BIAN Tech: CI/CD, Apps, Open Source and Adoption

Arnab Mitra



Reference Implementations & Feedback

DevOps & Open Source

BIAN Apps – UX - Roadmap

Approval App – Comparison Screen

Approval App -> Certification App, Comparer App & Model Browser

Model Browser – Business Scenarios & Wireframes

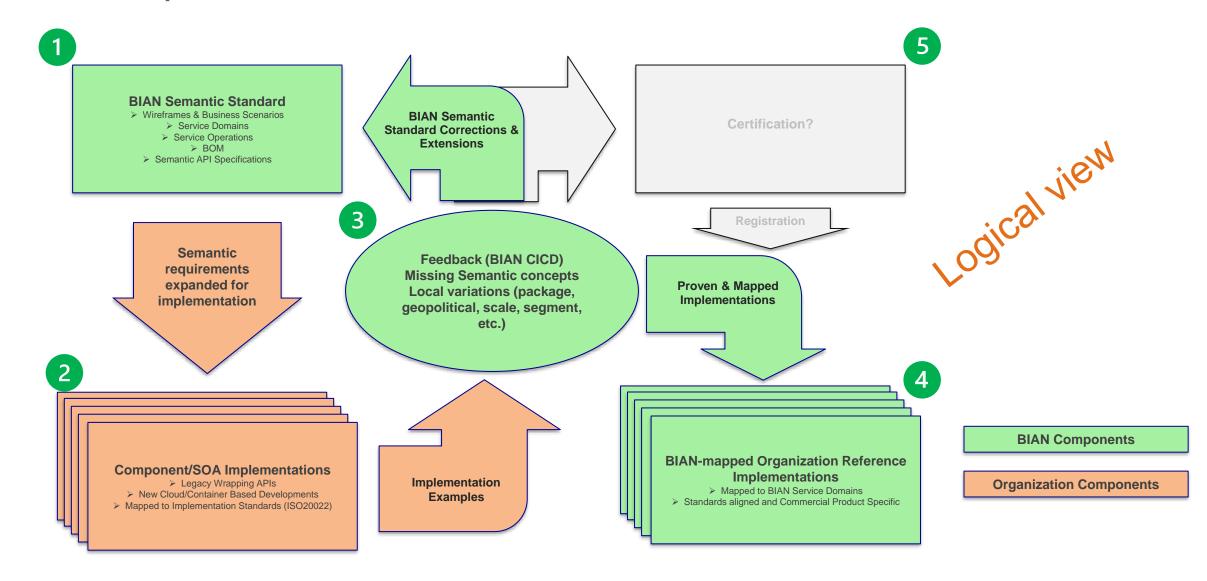
BIAN Tech Offerings

BIAN Applications

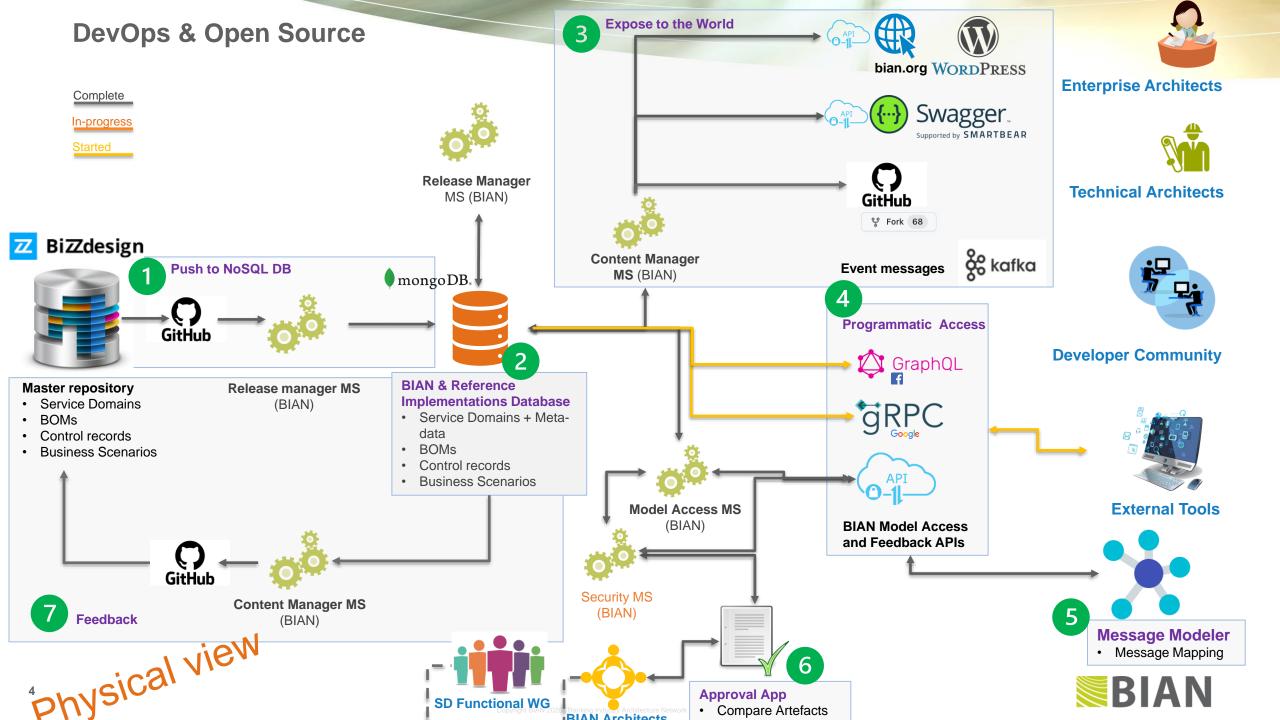
OVERVIEW



Reference Implementations & Feedback







BIAN Apps – UX – Roadmap

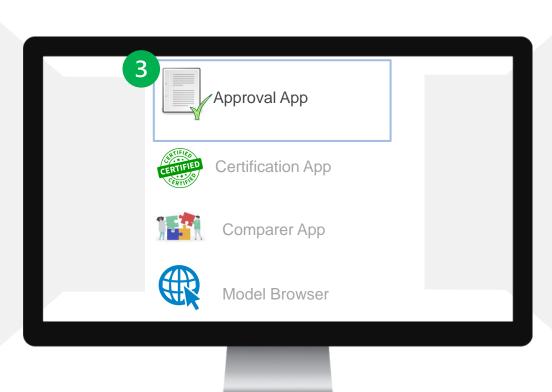












Ready¹

In Progress









Artefacts



Browse

8







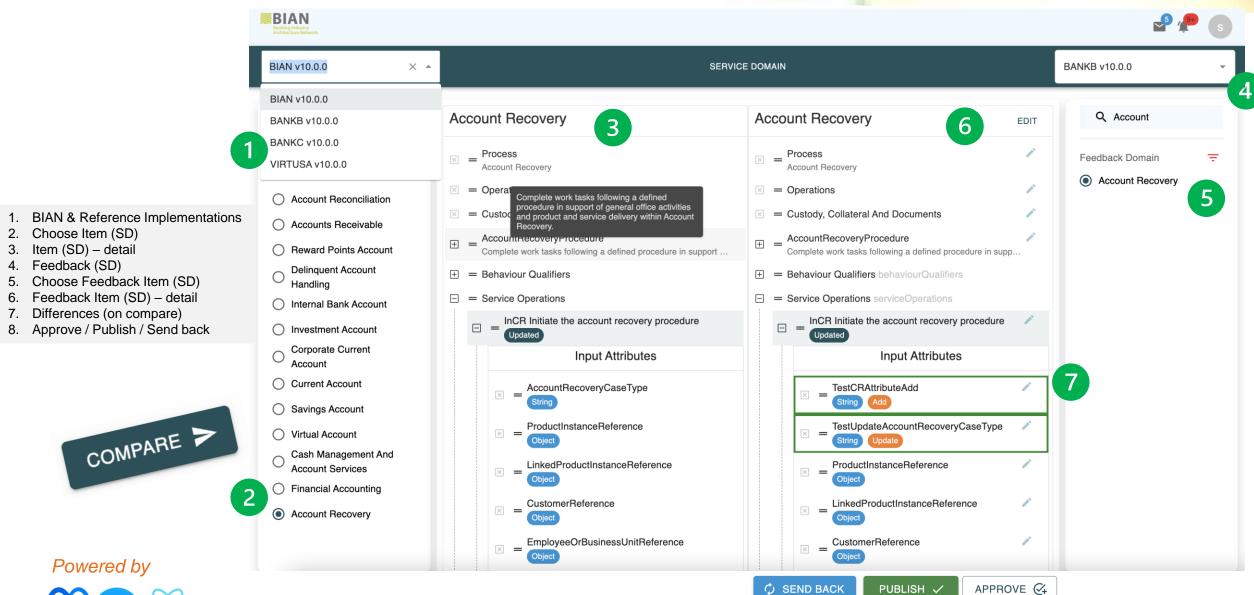


- Service Landscape
- Reference Implementations





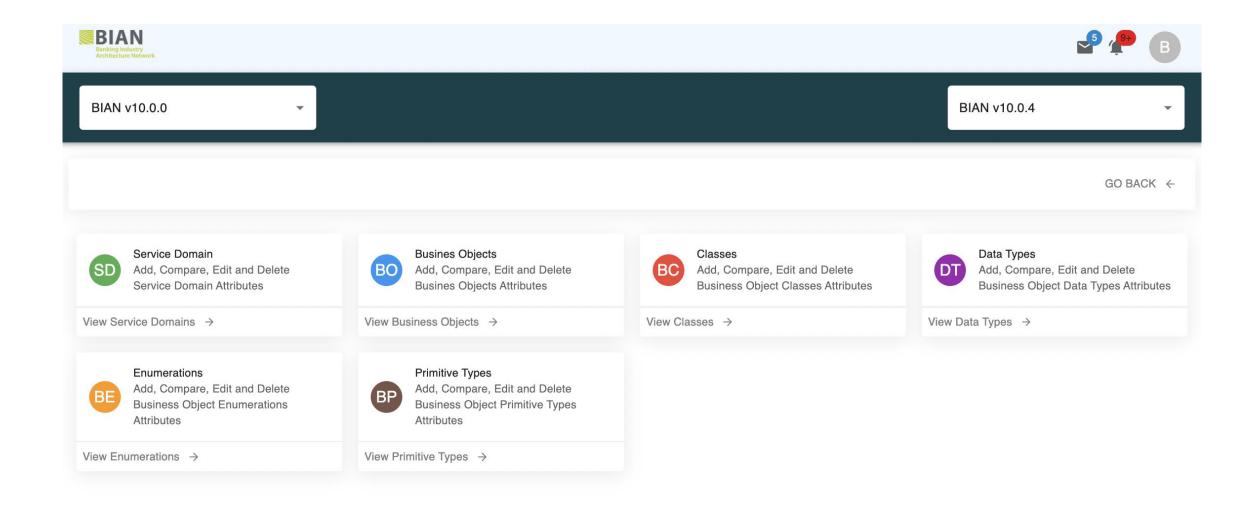
Approval App – Comparison Screen





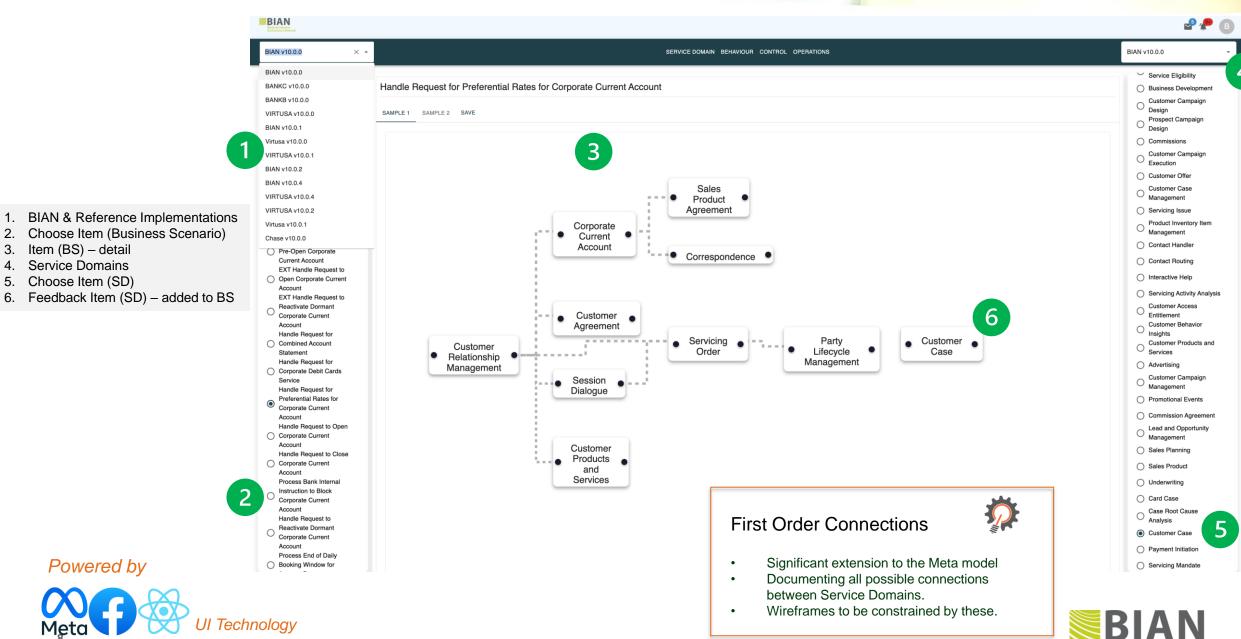


Approval App -> Certification App, Comparer App & Model Browser





Model Browser - Business Scenarios & Wireframes





BIAN Tech Offerings





















UI Layer

Developer **Community**



External Tools









API Layer







Model Access Service Domains **Business Objects Business Scenarios**



Functions Differences



Content Manager API to Service Domain Service Domain to API

Live

Started

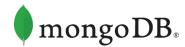
Live (Q1 2022)

BIAN Applications





NoSql DB7 Database instances







App Service16 MS/API deployments





Kubernetes Service1 MS / API



Web5 website instances



Meta



• 3 Part-time developers







BIAN Service Landscape

BIAN Artefacts

BIAN Portal

Service Domain

Business Scenario -> Service Domain API

Use-Case: Corporate Customer Onboarding

BIAN Landscape using APIs - Model APIs

Model API – SD – Current Account

DevOps & Open Source

BIAN Tech Offerings

API







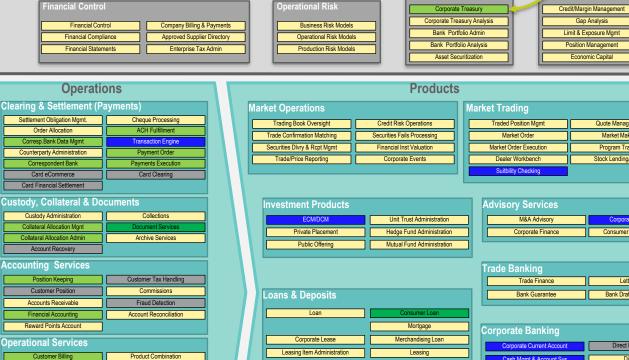
BIAN Service Landscape

Finance & Risk Management

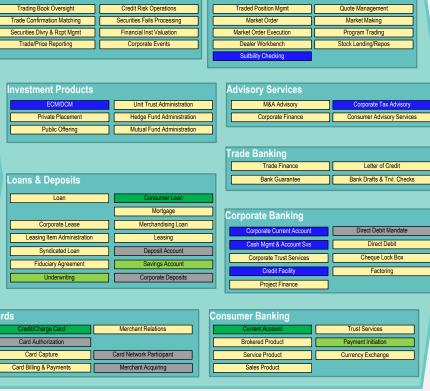


rket Risk

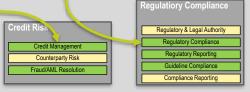




Cards	
Credit/Charge Card	Merchant Relations
Card Authorization]
Card Capture	Card Network Participant
Card Billing & Payments	Merchant Acquiring



Group Treasury





Party Reference

nvestment Svs

Consumer Investments eTrading Workbench Investment Portfolio Planning Investment Portfolio Mamt

Customer Relationship Mgmt Customer Behavioral Insights Customer Credit Rating Customer Agreement Sales Product Agreement Cust Prod./Service Eligibility Customer Precedents Customer Proposition Customer Event History

Prospect Campaign Exec Product Sales Support Product Expert Sales Support Product Matching Spec/Discount Pricing Conds

Customer Orders

Customer/Servicing Order Customer Case Mgmt Customer Case

Channels

nformtn. Providers Public Reference Data Mgmt Financial Instr Ref Data Mgmt Financial Market Research Financial Market Analysis Market Information Mamt Market Data Switch Ops Information Provider Ops

Cross Channel

Contact Handler Contact Routing Customer Profile Customer Access Entitlement Channel Activity History

nnel Specific

ATM Network Operations Branch Location Operations Advanced Voice Svs Ops Financial Gateway Card Terminal Card Terminal Operation

Contact Center Operations Point of Service Interactive Help Servicing Issue Servicing Event History

Product Inventory Distribution Branch Currency Distribution

Business Development

Rwd Points Awards & Red.

Issued Device Tracking

Card Transaction Switch

Sub Custodian Agreement

Commission Agreement

Contractor/Supplier Agmt



Models & Analytics	Quant Model
Contribution Models	Trading Models
Customer Behavior Models	Fin Inst.Valuation Models
Credit Risk Models	Market Risk Models
Fraud Models	Liquidity Risk Models

Disbursemen

Dunning

Open Item Managemen

Delinquent Account

Card Collections

Corresp Bank Rel Mgmt

Syndicate Management

Product Service Agency

External Agency

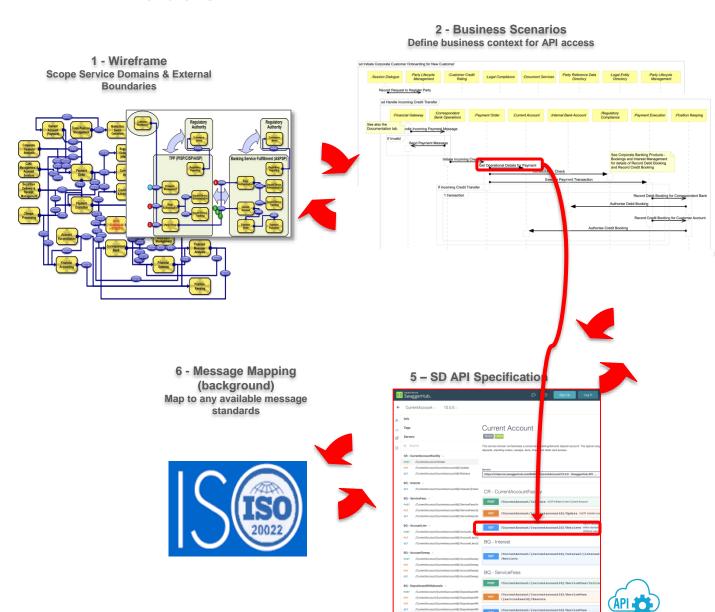


Product Management	
Product Portfolio	Product Quality Assurance
Product Design	Product Training
Production Release	Case Root Cause Analysis
Product Deployment	Product Directory

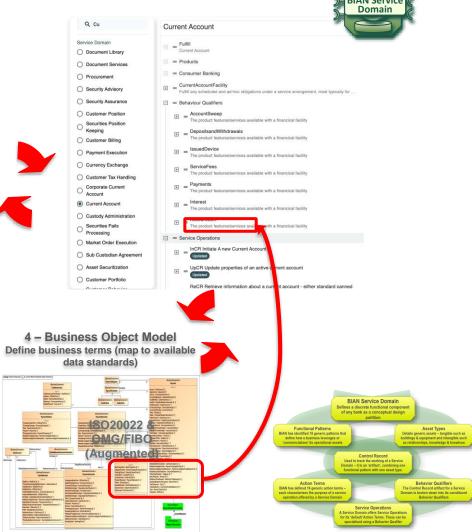
Market Research
Market Analysis
Competitor Analysis
stomer Campaign Mgmt
tomer Campaign Design
spect Campaign Mgmt
spect Campaign Design
Customer Surveys

Channel Management						
Channel Portfolio	Branch Location Mgmt					
Branch Portfolio	ATM Network Mgmt					
Contact Center Management	Branch Network Mgmt					
Servicing Activity Analysis	Advanced Voice Svs Mgmt					
Financial Message Analysis	E-Branch Management					
Channel Activity Analysis	Product Inventory Item Mgmt					
Information Provider Admin	Central Cash Handling					
Market Data Switch Adm	Branch Currency Mgmt					

BIAN Artefacts









BIAN Portal

https://portal.bian.org



BIAN Service

1. Service Domain **APIs**

Service Domain APIs

Semantic API Portal

Service Domain definitions | APIs | Related Business Scenarios | BOMs

ACCESS > HOW TO USE THE PORTAL? >

Service Domain APIs & Open Source

Practitioner Guide

DOWNLOAD >

GitHub

Semantic API definitions | Download | Contribute ACCESS >

Service Landscape

Model Access & Feedback API

Model Access & Feedback API

2. Model APIs

Sandbox

Service Domains | Business Capabilities | BOMs | Business Scenarios

SANDBOX API >

Live

Service Domains | Business Capabilities | BOMs | Business Scenarios

LIVE API >



Service Domain





BIAN v10.0.0 SERVICE DOMAIN Q Cu Current Account Service Domain Instance O Document Library Products With Attributes Document Services = Consumer Banking Procurement CurrentAccountFacility Security Advisory Fulfill any scheduled and ad-hoc obligations under a service arrangement, most typically for ... = Behaviour Qualifiers Security Assurance Features
With Attributes AccountSweep O Customer Position Securities Position Keeping The product features/services available with a financical facility Customer Billing Payment Execution The product features/services available with a financical facility Currency Exchange The product features/services available with a financical facility Customer Tax Handling Corporate Current The product features/services available with a financical facility Account Current Account The product features/services available with a financical facility Custody Administration The product features/services available with a financical facility Securities Fails Endpoints OR Functions, Methods Processing Service Operations Market Order Execution InCR Initiate A new Current Account Sub Custodian Agreement UpCR Update properties of an active current account Asset Securitization + Customer Portfolio ReCR Retrieve information about a current account - either standard canned

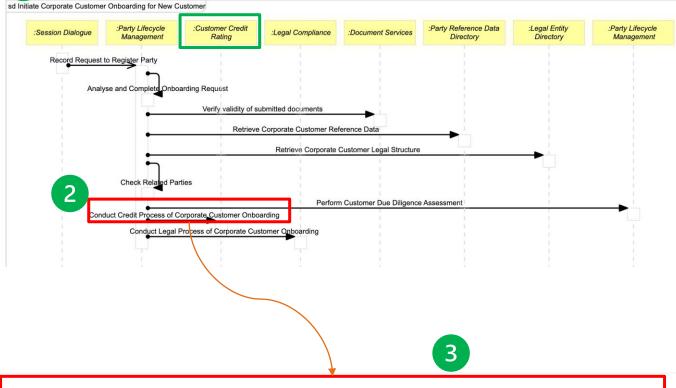
←→ SwaggerHub

√ CurrentAccount 10.0.0 ~ Servers Q Search CR - CurrentAccountFacility ^ /CurrentAccount/Initiate /CurrentAccount/{currentaccountId}/Update /CurrentAccount/{currentaccountId}/Retrieve BQ - Interest ^ /CurrentAccount/{currentaccountId}/Interest/{in BQ - ServiceFees ^ POST /CurrentAccount/{currentaccountId}/ServiceFees/In /CurrentAccount/{currentaccountId}/ServiceFees/{s /CurrentAccount/{currentaccountId}/ServiceFees/{s BO - AccountLien /CurrentAccount/{currentaccountId}/AccountLien/Ir /CurrentaccountId}/AccountLien/{a /CurrentAccount/{currentaccountId}/AccountLien/{a BQ - AccountSweep ^ /CurrentAccount/{currentaccountId}/AccountSweep /CurrentAccount/{currentaccountId}/AccountSweep /CurrentAccount/{currentaccountId}/AccountSweep /CurrentAccount/{currentaccountId}/AccountSweep BQ - DepositsandWithdrawals /CurrentAccount/{currentaccountId}/DepositsandWi /CurrentAccount/{currentaccountId}/DepositsandWi /CurrentAccount/{currentaccountId}/DepositsandWi /CurrentAccount/{currentaccountId}/DepositsandWi

Current Account This service domain orchestrates a consumer checking/demand deposit account. The typical rand deposits, standing orders, sweeps, liens, check and debit card access. https://virtserver.swaggerhub.com/BIAN-3/CurrentAccount/10.0.0 - SwaggerHub API .. CR - CurrentAccountFacility /CurrentAccount/Initiate InCR Initiate A new Current Account /CurrentAccount/{currentaccountId}/Update UpCR Update pro /CurrentAccount/{currentaccountId}/Retrieve either standard BQ - Interest /CurrentAccount/{currentaccountId}/Interest/{interest BQ - ServiceFees /CurrentAccount/{currentaccountId}/ServiceFees/Initia /CurrentAccount/{currentaccountId}/ServiceFees /{servicefeesId}/Execute /CurrentAccount/{currentaccountId}/ServiceFees /{servicefeesId}/Retrieve

Business Scenario -> Service Domain API

1 Initiate Corporate Customer Onboarding for new Customer



Conduct Credit Process of Corporate Customer Onboarding (Message)







CaBQ Capture internal

- Business Scenario
- Service Connection
- Service Connection Detail
- 4. Service Operation
- 5. API endpoint

Customer Credit Rating

10.0.0 OAS3

This service domain maintains and administers the bank's credit assessment for customers based on consolidated internal data and optionally by referencing external credit agency reports

BQ - InternalReporting

https://virtserver.swaggerhub.com/BIAN-3/CustomerCreditRating/10.0.0 - SwaggerHub API ...



/CustomarCraditPating/SquetomargraditratingId\/InternalPanorting

Use-Case: Corporate Customer Onboarding



Register **Party**



Execute. Analyse, Complete **Onboarding** Request



Validate Submitted Documents



Retrieve Corporate Customer **Details**



Customer Due Diligence



Credit **Process**



Legal Contract

B¹

Contact Dialogue

Party Lifecycle Management

Document Services

Party Data Management



- KYC & KYB
- · Related parties & associated officers
- · PEP, Global Sanctions list
- AML

Customer Credit Rating

Credit Analytics

Legal Compliance



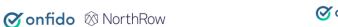


•Smart **Analytics**





















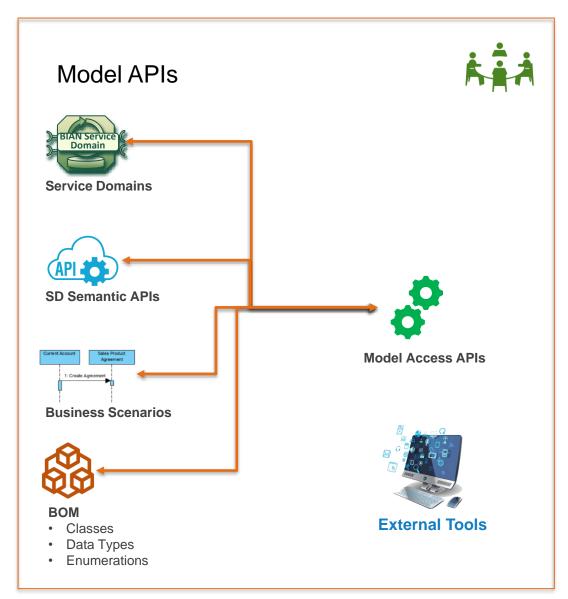




- BIAN Service Domains
- 2. AI
- 3. FinTech APIs



BIAN Landscape using APIs - Model APIs



Key Features



- API endpoints and Swagger (OAS3) definition
 - Sandbox
 - Live





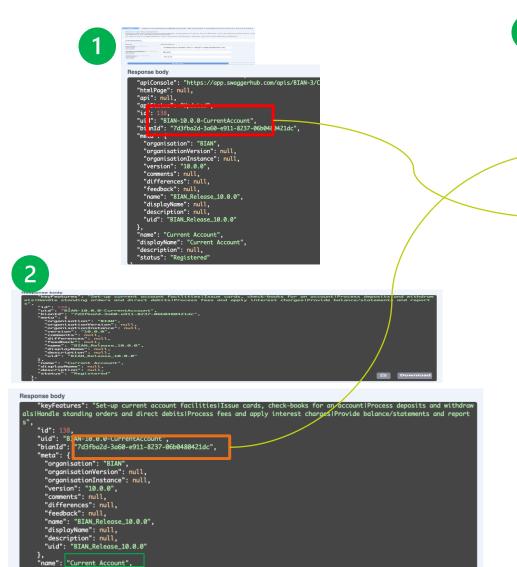
- Sandbox: https://bian.org/deliverables/bian-portal/model-api-live-help/
- Live: https://bian.org/deliverables/bian-portal/model-api-sandbox-help/
- Postman Collections for calling the endpoints



- Sandbox: https://bian.org/wp-content/uploads/2021/12/Model-Access-API_Sandbox.postman_collection.json_.zip
 - Live: https://bian.org/wp-content/uploads/2021/12/Model-Access-API_Live.postman_collection.json_.zip



Model API - SD - Current Account



"displayName": null, "description": null,

"status": "Registered"

```
How to call this endpoint:

Please call Get /ServiceDomainsBasic endpoints to get a list of Bianld's for all Service Domains. Ple of Bianld s for all Service Domains

To get a list of organisation and versions available, please call the Get /Metas endpoint

Parameters

Name Description

bianld * required string (path)

organisation * required string (path)

version * required string (path)

Execute
```

```
Response body
   "apiConsole": "https://app.swaggerhub.com/apis/BIAN-3/C
  "htmlPage": null,
  "api": null,
  "apiStatus": "Updated",
  "uid": "BIAN-10.0.0-CurrentAccount".
  "bianId": "7d3fba2d-3a60-e911-8237-06b0480421dc",
   "meta": {
     "organisation": "BIAN",
     "organisationVersion": null,
     "organisationInstance": null,
     "version": "10.0.0",
     "comments": null,
     "differences": null,
     "feedback": null,
     "name": "BIAN_Release_10.0.0",
     "displayName": null,
     "description": null,
     "uid": "BIAN_Release_10.0.0"
  "name": "Current Account",
  "displayName": "Current Account",
   "description": null,
   "status": "Registered"
```

5

```
ServiceDomain > {
                            integer($int32)
  uid
                            string
                            nullable: true
  bianId
                            string
                            nullable: true
  meta
                            Meta > {...}
  name
                            string
                            nullable: true
  description
                            string
                            nullable: true
  status
                            string
                            nullable: true
  serviceDomainID
                            integer($int32)
  characteristics
                            ServiceDomainCharacteristics > {...}
  extendedDefinition
                            boolean
  businessArea
                            BusinessArea > {...}
  businessDomain
                            BusinessDomain > {...}
  controlRecord
                            ControlRecord > {...}
   behaviourQualifiers
                             > [...]
  serviceOperations
                             > [...]
  executiveSummary
                            string
                            nullable: true
  examplesOfUse
                            string
                            nullable: true
  roleDefinition
                            string
                            nullable: true
  businessScenarios
                             > [...]
  coreBusinessObject
                            string
                            nullable: true
  keyFeatures
                            string
                            nullable: true
  fromServiceConnectionParts
                             > [...]
  toServiceConnectionParts
                             > [...]
   apiConsole
                            nullable: true
  htmlPage
                            HtmlPage > {...}
   api
                            Api > {...}
```

SDIAIV

Roadmap 2022 BIAN Portal – Google Analytics Roadmap 2022

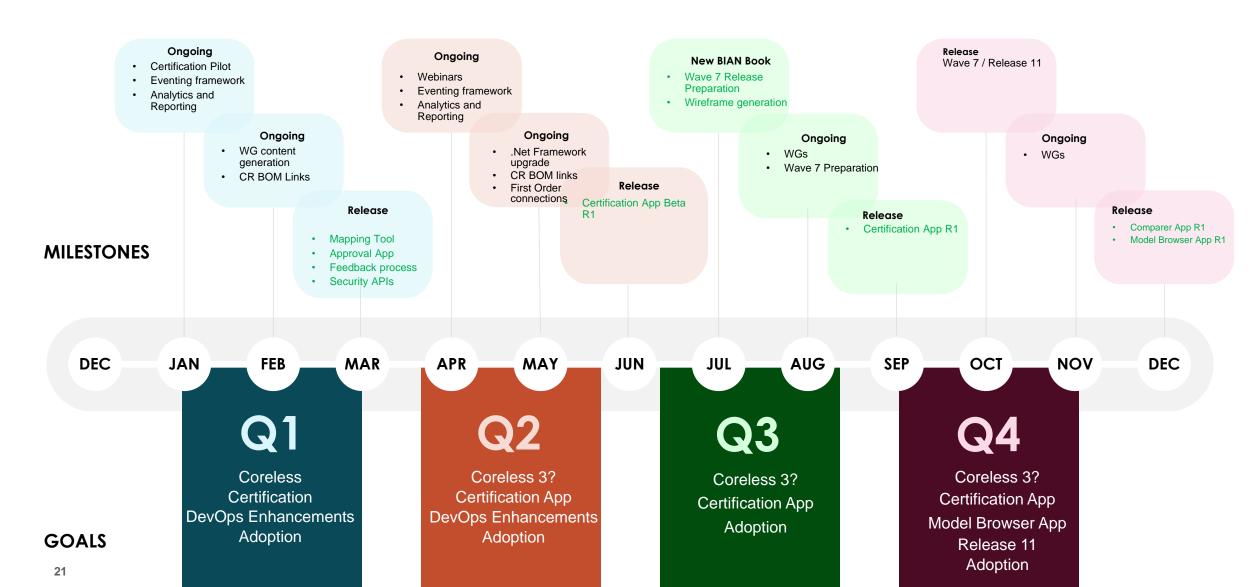
MISCELLANEOUS



Roadmap 2022

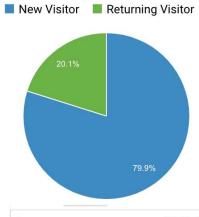


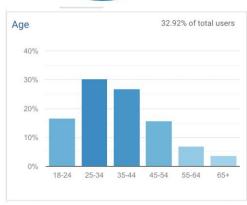
Current – Q2



BIAN Portal – Google Analytics







Country	(2)				
	· ·	Users	? ↓	New Us	ers ?
		%	5,347 of Total: 100.00% (26,347)		1,400 of Total: 100.07% (24,383)
1.	United States	5,664	(21.17%)	5,231	(21.44%)
2.	India	1,879	(7.02%)	1,709	(7.00%)
3.	China	1,840	(6.88%)	1,762	(7.22%)
4.	Germany	1,123	(4.20%)	1,091	(4.47%)
5.	Indonesia	1,106	(4.13%)	1,098	(4.50%)
6.	United Kingdom	1,097	(4.10%)	965	(3.95%)
7.	Australia	1,060	(3.96%)	922	(3.78%)
8.	Canada	898	(3.36%)	780	(3.20%)
9.	Pakistan	809	(3.02%)	800	(3.28%)
10.	Hong Kong	628	(2.35%)	602	(2.47%)

	Page		Pageviews	% Pageviews
1.		P	20,246	21.99%
2.	/deliverables/bian-portal/	P	11,484	12.47%
3.	/deliverables/bian-standards/	P	3,947	4.29%
4.	/semantic-apis/	æ	3,469	3.77%
5.	/deliverables/bian-standards/bian-service-landscape-10-0/	æ	2,504	2.72%

Mar 1, 2022 - May 3, 2022 ▼

Pa	age ?	Pageviews ?	Ψ.	Unique Pagevie	ws ?
	Service Domain		7,973 al: 19.52% (92,084)	15 % of Total	5,643 1: 20.00% (78,219)
1.	/semantic-apis/	3,469	(19.30%)	3,043	(19.45%)
2.	/semantic-apis/semantic-api-portal-help/	825	(4.59%)	756	(4.83%)
3.	/semantic-apis/party-reference-data-directory/	395	(2.20%)	306	(1.96%)
4.	/semantic-apis/account-reconciliation/	365	(2.03%)	304	(1.94%)
5.	/semantic-apis/current-account/	359	(2.00%)	274	(1.75%)
6.	/semantic-apis/credit-card/	328	(1.82%)	257	(1.64%)
7.	/semantic-apis/payment-initiation/	269	(1.50%)	182	(1.16%)
8.	/semantic-apis/payment-order/	212	(1.18%)	164	(1.05%)
9.	/semantic-apis/consumer-loan/	204	(1.14%)	180	(1.15%)
10.	/semantic-apis/party-lifecycle-management/	199	(1.11%)	151	(0.97%)
11.	/semantic-apis/loan/	193	(1.07%)	165	(1.05%)
12.	/semantic-apis/savings-account/	191	(1.06%)	152	(0.97%)
13.	/semantic-apis/party-authentication/	190	(1.06%)	160	(1.02%)
14.	/semantic-apis/account-recovery/	188	(1.05%)	140	(0.89%)
15.	/semantic-apis/card-authorization/	184	(1.02%)	158	(1.01%)
16.	/semantic-apis/customer-products-and-services/	170	(0.95%)	135	(0.86%)
17.	/semantic-apis/payment-execution/	168	(0.93%)	142	(0.91%)
18.	/semantic-apis/customer-offer/	154	(0.86%)	116	(0.74%)
19.	/semantic-apis/mortgage-loan/	143	(0.80%)	115	(0.74%)



Open-source – GitHub Analytics

04/21

04/22

04/23



1,020 Views 206 Unique visitors

04/25

04/26

04/27

04/28

04/29

04/30

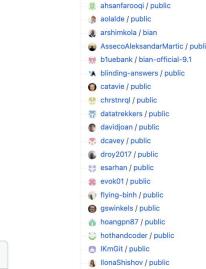
05/01

04/24

Referring sites					
Site	Views	Unique visitors			
⊕ bian.org	510	156			
github.com	29	16			
⊕ Google	27	8			
prod-1-confluence.mufgameri	8	1			
DuckDuckGo	7	2			
githublab.com	5	1			
dev.bian.org	4	3			
wwa.bian.org	2	1			

Popular content					
Content	Views	Unique visitors			
GitHub - bian-official/public: T	289	176			
public/release10.0.0/semantic	153	90			
public/release9.1/semantic-api	72	51			
public/release9.1 at main	35	29			
public/release9.1/semantic-api	31	25			
public/ACHOperations.yaml at	10	10			
public/PositionKeeping.yaml at	10	3			
public/release10.0.0 at main	9	9			
public/CreditCard.yaml at main	9	6			
File Finder	9	5			

Unwatch 14
▼



☆ Star 40

bian-official / public

1bigant / public 20140005862 / public

AetherPaw / bian-official Ingvarlse / bian-official

intruder1912 / public - JamaliAli / public jperezgith / public jyxing007 / public math description | help A kh-a-r / public kingsraghav / public krisrr3 / public 🚑 lasadana / public lidiexy-palinode / public ImulloaBP / public locnguyenx / public 👸 lukeeau / public lyminh1994 / public maxbyz / public 😭 mginocchio / public # mpaulgreen / public # mstaelen / public naheedmk / public 👭 nisha-nizamuddin / public open-accelerators / bian-public

open-risk / bian-public

♀ Fork 68

? Pull requests 1

05/03

05/02

Thank you

