Postman

Swagger

Restful API

- Design style，not standard
- Use URL to locate the only source. Refer to create,delete,update,retrieve resource
- Just corresponding to POST ,PUT,GET and DELETE methods that HTTP protocol provide
- 2012 >90% Web services use Restful API

Postman

- **Chrome Plug-in**

  - Web

  - APP

- **Develop & Debug & Test**

- Create and send any HTTP request (GET, POST, PUT..)

- Every request you send gets stored in the history

- Store requests for an API together in collections

Postman | Settings

chrome-extension://fdmmgilgnpjigdojojpjooooidkmcomcm/index.html

POSTMAN

History Collections

GET http://psi7webf01-app3.ae.sda.corp.telstra.com:9500/api/subscriptions/v1/offers?...

Normal Basic Auth Digest Auth OAuth 1.0   No environment ▾

http://psi7webf01-app3.ae.sda.corp.telstra.com:9500/api/subscriptions/v1/offers?serviceId=AFLGAME&countryCode=AU   GET ▾   URL params   Headers (0)

serviceId   AFLGAME   ✕

countryCode   AU   ✕

URL Parameter Key   Value

Send   Preview   Add to collection   Reset

Body Cookies (4) Headers (10)   STATUS 200 OK   TIME 1246 ms

Pretty Raw Preview   JSON XML

```
 1  {
 2      "offers": [
 3          {
 4              "code": "AFL_FREE_MONTHLY_TRIAL",
 5              "displayName": "2 Week Free Trial rolling on to AFL Live Monthly Pass",
 6              "webDescription": "Enjoy your Free 2 week trial of the AFL Live Pass by downloading the AFL Live Official app to watch every game live. At the end of the trial you will roll on to an AFL Live
    Monthly Pass unless cancelled prior.",
 7              "priceInCentsIncGst": 1499,
 8              "gst": 136
 9          },
10          {
11              "code": "AFL_WEEKLY_SUB_TRIAL",
12              "displayName": "2 Week Free Trial rolling on to AFL Live Weekly Pass",
13              "webDescription": "Enjoy your Free 2 week trial of the AFL Live Pass by downloading the AFL Live Official app to watch every game live. At the end of the trial you will roll on to an AFL Live
    Weekly Pass unless cancelled prior.",
14              "priceInCentsIncGst": 499,
15              "gst": 45
16          },
17          {
18              "code": "AFL_FREE_ANNUAL_SUB_TRIAL",
19              "displayName": "2 Week Free Trial rolling on to AFL Live Annual Pass",
20              "webDescription": "Enjoy your Free 2 week trial of the AFL Live Pass by downloading the AFL Live Official app to watch every game live. At the end of the trial you will roll on to an AFL Live
    Annual Pass unless cancelled prior.",
21              "priceInCentsIncGst": 8999,
22              "gst": 818
23          }
24      ]
25  }
```

Add request to a collection

Existing collection

Select ▼

or create a new one

telstra

Request name

subscription

Request description

List offers available to be subscribed to.

Add to collection Cancel

POSTMAN

History **Collections**

telstra

GET subscription

- Setting URL

- Setting Parameter

- Request Method

- Response Body

- Open Source

    - Project address: http://www.getpostman.com/

    - Download address: https://chrome.google.com/
       webstore/detail/postman-re...

Other Tools

- Chrome

  – Simple REST Client

  – Advanced Rest Client

- FireFox

  – Rest Client

- Linux command

  - CURL

SWAGGER

The World's Most Popular Framework for APIs.

- API documentation

- Unreadable

- Difficult to maintain

- sharing and communication are not easy

- Swagger is a framework which can generate beautiful online API though coding. It is not only online API documentation, but also online testing tool, great convenient to share and communication.

Subscriptions API

health-check-api : Health check to monitor downstream service availability

identity-api : Access the User identity and find out if logged in

POST	/identities/v1/unvalidated/federated/{serviceId}

Register a new unvalidated identity, federated to the appCode corresponding to the serviceId. Returns the euid from the federation, encrypted using Telstra Public key.

POST	/identities/v1/unvalidated/{serviceId}	Register a new unvalidated identity

GET	/identities/v1/users/current	Gets the logged in user

location-lookup-api : Find out where in the world the User's Browser is located

GET	/locations/v1/requestor	Gets the location of the requestor

GET	/locations/v1/requestor/{ip}	Gets the location of the requestor

offers-api : List offers available to be subscribed to.

GET	/subscriptions/v1/offers	Gets a list of offers

GET	/subscriptions/v1/offers/voucher/{voucherId}	Gets a list of offers price determined by voucher

subscriptions-api : Services to subscribe to products such as AFL and NRL subscriptions

GET	/subscriptions/v1/subscriptions	Gets a list of the users subscriptions

POST	/subscriptions/v1/{serviceId}/offers/{offerId}	Subscribes user to an offer

[BASE URL: https://id.telstra.com.au/api/api-docs , API VERSION: V1]

identity-api : Access the User identity and find out if logged in

POST /identities/v1/unvalidated/federated/{serviceId}

Register a new unvalidated identity, federated to the appCode corresponding to the serviceId. Returns the euid from the federation, encrypted using Telstra Public key.

POST /identities/v1/unvalidated/{serviceId}   Register a new unvalidated identity

Implementation Notes
registerIdentity

Parameters

Parameter	Value	Description	Parameter Type	Data Type
serviceId	AFLGAME ▾	AFLGAME, NRLGAME	path	string

registrant	```"dob": "17/01/1968",```
	```"password": "Pass1234",```
	```"firstName": "IRENE",```
	```"lastName": "MACCARTNEY",```
	```"emailAddress":```
	```"cq5spatest103@gmail.com"```
	```}```
	
	Parameter content type: application/json ▾
		registrant	body	Model Model Schema
				
				```{```
				``` "confirmedPassword": "",```
				``` "dob": "",```
				``` "password": "",```
				``` "firstName": "",```
				``` "lastName": "",```
				``` "emailAddress": ""```
				```}```
				
				Click to set as parameter value

Response Messages

HTTP Status Code	Reason	Response Model
409	Identity already exists with supplied Registrant email address	
201	Identity was registered successfully	Model Model Schema ```{}```
500	An internal or downstream issue occurred that prevented registration completing	
403	Forbidden	
400	Supplied registrant details were not valid	
401	Unauthorized	
404	Not Found	

Try it out!   Hide Response

Request URL

```
https://id.telstra.com.au:443/api/identities/v1/unvalidated/AFLGAME
```

Response Body

```
{
   "code": "409",
   "message": "Username of cq5spatest103@gmail.com has already been registered."
}
```

Response Code

```
409
```

Response Headers

```
{
   "Date": "Sat, 24 Jan 2015 07:52:47 GMT",
   "Strict-Transport-Security": "max-age=31536000",
   "Vary": "Origin",
   "Access-Control-Allow-Methods": "GET,PUT,POST,OPTIONS",
   "Content-Type": "application/json;charset=UTF-8",
   "Access-Control-Allow-Origin": "https://id.telstra.com.au",
   "Access-Control-Max-Age": "3600",
   "Transfer-Encoding": "chunked",
   "Connection": "Keep-Alive",
   "Access-Control-Allow-Credentials": "true",
   "Access-Control-Allow-Headers": "Origin, X-Requested-With, Content-Type, Accept, Key",
   "Keep-Alive": "timeout=5, max=10000"
}
```

Implementation Notes
wholsLoggedIn

Response Class
Model | Model Schema

```
{
  "user": {
    "firstName": "",
    "lastName": ""
  }
}
```

Response Content Type application/json ▼

Parameters

Parameter	Value	Description	Parameter Type	Data Type
firstname	Ivy	firstname	header	string
lastname	zhou	lastname	header	string

Response Messages

HTTP Status Code	Reason	Response Model
200	Returns the authenticated user details	Model | Model Schema

```
{
  "user": {
    "firstName": "",
    "lastName": ""
  }
}
```

HTTP Status Code	Reason	Response Model
403	Forbidden	
401	User is not authenticated	Model | Model Schema

```
{}
```

HTTP Status Code	Reason	Response Model
404	Not Found	

Try it out!   Hide Response

Request URL

```
https://id.telstra.com.au:443/api/identities/v1/users/current
```

Response Body

```json
{
  "user": {
    "firstName": "Ivy",
    "lastName": "zhou"
  }
}
```

Response Code

```
200
```

Response Headers

```json
{
  "Date": "Tue, 27 Jan 2015 03:53:59 GMT",
  "Strict-Transport-Security": "max-age=31536000",
  "Transfer-Encoding": "chunked",
  "Connection": "Keep-Alive",
  "Keep-Alive": "timeout=5, max=10000",
  "Vary": "Origin",
  "Content-Type": "application/json;charset=UTF-8"
}
```

- Website address   http://swagger.wordnik.com/
- Development language   Java
- Open source licence   Apache
- Operation environment   Cross-platform

- Swagger UI is a dependency-free collection of HTML, Javascript, and CSS assets that dynamically generate beautiful documentation from a Swagger-compliant API.

Other Tools

- Blueprint

- RAML

Q&A

MounteBank

cross-platform, multi-protocol test doubles over the wire.

Support protocols: http https tcp smtp

- Install

```
$ npm install -g mountebank --production
```

- Start

```
$ mb
mountebank v1.2.0 now taking orders - point your browser to http://localhost:2525 for help
```

- Register imposter

```
$ curl -i -X POST -H 'Content-Type: application/json' -d@imposter.json http://localhost:2525/imposters
```

- Query imposter

```
$ curl localhost:2525/imposters
{
  "imposters": [
    {
      "protocol": "http",
      "port": 4545,
      "_links": {
        "self": {
          "href": "http://localhost:2525/imposters/4545"
        }
      }
    }
  ]
}
```

Imposter definition

```json
{
 "port": 4545,
 "protocol": "http",
 "stubs": [
   {
     "responses": [{ "is": { "statusCode": 400 } }],
     "predicates": [
       {
         "equals": {
           "method": "POST",
           "path": "/test",
           "query": {
             "first": "1",
             "second": "2"
           },
           "headers": {
             "Accept": "text/plain"
           }
         }
       },
       {
         "equals": { "body": "hello, world" },
         "caseSensitive": true
       }
     ]
   },
   {
     "responses": [{ "is": { "statusCode": 406 } }],
     "predicates": [{ "equals": { "headers": { "Accept": "application/xml" } } }]
   },
   {
     "responses": [{ "is": { "statusCode": 405 } }],
     "predicates": [{ "equals": { "method": "PUT" } }]
   },
   {
     "responses": [{ "is": { "statusCode": 500 } }],
     "predicates": [{ "equals": { "method": "PUT" } }]
   }
 ]
}
```

Used for test

```
$ curl -i -X POST -H 'Accept: text/plain' -d'hello, world' http://localhost:4545/test\?Second\=2\&First\=1
HTTP/1.1 400 Bad Request
connection: close
Date: Thu, 22 Jan 2015 08:25:56 GMT
Transfer-Encoding: chunked

$ curl -i -X POST -H 'Accept: application/xml' -d'hello, world' http://localhost:4545/test?Second=2&First=1
HTTP/1.1 406 Not Acceptable
connection: close
Date: Thu, 22 Jan 2015 08:26:44 GMT
Transfer-Encoding: chunked


$ curl -i -X PUT -H 'Accept: text/plain' -d'hello, world' http://localhost:4545/test\?Second\=2\&First\=1
HTTP/1.1 405 Method Not Allowed
connection: close
Date: Thu, 22 Jan 2015 08:27:02 GMT
Transfer-Encoding: chunked
```
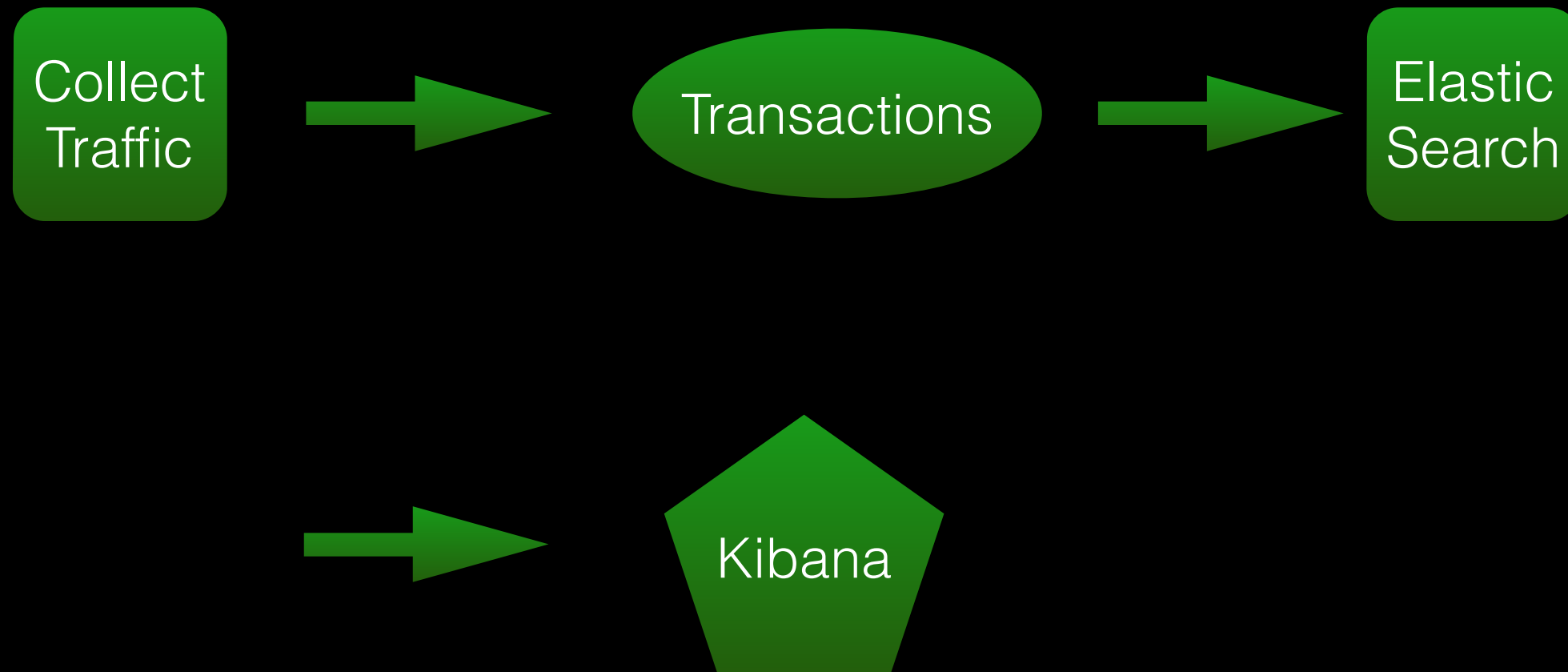
Packetbeat

- Open source

- Distributed

- Scalable and composable

- HTTP, MySQL, Postgresql, REDIS
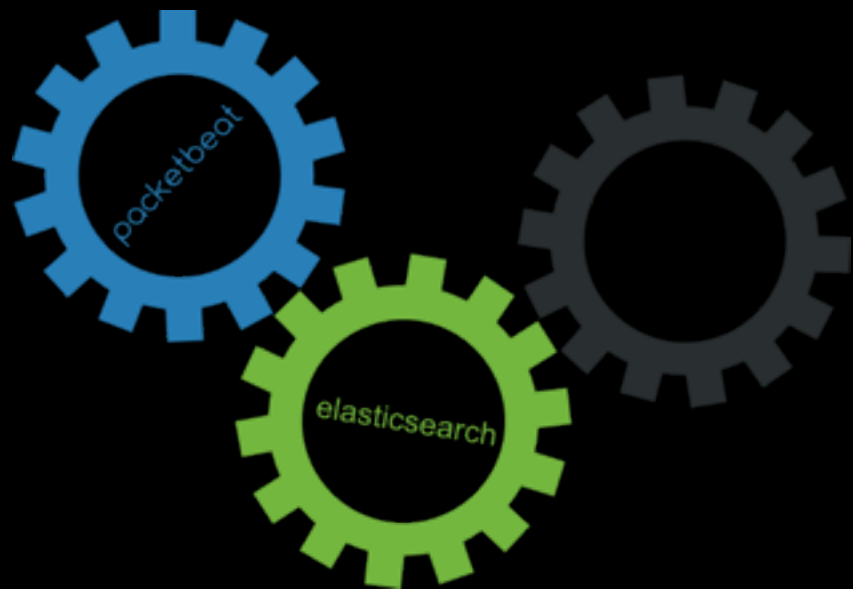
Progress

Packet Deploy

```
$ git clone https://github.com/packetbeat/packetbeat-deploy.git
```

```
# packetbeat-deploy/hosts

[aggrgator]
10.50.10.15

[app-servers]
10.50.50.1
10.50.50.2
10.50.50.2
```