

Strategy API's

Strategy API's

With Release 20, new API's are introduced:

- Customer/Business Defined external API's
- Internal API's

What is an API?

- API = Application Programming Interface
 - Exposes data through a consistent documented interface
 - Accessed by anyone with valid credentials & correct parameters
- Public or Private
- Allows data access outside of standard Web UI framework

API Examples

- CRM Integrations
 - Either exposes data for use in other applications, or can pull data in
 - Join Strategy information with deposit system, etc.
- Industry APIs
 - MISMO
- FEMA Widget

What's available in Strategy

- Defined API's
 - Freddie Mac XML – Property Reporting System
 - PINDEX
 - Insurance Agents
 - Financial Statements
 - New Loan Entry
- Internal API's
 - Self Registering API's & MetaData

Defined API's

Freddie Mac XML – Property Reporting System

- Supports C4 Multifamily
- XML Output sent automatically to PRS through Direct API Integration
- Supports User & Password updates to sync with Freddie PRS system

Generated from Financial Statements

Loan Information

Loan Number750082305

InvestorIRP Master Serviced (750)

Investor Loan82305750

Fiscal Year End

Related Loans

Client Relations MgrRYLOWICZ, SUSAN [SR]

Processor Code

Loan TypeCONVENTIONAL (PURCHASED) [P]

Original Loan Date04/01/2014

Load Added Date04/19/2014

Product Line

Product Line Detail 1

Product Line Detail 2

Source Code

Hold Code

Collateral ID102

Property NameCircle Pointe (1)

Property Address177 Circle Pointe Drive Cleveland, OH 44115

Property Desc 1MULTI APARTMENT <100 UNITS [10]

Property Desc 2

View Detail

Property Maintenance

CMBS Property TypeMULTIFAMILY [MF]

BackValidateSaveDeleteStatus: IN PROGRESS01/06/2013Currently viewing statement # 5: 01/01/2014 - 03/31/2014 - 1ST QUARTER - PERIODIC STATEMENT - CREFC Multifamily

Date sent to investor:

CompareOSARGenerate & Send To NetworkExport to ExcelExport to CSVOSAR & Export to ExcelValuation

Loan Level Comments:

Income

Borrower Statement Line Item	Amount	Adjustment	Adjusted Amount	Map To Account	Adjustment Comment	Delete
Gross Potential Rent	375,000.00	0.00				
Less Vacancy Loss	550.00	0.00				
Base Rent	1,500.00	0.00				
Laundry / Vending Income	1,250.00	0.00				
Parking Income	750.00	0.00				
Other Income	550.00	0.00				
Income Eliminate	1,000.00	0.00	1,000.00	Eliminate		
EGI (Effective Gross Income)	379,500.00	0.00	379,500.00			

Single or Multiple Loan Selection

☒ Single Loan

☐ Multiple Loans

☐ CMBS Reporting

☒ Send XML to Freddie Mac

Assessment Date: 9/1/2019

BackNext

Expenses

Borrower Statement Line Item	Amount	Adjustment	Adjusted Amount	Map To Account	Adjustment Comment	Delete
Real Estate Taxes	1,375.00	0.00	1,375.00	Real Estate Taxes		
Property Insurance	225.00	0.00	225.00	Property Insurance		
Utilities	2,000.00	0.00	2,000.00	Utilities		
Repairs and Maintenance	3,875.00	-700.00	3,175.00	Repairs and Maintenance	New Management company ir	

Form Type:

CREFC Multifamily

Purpose:

PERIODIC STATEMENT

Frequency:

1ST QUARTER

Entered For:

Statement Source:

TEST

Auditor:

Contact:

Start Date:

1/1/2014

End Date:

3/31/2014

No. of months:

3.0

Debt Svc Note(s) A:

0.00

Debt Svc Note(s) B:

0.00

Debt Svc Note(s) C:

0.00

Allocation %:

100.00000

Rent Roll Seq:

Occupancy %:

92.00000

Occupancy Date:

03/31/2014

Possible Responses

- Success – or-
 - Unknown Loan Number
 - Invalid Login
 - Invalid XML Request
 - Etc.

PINDEX API

- Allows for single record Insert/Update/Delete of Index Rates (PINDEX)
 - For Insert, Rate Code (IXICOD) must exist in PINFO
- Allows Query of Index Rates with or without parameters
- Uses standard McCracken Security model
 - PINDEX changes via API stored in File Maintenance

Insurance Agent API

- Query of Insurance Companies (PINSCO/PINCO2)
- Insert/Update of Insurance Company Ratings (PINSCORAT)
 - VSRAGENCY must exist in PINFO
 - VSCOID must exist in PINSCO
 - Automatically selects appropriate Rating Agency (A.M. Best/Fitch/Moody's/S&P)
- Uses standard McCracken Security model

Financial Statements

Two new API's utilize the Mapping Tool for Financial Statement uploads

- API 1: Upload spreadsheet to Mapping Tool for validation
- API 2: Process the file and insert/update

Necessary Parameters

- Upload API
 - Filename
- Processing API
 - User/Password/Data Library
 - Sheet to Process
 - Template Name
 - Associated Mapping
 - Filename from Upload API

Financial Statement – Upload Spreadsheet

- Uses new Mapping Tool Template based on existing Financial Statement template
 - All mapped fields must contain values, or API will return an error
 - Existing calculation logic is preserved
- Multiple Statement Types can be uploaded with different Mappings
- Any validation errors are returned via JSON to the API
 - If no errors exist, a success message is returned

Financial Statement – Process Data

When Validation is successful, second API passes data to Strategy for processing

- Supports Insert/Update
- Uses new POPMSTAPI template

New Loan Entry

- API for Boarding of New Loans
 - “/info” – an API call to receive available new loan endpoints
 - `{"name":"McCrackenAPI","version":"19D.0.0_WLP_Build.9_26-Apr-2021 14:06","endPoints":["/info","/loanentry","/pinindex","/pininfo","/pinsco","/pinscorat","/psys"],"date":"05/13/2021 13:22:20"}`
 - “/loanentry” – API to onboard new loan
 - One or many loans can be submitted at a time
 - Can be run in realtime batch, or at day end
- Available post-R20

Loan Entry Files

- New File “KNLOAN”
 - Takes Loan Number(s) from API submission and checks for duplicates in the database
 - If duplicates are found – returns error message for that loan via API
 - If no duplicates, stores new Loan number for submission

Required Fields

- API must contain:
 - Loan Number
 - Investor Seq*
 - Property Seq*
 - UDF ID/Seq*
 - Tax Desc. Number *
 - System Escrow Num/Seq*
 - Insurance Escrow/Seq Num/Coverage Seq/Loi Seq*
 - Name Seq*
- Asterisk fields applicable only when updating associated files

Available Loan Entry Files

- NMASTR - Master
- NCIF – Customer Information
- NARM – ARM information
- NUDFDATA – User Defined Fields
- NPROP - Property
- NIMST – Investor Master
- NOESC - Escrow
- NRBL - Balance
- NINSCV – Insurance
Types/Coverage
- NINSLIN – Lines of Insurance
- NDMND – Balloon Loan
- NACCRU - Accruals
- NANAME – Name
- NTXDSC - Tax

API Responses


- Success – or –
 - Bad Request
 - Duplicate Loan
 - Strategy Locked

Internal API's

API Services

- API Service Layer
 - Standardized access to the Strategy engine
 - Reduces the tight coupling between front-end and back-end
 - Can be updated at will as long as API contracts are maintained
 - System Services: organized by function
 - Authorization, metadata, general
 - Business Services: organized by business domains
 - Loan data, Asset data, Accounting data, Insurance data, etc.
- API Documentation
 - API documentation generated when the service is built

Swagger API Documentation

 **swagger**

Select a spec default

Api Documentation ^{1.0}

[Base URL: 172.29.20.30:8080/loanAdministration]
<http://172.29.20.30:8080/loanAdministration/v2/api-docs>

Api Documentation
[Terms of service](#)
[Apache 2.0](#)

basic-error-controller Basic Error Controller

>

operation-handler Operation Handler

>

rest-api-r-20-controller Rest Api R 20 Controller

▼

GET /api/R20/loanAdministrationService/getNameAddress getNameAddress

GET /api/R20/loanAdministrationService/getPMASTR getPMASTR

POST /api/R20/loanAdministrationService/maintainNameAddress maintainNameAddress

POST /api/R20/loanAdministrationService/maintainPMASTR maintainPMASTR

web-mvc-links-handler Web Mvc Links Handler

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Swagger (cont.)

rest-api-r-20-controllerRest Api R 20 Controller

GET

/api/R20/loanAdministrationService/getNameAddress

getNameAddress

Try it out

Parameters

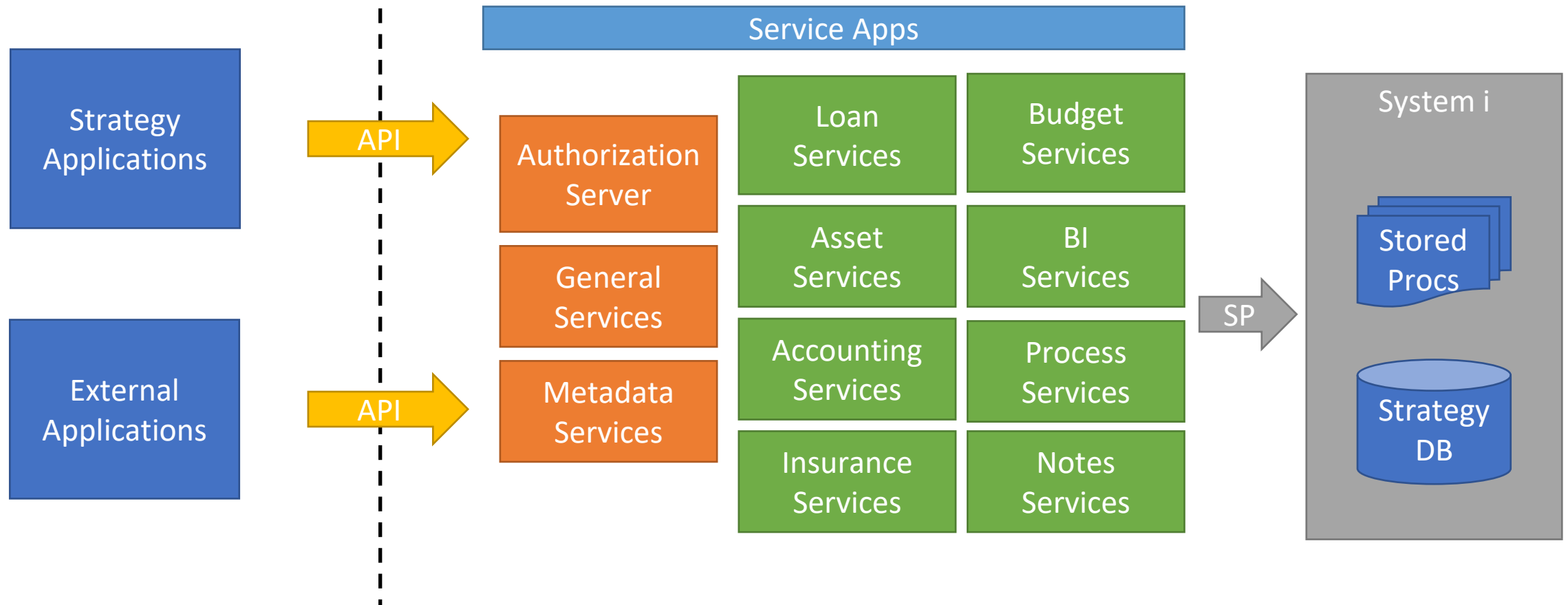
Name	Description
Authorization <small>required</small> string <i>(header)</i>	Authorization
CMLN <small>required</small> integer(\$int32) <i>(query)</i>	CMLN

Responses

Response content typeapplication/json

Code	Description
200	<div>OK</div> <div><div>Example Value</div><div>Model</div><div><pre>[{ "lkfmtad1": "string", "lkfmtad2": "string", "lkfmtad3": "string", "lkfmtad4": "string", "lkfmtad5": "string", "lkfmtad6": "string", "lknamid": 0, "mode": "string", "nmconam": "string", "nmemail": "string", "nmfax": "string", "nmfnam": "string", "nmLang": "string", "nmlname": "string", "nmnamid": 0, "nmpcontac": "string", "nmphone": "string", "nmssntin": "string", "nmtaxid": 0, "recCnt": 0, "recCnt2": 0, "sifful": "string", "tnias": "string", </pre></div></div>
401	<div>Unauthorized</div>
403	<div>Forbidden</div>

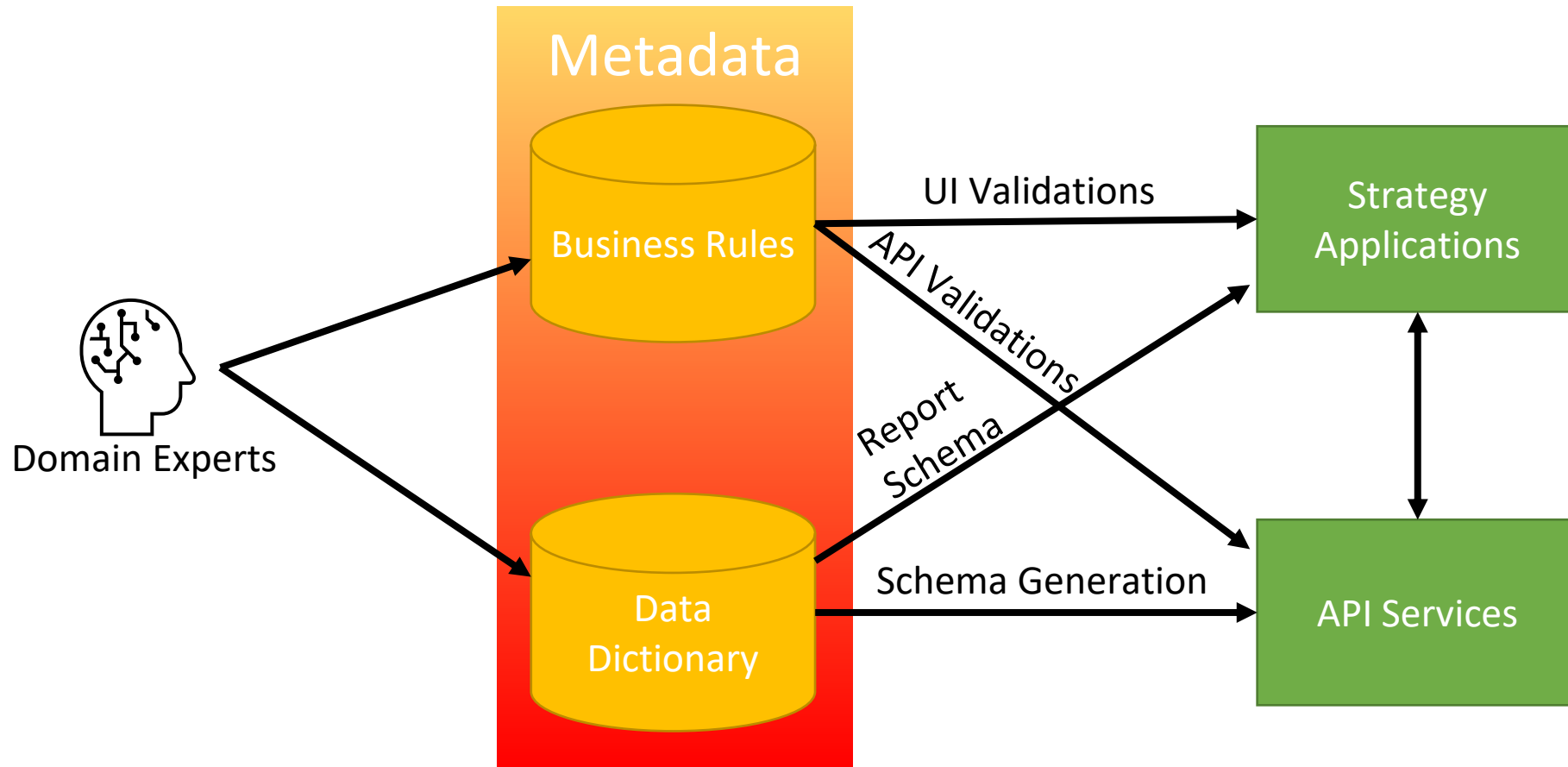
API Services



Strategy Metadata

- Data Dictionary
 - Documents Strategy database structure and elements
 - Provides schema definition for reporting module
 - Provides business definitions for all fields in the system
- Business Rules
 - Defines data conditions when rules (constraints) are applied
 - Constraints restrict available values for entry
 - Used to validate entered data and control UI behaviors
 - Provides business context on why constraints are applied

Strategy Metadata



Questions?