



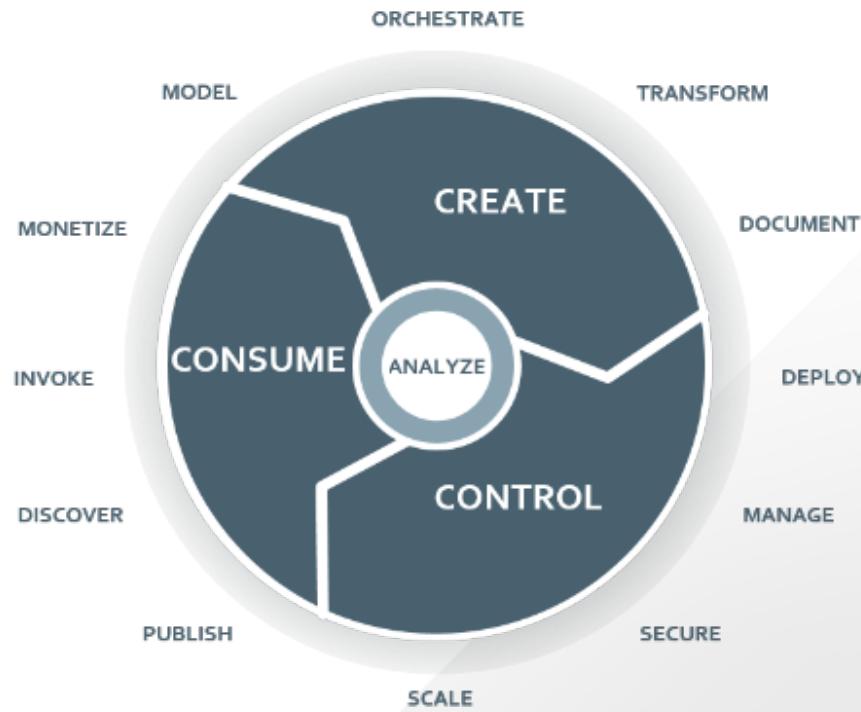
{ api }

API Management

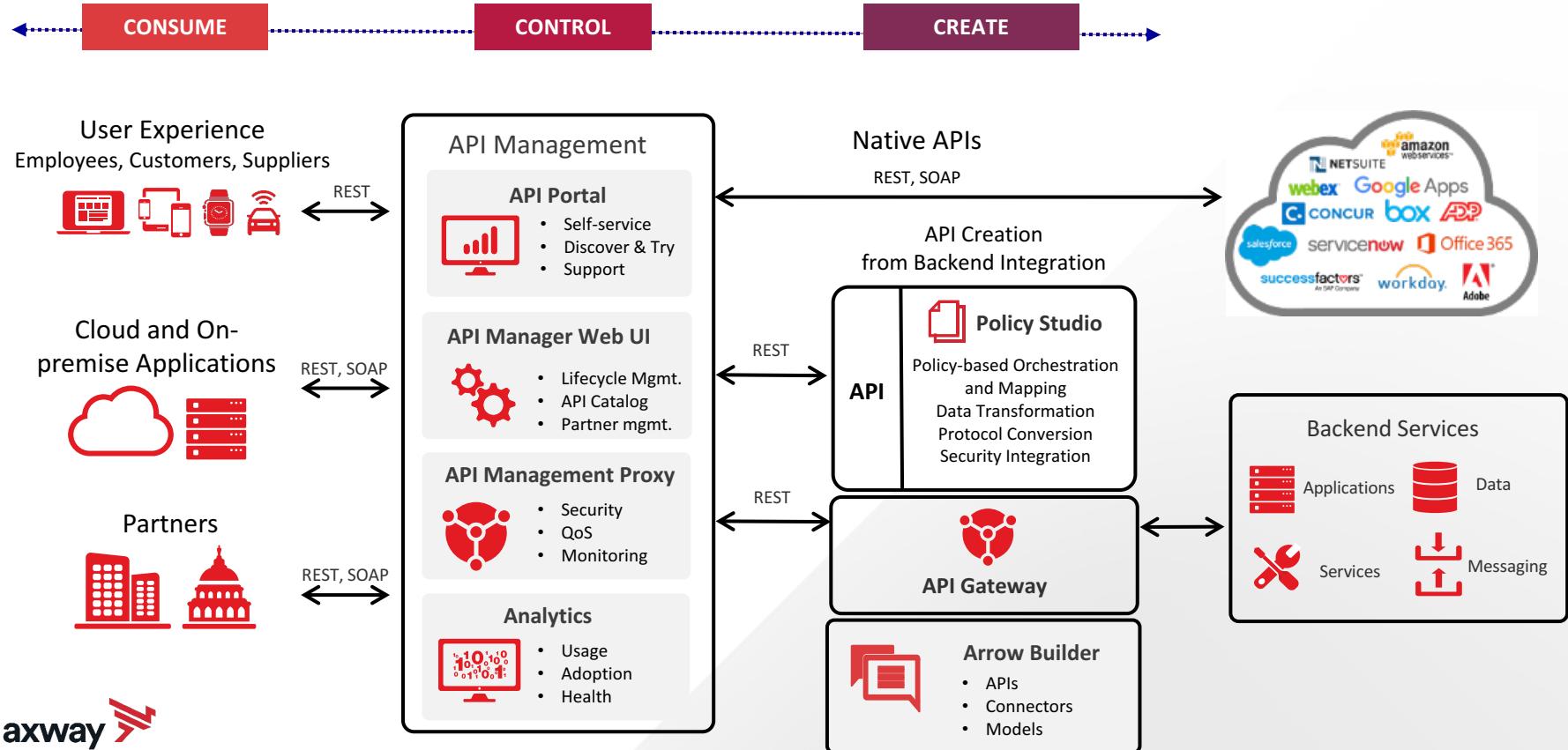
Uli Hitzel

Principal Solutions Architect, Axway

The Axway Solution— Full API Lifecycle Management



Axway API Management – Building Blocks



Axway API Gateway

API Gateway Manager

Dashboard

Dashboard

TOPOLOGY

View as: Topology

QuickStart Gr...

QuickStart Se...

testgroup2

TRAFFIC

Total messages

Passed: 7,110

Blocked: 0

Exception: 0

10 minutes 10

Welcome admin

Axway Policy Studio - BalanceEnquiryMashup

File Edit Navigate Tasks Tools Window Help

True [API Gateway]

- APIs
- Policies
- Resources
- Environment Configuration
 - Listeners
 - External Connections
 - Libraries
 - Certificates and Keys
 - Users and Groups
 - Key Property Stores
 - Package Properties
- Server Settings

BalanceEnquiryMashup Server Settings

```
graph TD; Start(( )) --> Connect1[Connect to #1 - Card Balance Service]; Connect1 --> Retrieve1[Retrieve and Save Card Balance Response]; Retrieve1 --> SetRequest[Set Request for Savings Balance]; SetRequest --> Connect2[Connect to #2 - Prepaid Balance Service]; Connect2 --> Retrieve2[Retrieve and Save Prepaid Balance response]; Retrieve2 --> Merge[Merge/Mashup Response]; Merge --> XMLtoJSON[XML To JSON]; XMLtoJSON --> Reflect[Reflect Message];
```

Success Path

Failure Path

Favorites

- API Management
- Amazon Web Services
- Attributes
- Authentication
- Authorization
- CA SiteMinder
- Cache
- Certificate
- Content Filtering
- Conversion
- Encryption
- Fault Handlers
- Integrity
- Monitoring
- OAuth 2.0

Context: icy_balanceEnquiry

100%

122M of 305M

Applications Places Axway@api... Axway API T... API Gatewa... Axway API ... Axway Polic... Problem lo... 1 / 2 en Sun 27 Aug, 20:39

The screenshot shows the Axway Policy Studio interface with a workflow titled "BalanceEnquiryMashup". The workflow consists of the following steps:

- Start
- Connect to #1 - Card Balance Service
- Retrieve and Save Card Balance Response
- Set Request for Savings Balance
- Connect to #2 - Prepaid Balance Service
- Retrieve and Save Prepaid Balance response
- Merge/Mashup Response
- XML To JSON
- Reflect Message

On the left, the "Server Settings" node is selected in the tree view. The right sidebar lists various policy components and system integrations.

Axway APIM - API Builder

From data source to APIs in minutes

- Auto-generated CRUD REST APIs
- Highly scalable Node.JS microservices
- Orchestration
- Data and Service API
- Connectors
- Built-in Swarm based orchestration layer
- Data API / built-in NoSQL data source



Click-and-Drop API development

API Builder GetItUpAndRunning

API Orchestration - {API name - version}

Run

```
graph TD; Request --> Model; Model --> Decision{ }; Decision -- YES --> Twilio[Twilio]; Decision -- NO --> End(( ));
```

Configuration

Authentication

Select authentication

text... OK

Input

Account SSID

\$steps.sendgrid-1.custom_fields[0].name

Token

\$auth.token

Variables

Expressions

API Connectors



servicenow

eloqua

Marketo

Microsoft
Dynamics CRM

HubSpot

SharePoint

SUGARCRM



HubSpot CRM

Axway Marketplace

Featured Products All Applications MFT B2B Analytics More

Find Products Search

CATEGORIES

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- APP DEV**
- Titanium 97

Showcase

 SMB Conn...	 MQTT Proxy	 Hadoop Co...	 Syncplicity ...	 MQTT Trigger
SMB Connector with PTAs for Axway...	Proxy to apply Axway API Gateway...	Hadoop Connector for Axway Secur...	Syncplicity Connector for Axway ...	mqtt-trigger subscribes to MQTT
Free		Free	Free	...

Popular Products

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A Mobile Developer's Best Friend	GCM push notifications made easy	A library for downloading files ...	Enterprise-Grade Barcode Scannin...	Chat SMS-like View
Free	Free	Free	Free	Free
				
★★★★★	★★★★★	★★★★★	★★★★★	★★★★★

Axway APIM – API Manager

API Life-cycle Management

API Virtualization

API Catalog

API Versioning

Partner Management

API Registration → API Promotion → API Consumption → API Administration

The screenshot illustrates the Axway APIM interface, highlighting the four stages of API management:

- API Registration:** The top navigation bar shows "API Registration".
- API Promotion:** The second stage in the navigation sequence.
- API Consumption:** The third stage in the navigation sequence.
- API Administration:** The fourth stage in the navigation sequence.

The main interface shows the "Create new API" screen for "Editing API, My Test API". It includes sections for "Clients" and "Manage backend API". Below this, the "Editing application, Test application" screen is shown, featuring tabs for Application, Authentication, Quota, and Sharing. The "Quota" tab is selected, displaying configuration for overriding default application quotas and adding specific APIs like "petstore.json" and "All API" with their respective throttle settings. A red box highlights the "Quotas" section. At the bottom, there are fields for "Organization" (set to "API Development") and an "Enabled" toggle switch.

Axway APIM - API Portal

API Catalog
Explore our APIs and see sample responses without writing a single line of code.

Products and shipping catalog
This API provides GET information about the full range of products with tracking, production and financial information. Tracking information can be updated via POST methods.

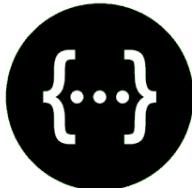
Version 1.4 | Type REST | Tags Finance, Production, Products, Tracking

Revenue and Expenses Analytics
This API provides different statistics and analytics data about revenue growth and costs optimization. This information is highly restricted to selected company personnel.

Version 1.4 | Type REST | Tags Finance, Analytics

Range of Products
This is a public API to provide information about the most recent catalog of products and price listings.

Version 1.4 | Type REST | Tags Products



- Default UI with new Amplify UX
- Enhanced UI templates
- SSO
- Docker Support
- Client SDK generator
- API Catalog at scale
- Promotion of customizations

Axway APIM - Embedded Analytics



- Proactive identification of abnormal situations
- Key operational analytics for decision making
- Low T2V with predefined integration
- Low impact on monitored system
- Analytics exposed via REST API
- Powerful customization and extension (with ADI)

Analytics – Infrastructure Health

Embedded Analytics for API - API Infrastructure Health | [Welcome admin](#)

Gateway Instance Health | **Gateway instance:** group-1.0_instance-2.0 | **Group:** 1.0 | **Status:** Paused on Feb 15, 2017 at 12:10 | [Edit](#) [Share](#) [Discard](#)

API Gateway Health

TRAFFIC
Graph showing the number of the transactions completed and their status during the last hour
55
Transactions completed over the last hour (25.11 % of the overall traffic)
7 (12.73 %) failures
6 exceptions

GATEWAY ACTIVITY
100.00 % Activity rate over the last 1 h

LATENCY
37 ms Latency over the last 1 h

SYSTEM RESOURCES
Instance memory usage: 13 MB
System max. memory usage: 23 MB
System total memory available: 1,600,000 MB
Disk usage: 65 %
Instance CPU: 84 % (min: 2 %, max: 97 %)

Gateway resources usage

VESPA_Group_0 (1.0)
Group
vespaapiprdif102vm
Gateway instance

Name of the gateway instance and its group

TRAFFIC
Graph showing the number of bytes sent and received by the gateway
15,949 Total bytes sent over the last hour
14,602 Total bytes received over the last hour
Bytes sent Bytes received

SLA BREACHES

Alert	Creation time	Message

GATEWAY INSTANCES OF GROUP (LAST 1 HOUR)

Gateway Instan	Traffic	Bytes exchanged	Latency	SLA breaches
group-1.0_inst	55	33,922	43 ms	54

Analytics – API Method Activity



Embedded Analytics for API - Client Application Health (all) | A Welcome admin

Client Application List

FILTER BY CRITERIA

Organization: Client Application:

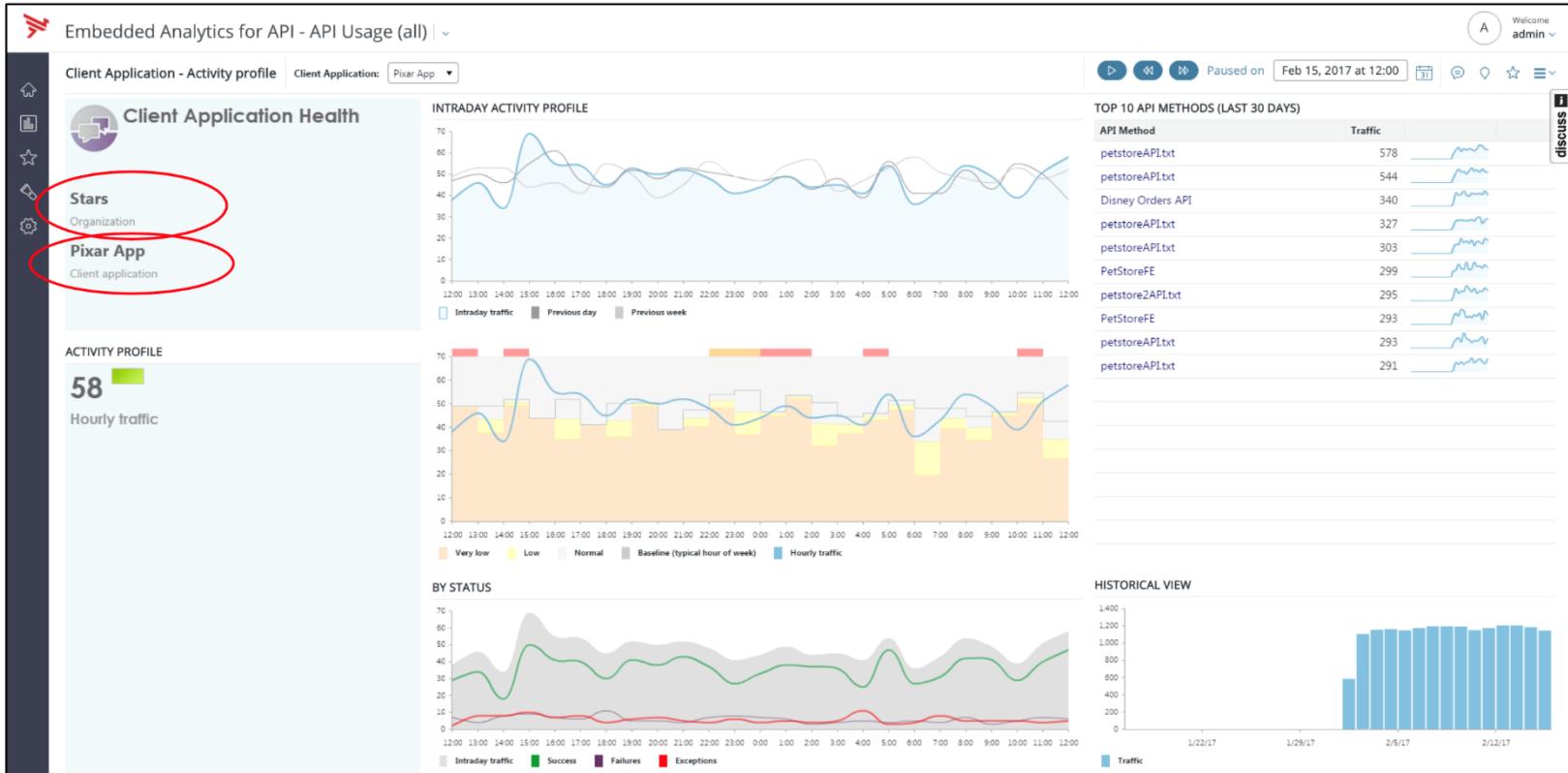
CLIENT APPLICATIONS

You can filter the list specifying the filter criteria

Client Application	Organization	Traffic	Avg Response time	Min response time	Max response time	High Failure rate	High response time	High Exception rate
test	Stars	91	40 ms	12 ms	69 ms	7 methods	0 methods	10 methods
apttest1	Test Org	65	42 ms	14 ms	70 ms	4 methods	0 methods	11 methods
Pixar App	Stars	44	38 ms	15 ms	63 ms	5 methods	0 methods	4 methods
Toy App	Community	40	45 ms	16 ms	64 ms	5 methods	0 methods	5 methods

List of all client applications

Embedded Analytics – Trending



Analytics – Client Application Health

Embedded Analytics for API - Client Application Health (all) | [▼](#)

Client Application Health | Client application: Pixar App

[A](#) Welcome admin [▼](#)

[Home](#) [Client Application Health](#) [Client application: Pixar App](#) [Paused on Feb 10, 2017 at 00:00](#) [Share](#) [Print](#) [Star](#) [List](#)

[discuss](#)

Client Application Health

Stars
Organization

Pixar App
Client application

Name of the gateway instance and its group

TRAFFIC

42
Transactions processed over the last hour

Graph showing the number of the transactions processed and their status during the last hour

Traffic Success Failures Exceptions

RESPONSE TIME

37 ms
Average response time over the last hour

10 ms / 67 ms
Min response time / Max response time

Avg response time Max response time Min response time

API METHOD ACTIVITY (LAST 1 HOUR)

API method	API	Traffic	Avg response time	Failure rate	Exceptions
getInventory	Disney Games API	2	38 ms	0.00 %	0 Activity profile...
list	Disney Games API	1	30 ms	0.00 %	0 Activity profile...
deleteOrder		2	16 ms	0.00 %	0 Activity profile...
getIds		1	27 ms	0.00 %	0 Activity profile...
getOrderById	Disney Orders API	3	48 ms	33.33 %	0 Activity profile...
deleteOrder	PetStoreFE	1	11 ms	0.00 %	0 Activity profile...
Disney Games API	Pixar App	1	16 ms	0.00 %	1 Activity profile...
PetStoreFE	Pixar App	2	34 ms	0.00 %	1 Activity profile...
PetStoreFE	Toy App	2	25 ms	0.00 %	0 Activity profile...
petstoreAPI.txt	appitest1	1	26 ms	0.00 %	1 Activity profile...
getOrderById	petstore2API.txt	1	32 ms	0.00 %	0 Activity profile...
createuser	petstoreAPI.txt	1	50 ms	0.00 %	1 Activity profile...
deleteOrder	petstoreAPI.txt	2	27 ms	0.00 %	1 Activity profile...

List of API methods

Click on Activity profile to see the profile of the API method

Analytics – Operational Intelligence



Embedded Analytics for API - API Health | v

API Health Cockpit - Last 1 hour Observation period: Last 1 hour Paused on Feb 17, 2017 at 11:35

API HEALTH ANALYTICS

High failure rate, High response time, High TPS, High exception (65)

Last 1 hour, Last 3 hour, Last 1 hour, Last 1 hour

API Method	API	Response time	% Failure	Exceptions	TPS
createUser	Disney Games API	41 ms	11.83 %	2	0.03
deleteOrder	Disney Games API	41 ms	11.00 %	5	0.03
deleteUser	Disney Games API	42 ms	14.43 %	4	0.03
getIds	Disney Games API	40 ms	20.62 %	3	0.03
getInventory	Disney Games API	43 ms	15.38 %	13	0.06

TOP 5 API METHODS WITH UNEXPECTED BEHAVIOR

API Method	API	Response time	% Failure	Exceptions	TPS
createUser	Disney Games API	41 ms	11.83 %	2	0.03
deleteOrder	Disney Games API	41 ms	11.00 %	5	0.03
deleteUser	Disney Games API	42 ms	14.43 %	4	0.03
getIds	Disney Games API	40 ms	20.62 %	3	0.03
getInventory	Disney Games API	43 ms	15.38 %	13	0.06

TOP 5 REMOTE HOSTS BY TRAFFIC

Remote Host	Traffic	Avg volume exchanged	Processing time
localhost:60688	10.761 (44.84 %)	561.74 bytes	40 ms
PetStore:60688	8.861 (36.92 %)	558.26 bytes	40 ms
Group_2:60688	2.397 (9.99 %)	559.10 bytes	40 ms
Group_1:60688	1.981 (8.25 %)	565.08 bytes	40 ms

See all API Methods... See all APIs... See all Remote Hosts...

Paused on Feb 17, 2017 at 11:35

CURRENT ACTIVITY PERFORMANCE

Transactions completed: 12,000, Failure rate: 14.60 %, Response time: 40 ms

Embedded Analytics for API - API Usage (all) | v

Welcome admin

API Usage

PetStoreFE

TRAFFIC

3,237 Traffic over the latest period, 8.33 % Variation on previous period

INTRADAY ACTIVITY

BY STATUS

HISTORICAL VIEW

TOP 10 ACTIVE APPLICATIONS (LATEST PERIOD)

Client Application	Traffic	Success	Failure	Exception
test	1,328	968 (72.85 %)	179 (13.48 %)	98 (13.63 %)
Toy App	652	469 (71.00 %)	92 (13.41 %)	73 (22.88 %)
appstore1	637	483 (75.82 %)	83 (13.01 %)	73 (11.15 %)
Phone App	620	418 (73.87 %)	64 (10.32 %)	96 (15.82 %)

TOP 10 API METHODS (LATEST PERIOD)

API Method	Traffic	Success	Failure	Exceptions
getInventory	659	486 (73.75 %)	77 (11.68 %)	98 (14.57 %)
uploadFile	364	270 (73.18 %)	44 (12.09 %)	50 (12.74 %)
partialUpdate	944	254 (73.84 %)	40 (11.61 %)	50 (14.53 %)
getOrderById	322	243 (75.47 %)	45 (13.98 %)	34 (12.56 %)
getIds	318	241 (75.79 %)	48 (13.95 %)	39 (12.26 %)
getCategory	315	231 (73.33 %)	47 (13.82 %)	37 (13.75 %)
list	307	225 (73.29 %)	41 (13.36 %)	42 (13.36 %)
createUser	306	223 (72.88 %)	48 (15.69 %)	35 (11.44 %)
deleteUser	302	225 (74.50 %)	38 (12.58 %)	39 (12.91 %)