Analytics

Hybrid Integration Enablement

October 2017

KPIS for your APIs

Business

- Gain real-time visibility into API program performance
- Perform trend analysis by tracking metrics over time

API Development

- Response time & performance of the APIs
- Error response codes correlation

Operations

- Scale the infrastructure based on resource utilization requirement
- Monitor API availability and uptime

Analytics Behind the Scenes

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Analytics Foundation: Behind the Curtain

Plenty of Events for Comprehensive Analytics

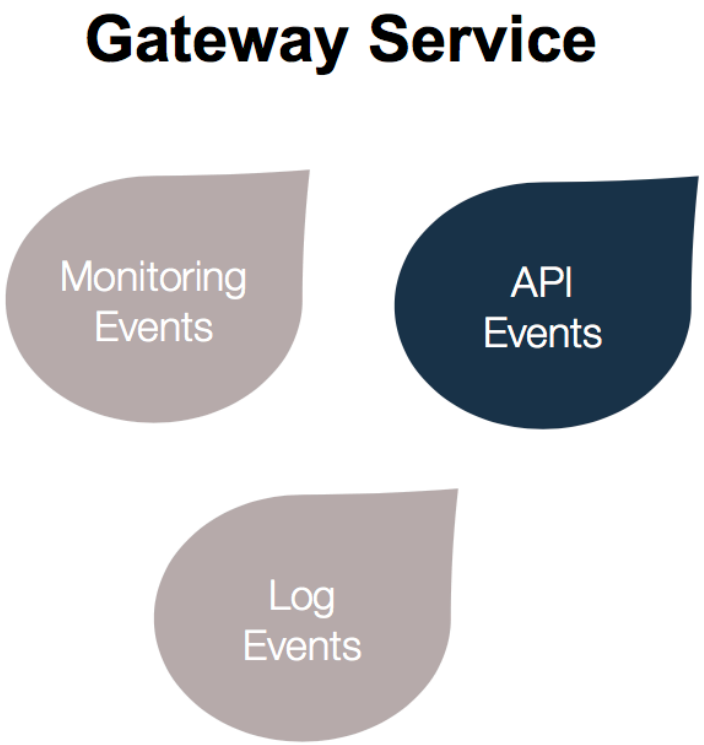
API Events- *Provides details around API invocations from the gateway*

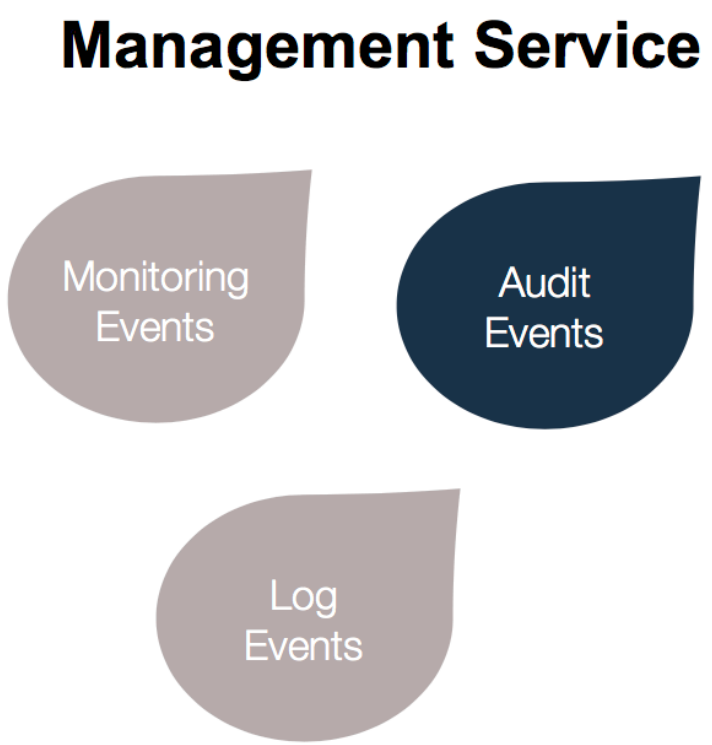
Log Events- *Provides details around logs captured from the gateway*

Monitoring Events- *Provides details around system usage from both gateway and API management nodes*

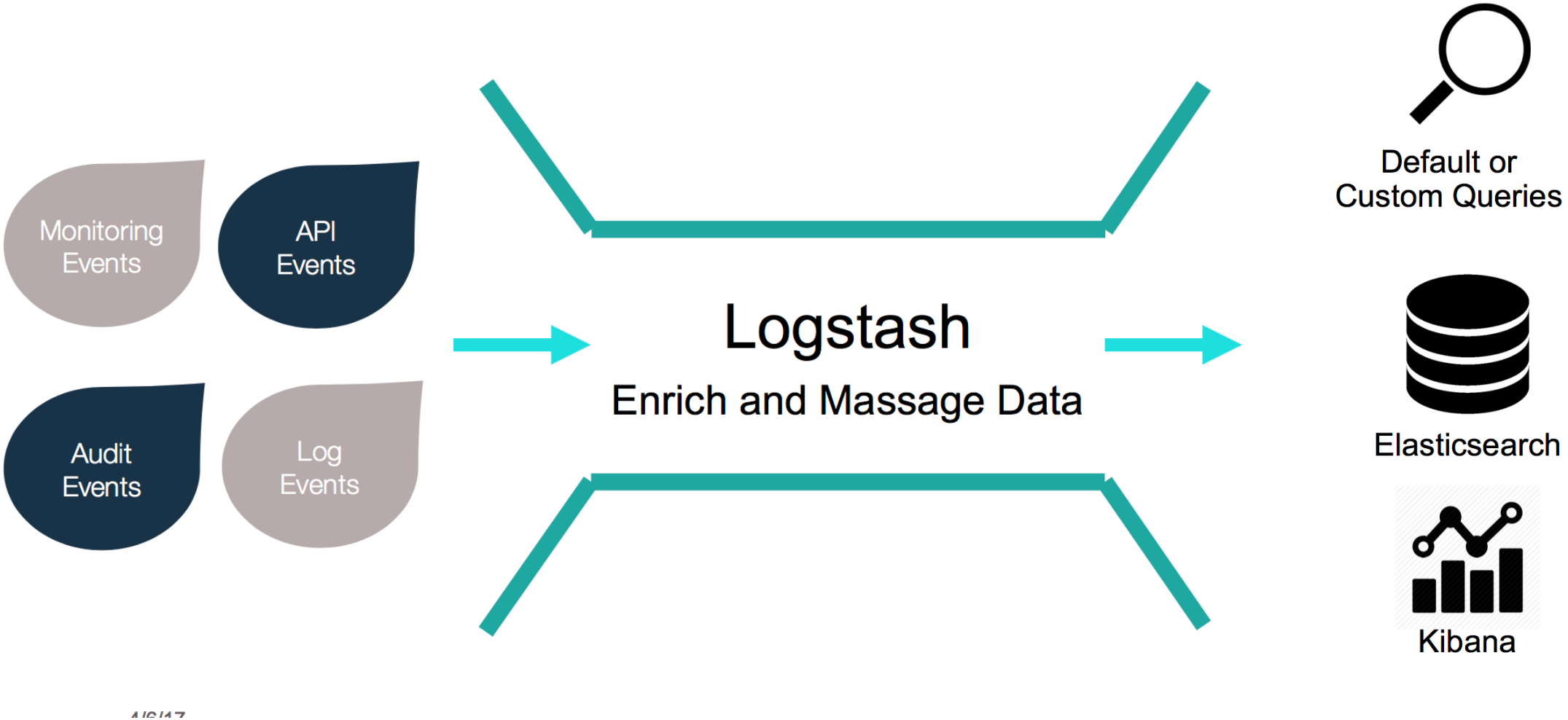
Audit Events- *Provides details around API developer user activity from API management node*

Events Generated By Each Service





Putting it all together



Visualize your Data

Mapping in to the KPIs

- **API Manager**: for the API Developer and Manager to understand the usage of the various APIs
- **Cloud Console**: focused on providing operational analytics regarding the system's performance
- **Developer Portal**: provides a portal for the App Developer to view their usage for APIs

API Manager Analytics

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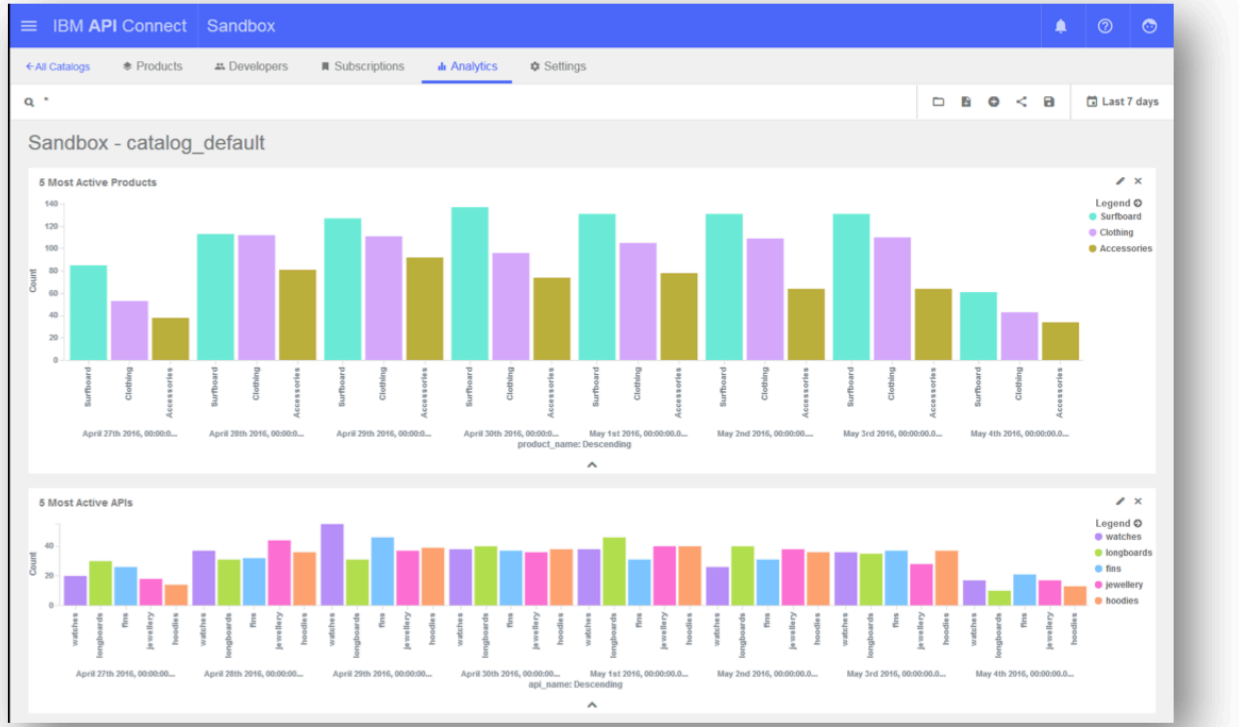
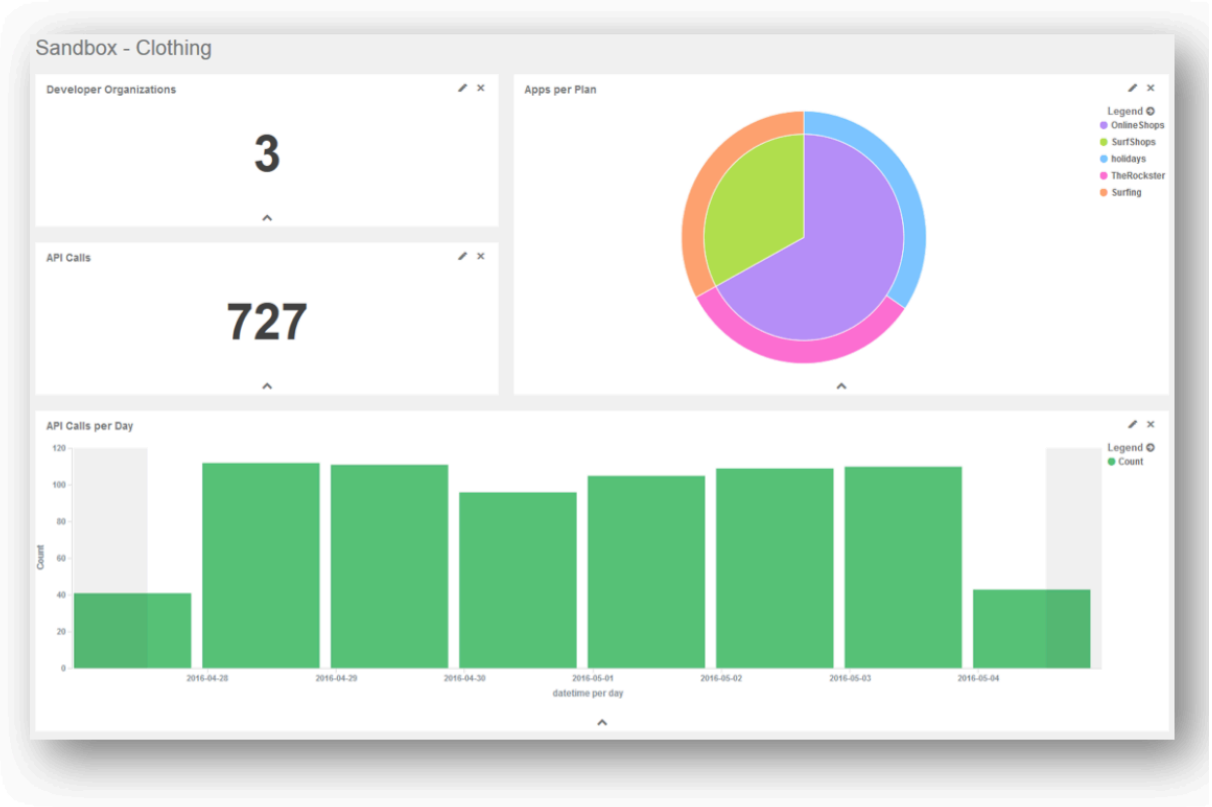
Dashboard

Who & What is Driving my API Business?



Products

Is my Product's packaging targeted?



Plans

How effective are the plans in the product?

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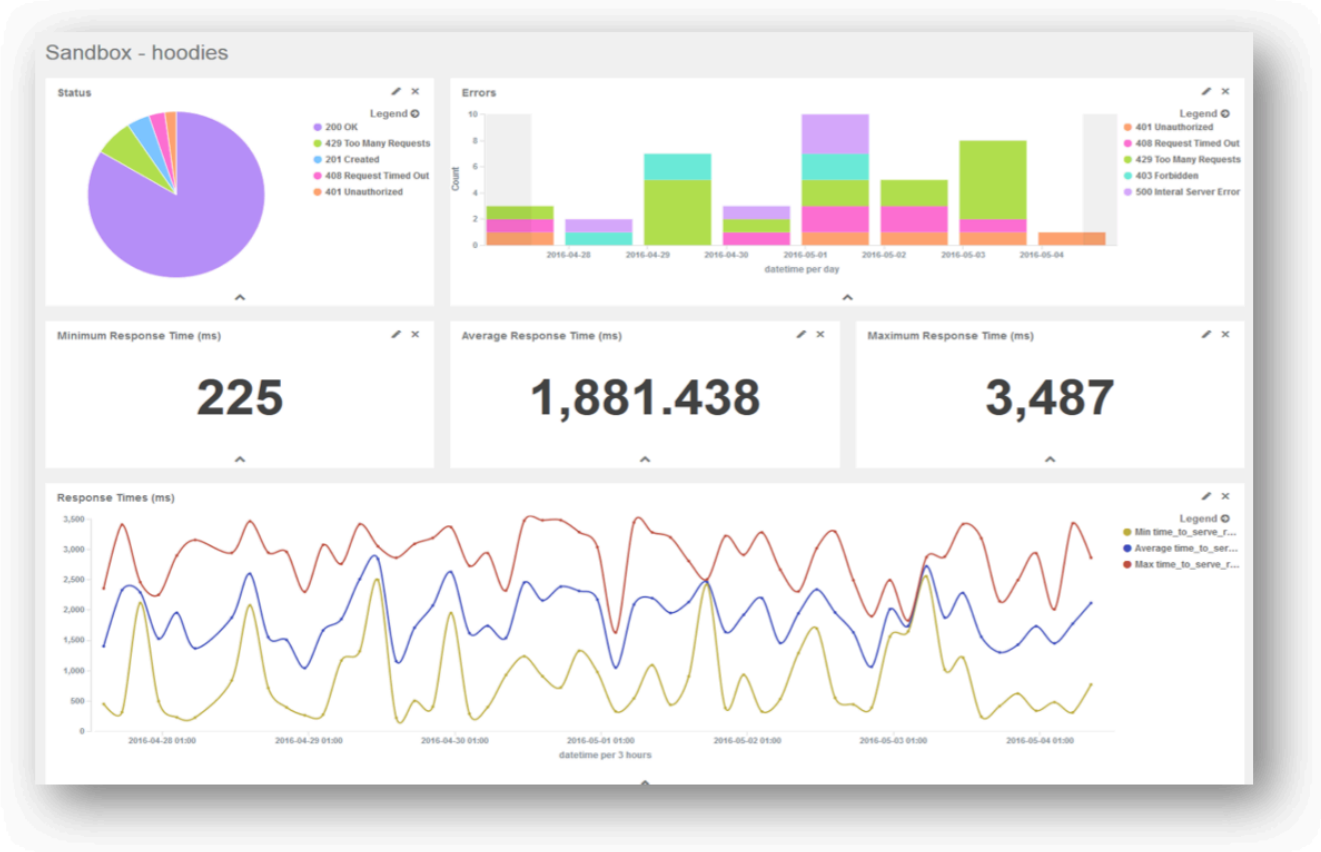
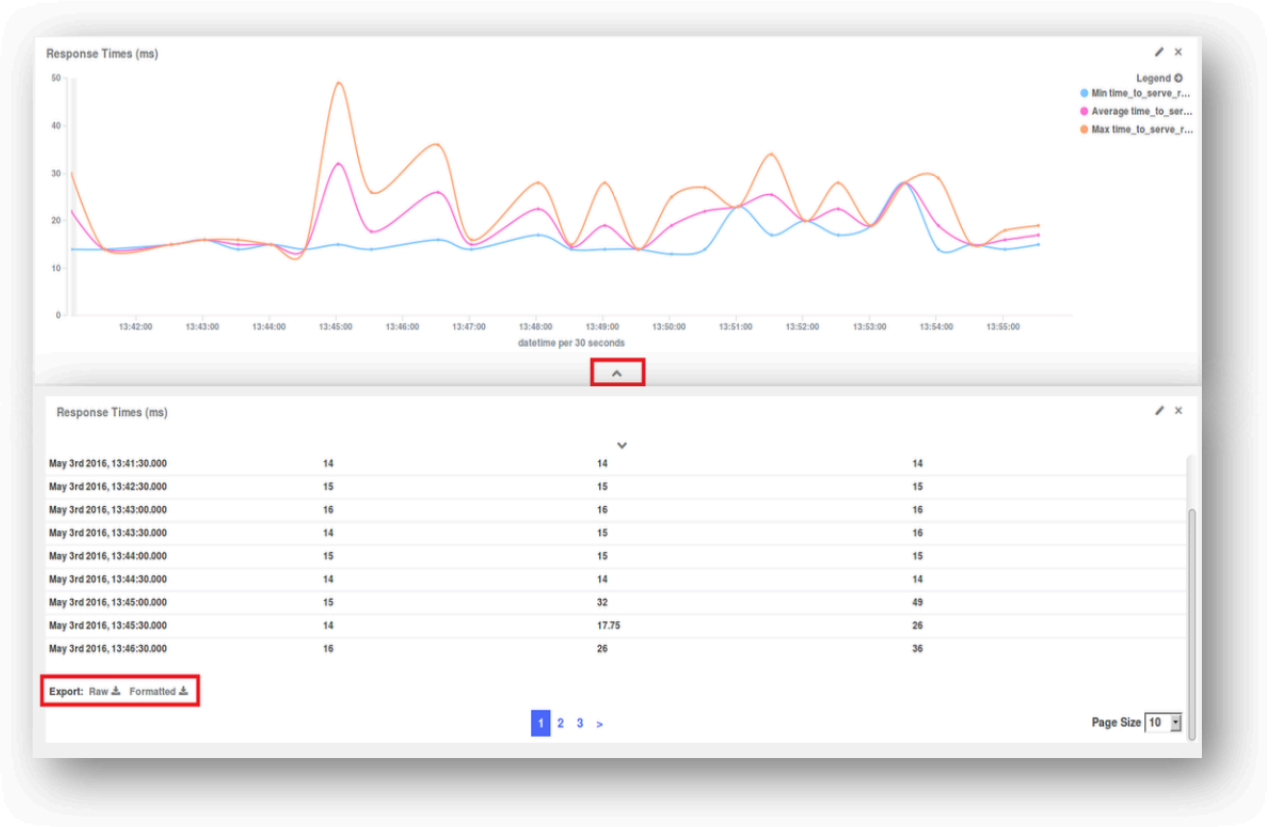
APIs

What is the response time of APIs?



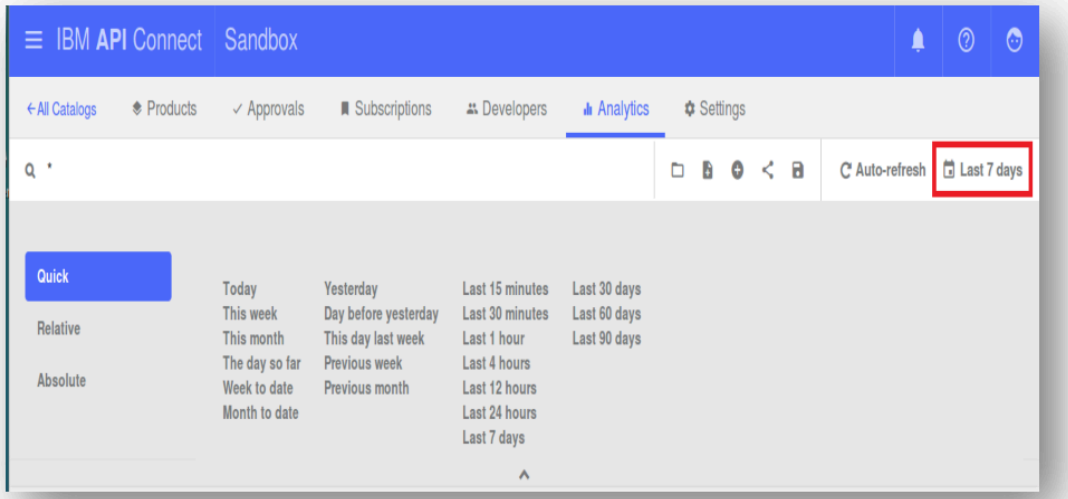
View & Export Tabular Data

View individual API Event Records & export them



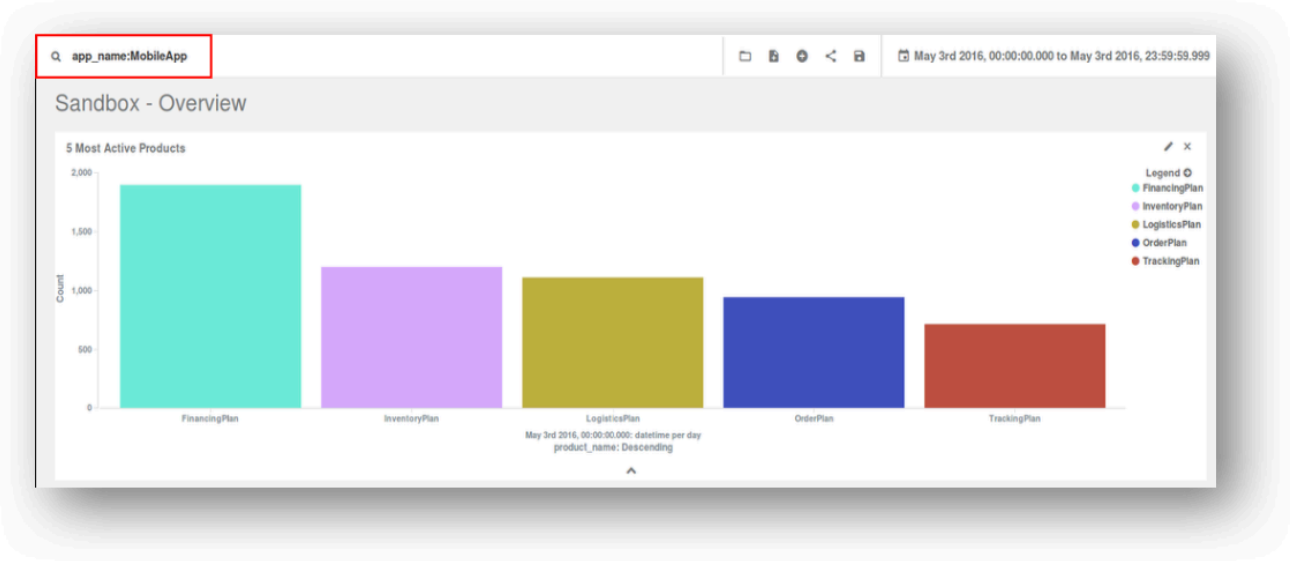
Perform Trend Analysis

View across time horizons to compare & contrast



Filter the Results

Filter the results through various parameters. This can be as straightforward as selecting a column in a graph



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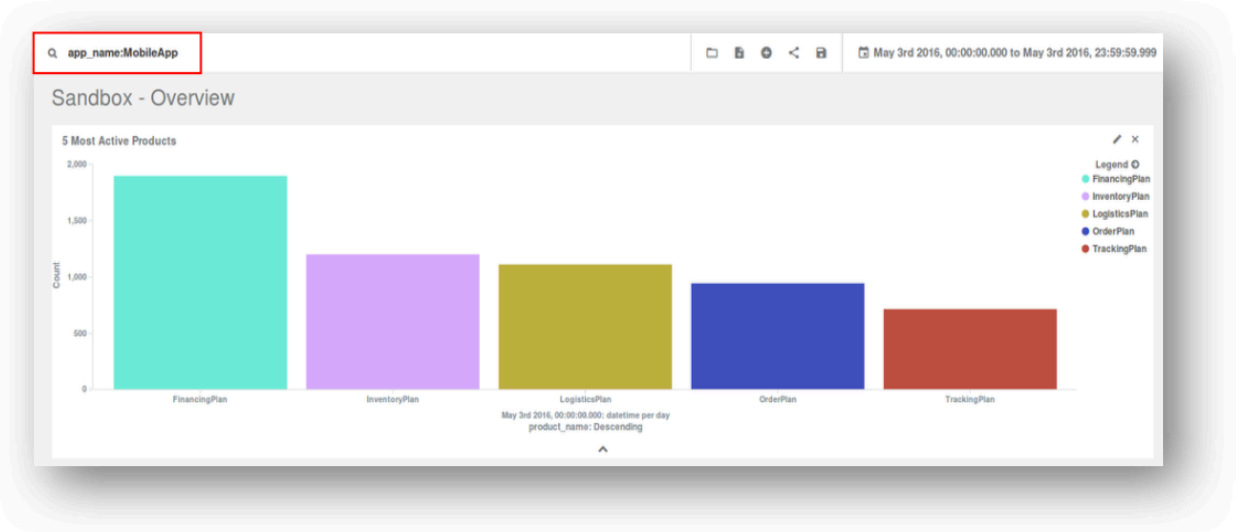
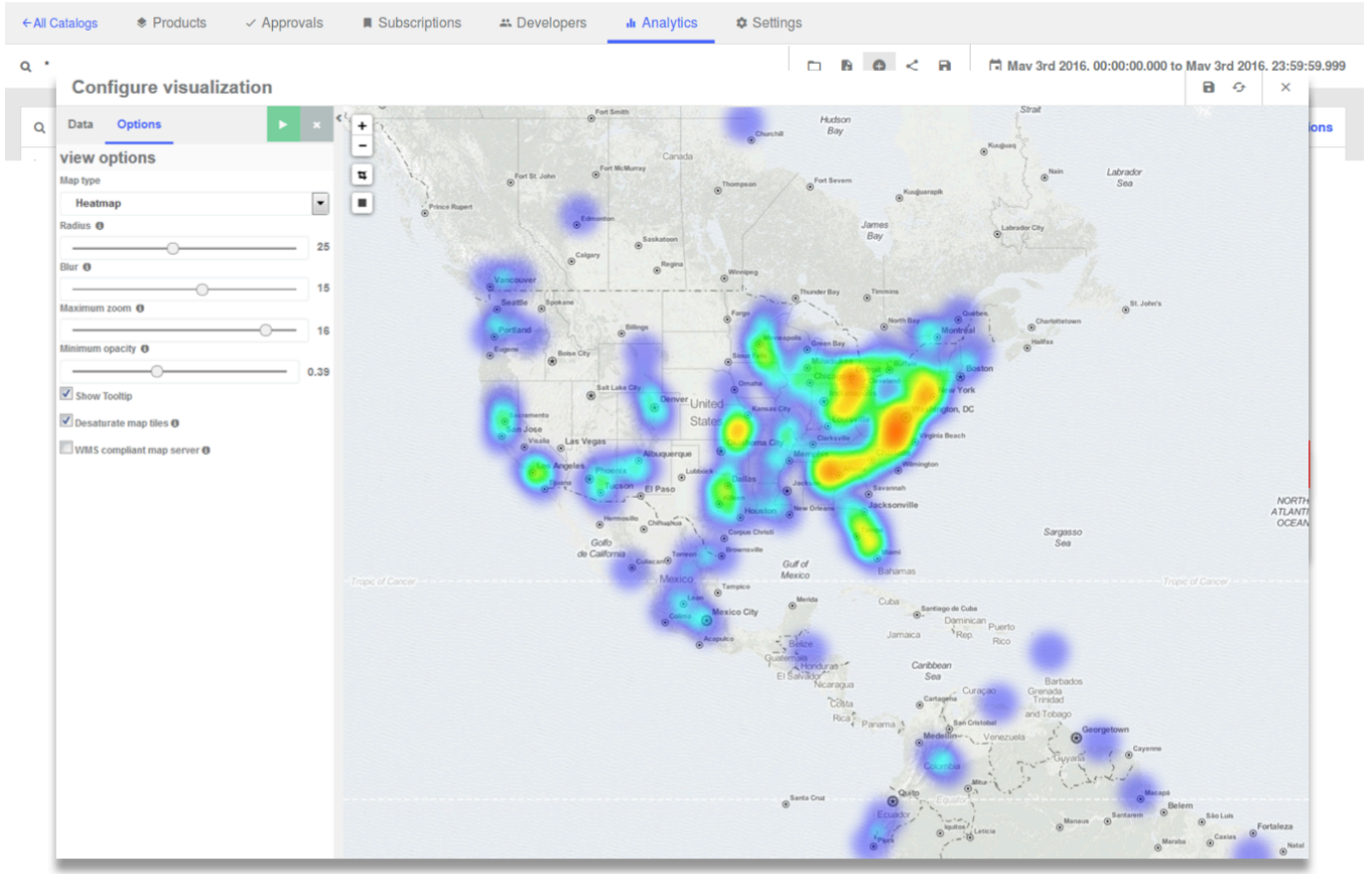
Query your Data

Gather deep insights through complex queries including those on API Payload



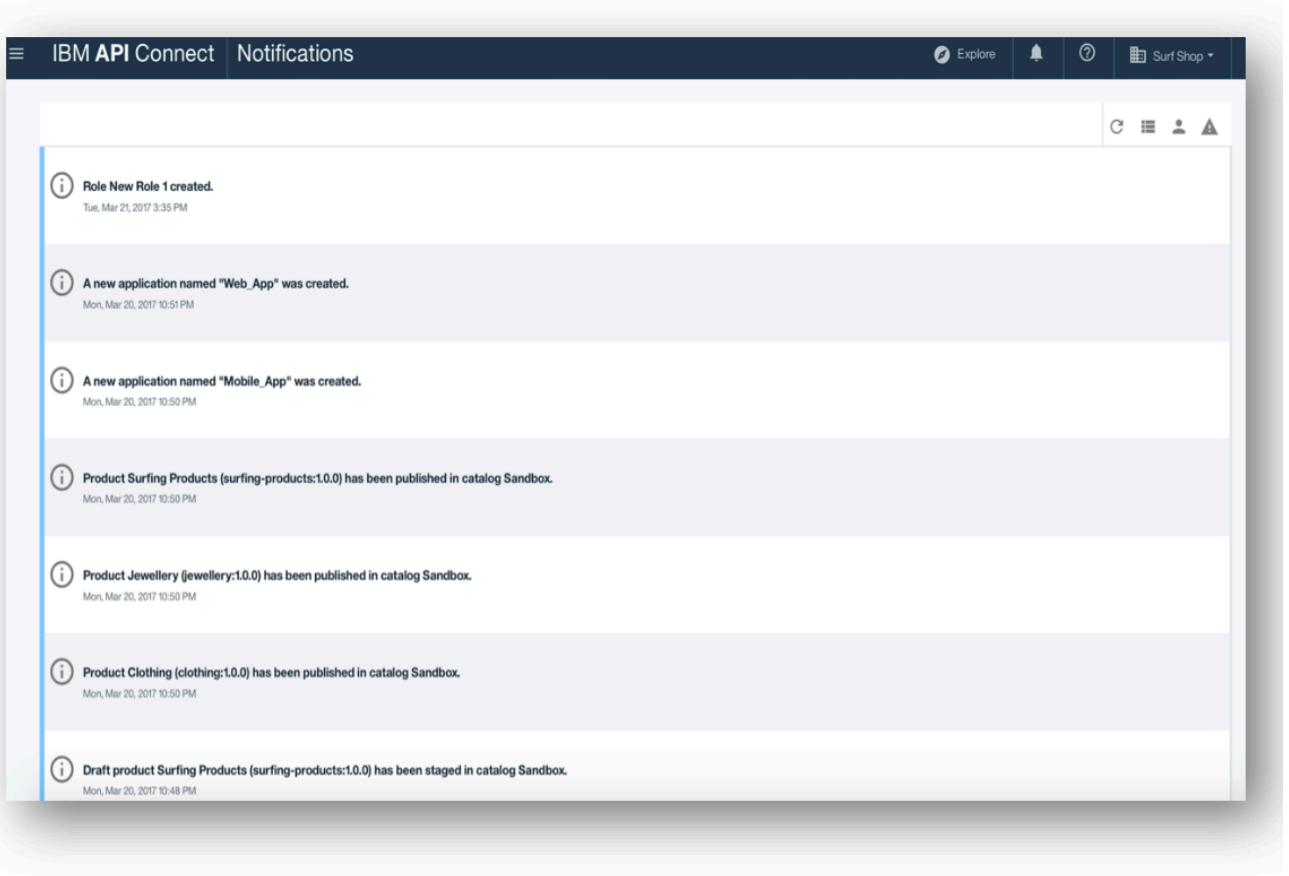
Not Happy with Default Dashboards

Create your own custom dashboards & visualization. Share them across teams



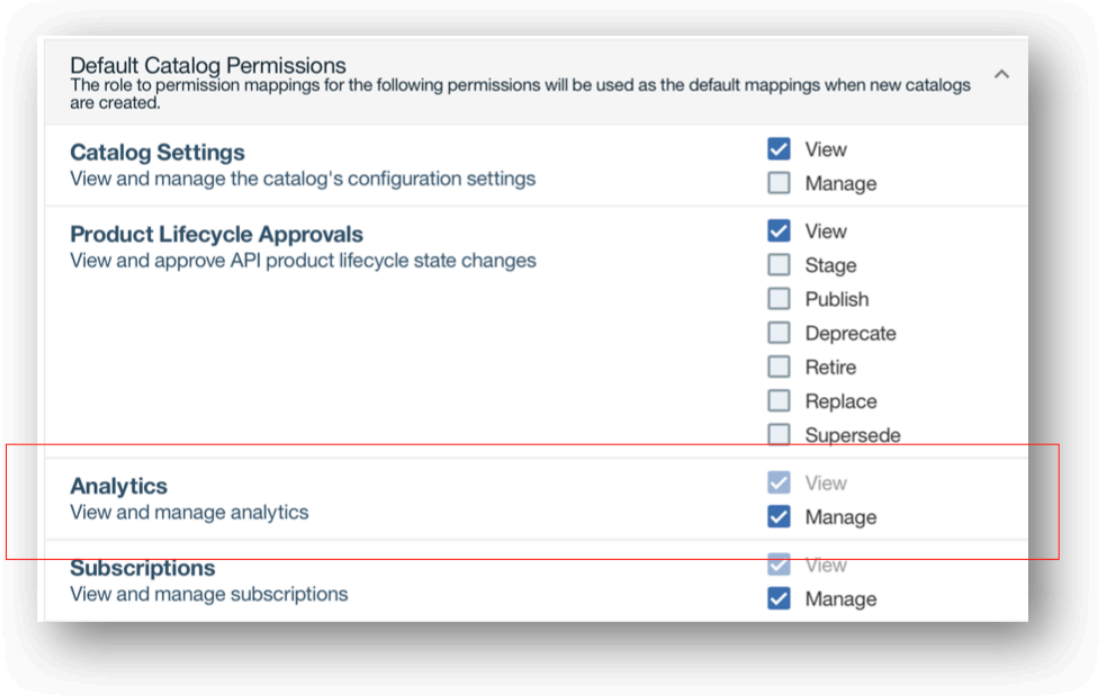
Audit Trail

Complete details around who created what and when



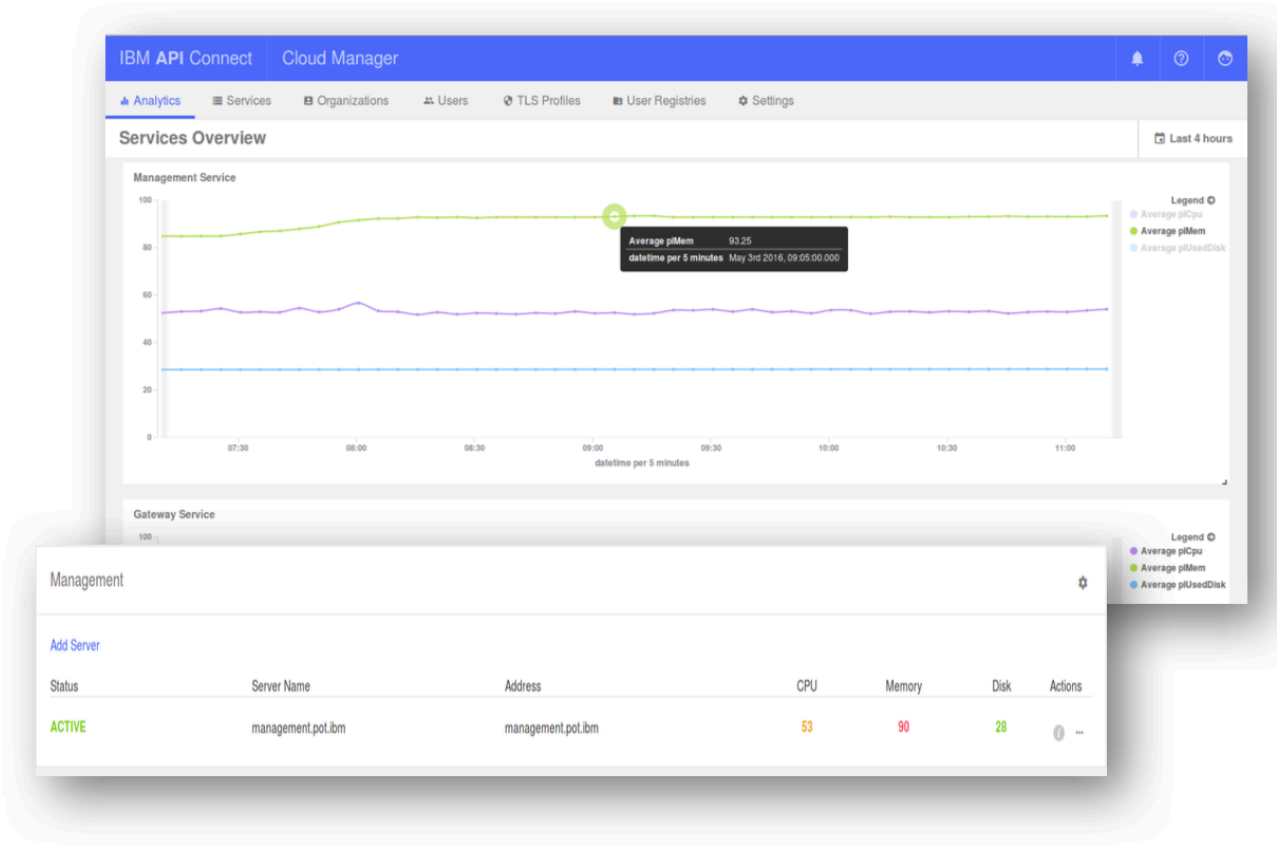
Role Based Access Control

Manage controls on who can View and Manage analytics dashboards



Cloud Manager: System Health

Drill down individual servers and view health status against various metrics



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Integrating with API Manager Analytics

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Analytics API

Extract API Event records programmatically using Analytics REST API

```
GET /v1/orgs/{orgId}/environments/{envId}/events

{orgId} is either the URL path segment or the ID
of the API provider organization

{envId} is either the URL path segment or the ID
of the catalog
```

Example of API Event Payload


```
{
"datetime": "2016-09-29T22:17:43.404Z",
"latency_info": [ { "task": "Start", "started": 2 }, { "task": "security-appID", "started": 7 }, { "task": "Plan Limit", "started": 11 }, { "task": "proxy", "started": 12 } ],
"api_version": "1.0.0",
"product_version": "1.0.0",
"product_name": "__INTERNAL_QS__",
"plan_version": "1.0.0",
"uri_path": "\/macs-shack\/sb\/AccountService",
"request_method": "POST",
"log_policy": "activity",
"request_protocol": "https",
"query_string": [ ],
"request_body": "",
"response_body": "",
"bytes_received": 256,
"bytes_sent": 256,
"time_to_serve_request": 301,
"status_code": "200 OK",
"request_http_headers": [ ],
"response_http_headers": [ ],
"org_name": "macs-shack",
"api_name": "accountservice",
"catalog_name": "sb",
"resource_path": "post",
"plan_name": "default",
"developer_org_name": "macs-shack",
"client_geoip": { "ip": "9.20.152.215", "country_code2": "US", "country_code3": "USA", "country_name": "United States", "continent_code": "NA", "region_name": "NC", "city_name": "Durham",
"postal_code": "27709", "latitude": 35.994, "longitude": -78.8986, "dma_code": 560, "area_code": 919, "timezone": "America\/New_York", "real_region_name": "North Carolina", "location": [ -78.8986,
35.994 ] },
"gateway_geoip": { "ip": "9.79.12.126", "country_code2": "US", "country_code3": "USA", "country_name": "United States", "continent_code": "NA", "region_name": "NC", "city_name": "Durham",
"postal_code": "27709", "latitude": 35.994, "longitude": -78.8986, "dma_code": 560, "area_code": 919, "timezone": "America\/New_York", "real_region_name": "North Carolina", "location": [ -78.8986,
35.994 ] }
}
```

Offload to External Systems

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Real-Time Analytics Offload to 3rd Party Tools

- Real-time insights into operational & API program analytics
- Easily off-load analytics to popular systems like Splunk and SAP
- Configurable with direct offload or store within API Connect analytics and copy to offload location
- Outputs supported include: Syslog, Kafka, Elasticsearch, HTTP
- Available on-premises, Bluemix Dedicated & Local