



# **Pengembangan Sistem Pengelolaan Klaim Asuransi dan Subrogasi secara Host to Host (*e-Claim*) dengan Asuradur / Penjamin**

API Specification Document 1.0

*April 2021*

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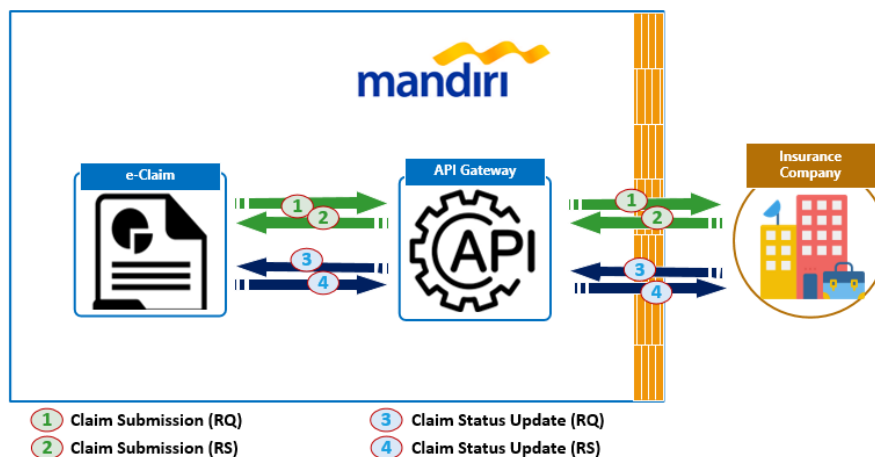
## *Document Change Control*

Version	Date	Authors	Summary of Changes
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1.0	06/04/2021	Gloria Saripah Patara	FINAL

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# 1 TECHNICAL ARCHITECTURE



Picture 1. Technical Architecture

## 2 MESSAGE FORMAT

### 2.1 OUTGOING (BANK MANDIRI TO INSURANCE COMPANY)

#### 2.1.1 Claim Submission

Configurations		
URL	:	https://<Host>:<Port>/api/claimSubmission
HTTP Method	:	POST

Request					
	Field Name	Attribute	Type	Description	Sample Values
HTTP Header	Content-Type	Mandatory	String	Request type	application/json
	Accept	Mandatory	String	Response type	application/json
	Authorization	Mandatory	String	OAuth2 Bearer Token	Bearer <token>
	X-TIMESTAMP	Mandatory	String	Transaction Timestamp FORMAT: 'yyyy-MM-dd'T'HH:mm:ss.SSS'T'Z'	2021-03-10T11:10:00.000T+0700
	X-SIGNATURE	Mandatory	String	Transaction Signature Please refer to <b>Appendices 3.2.2</b> on how to generate signature.	
Body	batchID	Mandatory	String	Batch ID	
	totalRows	Mandatory	Numeric	Total of claim submissions	
	claimSubmissions	Mandatory	Object[]	Claim submissions data	
	requestID	Mandatory	String	Unique Identifier	
	applicationNumber	Mandatory	String	Loan submission transaction ID	
	loanAccount	Mandatory	String	Loan account number	0700006795871
	debtorName	Mandatory	String	Debtor name	Cakrawala Luas Membentang
	certificateNumber	Mandatory	String	Insurance Company's certificate number	
	insuranceCompanyID	Mandatory	String	Insurance Company ID	
	productType	Mandatory	String	Product type – KUM/KUR/KSM	
	claimType	Mandatory	Numeric	1 = Jiwa 2 = PHK	1

Request					
	Field Name	Attribute	Type	Description	Sample Values
				3 = Kredit	
	requestDate	Mandatory	Date	Request datetime – FORMAT: 'YYYYMMDD HHmmss'	20210310 111000
	requestType	Mandatory	Numeric	1 = Order Claim 2 = Ajukan Banding 3 = Cancel Claim 4 = Verifikasi Claim 5 = Insufficient Balance 6 = Pendebetan 7 = Revisi Doc	1
	data	Mandatory	Object		
	orderClaim	Conditional	Object	Mandatory if requestType=1	
	currentBalance	Conditional	Numeric	Current balance in cents	200000000.53
	billingInterest	Conditional	Numeric	Billing interest in cents	19000.45
	billingCharge	Conditional	Numeric	Billing charge in cents	2500.66
	collectibility	Conditional	String	Collectibility	
	claimNominal	Conditional	Numeric	Claim nominal in cents <b>Perhitungan KUM/KUR</b> claimNominal = 70% * Total Kewajiban (Baki Debet + Tunggakan Bunga + Tunggakan Denda) <b>Perhitungan KSM</b> claimNominal = Baki Debet	500000000
	stgrNumber	Conditional	String	STGR number	
	stgrDate	Conditional	Date	STGR date – YYYYMMDD	20210309
	claimReason	Conditional	Numeric	Claim reason codes: 1. Terjamin menyalahgunakan kredit yang diperoleh 2. Terjamin tidak mampu mengelola usahanya 3. Terjamin beritikad tidak baik 4. Terjadi relokasi tempat usaha terjamin 5. Pengaruh perubahan kebijakan pemerintah 6. Perubahan jenis usaha 7. Force Majeur	1
	collateralValue	Conditional	Numeric	Collateral value in cents Mandatory for product type KUM/KUR	25000000.45
	eligibleDate	Conditional	Date	Eligible Date – FORMAT: YYYYMMDD	
	appealClaim	Conditional	Object	Mandatory if requestType=2	
	nominal	Conditional	Numeric	Appeal nominal	
	reason	Conditional	String	Appeal reason	
	cancelClaim	Conditional	Object	Mandatory if requestType=3	
	reason	Conditional	String	Cancellation reason	
	insufficientBalance	Conditional	Object	Mandatory if requestType=5	
	transferredAmount	Conditional	Numeric	Transferred amount in cents	250000000.77
	debitInfo	Conditional	Object	Mandatory if requestType=6	
	claimNumber	Conditional	String	Claim number	
	debitStatus	Conditional	String	Debit status	
	debitNominal	Conditional	Numeric	Debit nominal in cents	277500000.35
	debitDate	Conditional	Date	Debit date – FORMAT: YYYYMMDD	20210310
	documentRevision	Conditional	Object	Mandatory if requestType=7	
	documentCode	Conditional	Numeric	1 = Copy Polis 2 = Form Aplikasi Kredit 3 = Jadwal Angsuran Kredit 4 = Copy KTP 5 = Surat Peringatan 1,2,3 6 = Surat Keterangan meninggal	

Request					
	Field Name	Attribute	Type	Description	Sample Values
				dunia dari Kades/Lurah/RS 7 = Surat Keterangan PHK dari instansi 8 = Surat Pengantar dari Bank Mandiri 9 = Print Out System BDS 10 = History Kolektibilitas 11 = Copy PK 12 = SID BI/iDeb OJK pada saat pengajuan kredit 13 = Berita Acara Klaim 14 = Copy rekening koran 3 bulan terakhir 15 = Putusan pengadilan khusus debitur insolvent 16 = Copy SKU/legalitas usaha	
	remarks	Conditional	String	Remarks	

Response					
	Field Name	Attribute	Type	Description	Sample Values
Body	responseCode	Mandatory	Number(7)	Response code "2000000" for Success	2000000
	responseMessage	Mandatory	String(150)	Response description	Success
	data	Mandatory	Object[]	Claim Submissions response data	
	requestID	Mandatory	String	Unique Identifier	<ECHO>
	status	Mandatory	String	Status	Success/Failed
	statusMsg	Mandatory	String	Status message/description	

Sample Request	
<pre> {   "batchID": "BTID000123",   "totalRows": "2",   "claimSubmissions": [     {       "requestID": "CLID000123",       "applicationNumber": "APID000123",       "loanAccount": "0700006795871",       "debtorName": "Cakrawala Luas Membentang",       "certificateNumber": "CRID000123",       "insuranceCompanyID": "ICID000111",       "productType": "KUM",       "claimType": 1,       "requestDate": "20210310 111000",       "requestType": 1,       "data": {         "orderClaim": {           "currentBalance": 200000000.53,           "billingInterest": 19000.45,           "billingCharge": 2500.66,           "collectibility": "4",           "claimNominal": 500000000,           "stgrNumber": "STGR001",           "stgrDate": "20210309",           "claimReason": 1,           "collateralValue": 25000000.45,           "eligibleDate": "20210310"         }       }     }   ], }</pre>	

```

{
  "requestID": "CLID000124",
  "applicationNumber": "APID000124",
  "loanAccount": "0700006795872",
  "debtorName": "Putra Langit Biru",
  "certificateNumber": "CRID000124",
  "insuranceCompanyID": "ICID000111",
  "productType": "KUR",
  "claimType": 2,
  "requestDate": "20210310 111000",
  "requestType": 3,
  "data": {
    "cancelClaim": {
      "reason": "Invalid claim, cannot be processed further"
    }
  }
}

```

#### Sample Success Response

```

{
  "responseCode": "2000000",
  "responseMessage": "Success",
  "data": [
    {
      "requestID": "CLID000123",
      "status": "Success",
      "statusMsg": "Transaction has successfully been processed"
    },
    {
      "requestID": "CLID000124",
      "status": "Failed",
      "statusMsg": ""
    }
  ]
}

```

### 2.2.1 Authentication

URL	:	<b>https://&lt;Host&gt;:&lt;Port&gt;/openapi/auth/token</b>
HTTP Method	:	<b>POST</b>

Response					
	Field Name	Attribute	Type	Description	Sample Values
Body	accessToken	Mandatory	String	Access Token	
	tokenType	Mandatory	String	Token Type	Bearer
	expiresIn	Mandatory	String	Expires In 900 seconds or 15 minutes	900

```
{
  "grant_type": "client_credentials"
}
```

```
{
  "accessToken":
    "eyJraWQiOiJzc29zliwiYWxnIjoiaUIMMTlMiOiJ0eXZkdDc1Yi03YzhmNzlkbnY0ZTMiLCJhdWQiOiJsInM5YnNGISMTYtZjhjZS00M2M5LTg3NWItN2M4Zjc5SDY2NGUzliwiand0LWF1ZCJdLCJjbGllbnRJZCI6Im5MGY1YjA0Tlc3YTctNGUwMC05YzAwLWJJIWMwM5YWwMxZmRhNiilsmlzcyl6Imp3dC1pc3N1ZXIiLCJleHAiOjE2MTUzNTUzUzNjYjsimlhdCl6MTYxNTM1MTC2Nn0.BMOSbsJEV3dstBFh2-dbWYHB8Suvi2BP1qVLT-  
wBwUCyR3AzrXICDGVEcmfYN8XSZeW4snwdTU2vUG3M9W7j9emJkmUuiroiDsYl8zQLxz4RGvJmrC33AcTrrBaRhhRIgQW3jm7VAWi8  
wo33OgzF0MsV8o-5omCwKRGqncBsZoJDzIs7YZH9j9BqNMLCGB4kw8ewOM0p2YnrKVyuMxFyAefHe92i9ojYPaxKe1cUy6TLex-  
dC0g9YghrdmCBRYjZCsSqdg6gf0dgMmQQtXhTOCKb9_mXkfo-Giuk6litBA9onBdiaZZJHVYEUhLoMSziVqus35xwoA5AV5A",
  "tokenType": "Bearer",
  "expiresIn": 900
}
```



## 2.2.2 Claim Status Update

Configurations		
URL	:	https://<Host>:<Port>/openapi/customers/v1.0/insurance/claimStatusUpdate
HTTP Method	:	POST

Request					
	Field Name	Attribute	Type	Description	Sample Values
HTTP Header	Content-Type	Mandatory	String	Request type	application/json
	Accept	Mandatory	String	Response type	application/json
	Authorization	Mandatory	String	OAuth2 Bearer Token	Bearer <token>
	X-TIMESTAMP	Mandatory	String	Transaction Timestamp FORMAT: 'yyyy-MM-dd'T'HH:mm:ss.SSS'T'Z'	2021-03-10T11:49:00.000T+0700
	X-SIGNATURE	Mandatory	String	Transaction Signature Please refer to <b>Appendices 3.2.2</b> on how to generate signature.	
Body	claimStatus	Mandatory	Object[]	Claim status	
	requestID	Mandatory	String	Unique Identifier	
	trackStatus	Mandatory	Numeric	1 = Dokumen tidak Lengkap 2 = Kantor Pusat 3 = Analisa Cabang 4 = Analisa Bag Keuangan 5 = Disetujui 6 = Ditolak 7 = Pending IJP 8 = Revisi Dokumen 9 = Bayar	5
	requestDate	Mandatory	Date	Request datetime – FORMAT: 'YYYYMMDD HHmmss'	20210310 114900
	remarks	Optional	String	Transaction remarks	
	data	Mandatory	Object		
	<i>approvalInfo</i>	Conditional	Object	Mandatory if trackStatus=5	
	claimNumber	Conditional	String	Claim number	
	nominal	Conditional	Numeric	Claim approved nominal in cents	400000000.57
	<i>rejectionInfo</i>	Conditional	Object	Mandatory if trackStatus=6	
	letterNumber	Conditional	String	Rejection letter number	
	letterDate	Conditional	Date	Rejection letter date – YYYYMMDD	20210310
	reason	Conditional	String	Rejection reason	
	<i>documentRevisionInfo</i>	Conditional	Object	Mandatory if trackStatus=1 or 8	
	documentCode	Conditional	String	Document code	
	reason	Conditional	String	Revision reason	
	<i>paymentInfo</i>	Conditional	Object	Mandatory if trackStatus=9	
	nominal	Conditional	Numeric	Payment nominal in cents	400000000.57
	transferRemarks	Conditional	String	Transfer remarks – filled with Claim Number	
	applicationNumber	Conditional	String	Application number	
	loanAccount	Conditional	String	Loan account number	
	subrogationAccount	Conditional	String	Subrogation account number	
	escrowAccount	Conditional	String	Escrow account number	

Response					
	Field Name	Attribute	Type	Description	Sample Values
Body	responseCode	Mandatory	Number(7)	Response code "2000000" for Success	2000000
	responseMessage	Mandatory	String(150)	Response description	Success
	data	Mandatory	Object[]	Claim Status response data	
	requestID	Mandatory	String	Unique Identifier	<ECHO>
	status	Mandatory	String	Status	Success/Failed
	statusMsg	Mandatory	String	Status message/description	

#### Sample Request

```
{
  "claimStatus": [
    {
      "requestID": "CLID000123",
      "trackStatus": 5,
      "requestDate": "20210310 111000",
      "remarks": "Claim is approved",
      "data": {
        "approvalInfo": {
          "claimNumber": "CLID000123",
          "nominal": 400000000.57
        }
      }
    },
    {
      "requestID": "CLID000124",
      "trackStatus": 6,
      "requestDate": "20210310 111000",
      "remarks": "Claim is rejected",
      "data": {
        "rejectionInfo": {
          "letterNumber": "RIL000222",
          "letterDate": "20200310",
          "reason": "Cannot be processed further"
        }
      }
    }
  ]
}
```

#### Sample Success Response

```
{
  "responseCode": "2000000",
  "responseMessage": "Success",
  "data": [
    {
      "requestID": "CLID000123",
      "status": "Success",
      "statusMsg": ""
    },
    {
      "requestID": "CLID000124",
      "status": "Failed",
      "statusMsg": ""
    }
  ]
}
```

## 3 APPENDICES

### 3.1 RESPONSE CODE

HTTP Code	Response Code	Response Message	Description
200	2000000		Success
401	4010001	Invalid token	Transaction cannot be processed because invalid token
401	4010002	Invalid signature	Transaction cannot be processed because signature value is invalid
401	4010000	Unauthorized	General Unauthorized
409	4090000	Conflict	Conflict
402	4020004	Account not found	Account not found in mandiri system
400	4000008	Invalid X-EXTERNAL-ID format	Transaction cannot be processed because invalid X-EXTERNAL-ID
400	4000004	X-EXTERNAL-ID must be numeric string	Transaction cannot be processed because invalid X-EXTERNAL-ID format
400	4000006	Invalid X-TIMESTAMP format	Transaction cannot be processed because invalid X-TIMESTAMP
400	4000004	accountNo must be numeric string	Transaction cannot be processed because invalid accountNo format
402	4020006	Account not active	Transaction cannot be processed because Account not active
400	4000001	Field X-MANDIRI-KEY is mandatory	Transaction cannot be processed because field X-MANDIRI-KEY not exist in request
400	4000001	Field X-MANDIRI-TIMESTAMP is mandatory	Transaction cannot be processed because field X-MANDIRI- TIMESTAMP not exist in request
400	4000001	Field X-MANDIRI-SIGNATURE is mandatory	Transaction cannot be processed because field X-MANDIRI- SIGNATURE not exist in request
400	4000001	Field X-MANDIRI-PARTNER-ID is mandatory	Transaction cannot be processed because field X-MANDIRI- PARTNER-ID not exist in request
400	4000001	Field X-MANDIRI-EXTERNAL-ID is mandatory	Transaction cannot be processed because field X-MANDIRI- EXTERNAL-ID not exist in request
400	4000001	Field accountNo is mandatory	Transaction cannot be processed because field accountNo not exist in request
503	5030000	Service Unavailable	Service Unavailable
500	5000000	Internal Server Error	General error


## 3.2 CALCULATE SIGNATURE

### 3.2.1 Authentication Signature

Every transaction request sent by Partner channel should include OAuth2 token in Authorization HTTP request header. It will be validated by Bank Mandiri. If it is invalid or expired, then the transaction request will be rejected and cannot be proceed any further.

Partner can retrieve a token through an invocation to Bank Mandiri. The invocation should include a signature, a combination of Client ID and formatted Timestamp.

- Data = <Client\_ID>|<Timestamp:yyyy-mm-dd'T'HH:mi:ss.SSS'T'Z>
- Data is signed using algorithm *SHA256withRSA* with Partner Private key

Private key for Testing	 apibmri.dev.jks
	KeyStoreFile = apibmri.dev.jks KeyStorePassword = m4nd1r1 KeyAlias = apibmri.dev KeyPassword =m4nd1r1

#### Example:

String to sign = 390f5b04-77a7-4e00-9c00-bb1c9ac1fda6|2021-04-06T17:30:00.000T+0700

Signature with above private key:

```
qTwFmOATU5iXGFbrRZStiDum35TJL4ZKpUnr35eERqhSnMHp6zlaDkH5kkC7kJHmUg7sE3NCNFnJK/pj  
GlbciGMSijLC6icQEwZFhE2FrJesmmHVEASn/SyYlhsUyrjnA9xuibMoMsx/loHivR9KiVHo4KuBQ5JVkVm0F  
9Pn6HLY9rRgx2eLCwjnbdyTXp9pDjb6pYdj4XMXW4az3pfZ4FuvLTTEpFW88dSPpSWwUpqAq+VkG+2rvb  
2HVFZ+ZqDCqd2akzZ6rA0cyNTT+VbF1+jpROselb0qpaQx5JfRA9RKqhLC/povyaX3HKSxbJB0nlvbym8+R  
vOWKDXwMy02tA==
```

### 3.2.2 Transaction Signature

Every transaction request sent by Partner channel also should include signature HTTP request header. It will be validated by Bank Mandiri. If it is invalid or expired, then the transaction request will be rejected and cannot be proceed any further.

- Data = <http\_method> + ":" + <endpoint\_url> + ":" + <access\_token> + ":" + <minify(jsonBodyRequest)> + ":" + <timestamp>
- Data is hashed using HMAC\_SHA512 where client\_secret as a key.

#### Example:

Client ID : 390f5b04-77a7-4e00-9c00-bb1c9ac1fda6  
Client Secret : d1abd8b8-7cb1-41af-9513-826adc83c946

### Request

POST /openapi/customers/v1.0/insurance/claimStatusUpdate

*Authorization:*

```
eyJraWQoOiJzc29zliwiYWxnpjoiU1M1MTlIfQ.eyJzdWlloil2Ji0YjKXNi1mOGFLTQzYzktODc1Yi03YzhmNzlkNjY0ZTMiL
CjhdWQoIOlsiNmYyNGI5MTYtZjhhZS00M2M2M5LTg3NWltN2M4Zjc5ZDZlNGUzliwiand0LWF1ZCjdlCjBGlbnRjZCjGj
M5MGY1YjA0LT3YtctNGUwMC05YzAwLWJiMWM5YVWmXzZmRhNiIsImZlcyY6Imlp3dC1pc3N1Z2XlilCjleHAiOiE2MTc
3MDg2NTgsImhhdCjG6MTYxNzcwNTA1OH0.U5VxPybGSWskkQrISM-lbKm9qyx2IaYzhXUd5xvJMSR0trftIpc_3EG-
FXGjXjEagLXOEY6c24ZYZRPmLdAvzc-3GDfchoHcG8E_xdvGnDAC33Q9sTvE3JWWNjv_-ARU-
Sp38VJp9tP6EeseeQ30ym9bd8WYHhxmePmYHYgQcyDvTwCPfc87j1kCqfrluH0awr5rdNpVnxWds30AoYvKMIClCV
21St7VvNpGpbSUMOU3dRhZxPtShZN1AuphW6DjzWBmHOwyLfHejrXWphpyh1VVWoej3p67_OiN-wMpfC_H-
texldUwliCh4sP_3KaDxN1F4sVkl2dzABP7qb50W
X-TIMESTAMP: 2021-04-06T17:30:00.000T+0700
```

*Content-Type:* application/json

*Accept:* application/json

```
{
  "claimStatus": [
    {
      "requestID": "CLID000123",
      "trackStatus": 5,
      "requestDate": "20210310 111000",
      "remarks": "Claim is approved",
      "data": {
        "approvalInfo": {
          "claimNumber": "CLID000123",
          "nominal": 400000000.57
        }
      }
    },
    {
      "requestID": "CLID000124",
      "trackStatus": 6,
      "requestDate": "20210310 111000",
      "remarks": "Claim is rejected",
      "data": {
        "rejectionInfo": {
          "letterNumber": "RJL000222",
          "letterDate": "20200310",
          "reason": "Cannot be processed further"
        }
      }
    }
  ]
}
```

**String to sign:**

```
POST:/openapi/customers/v1.0/insurance/claimStatusUpdate:eyJraWQoIjZjc29zliwiYWxnljoiUIM1MTlflfQ.eYJzdV  
liOi2IJzI0YjKXNi1mOGFILTQzYzkTOdc1YiO3YzhmNzlkNjYOZTMiLCJhdWQoIolsinMYyNGI5MTYtZjhZS00M2M5LTg3N  
WltN2M4Zjc5ZDY2NGUzliwianDOLWF1ZCJdLCljbGllbnRJCi6ljM5MGY1YjA0LTc3YTctNGUwMc05YzAwLWJiMWMw  
5YWMxZmRhNiIsImZlcyl6Imp3dC1pc3N1ZXiiLCJleHAiOiE2MTc3MDg2NTgsImhhcCI6MTYxNzcwNTA1OH0.U5VxPyb  
GSwwkQrISM-lbKm9qyx2laYzhXu5xvJMSR0trfiTpc_3EG-FXGjXjEagLXOEy6c24ZYZRYPMldAvcz-  
3GDfchoHcG8E_xdvGnDAC33Q9sTvE3JWWWNjV_-ARU-  
Sp38Vjp9PtP6EeseeQ30ym9bd8WYyHxmepmYHYgQcyDvTwCPfqC87jikCqfrluH0awr5rdNpVnxWds30AoYvKMICIV  
21St7VvNpGPbSUMOU3drHzXptShZN1AuphW6DjzWBmHOwyLfHejrXWhpyh17VVwoej3p67_OiN-wMpfc_H-  
texIdUwliCh4sP_3KaDxN1F4sVk2IdzABP7qb50w:{"claimStatus":{"requestID":"CLID000123","trackStatus":5,"requ  
estDate":"20210310111000","remarks":"Claim is approved","data":{"approvalInfo":{"claimNumber":"CLID000123","nominal":4.0000000057E8}},"requestID":"CLI  
D000124","trackStatus":6,"requestDate":"20210310111000","remarks":"Claim is rejected","data":{"rejectionInfo":{"letterNumber":"RJL000222","letterDate":"20200310","reason":"Cannot be  
processed further"}}}};2021-04-06T17:30:00.000T+0700
```

**Signature with above Client ID and Secret:**

C9B22B4A3CC0ABC07A60F23755E54519EE5E730C0A31A9A4855AC510293D8A80617675FFFC6978789B63026E2  
56BD2AA20BF9EF0D12C6123E55DA82B3728D8D1

BANK MANDIRI