Playground API Documentation

TABLE OF CONTENTS

This document

- Explains the utilities of the APIs of the Playground Application Programming Interface (API) platform
- Describes the resources that are accessed by the APIs and enlists the various endpoints and methods—grouped by individual resources
- Illustrates how quickly you can get started with using the APIs of the Playground API Platform
- Provides a walkthrough of a typically performed task to help you get going
- Provides parts of the API Definition file, and
- Contains the reference documentation for the APIs used in the Playground API platform

This chapter contains information on

- What you can do with the APIs of the Playground API platform
- A use case
- The resources accessed by the APIs of the Playground API platform, and
- A typical workflow

The Playground Application Programming Interface (API) platform

Using the APIs of the Playground API Interface, manage the virtual machines (VM) of your enterprise. The following are the various VM-management operations you can perform:

- Start a VM
- Stop a VM
- Terminate a VM
- Reboot a VM
- Add SSH keys

Additionally, you can perform the following maintenance and monitoring activities for your VMs and cloud accounts.

- Store role for a cloud platform
- Update the inventory for virtual machine resources
- Retrieve an existing list of inventories
- Monitor resources using any of the two integrated tools: CloudWatch or Stackdriver
- Set alert thresholds in CloudWatch or Stackdriver
- Use APIs to get metric data

The Playground API platform is cloud-agnostic, that is, Playground APIs are compatible with all cloud service providers.

A Use Case

Company XYZ has a software product that scans the various Travel and Ticket-booking websites to find out the one that offers the cheapest fare for a flight between any two locations on a given date. This product is compatible with IOS, Android, Windows, Blackberry, and Symbian operating systems. Company XYZ uses Virtual Machines (VM)s to test whether their product is performing to its optimum in the various OS environments.

The VMs involve certain regular management, maintenance, and monitoring activities. The company wants to reduce the manual effort behind the upkeep of its VMs, so to keep the focus on its core business. They have come up with a chatbot that understands human-voice input and synthesizes the instructions received to perform various VM-related tasks. This chatbot will use the Playground APIs to manage the operations of the VMs of company XYZ.

Playground API Resource description

A resource is any data or object that is accessed by the URL of an API. The Playground APIs access the following resources:

- Cloud: Refers to the following three supported cloud providers:
    - Google Cloud Platform - Compute Engine
    - Amazon Web Services - Amazon Elastic Compute Cloud, and
    - Microsoft Azure - Virtual Machines
- Consumer: Refers to the consumers of Playground's APIs
- Metric: Refers to a list of available parameters for a
    - A given cloud service, and
    - A given VM resource from a cloud ID

Endpoints and methods grouped by individual resources

An endpoint indicates a resource or its constituent components (sub-resources). Methods, such as GET, POST, PUT, or DELETE indicate the allowed interactions with the resources and sub-resources.

Resource	Method	Endpoint
Cloud	GET	apiKey
		cloudId
		vm
		vmId
		credentials
		resourceId
		services
	POST	serviceId
		sshKeys
		start
		stop
		terminate
		vms
		cloudId
	PUT	policy
		callbackurl
		filters
	DELETE	cloudId
Consumer	Put	<>
Metric	Get	cloudId
	Post	cloudId

Client Server

- Cliet server initiates a request with an API Key

Playground Server

- Response is sent to respective client server upon successful authentication
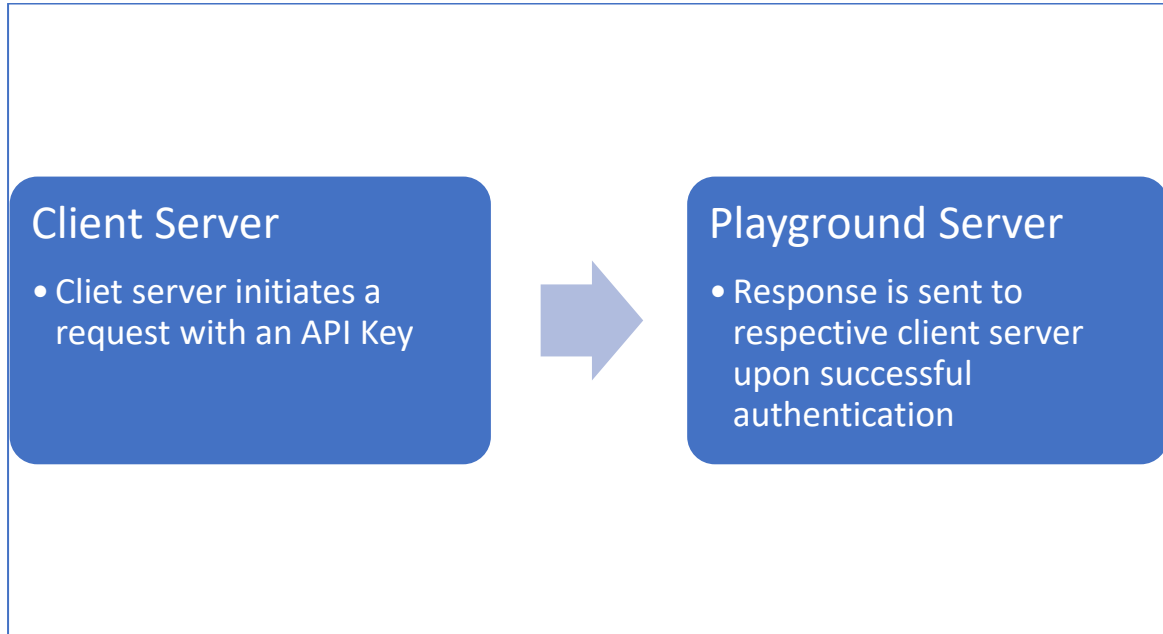
This chapter contains information on:

- How to get up and running with using a playground API
- How to make an HTTP request

Getting started with the Playground API platform

Open the URL: http://playground.godmode.in/ to access the Playground API platform. Find a subscription plan that's right for you and register yourself. This platform uses the API key-based authentication mechanism. Upon successful registration, an API key is sent to your registered Email ID and Phone number.

The "Time to Hello World" using the Playground API platform is less than <--> minutes.

Authentication

Upon having an API key, type it in the header, as shown in the screenshot next, while making a request.

```
api_key:
    type: apiKey
    name: api_key
    in: header
```

Making an HTTP request using a Playground API

Consider a scenario where you want to fetch the metadata of the various VMs you have in a cloud account.

The HTTP Request will be [GET] http://playground.godmode.in/clouds/ {cloudId}/compute/vms

where cloudID is the ID of the cloud account whose VM-metadata you want to retrieve. The required format of the data to be sent and returned is JSON. Use the API key that you will be provided on buying a subscription to the Playground platform to access the Playground APIs. Use it in the Header for authentication.

This chapter walks you through a common task that is typically performed using a Playground API.

How to Retrieve VM details for a specified VM in a specified Cloud Account

Consider the Use Case mentioned earlier in the document, in which Company XYZ uses a chatbot to manage its VMs. Let us consider an instance where the details of a particular VM for a specified Cloud Account is sought.

The HTTP Request

The HTTP Request for this operation is: [GET] http://playground.godmode.in/clouds/ {cloudId}/compute/vms/ {id}

where, cloudId is the ID of the cloud account whose VM-metadata you want to retrieve.

Data format and Authentication

The required format of the data to be sent and returned is JSON. Use the API key that you will be provided on buying a subscription to the Playground platform to access the Playground APIs. Use it in the Header for authentication. See Headers to know how to pass the API key and how to specify the data formats for the Request and Response.

URL

http://playground.godmode.in/clouds/ {cloudId}/compute/vms/ {id}

Sample Response

The response includes the details of the specified VM in the specified Cloud Account. Here, is how the response will look.

```
{
"description": "string",
"id": "string",
"meta": {…},
"name": "string",
"option": […],
"resourceId": "string"
}
```

Element	Description	Type	Notes
description	Description of the specified VM whose detail is sought	string	The response is a data object. The object represents the details of the specified VM in the specified Cloud Account.
id	Id of the specified VM	string	
meta	Metadata of the specified VM	A data object	
name	Name of the specified VM	string	
option	<>	boolean	
resourceId	Id of the cloud account in which the VM exists	string	

This chapter contains the part of the API Definition file that applies to the entire API. It also includes a part of the file describing an operation.

The part of the API Definition file that applies to the entire API

```
openapi: 3.0.0

# Document metadata

info:

    version: '1.0.0'

    title: 'Playground API Platform'

    description: 'Contains a collection of APIs to manage Virtual Machines (VM)s'

# URL data

host: 'playground.godmode.in'

basepath: 'v1'

schemes: 'http'


produces:

 - "application/json"

consumes:

- "application/json"
```

A part of the API Definition file describing an operation

In this operation, the cloud ID is sent to the server to return the Cloud Account associated with it.

```
paths:

 # Clouds

 /clouds/{cloudId}:

    # Return a single cloud account

   get:

       operationID: "findCloudAccountById"

       description: "Returns the cloud account associated with the cloud ID"

       parameters:

          -  name: "cloudId"

             in: "path"

             description: "ID of the cloud to return"

             required: "true"

             type: "string"


       security:

       -    api_key: [  ]



   securityDefinitions:

      api_key:

         type: "apiKey"

         name: "application-key"

         in: "header"
```

Playground API Reference documentation

This chapter contains detailed information about each of the HTTP requests (endpoint-operations) that can be done through the Playground API platform.

The URL for the Playground API is: <u>http://playground.godmode.in/clouds</u>, where the

- scheme: `HTTP`
- domain: `playground.godmode.in`, and
- resource (primary): `clouds`

Retrieve all cloud accounts for a given API key

Description
Retrieves the cloud accounts for the specified API key.

URL
http://playground.godmode.in/clouds/

Note: For authentication and required data format, see <u>Headers</u>.

Sample Request
[GET] http://playground.godmode.in/clouds/

Sample Response
```
{
"code": {},
"credentials": {},
"vendor": {}
}
```

Element	Description	Type	Notes
code	A data object that can contain the code of a Cloud Account, or the codes of more than one Cloud Accounts (if the APIKey has multiple Cloud Accounts).	A data object that can contain an array.	If **code** is not specified for a Cloud Account, then **code** is not included in the response.
credentials	A data object that can contain the credentials of a Cloud Account, or the credentials of more than one Cloud Accounts (if the APIKey has multiple Cloud Accounts).	A data object that can contain an array.	
vendor	The name(s) of the Cloud Service provider(s).	string	

Create a new cloud account on Playground

Description

Creates a new cloud account on Playground.

URL

http://playground.godmode.in/clouds/ {bodyData}

Note: For authentication and required data format, see Headers.

Sample Requests

[POST] http://playground.godmode.in/clouds/ {bodyData}

where, bodyData is represented as below.

{

"code": "string",

"credentials": {},

"serviceTypes": ["string"],

"state": "string",

"vendor": "string"

}

Element	Description	Type	Required	Notes
code	The code of the Cloud Account	string	Optional	<Default code to be mentioned>
credentials	The credentials of the Cloud Account	Data object	Required	
serviceTypes		list of services	Optional	<Default serviceType to be mentioned>
state		string	Optional	<Default state to be mentioned>
vendor	Name of the Cloud Service provider	string	Required	

Retrieve the cloud account for a given cloudID

Description

Retrieves the cloud account associated with the specified cloud ID.

URL

http://playground.godmode.in/clouds/{cloudID}

Note: For authentication and required data format, see Headers.

Sample Request

[GET] http://playground.godmode.in/clouds/ {cloudID}

where cloudID is the ID of the cloud account, you want to retrieve.

Sample Response

{

"credentials": {},

"serviceTypes": {}

}

Element	Description	Type	Notes
code	The code of the Cloud Account	string	If **code** is not specified for a Cloud Account, then **code** is not included in the response.
credentials	The user credentials of the Cloud Account	string	
vendor	The name of the Cloud Service provider	string	

Delete a Cloud Account

Description
Deletes the specified cloud account.

URL
http://playground.godmode.in/clouds/ {cloudID}

where cloudID is the ID of the cloud account, you want to delete.

Note: For authentication and required data format, see Headers.

Sample Request
[DELETE] http://playground.godmode.in/clouds/ {cloudID}

Retrieve metadata of all VMs for a given Cloud Account

Description
Retrieves metadata of all VMs for a specified Cloud Account.

URL
http://playground.godmode.in/clouds/ {cloudId}/compute/vms

Note: For authentication and required data format, see Headers.

Sample Request
[GET] http://playground.godmode.in/clouds/ {cloudId}/compute/vms

where cloudID is the ID of the cloud account whose VM-metadata you want to retrieve

Sample Response

[{

"description": "string",

"id": "string",

"meta": {...}

"name": "string"

"option": [...]

"resourceId": "string"

}]

Element	Description	Type	Notes
description	Description of the VM whose metadata is returned	string	The response is an array of objects. Each object represents the details of an individual VM in the Cloud Account.
id	Id of that VM	string	
meta	Metadata of that VM	A data object	
name	Name of that VM	string	
option	<Not sure>	boolean	
resourceId	Id of the cloud account	string	

Retrieve VM details for a specified VM in a specified Cloud Account

Description
Retrieves the details of a specified VM in a specified Cloud Account.

URL
http://playground.godmode.in/clouds/ {cloudId}/compute/vms/ {id}

Note: For authentication and required data format, see Headers.

Sample Request
[GET] http://playground.godmode.in/clouds/ {cloudId}/compute/vms/ {id}

where cloudID is the ID of the cloud account that hosts the VM whose details you want, and id is the ID of the particular VM whose details are sought.

Sample Response
{

"description": "string",

"id": "string",

"meta": {...}

"name": "string",

"option": [...]

"resourceId": "string",

}

Element	Description	Type	Notes
description	Description of the specified VM whose detail is sought	string	The response is a data object. The object represents the details of the specified VM in the specified Cloud Account.
id	Id of the specified VM	string	
meta	Metadata of the specified VM	A data object	
name	Name of the specified VM	string	
option	<Not sure>	boolean	
resourceId	Id of the cloud account in which the VM exists	string	

Items that generally apply to all the APIs

This information is general for the entire API. It includes:

- Headers
- Status Codes and Errors

Headers

Header Name	Description	Required	Values
Bearer	application-key	Required	For the API key, see the section on Authenticating - Getting an API key.
Accept	The format of the data to be returned	Required	application/json
Content-type	The format of the data to be posted	Required	application/json

Status Codes and Errors

The following table lists the returned HTTP status codes.

Code	Description	Notes
200	Ok	Success
401	Unauthorized	Access key is invalid
404	Not found	Invalid resource