## PRAB Benchmark - Structural Characteristics of the REST APIs

PI Name	Reference	Availability				Number of Routes Number of Query Parameters G						Chart Numb
madeus Hotel   [6][17][19]	https://developers.amadeus.com/self-service/category/hotels	ONLINE	KEY		YES			13		1	0 https://www.postman.com/amadeus4dev/amadeus-for-developers-s-public-workspace/collection/kquqijj/amadeus-for-developers	
API of Ice and Fire   [16]	https://anapioficeandfire.com	ONLINE	NO	NO	YES		3	0		0	0 https://www.postman.com/postman/postman-team-collections/documentation/4dugaxo/game-of-thrones	
alldontlie   [16]	https://www.balldontlie.io	ONLINE ONLINE	KEY	OPT	YES	10 5	10	0	0	0	0 https://www.postman.com/grandios/public/collection/lcm3za0/balldontlie	
ng Maps   [1]	https://www.bingmapsportal.com	ONLINE	KEY	OPT	YES	NO OPENAPI OR POSTMAN  1 13		0	,	0	/	
ng Web Search   [10]	https://www.microsoft.com/en-us/bing/apis/bing-web-search-api https://developer.atlassian.com/cloud/bitbucket/rest	ONLINE	KEY	OPT	YES		1	48 4			0 https://github.com/microsoft/bing-search-specs/blob/master/WebSearch/stable/v1.0/WebSearch.json 0 https://dac-static.atlassian.com/cloud/bitbucket/swagger.y3.json	
tBucket   [4]	https://www.boredapi.com	DOES NOT EXIST ANYMOR	NE I	/	/	100	1/1	40 4	, ,	,	Units, ruac-static, attassian, commonwearswagger, vs. json	,
atwatch   [2][9][11][12][15][25]	https://github.com/zalando-incubator/catwatch	LOCAL	NO	NO	NO	6 8	6	0	0	0	https://github.com/WebFuzzing/EMB/blob/master/openapi-swagger/catwatch.ison	
heapShark I [16]	https://apidocs.cheapshark.com	ONLINE	NO	NO	YES		4	0		-	https://apidocs.cheapshark.com	
pinCap   [16]	https://docs.coincap.io	ONLINE	NO.	NO	YES		10	0		0	0 https://docs.coincap.io/	
VA Verification Server   [3][11][12]	https://github.com/corona-warn-app/cwa-verification-server	LOCAL	NO.	NO	NO	5 0		5		0	https://github.com/corona-warn-app/cwa-verification-server/blob/master/api-docs.json	
	https://github.com/ExcediaGroup/cyclotron	LOCAL	NO.	NO	NO			14		3	https://github.com/ExpediaGroup/cyclotron/blob/master/cyclotron-svc/swagger.json	
yclotron   [11]	https://www.datamuse.com/api	ONLINE	NO	NO	NO	2 25		0		0	NO OPENAPI OR POSTMAN	
emo Blog Server   [28]	https://github.com/HeskevBaozi/RESTful-blog-server-demo	NOT IN ENGLISH	/	/	/	1 1	- ,	,	,	1	i de di Libit i di i di	,
HL Shipment Tracking   [6]	https://developer.dhl.com/api-reference/shipment-tracking	ONLINE	KEY	NO	NO	1 8	1	0	n	0	https://developer.dhl.com/api-reference/shipment-tracking#downloads-section	
igDag   [12]	https://docs.digdag.io	LOCAL	NO.	NO	NO	35 14		5		2	https://github.com/treasure-data/digdag/blob/master/digdag-docs/src/ extra/api/swagger.yaml	
sease SH [[11]	https://disease.sh	вотн	NO	NO	NO	41 7		0		0	https://disease.sh/apidocs/swagger_v3.json	
nviroCar   [12]	https://envirocar.github.io/enviroCar-server/api	BOTH	KEY	NO	NO	53 40		15		8	0 https://envirocar.org/api/stable/api-docs.json	
RC-20 RESTful Service   [3]	https://github.com/web3labs/erc20-rest-service	LOCAL	NO	NO	NO		8	5		0	https://github.com/web3labs/erc20-rest-service/blob/master/images/full-swagger-ui.png	
ShonOnContainers   [21]	https://github.com/dotnet-architecture/eShopOnContainers	DEPRECATED	/	/	/		,	,	,	,		,
DIC   [6][13]	https://github.com/ContinuityControl/fdic	LOCAL	NO.	NO.	NO.	8 15	8	0	0	0	https://www.postman.com/api-evangelist/federal-deposit-insurance-corporation-fdic/collection/ddi8s3a/fdic-bank-data-api-beta	
nc   [6][13] atures Service   [2][3][4][7][9][11][12][15][18][20][25]		LOCAL	NO NO	NO	NO		6	6	1	5	https://www.bustman.com/api-evangens/rederal-deposite insurance-corporation-rule/content/unusssar/ut-salik-data-api-data     https://github.com/WebFuzzing/EMB/blob/master/openapi-swagger/features-service.json	
arte   [10]	https://restdocs.forte.net	ONLINE	KEY	NO	YES	POSTMAN TRANSLATION DOES NOT WORK /	, ,	,	1	- /	https://restdocs.forte.net/	,
pursquare   [6][8][10]	https://docs.foursquare.com/developer	ONLINE	KEY	OPT	YES	21 78		6	0	0	https://www.postman.com/foursquare-places-api/foursquare-s-public-workspace/collection/gjus7hg/foursquare-places-api	
BIF Species   [16]	https://techdocs.gbif.org/en/openapi/v1/species	ONLINE	NO	NO	NO	26 37		1		0	https://techdocs.obif.org/openapi/checklistbank.ison	
enome Nexus   [3][13]	https://docs.genomenexus.org/api	BOTH	NO	NO	NO			10		0	https://www.genomenexus.org/swagger-ui.html	
estao Hospital   [11][20]	https://github.com/ValchanOficial/GestaoHospital	LOCAL	NO	NO	NO			10		2	https://github.com/WebFuzzing/EMB/blob/master/openapi-swagger/gestaohospital-rest.json	
itHub   [8][10][17][19][24]	https://docs.github.com/en/rest	ONLINE	KEY	OPT	YES			154 9			56 https://github.com/github/rest-api-description	
itLab   [1]	https://docs.gittab.com/ee/api/rest	ONLINE	KEY	OPT	YES	48 18		14 1			https://gitlab.com/gitlab-org/gitlab/-/blob/master/doc/api/openapi.yaml	
pogle Geocoding   [10]	https://developers.google.com/maps/documentation/geocoding	ONLINE	KEY		YES	1 10		0		0	https://www.postman.com/google-maps-platform/google-maps-platform/collection/c4xo2u9/google-maps-platform-core-apis	
nogle Mans I [10]	https://developers.google.com/maps/documentation	ONLINE	KEY	OPT	YES	MULTIPLE APIS /	1	1	1	1	https://www.postman.com/google-maps-platform/google-maps-platform/collection/c4xo2u9/google-maps-platform-core-apis	,
raphhopper   [14]	https://docs.graphhopper.com	ONLINE	KEY	OPT	YES	14 40	8	9	n	1	0 https://docs.graphhopper.com/	
ravitee.io   [12]	https://github.com/gravitee-io/gravitee-api-management	APLIS NOT REST	/	/	/		, ,	,	,	,	I I	,
HO   [9][11]	ANONYMIZED / NOT PUBLIC	/	,	1	1	, ,	,	,	1	,	,	,
afka REST Proxy   [12]	https://github.com/confluentinc/kafka-rest	LOCAL	NO	NO	NO	38 37		8	3	5	1 https://github.com/confluentinc/kafka-rest/blob/master/api/v3/openapi.yaml	
inguageTool   [3][4][6][11][13][18][20][24][26]	https://languagetool.org/http-api	ONLINE	KEY	OPT	YES		2	3		0	https://github.com/WebFuzzing/EMB/blob/master/openapi-swagger/languagetool.json	
agento   [4]	https://developer.adobe.com/commerce/webapi/rest	LOCAL	NO	NO.	NO	446 63 :		190 7		-	https://developer.adobe.com/commerce/webapi/rest/quick-reference/	
anagement API for Apache Cassandra   [12]	https://github.com/k8ssandra/management-api-for-apache-cassandra	LOCAL	NO	NO	NO	56 25		38	1	2	https://raw.githubusercontent.com/k8ssandra/management-api-for-apache-cassandra/master/management-api-server/doc/openapi.json	
arvel   [6][17]	https://developer.marvel.com	ONLINE	KEY	NO	YES	39 38		0	0	0	https://gateway.marvel.com/docs/public	
CVN   [3][11][12][13][18][25]	https://github.com/devgateway/ocvn	LOCAL	NO.	NO	NO	96 26		96	-	0	https://github.com/WebFuzzing/EMB/blob/master/openapi-swagger/ocvn-rest.json	
hsome   [6][12][13][26]	https://docs.ohsome.org/ohsome-api	ONLINE	NO	NO	NO	61 18		61		0	https://github.com/GIScience/ohsome-api/blob/main/docs/_static/swagger-aggregation.json	
MDb   [6][13][14][16][17][19]	https://www.omdbapi.com	ONLINE	KEY	OPT	YES	1 11		0		0	https://github.com/Mermade/openapi-definitions/blob/master/OMDb/swagger.json	
pen Brewery DB   [16]	https://www.openbrewerydb.org	ONLINE	NO.	NO.	NO		5	0		0	https://github.com/openbrewerydb/openbrewerydb	
penverse   [20]	https://api.openverse.org	ONLINE	KEY	NO	YES	18 28		4		0	0 https://api.openverse.org/v1/schema	
	http://passwordutility.net	DOES NOT EXIST ANYMOR	RE /	/	/	10 20	, ,	,	,	1	United and the second of the s	,
assword Utility   [14] ayPal (Invoices)   [10]	https://developer.paypal.com/api/rest	ONLINE	KEY	NO	NO	14 6	4	10	2	4	0 https://github.com/paypal/paypal-rest-api-specifications	
erson Controller I [3]	NOT FOUND. NO REFERENCE IN THE PAPER	/	/	/	/	1.7	1	,	,	1	I I	,
etClinic I [16][20][22]	https://github.com/spring-petclinic/spring-petclinic-rest	LOCAL	NO	NO	NO	17 1	14	9	7	6	https://github.com/spring-petclinic/spring-petclinic-rest/blob/master/src/main/resources/openapi.yml	
etStore   [4][14][20][23][28][29]	https://github.com/swagger-api/swagger-petstore	LOCAL	NO	NO	NO		8	6		3	0 https://petstore3.swagger.io/api/v3/openapi.json	
ggy Metrics   [21]	https://github.com/sqshq/piggymetrics	LOCAL	NO	NO	NO		7	1		0	0 NO OPENAPI OR POSTMAN	
roblem Controller I [3]	NOT FOUND. NO REFERENCE IN THE PAPER	/	/	/	/	,		. ,	,	,	i de de Leta i deci de diment	,
niect Tracking System I [3]	NOT FOUND, NO REFERENCE IN THE PAPER	,	,	,	,	, ,	, ,	,	,	,	i,	,
oxyPrint   [2][3][9][11][12][15][18][25]	https://github.com/ProxyPrint/proxyprint-kitchen	I OCAL	NO	NO.	NO.	79 0	48	30 1	4 1	0	4 https://github.com/WebFuzzing/EMB/blob/master/openapi-swagger/proxyprint.json	
uartz Manager   [12]	https://github.com/fabioformosa/quartz-manager	LOCAL	NO.	NO	NO		2	2		1	https://github.com/pranaybathini/quartz-scheduler/blob/main/Quartz-Scheduler.postman_collection.json	
andom User Generator   [16]	https://randomuser.me	ONLINE	NO	NO	NO	1 12		0	-	0	http://documenter.getpostman.com/view/19878710/2s93.Jrwk3R	
ealworld App   [11][22]	https://github.com/lujakob/nestjs-realworld-example-app	LOCAL	NO	NO	NO	12 3		6		4	https://github.com/gothinkster/realworld/blob/main/api/openapi.yml	
fuge Restrooms   [14]	https://www.refugerestrooms.org/api/docs	ONLINE	NO	NO	NO	4 12		0	_	0	0 https://www.refugerestrooms.org/api/swagger_doc.json	
qRes   [16]	https://regres.in	ONLINE	NO	NO	NO		4	3		2	2 https://www.postman.com/regresapi/regres/collection/fil8ped/regres-api	
ST Countries   [3][6][11][12][13][16][20][26]	https://restcountries.com	ONLINE	NO	NO	NO	22 16		0		0	https://github.com/WebFuzzing/EMB/blob/master/openapi-swagger/restcountries.yaml	
ST Faults   [11]	https://github.com/WebFuzzing/rest-faults	LOCAL	NO	NO	NO		4	1		1	https://github.com/WebFuzzing/rest-faults/blob/master/src/main/resources/schema.json	
ST Market   [3]	NOT FOUND. NO REFERENCE IN THE PAPER	/	/	/	1	, , ,	1	,	/	/	1	,
ST NCS   [3][9][11][15][18][25]	https://github.com/WebFuzzing/EMB/tree/master/jdk_8_maven/cs/rest/artificial/ncs	LOCAL	NO	NO.	NO.	6 0	6	0	0	0	https://github.com/WebFuzzing/EMB/blob/master/openapi-swagger/rest-ncs.json	
ST News   [2][3][9][11][15][18]	https://github.com/WebFuzzing/EMB/tree/master/jdk 8 maven/cs/rest/artificial/news	LOCAL	NO	NO	NO		3	1		0	https://github.com/WebFuzzing/EMB/blob/master/openapi-swagger/rest-news.json	
ST SCS   [3][9][11][15][18][25]	https://github.com/WebFuzzing/EMB/tree/master/juk 8 maven/cs/rest/artificial/scs	LOCAL	NO	NO	NO		11	0		0	https://github.com/WebFuzzing/EMB/blob/master/openapi-swagger/rest-scs.ison	
STful Web Service Study I [3]	NOT FOUND. NO REFERENCE IN THE PAPER	1	/	/	1	,	1	- /	1	1	1	,
out API   [2][3][7][9][11][15][18][25]	https://github.com/WebFuzzing/EMB/tree/master/jdk_8_maven/cs/rest/original/scout-api	LOCAL	NO.	NO.	NO.	21 25	21	10	7	9	2 https://github.com/WebFuzzing/EMB/blob/master/openapi-swagger/scout-api.json	
nzing   [12]	https://genzing.zendesk.com/hc/en-us/categories/360000120514-Senzing-API-for-Developer		NO NO	NO	NO	31 29		7		1	https://github.com/senzing-garage/senzing-rest-api-specification/blob/main/senzing-rest-api.yaml     https://github.com/senzing-garage/senzing-rest-api-specification/blob/main/senzing-rest-api.yaml	
ckShon   [20]	https://aithub.com/microservices-demo/microservices-demo	LOCAL	NO NO	NO	NO	NO OPENAPI OR POSTMAN		. ,		1	- Imparignmentality garagesoniang too aproposition and appointmentality restricting restricting restricting from the second seco	,
aceX API   [11]	https://github.com/r-spacex/SpaceX-API	ONLINE	KEY	NO	NO	41 0	29	21	0 1	1	13 https://github.com/r-spacex/SpaceX-API/blob/master/docs/README.md	
otify   [6][13][17][19]	https://developer.spatialv.com	ONLINE	KEY	NO	YES	68 63		5 1			0 https://github.com/sonallux/spotify-web-api/tree/main	
ree Commerce   [4]	NOT FOUND, NO REFERENCE IN THE PAPER	/	/	/	/	00 63	59	J 1	,	,	I Index administration of the following and the	,
ring Batch Test   [3]	NOT FOUND, NO REFERENCE IN THE PAPER  NOT FOUND, NO REFERENCE IN THE PAPER	, , , , , , , , , , , , , , , , , , ,	,	,	,	1		,	,	,	i,	,
	NOT FOUND, NO REFERENCE IN THE PAPER  NOT FOUND, NO REFERENCE IN THE PAPER	,	,	,	,		,	,	,	,	1,	,
ing Boot Sample App   [3] pe   [5][6][8][10][24]	https://docs.stripe.com/api	ONLINE	KEY	NO	YES	388 138	257	271	0 3		0 https://oithub.com/stripe/openapi	
	https://docs.stripe.com/api	ONLINE	KEY	NO	YES	388 138 . 16 19		6		0	0 https://ginub.com/sinpe/openapi 0 https://www.postman.com/api-evangelist/tumblr/collection/wa7adwz/tumblr	
		ONLINE	KEY	NO	NO		3	3		-	https://www.posman.com/api-evange/is/nambir/collection/wa/adwz/tumbir     https://mathew.stoplight.ip/docs/ur-codebin-api	
mblr   [8][10] -Codebin I [12]												
-Codebin   [12]	https://mathew.stoplight.io/docs/ur-codebin-api	/	/	/	/	, ,	,	3 /	,	1	I I	,
	https://mathew.stoplight.io/docs/ur_codebin-api NOT FOUND, NO REFERENCE IN THE PAPER https://github.com/Throyer/springboot-api-rest-example	/ LOCAL	/ NO	/ NO	/ NO	/ / / / / / / / / / / / / / / / / / /	1	1	1	1	/ / / / / / / / / / / / / / / / / / /	,

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## PRAB Benchmark - Structural Characteristics of the REST APIs

API Name	Reference	Availability	Authentication	Pricing	Limits Number of Routes	Number of Qu	Query Parameters GET POST	T PUT	DELE	TE PAT	CH OpenAPI URL	Chart Number
YouTube   [5][6][8][13][17][19][24][26]	https://developers.google.com/youtube	ONLINE	KEY	NO	YES 46	3	71 20 1	11 0	)	15	0 https://www.postman.com/api-evangelist/youtube/overview	60

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