MF Utility

API Interface – Facilitating Complaints & Feedback

JSON API Specification

| Version | 1.0 |
| --- | --- |
| Release Date | 04-Sep-2021 |
| Number of Pages | 11 |

# Document Control

## Table of Contents

[1 Document Control 2](#_Toc81916051)

[Table of Contents 2](#_Toc81916052)

[1.1 Document Information 3](#_Toc81916053)

[1.2 Revision History 3](#_Toc81916054)

[1.3 Open Issues 3](#_Toc81916055)

[1.4 Circulation 3](#_Toc81916056)

[1.5 References 3](#_Toc81916057)

[1.6 Definitions, Acronyms and Abbreviations 4](#_Toc81916058)

[2 Overview 5](#_Toc81916059)

[3 dependent requirements & Workflow 5](#_Toc81916060)

[4 Interfacing Areas 5](#_Toc81916061)

[4.1 CQF Entry 6](#_Toc81916062)

[4.2 CQF Update 7](#_Toc81916063)

[4.3 CQF Status 7](#_Toc81916064)

[4.4 Image Proof Upload Service 7](#_Toc81916065)

[4.5 Image Proof Fetch View 8](#_Toc81916066)

[4.6 CQF Push Notification Service 8](#_Toc81916067)

[5 Model implementation activity & Checklist 9](#_Toc81916068)

[5.1 API Integration Model Checklist Template - UAT 9](#_Toc81916069)

[5.2 API Integration Model Checklist Template - Production 10](#_Toc81916070)

[6 GENERAL SECURITY 10](#_Toc81916071)

[6.1 Restricted Access 10](#_Toc81916072)

[6.2 Online Interfaces 10](#_Toc81916073)

[7 Appendix 11](#_Toc81916074)

[7.1 APPENDIX A - JSON\_CENCOM\_API\_SPECIFICATION 11](#_Toc81916075)

## Document Information

| Drafted By | Subbulakshmi |
| --- | --- |
| Reviewed By | Ganesh Kamalraaj |
| Client Sources | - |
| Status | Baseline Version |
| Version | 1.0 |
| Release Date | 04-Sep-2021 |
| SoW Reference |  |

## Revision History

| **Date** | **Version** | **Description** |
| --- | --- | --- |
| 04-Sep-2021 | 1.0 | Baseline Version – MFU CenCom API |
|  |  |  |

## Open Issues

| # | Description | Date | Owner | Status |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

## Circulation

|  |  |
| --- | --- |
| **MF Utilities India Ltd. And API Entities** | Entities partnering with MFU for API can also have access to this document |
| **Intellect Design Arena Ltd** |  |
|  |  |

## References

N/A

## Definitions, Acronyms and Abbreviations

|  |  |
| --- | --- |
| **AMC** | Asset Management Company |
| **API** | Application Programming Interface |
| **ARN** | AMFI Registration Number |
| **CAN** | Common Account Number. This is a unique number allotted by MFU system for an “Investor combination” which can be used for investments across various Mutual Funds in the industry, when transacted through MFU |
| **CenCom** | Central Communications (Complaints & Feedback) |
| **CQF** | Complaint / Query / Feedback (Refers to type of ticket that may be created with Complaints & Feedback module) |
| **CT** | Commercial Transactions |
| **Distributors** | Distributors are entities who act as intermediaries between the investors and the Mutual Funds. They are empanelled by AMCs to mobilize funds for their schemes. Distributors can also use MFU system to route transactions of investors |
| **DP** | Depository Participant Account. |
| **FATCA** | Foreign Account Tax Compliance Act. Refers to Foreign Tax detail of the investor (CAN Holder) in case he / she pays taxable remuneration abroad. |
| **MFU** | Mutual Funds Utility (MF Utility) |
| **NCT** | Non Commercial Transactions |
| **PAN** | Permanent Account Number |
| **Partnering Entities** | In this document, Partnering Entities refer to those entities (Distributor / RIA / Neutral Entity) who subscribes to API Model for NCTs |
| **POS** | Point Of Services |
| **RIA** | SEBI Registered Investment Advisors |
| **RTA** | Registrar & Transfer Agents |

# Overview

1. MF Utility is a transaction aggregation portal for the Mutual Funds Industry in India, setup under the aegis of AMFI through which the investors may place orders either by themselves or through a Distributor, RIA or an AMC branch or a Point of Service (POS), appointed by MFU.
2. This platform can be leveraged by current Mutual Fund Distributors or Advisors by integrating their application for Transaction (CT & NCT) routing and processing direct online transactions from their respective application /portal.
3. Expanding the digital reach, MFU is now providing the API interface for its CenCom (Central Communications - Complaints & Feedback) Module.
4. This document lists interaction areas, data points and forms a basis for Technical Interface between MFU and Partnering Entities for collecting & Processing Complaints / Queries / Feedback (CQF) Tickets.

# dependent requirements & Workflow

1. Interfacing Entity to complete all the formalities with MFU like agreements process to make use of API Facilities.
2. Interfacing Entity to provide all required inputs for setting up this feature.
3. Interfacing Entity has their own arrangement to collect the CQF and will route the data to MFU for further processing.
4. Interfacing Entity to have their own / contracted technical team to implement the API Specification shared by MFU
5. CenCom Workflow involves the following steps:
   * Entities raising the Complaint / Feedback / Query (CQF) ticket through API
   * If any validation fails, CQF request will not be collected and error message will be shared with Entities. If the validation is successful, success response will be shared with Entities
   * If proof image to be uploaded, Entry request will have Image Flag set to Y and will carry unique image reference number generated by Entities
     + Entities may share image proof with the valid reference number mapped to a given CQF Ticket
     + There is a service to fetch the image for the given CQF ticket
   * Ticket will be in Open Status initially and may get Reassigned or Resolved. From Resolved Status, it may be re-opened or closed.
   * There is a push notification for informing the Entities about their CQF ticket status.
   * If the Partner Entity is setup with Email configuration (Mail Flag = Y)
     + When MFU Helpdesk replies to the given CQF ticket, MFU will send a mail to initiating entity’s mail id
   * If the Entity wants to re-open the resolved ticket or to close the request, they may use CQF Update Service
   * There is a provision to enable / disable Emails to user being sent by MFU when CQF status is changed. Entity may choose to set it up accordingly.

# Interfacing Areas

Following areas have been identified for JSON API based MFU CenCom Interface. Each of these requests will have a common request header containing Entity ID, API Type, Version, User id, Encrypted Password, unique request id and Timestamp of the request

| Spec Points | **Interface** | **Description** |
| --- | --- | --- |
| 4.1 | CQF Entry (Complaint / Query / Feedback Entry) | * CQF Entry service may be used to create a new ticket of type Complaint or Feedback or Query (CQF) with MFU. |
| 4.2 | CQF Update | * Service to change the status of a given CQF ticket (Reply, Re-open the resolved ticket or to close the ticket). |
| 4.3 | CQF Status | * Service to get the status of the CQF Ticket raised with MFU. |
| 4.4 | Image Proof Upload | * Service to upload the image proof supporting the CQF Ticket created with MFU wherever applicable |
| 4.5 | Image Proof Fetch View | * Service to fetch the image proof mapped to a particular CQF Ticket |
| 4.6 | CQF Push Notification | * Periodic Notification service – This will automatically fetch the status of CQF Tickets created by partnering entities and share. * There will be multiple records (one record per CQF Ticket) in the same message |

## CQF Entry

* CQF Entry service is used to create / enter a new Complaint / Feedback / Query with MFU
* Ticket may be created for MFU or for an AMC
* When the ticket is created, it will be in Open Status.
* If there is a image proof to be attached, it will have Image Flag as Y and a unique image reference number. There is a separate service to upload the required image proof with the same image reference id

| Spec. Points | **Service** | **Remarks** | **Reference** |
| --- | --- | --- | --- |
|  | CQF Entry | API Structure for creating a new Complaint / Query / Feedback (CQF) Ticket | **CQF-Entry** worksheet of MFU\_Interface\_for\_CQF Specification in Appendix A.  Proof document image will have to separately shared using Image upload service |

* For response there is a single structure for both Successful and Failure response. Please refer to **CQF-Response** worksheet of MFU\_Interface\_for\_CQF Specification in Appendix A.

## CQF Update

* For all the CQF Tickets that are successfully accepted by MFU system, partnering entities may update the status of their particular CQF Ticket. e.g partnering entity may want to re-open the resolved ticket or may want to close the resolved ticket and so on…
* If the original CQF Ticket request is not accepted (failed validations), that ticket will not be available in MFU system and cannot be updated.
* There is separate API structure for CQF Update Service and the same is provided in the Appendix A

| Spec. Points | **Remarks** | **Reference** |
| --- | --- | --- |
|  | API Structure for updating a particular CQF Ticket raised by the entity. | **CQF-Update** worksheet of MFU\_Interface\_for\_CQF Specification in Appendix A. |

## CQF Status

* For all the CQF Tickets that are successfully accepted by MFU system, there is a push notification service sharing the status of the tickets. Apart from this, partnering entities may query the status of their particular CQF Ticket using this CQF Status Service.
* If the original CQF Ticket request is not accepted (failed validations), then the status of that request will not be available in MFU system.
* There is separate API structure for CQF Status Service and the same is provided in the Appendix A

| Spec. Points | **Remarks** | **Reference** |
| --- | --- | --- |
|  | API Structure for getting the status of a particular CQF Ticket successfully created by the Entity | **CQF-Status** worksheet of MFU\_Interface\_for\_CQF Specification in Appendix A. |

## Image Proof Upload Service

* If the CQF Ticket has a proof to be uploaded for the given CQF Ticket, partnering Entities may choose the upload the proof images using this service post successful creation of CQF Ticket
* Supported Image types are: **jpg / jpeg / png / bmp**
* Image size should be less than 500 KB
* This service is available to upload one image at a time.
* There is separate API structure for Image Proof Upload service and the same is provided in the Appendix A

| Spec. Points | **Remarks** | **Reference** |
| --- | --- | --- |
|  | API Structure for uploading the proof image mapped to a particular CQF Ticket (if any) | **Image Proof Upload** worksheet of MFU\_Interface\_for\_CQF Specification in Appendix A. |

## Image Proof Fetch View

* Partnering entities may use this service if they want to fetch the image attached to a given CQF Ticket created by them.
* There is separate API structure for fetching the Image Proof and the same is provided in the Appendix A

| Spec. Points | **Remarks** | **Reference** |
| --- | --- | --- |
|  | API Structure for fetching the proof image mapped to a particular CQF Ticket (if any) | **Image Proof Fetch View** worksheet of MFU\_Interface\_for\_CQF Specification in Appendix A. |

## CQF Push Notification Service

* For all the CQF tickets that are successfully accepted by MFU system, MFU will notify the partnering entities if there is any status update for that CQF Ticket.
* If the original CQF request is not accepted (failed validations), then the status of that request will not be available in MFU system.
* Periodically MFU system will share the latest status of the CQF Tickets that are changed since last notification.
* There is separate API structure for CQF Push Notification and the same is provided in the Appendix A

| Spec. Points | **Remarks** | **Reference** |
| --- | --- | --- |
|  | API Structure for CQF Push Notification | **CQF Push Notification** worksheet of MFU\_Interface\_for\_CQF in Appendix A. |

# Model implementation activity & Checklist

The Model implementation activities include the following:

| **Tasks** | **Action By** |
| --- | --- |
| Brief walk through on the Specifications | MFU & Entity |
| Sign-off Agreement with MFU for API Services | Entity & MFU |
| Entity UAT readiness | Entity |
| Integration Checklist Sharing with UAT URL & UAT Symmetric Key for interfacing | MFU & Intellect |
| MFU UAT environment readiness | MFU |
| Integration testing by customer & Application team | MFU, Intellect & Entity |
| Go Live Planning | MFU & Intellect |
| **GO Live Support**  Support for First week of Live | MFU & Intellect |
| Further support on Live implementation | MFU |

## API Integration Model Checklist Template - UAT

|  |  |  |
| --- | --- | --- |
| **Test Environment Details for the Entity API Integration** | | |
| **Description** | **Remarks** | **Action By** |
| Entity ID | MFU will Provide the Entity ID upon Entity creation Sample Value : 41000D | MFU |
| Entity Name | Name of the Entity | Entity |
| Login Id | Will be provided during the UAT testing | MFU |
| Password | Will be provided during the UAT testing | MFU & Intellect |
| Public Key & IvKey (for password encryption) | Will be provided during the UAT testing | MFU & Intellect |
| Test Environment URL | Will be provided during the UAT testing | MFU |
| Test Environment Port | Will be provided during the UAT testing | MFU |
| Entity Email Flag | To be setup as agreed Y / N | Entity |
| **Contacts for Support / Queries** | | |
| Business Flow / Operational queries on JSON-API | You may contact authorized SPOC from MFU on any queries or issues pertaining to business flow / operational flow. Details will be shared to you in checklist during Integration testing | MFU |

## API Integration Model Checklist Template - Production

| **Production Environment Details for the Entity API Integration** | | |
| --- | --- | --- |
| **Description** | **Remarks** | **Action By** |
| Entity ID | Will be provided during the Live | MFU |
| Entity Name | Name of the Entity | Entity |
| Login Id | Will be provided during the Live | MFU |
| Password | Will be provided during the Live | MFU & Intellect |
| Public Key & IvKey (for password encryption) | Will be provided during the Live | MFU & Intellect |
| Production Environment URL | Will be provided during the Live | MFU |
| Production Environment Port | NA | MFU |
| Entity Email Flag | To be setup as agreed Y / N | Entity |
| Business Flow / Operational queries on JSON-API | You may contact authorized **SPOC from MFU**.  Details will be shared to you in checklist during Live | MFU |

# GENERAL SECURITY

## Restricted Access

* Once Agreement is signed, their API access is enabled. Not all the transaction entities have access to this feature.

## Online Interfaces

* HTTPS would be used for communicating with the Online Interfaces; It is a network layer encryption and uses SSL
* The password should be encrypted using AES/CBC/PKCS5Padding algorithm. MFU will provide a separate public key and IvKey for password encryption at the time of integration

# Appendix

## APPENDIX A - JSON\_CENCOM\_API\_SPECIFICATION

* JSON CenCom API Structure along with guideline is appended herewith for the developer reference.
* Worksheet for each of the services is available in the specification.
* URL given against each of the service should be appended to the base URL received for a particular environment from MFU India (UAT Environment, Testing Environment, Production Environment)

