
	Field	Description	
	Symbol	Contract symbol	String
	orderNo	Order number	String
	Price	Order price If the "hasMultipleCurrency" flag is true, value is ">>"	String
	fromCurrency	From Currency (Amount Sold) This can be empty if the "hasMultipleCurrency" is true.	String
	fromAmount	From Amount (Currency Sold) This can be empty if the "hasMultipleCurrency" is true.	String
	toCurrency	To Currency (Bought Currency)	String
	toAmount	To Amount (Bought Amount)	String
	Status	Order status code	String
	statusDescription	Order status description	String
	statusColor	Status HEX color code	String
	statusColorName	Status color name	String
	orderType	Withdrawal type option code	String
	orderTypeDescription	Withdrawal type optiondescription	String
	hasMultipleCurrency	Flag indicator if the Online Withdrawal has multiple currencies. If true, the price should not be shown.	Boolean
	orderDetailURI	Order detail URI	String
passwordRequired	Flag if password is required for the account		Booelan
twoFARequired	Flag if the 2FA is required for the account		Boolean

Result

```
{
  "code": Integer,
  "data": {
    "fxInvest": [
      {
        "symbol": String,
        "orderNo": String,
        "price": String,
        "fromCurrency": String,
        "fromAmount": String,
        "toCurrency": String,
        "toAmount": String,
        "status": String,
        "statusDescription": String,
        "statusColor": String,
        "statusColorName": String,
        "orderType": String,
        "orderTypeDescription": String,
        "orderDetailURI": String
      },
      ...
    ],
    "onlineWithdrawal": [
      {
```

```
        "symbol": String,
        "orderNo": String,
        "price": String,
        "fromCurrency": String,
        "fromAmount": String,
        "toCurrency": String,
        "toAmount": String,
        "status": String,
        "statusDescription": String,
        "statusColor": String,
        "statusColorName": String,
        "orderType": String,
        "orderTypeDescription": String,
        "hasMultipleCurrency": Boolean,
        "orderDetailURI": String
      },
      ...
    ],
  "passwordRequired": Boolean,
  "twoFARequired": Boolean
  }
}
```

2.2.8.2 Get FXInvest Order Detail

Description: Get the FXInvest order detail

Request:

Section	Component			
URI	NFX/conversion/{type}/{orderNo}			
	type	History Type		
		Values	TD – Today's Order YD – Yesterday's Order CM – Current Month Order PM – Previous Month Order	
		Default	TD	
	orderNo	Order number		
		Constraint	[0-9]+	
		Optional	No	
Verb	**GET**			
Request Header	Refer to common request header parameter in HTTP Request			
Request Body	N/A			
Parameters	Refer to the common Parameter of GET request method in HTTP Request			

Response:

Contains FXInvest order detail response		
Property	**Description**	**Type**
code	Response code	Integer
data	Response data container	Object
symbol	Order symbol	String
orderNo	Order number	String
price	Order price	String
fromCurrency	From Currency (Amount Sold)	String

fromAmount	From Amount (Currency Sold)	String
toCurrency	To Currency (Bought Currency)	String
toAmount	To Amount (Bought Amount)	String
status	Order status code	String
statusDescription	Order status description	String
statusColor	Status HEX color code	String
statusColorName	Status color name	String
action	Order action	String
orderType	Order type code	String
orderTypeDescription	Order type description	String
tradeType	Trade type code	String
tradeTypeDescription	Trade type description	String
transactionDateTime	Last transaction date/time	String
unitMultiplier	Contract unit multiplier	Decimal
noOfDecimalsDisplay	Contract price decimal limit	Integer
orderDetailURI	Order detail URI	String
amendURI	Amend URI	String
withdrawURI	Withdraw URI	String
historyLog	Order History Log		List
	Field	Description	
	status	Order status code	String
	statusDescription	Order status description	String
	statusColor	Status HEX color code	String
	statusColorName	Status color name	String
	price	Executed price	String
	quantity	Executed quantity	String
	transactionDateTime	Transaction date/time	String
	message	Message/Remarks	String
passwordRequired	Flag if password is required for the account	Booelan
twoFARequired	Flag if the 2FA is required for the account	Boolean

Result

```
{
  "code": Integer,
  "data": {
    "symbol": String,
    "orderNo": String,
    "price": String,
    "fromCurrency": String,
    "fromAmount": String,
    "toCurrency": String,
    "toAmount": String,
    "status": String,
    "statusDescription": String,
    "statusColor": String,
    "statusColorName": String,
    "action": String,
```

```
      "orderType": String,
      "orderTypeDescription": String,
      "tradeType": String,
      "tradeTypeDescription": String,
      "transactionDateTime": String,
      "noOfDecimalsDisplay": Integer,
      "orderDetailURI": String,
      "amendURI": String,
      "withdrawURI": String,
      "historyLog": [
        {
          "status": String,
          "statusDescription": String,
          "statusColor": String,
          "statusColorName": String,
          "price": String,
          "quantity": String,
          "transactionDateTime": String,
          "message": String
        },
        ...
      ],
      "passwordRequired": Boolean,
      "twoFARequired": Boolean
    }
}
```

2.2.8.3 Get Online Withdrawal Order Detail

Description: Get the Online Withdrawal order detail

Request:

Section	Component		
URI	NFX/onlinewithdrawal/{type}/{orderNo}		
	type	History Type	
		Values	TD – Today's Order YD – Yesterday's Order CM – Current Month Order PM – Previous Month Order
	orderNo	Order number	
		Constraint	[0-9]+
		Optional	No
Verb	**GET**		
Request Header	Refer to common request header parameter in HTTP Request		
Request Body	N/A		
Parameters	Refer to the common Parameter of GET request method in HTTP Request		

Response:

Contains Online Withdrawal order detail response		
Property	**Description**	**Type**
code	Response code	Integer
msg	Response message	String
data	Response data container	Object
orderNo	Order number	String
totalAmountWithdrawn	Total withdrawn amount	String

conversion	List of currencies submitted for Online Withdrawal with converted to other currency		List
	Field	Description	
	fromCurrency	From Currency	String
	fromAmount	From Amount	String
	toCurrency	To Currency	String
	toAmount	To Amount	String
	rate	Exchange rate	String
status	Order status code		String
statusDescription	Order status description		String
statusColor	Status HEX color code		String
statusColorName	Status color name		String
withdrawalType	Withdrawal type code		String
withdrawalTypeDescription	Withdrawal type description		String
bankName	Represents bank name		String
accountNo	Represents Bank account or Phillip account		String
name	Represents name		String
nricPassport	NRIC or Passport		String
swiftCode	Swift code		String
beneficiary	Beneficiary name		String
otherInfo	Represents other information		String
remarks	Remarks		String
transactionDateTime	Order transaction date/time		String
orderDetailURI	Order detail URI		String
passwordRequired	Flag if password is required for the account		Boolean
twoFARequired	Flag if the 2FA is required for the account		Boolean
Field mapping for each Withdrawal Type			
Quick Cheque Deposit			
bankName	Bank Name		
accountNo	A/C No		
Cheque to be collected personally			
N/A			
Authorisation for cheque collection			
name	Name		
nricPassport	NRIC/Passport		
Internal transfer within Phillip			
accountNo	A/C		
name	Name		
Internal transfer with Phillip Group			
accountNo	A/C No		

otherInfo	Other Information
Remittance to bank	
bankName	Bank name
accountNo	A/C No
swiftCode	Swift Code
beneficiary	Beneficiary
otherInfo	Other Information

Result

```
{
  "code": Integer,
  "data": {
    "orderNo": String,
    "totalAmountWithdrawn": String,
    "conversion": [
      {
        "fromCurrency": String,
        "fromAmount": String,
        "toCurrency": String,
        "toAmount": String,
        "rate": String
      },
      ...
    ],
    "status": String,
    "statusDescription": String,
    "statusColor": String,
    "statusColorName": String,
    "withdrawalType": String,
    "withdrawalTypeDescription": String,
    "bankName": String,
    "accountNo": String,
    "name": String,
    "nricPassport": String,
    "swiftCode": String,
    "beneficiary": String,
    "otherInfo": String,
    "remarks": String,
    "transactionDateTime": String,
    "orderDetailURI": String,
    "passwordRequired": Boolean,
    "twoFARequired": Booelan
  }
}
```

2.3   Description of Stored Procedures used

N/A

III.   Input/Output files used

3.1   Input/Output file format design (with Samples attached)

3.2   Database connections used

IV. Error Message/Warning Message List

V.   Archival and Record Retention List1

Type of Records Retained	Period of Retention (*from the time when the files are created or used by the application/ system)	Where Doc Retained (i) electronic (indicate system e.g. docuware / shared drive – indicate location) (ii) Warehouse (indicate service provider e.g. Crown)	Indexing (e.g. MM/YY, By client's name- Alphabetic order by surname)

Note1: Sample is given in Appendix 1.

VI.   **Program List**

VII. Acceptance Form

Project Name :	
Document Name :	
Company Name :	
Project Manager :	
Designation :	
Signature/Date :	

Appendix 1

Type of Records Retained	Period of Retention (*from the time when the files are created or used by the application/ system)	Where Doc Retained (i) electronic (indicate system e.g. docuware / shared drive – indicate location) (ii) Warehouse (indicate service provider e.g. Crown)	Indexing (e.g. MM/YY, By system Module and sub-module name)
File lists/description of transaction related audit log: **File Name/Description 1** **File Name/Description 2** **...** **File Name/Description n**	7 years	1. Log files less than **X** year is stored in: ServerName\Path\ 2.Log files more than **X** year are stored in: XX[1]	System/Module/sub module/YYYYMMDD.log
File lists/description of Non-transaction audit logs: **File Name/Description 1** **File Name/Description 2** **...** **File Name/Description n**	5 years	1.Log files less than **X** year is stored in: ServerName\Path\ 2. Log files more than **X** years are stored in: XX[1]	Module/sub module /YYYYMMDD.log
File lists/description of Data file, report generated/used by the application/system: **File Name/Description 1** **File Name/Description 2** **...** **File Name/Description n**	5 years	1. Log files less than **X** year year are stored in ServerName\Path\ 2. Log files more than **X** year are stored in XX[1]	YYYYMMDD.log

[1] Location example: CD, Avamar, Log-Bk Server Avamar (Replicate to the DR Avamar), Tape