ORACLE DATA SHEET

Oracle API Platform Cloud Service

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API PLATFORM
CLOUD SERVICE

Oracle API Platform Cloud Service provides a foundation for Digital Transformation through the first API Management offering that comprises the Full API Lifecycle. Encompassing the complete API continuum from API Design & Standardization via Apiary's trusted API Design & Documentation Platform through to API Security, Discovery & Consumption, Monetization, and Analysis, the API Platform Cloud Service provides a completely new, simplified API management user experience on top of a proven API gateway.

It is easy for an organization to eliminate the challenges associated with traditional API management with the API Platform Cloud Service. Teams have the agility provided by Apiary to collaborate on design specs quickly, developing front- and back-end services in parallel, achieving visibility into API use for better control and monetization of digital assets, as well as the assurance that their APIs are secured against unauthorized users and potential attacks.

The primary benefits of Oracle API Platform Cloud Service are:

- **Design -** Define how an API will look, then create its stub implementation and verify it with stakeholders. Build the API implementation according to the API design that was created, and the API implementation will be automatically tested against its design so that everyone will know that it's living up to the agreed-upon contract.
- **Agility** – Quickly change APIs and their policies to enable rapid introduction or modification of services or applications. The Apiary integrated mock server enables the testing of API prototypes to ensure accurate development and deployment of APIs, as well as the ability of the front-end and back-end developers to attack it in parallel. Standardization of API management and interactive automated documentation ensures ease of use for application integration developers assembling APIs.
- **Security** – Ensure only approved consumers can access the right API resources. Integrated Oracle Identity Management protects your infrastructure from potential attacks
- **Visibility** – Without centralized API management, understanding the flow of data to and from your applications and services is exceedingly difficult due to the multitude of platforms and tools. API Platform Cloud Service provides a single view of all of the operational flow of API data, as well as the conversion of the operational flow into a business context aligned with key performance indicators (KPIs).

Note: Business Metrics will not be in first release of API Platform Cloud Service

Key Features

- **Apiary Mock Server**: Quickly model an API on Apiary's hosted server to make sure that everyone is on-board

FEATURE OVERVIEW

- Apiary Mock Server
- Apiary Interactive Documentation
- API Implementation
- API Deployment
- API Inventory & Catalog
- Application Registration & Management
- Operational Analytics
- Policies
- User Roles & Grants:

SECURITY POLICIES

- Authentication: OAuth 2.0, Basic Auth, Key Validation, Service Level Authorization
- Threat Protection: CORS, IP Filtering, Rate Limiting, Throttling, Groovy

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USER ROLES

- API Manager
- Service Manager
- Gateway Manager
- Gateway Runtime User
- Application Developer
- Administrator

GRANTS

- **API:** Manage, View, Deploy, Register, Request Register
- **Gateway:** Manage, View, Deploy, Request Deploy, Get Runtime State
- **Application:** Manage, View
- **Service:** Manage, View, Reference

INTERFACE MANAGEMENT

- Interface Filtering
- Method Mapping
- Redaction
- Header Validation

- **Apiary Interactive Documentation:** Give API consumers the information they need to succeed. The Apiary Documentation Console takes the API Description and allows you to not only read and write, but also to interact with your API—even before you've built it
- **API Implementation:** Build new APIs using Apiary UI
- **API Deployment:** Deploy, Activate, Deprecate, and Remove APIs
- **API Inventory & Catalog:** Know which APIs are available for use
- **Application Registration & Management:** Manage the applications using your APIs to ensure proper usage
- **Operational Analytics:** 10 pre-built charts to see, for example, who is using your API, how, and if they are encountering issues
- **Policies: T**op security, quality of service, and routing policies
- **User Roles & Grants:** Control access to your APIs with API-level entitlements

Security

Security is an essential element of the Oracle API Platform Cloud Service. The API Platform Cloud Service uses Oracle Identity Management Cloud Service as a multitenant identity store, since the API Platform is a multitenant service itself. The Gateway component of the API Platform can also be configured to authenticate against IDCS, if the customer chooses to have the identities that are allowed access to their APIs also reside in IDCS.

- **Authentication and API Authorization** – The ability to control which clients and users have the right to invoke an API and how they will authenticate themselves is a key aspect of security. The most common industry-supported forms of Client/User Authentication are OAuth 2.0 and Basic Auth. In the case of OAuth 2,0, the API Platform leverages Oracle Identity Management Cloud Service as an OAuth 2.0 provider. API Platform Cloud Service also supports Application Key validation (generated and managed by Oracle). The capability of serving as an OAuth 2.0 native provider is planned for the future.

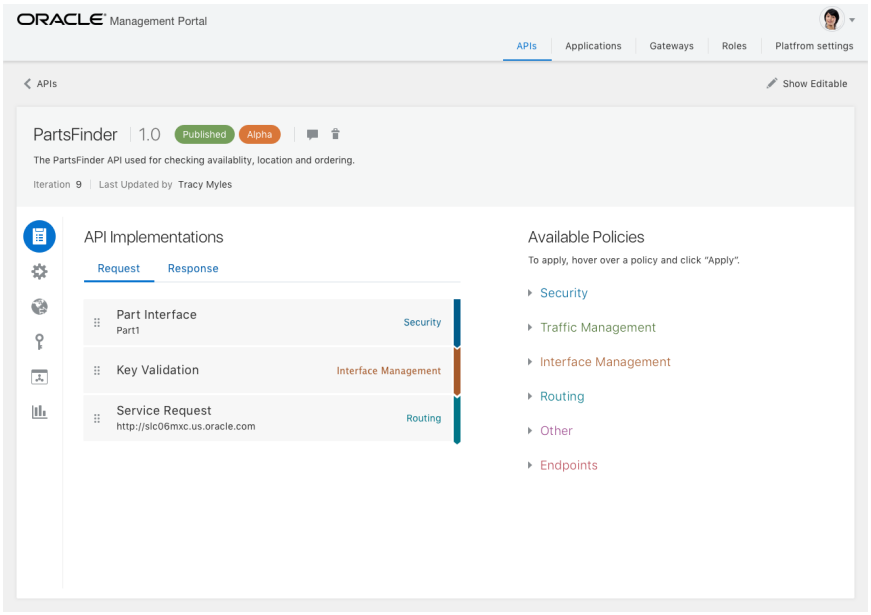

Figure 1. API Platform Cloud Service Policy Management

- **Threat Protection** – Some users will introduce threats to your systems, either intentionally or inadvertently. An API Provider needs to consider such threats, then consciously address or ignore. The most common threats include things such as SQL Injection, Malformed Payloads and Denial of Service (DoS). With API Platform Cloud Service policies like throttling, rate limiting, and IP Filtering, you have a defense against the most common attacks. In addition to these out-of-the-box policies, the Groovy policy allows any regular expression criteria that should be evaluated to defend a system from potential attacks not covered with out-of-the-box policies.
- **Threat Detection & Alerting** – Knowing about potential breaches when they are attempted is critical to safeguarding your infrastructure. Oracle API Platform Cloud Service has a logging policy which allows you to recall the message context for requests received and to forward to your systems of choice.
- **Roles and Grants** – Another element to security is having a good handle on managing which users have rights to perform actions in the management system to reduce the impact of a user account being compromised. In API Platform Cloud Service, access is driven by fine-grained permissions which determine the information a user can see and which actions a user is allowed to take on a specific item, thus ensuring that a user cannot get a grant to do something which their role does not allow.

Agility

The API Platform Cloud Service lets you quickly change APIs and their policies to enable rapidly introduction or modification of services or applications. Apiary's integrated mock server lets users test API prototypes to ensure accurate development and deployment of APIs. Standardization of API management and interactive automated documentation through Apiary ensures ease of use for application integration developers assembling APIs.

The API Platform Cloud Service Developer Portal is tightly linked with Apiary to allow application developers to search for, learn about, test and register to use APIs, then track their own usage. Apiary provides the ability to design APIs using either API Blueprint or Swagger 2.0. From these description files, Apiary generates interactive documentation and a console for making calls to the APIs from the UI. Apiary also instantiates a mock service that you can use to interact with the examples provided in the specification file. API Managers can link APIs they have on Apiary to display interactive documentation, a test console, and mock service details on an API's page in the Developer Portal.

ANALYTICS

- **General:** Request Volume, Response Time, Payload Size, Requests by Resource
- **Applications:** Requests by Application (requests, rejections, errors)
- **Rejections and Errors:** Policy Rejection Rate, Policy Rejection Distribution, Error Rate, Error Distribution

UPCOMING FEATURES IN FUTURE RELEASES

- **Transformation Policies:** XML to JSON, JSON to XML, REST to SOAP
- **Developer Portal:** Anonymous Users, Self-Registration
- **Analytics:** Application Analytics, 5 New Analytics Charts, Event Overlays, Registrations
- **Deeper Apiary Integration:** API Interface Filtering via Swagger 2.0 or API Blueprint
- **Miscellaneous:** Policy Drag and Drop
- **Plans:** Limits across Applications and APIs
- **OAuth Provider:** Native OAuth 2.0 Provider for easier configuration
- **Deeper Testing:** Integration with API Fortress for advanced API testing
- **SDK Generation:** Integration with APIMatic for auto-generated SDKs in Developer Portal
- **Notifications:** Events management and out of the box integrations with Incident Management System
- **Gateway As a Service:** Oracle managed gateway service available on Oracle Cloud and coming later to other clouds
- **Integration with Service Platforms:** Oracle Integration, Mobile, AppDev will be "API Aware" and will be able to automatically create Services and APIs in API Platform

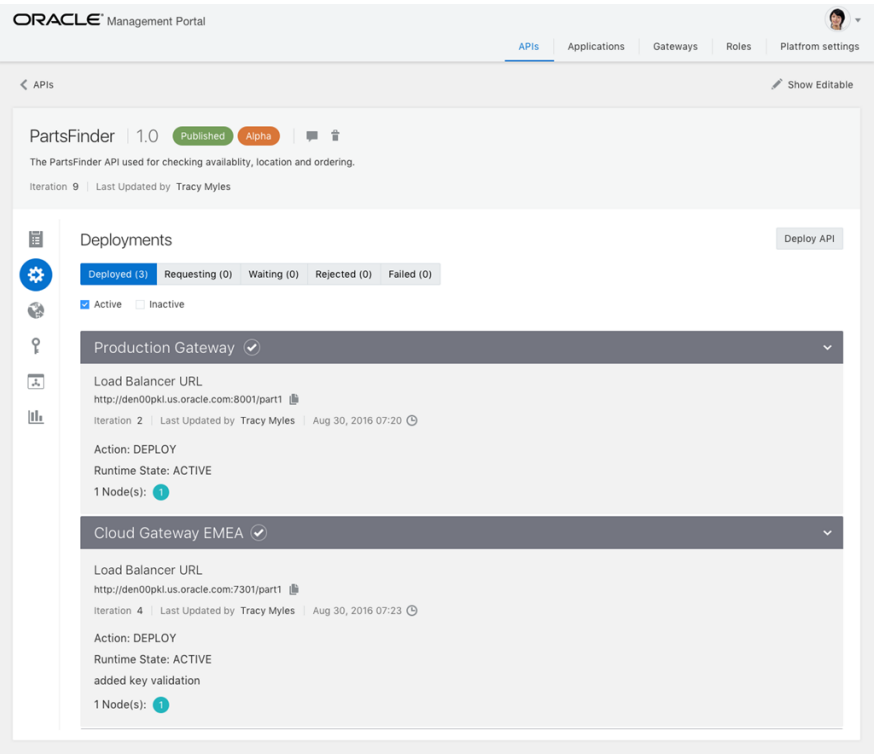

Figure 2. API Platform Cloud Service Gateway Management

Analytics

Built-in analytics determine how, when, and why your APIs are being used, review how frequently and why requests are rejected, and monitor data trends. Multiple options are available to view analytics and provide different options for the users based on different timeframes.

General – Provides overall analytics on all API transactions in the system including successful, rejected and error transactions. Provides detailed information on request volumes, response times, payload sizes and requests by resources

Applications – Provides analytics based on different applications invoking APIs. Includes information on requests, rejections and errors for different applications.

Rejections and Errors – Provides analytics on rejections rates, rejection distributions, error distributions and error rates for requests, responses and service invocations.

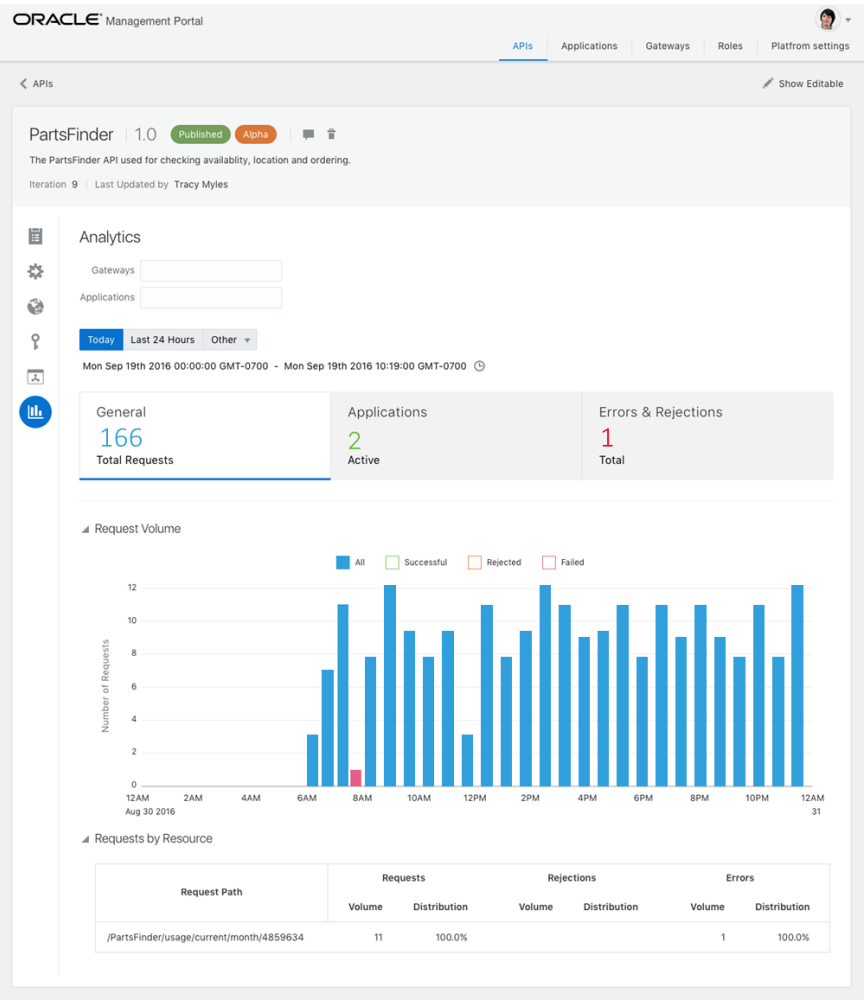

Figure 3. API Platform Cloud Service Analytics

RELATED PRODUCTS

Integration Cloud Service

SOA Cloud Service

Process Cloud Service

Managed File Transfer

Oracle API Catalog

RELATED SERVICES

The following services are integrated with Oracle API Platform Cloud Service:

- Apiary
- Identity Management Cloud Service

Key Design Principles

API-first development experience: A modern "API Design" approach streamlines the process of creating, deploying, publishing and tracking the usage of APIs. A new developer portal, tightly linked with Apiary, allows application developers to search for, learn about, test and register to use APIs, and then track their own usage.

Cloud-native, hybrid delivery API management: APIs are managed in the Oracle Cloud and API Platform Cloud Service is designed from the ground up to let customers deploy their gateways wherever they are needed – in the Oracle Cloud for SaaS APIs, in the customer's data center for key on-premises APIs, or on non-Oracle cloud environments like AWS or Azure – wherever it makes the most sense for the customer.

Architecture

Management Portal: APIs are managed, secured, and published using the Management Portal. The Management Portal is hosted on the Oracle Cloud, managed by Oracle, and users granted API Manager privileges have access.

Gateways: API Gateways are the runtime components that enforce all policies, but also help in collecting data for analytics. The gateways can be deployed anywhere – on premise, on Oracle Cloud or to any third party cloud providers.

Developer Portal: After an API is published, Application Developers use the Developer Portal to discover, register, and consume APIs. The Developer Portal can be customized to run either on the Oracle Cloud or directly in the customer environment on premises

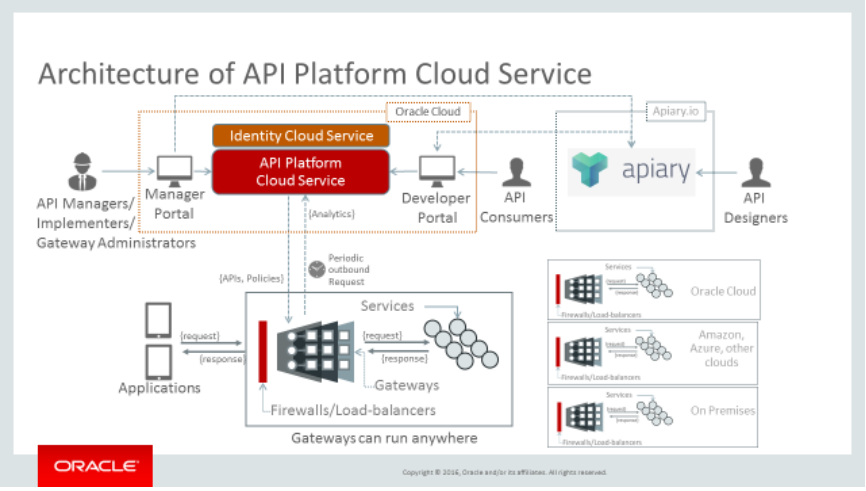

Figure 4. API Platform Cloud Service Architecture

KEY DIFFERENTIATORS

- Full API Lifecycle Support
- Hybrid Deployment Flexibility
- Rich Functional, Operational and Audit Capabilities
- Customizable Developer Portal
- Proven Gateway Technology

Key Differentiators

The API Platform Cloud Service is a leader where there has been a gap in full lifecycle API Management. The API Platform Cloud Service is the only platform that provides complete support for API Lifecycle from API Design & Standardization to API Security, Discovery & Consumption, Monetization, and Analysis on top of a proven API gateway.

Deployment Flexibility: The API Platform Cloud Service is a hybrid solution where management is in the Cloud but gateways can be deployed anywhere - on premises, Oracle Cloud or third party cloud providers.

Rich Functional, Operational and Audit Capabilities: The platform provides strong out-of-the-box and custom security policy support, robust fine-grained analytics, as well as a complete audit history of all APIs.

Customizable Developer Portal: The Developer Portal allows complete customization of the CSS and the addition of languages through a REST API. The portal can also be hosted by the customer through provided JQuery source code.

Proven Technology: The platform's gateway technology is based on proven technology that has been tested in rigorous production environments at telecommunications companies around the world for several years.

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CONTACT US

For more information about Oracle API Platform Cloud Service, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

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