An abstract graphic at the top of the page features several rectangular blocks of varying sizes and colors (white, grey, red, black) floating in a 3D space, creating a sense of depth and movement. The blocks are arranged in a way that suggests a complex, multi-layered structure.

FUJITSU Cloud Service for OSS IaaS API Reference (Application Platform Service)

Version 1.29
FUJITSU LIMITED

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Preface

Structure of the manuals

Manual Title	Purposes and Methods of Use
• IaaS API Reference • Foundation Service • Network • Application Platform Service (this document) • Management Administration • Contract Management	Detailed reference for using the REST API.
IaaS Features Handbook	Explains the features provided by this service.
IaaS API User Guide	Explains how to use the REST API, how to build the API runtime environment, and sample scripts according to usage sequences, etc.

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Notes

- In this document it is assumed that APIs are executed using curl commands. It is also assumed that "bash" will be used as the execution environment for curl commands.
- For details on the characters that can be used for each service described in this document, refer to ["Character Strings Specifiable for Names"](#) in the "Features Handbook".

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Revision History

Edition	Date of Update	Location	Overview
1.6	July 1, 2016	Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	Description added
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceld})	Description added
		Show DB log file details (GET /v1.0/{tenantId}/logfiles/{instanceld}/{logFileName})	Description added
1.7	July 7, 2016	1.1 Database	Description deleted
1.8	July 29, 2016	Create virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
		Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	Description modified
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceld})	Description modified
		Create read replica virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
1.9	August 19, 2016	2.2 Content delivery service	Article added
1.10	November 7, 2016	Common parameters	Description modified
		Create virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
		Delete virtual database server (DELETE /v1.0/{tenantId}/instances/{instanceld})	Description modified
		Modify virtual database server (PUT /v1.0/{tenantId}/instances/{instanceld})	Description modified
		Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	Description modified
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceld})	Description modified
		Start virtual database server (POST /v1.0/{tenantId}/instances/{instanceld}/action)	Description modified
		Stop virtual database server (POST /v1.0/{tenantId}/instances/{instanceld}/action)	Description modified
		Restart virtual database server (POST /v1.0/{tenantId}/instances/{instanceld}/action)	Description modified
		Create read replica virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
		List virtual database servers (GET /v1.0/{tenantId}/instances)	Description modified

Edition	Date of Update	Location	Overview
		Show virtual database server details (GET / v1.0/{tenantId}/instances/{instanceld})	Description modified
		Create DB snapshot (POST /v1.0/{tenantId}/ snapshots)	Description modified
		Delete DB snapshot (DELETE /v1.0/{tenantId}/ snapshots/{snapshotId})	Description modified
		Copy DB snapshot (PUT /v1.0/{tenantId}/ snapshots/{snapshotId})	Description modified
		List DB snapshots (GET /v1.0/{tenantId}/ snapshots)	Description modified
		Show DB snapshot details (GET /v1.0/ {tenantId}/snapshots/{snapshotId})	Description modified
		List DB log files (GET /v1.0/{tenantId}/logfiles/ {instanceld})	Description modified
		Show DB log file details (GET /v1.0/{tenantId}/ logfiles/{instanceld}/{logFileName})	Description modified
		Create DB subnet group (POST /v1.0/ {tenantId}/subnetgroups)	Description modified
		Delete DB subnet group (DELETE /v1.0/ {tenantId}/subnetgroups/{subnetGroupld})	Description modified
		Modify DB subnet group (PUT /v1.0/{tenantId}/ subnetgroups/{subnetGroupld})	Description modified
		List DB subnet groups (GET /v1.0/{tenantId}/ subnetgroups)	Description modified
		Show DB subnet group details (GET /v1.0/ {tenantId}/subnetgroups/{subnetGroupld})	Description modified
		Create DB parameter group (POST /v1.0/ {tenantId}/parametergroups)	Description modified
		Delete DB parameter group (DELETE / v1.0/{tenantId}/parametergroups/ {parameterGroupld})	Description modified
		List DB parameter groups (GET /v1.0/ {tenantId}/parametergroups)	Description modified
		Show DB parameter group details (GET / v1.0/{tenantId}/parametergroups/ {parameterGroupld})	Description modified
		Modify DB parameter group (PUT / v1.0/{tenantId}/parametergroups/ {parameterGroupld})	Description modified
		Create event notification subscription (POST / v1.0/{tenantId}/eventnotifications)	Description modified
		Delete event notification subscription (DELETE /v1.0/{tenantId}/eventnotifications/ {subscriptionId})	Description modified

Edition	Date of Update	Location	Overview
		Modify event notification subscription (PUT /v1.0/{tenantId}/eventnotifications/{subscriptionId})	Description modified
		Add or delete monitored event (PUT /v1.0/{tenantId}/eventnotifications/{subscriptionId})	Description modified
		List event notification subscriptions (GET /v1.0/{tenantId}/eventnotifications)	Description modified
		Show event notification subscription details (GET /v1.0/{tenantId}/eventnotifications/{subscriptionId})	Description modified
		List event notification categories (GET /v1.0/{tenantId}/eventcategories/{sourceType}/)	Description modified
		List event notifications (GET /v1.0/{tenantId}/events)	Description modified
		Show DB engine details (GET /v1.0/{tenantId}/engineversion)	Description modified
		List flavors (GET /v1.0/{tenantId}/flavors)	Description modified
		Show flavor details (GET /v1.0/{tenantId}/flavors/{flavorId})	Description modified
1.11	March 24, 2017	Create virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
		Modify virtual database server (PUT /v1.0/{tenantId}/instances/{instanceId})	Description modified
		Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	Description modified
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceId})	Description modified
		Create DB snapshot (POST /v1.0/{tenantId}/snapshots)	Description modified
		Show DB snapshot details (GET /v1.0/{tenantId}/snapshots/{snapshotId})	Description modified
		List event notifications (GET /v1.0/{tenantId}/events)	Description modified
1.12	April 25, 2017	Notes	Article added
1.13	June 1, 2017	API list	Description modified
		Common API response headers	Description modified
		Create a service (POST /v1/services)	Description modified
		Retrieve a service (GET /v1/services/{service_id})	Description modified
		Edit a service (PATCH /v1/services/{service_id}/param)	Description modified

Edition	Date of Update	Location	Overview
		Create a report (POST /v1/reports)	Description modified
		Retrieve a report (GET /v1/reports/{report_id})	Description modified
		Supported Behaviors	Description modified
		token-auth	Article added
1.14	July 17, 2017	Create virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
		Modify virtual database server (PUT /v1.0/{tenantId}/instances/{instanceId})	Description modified
		Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	Description modified
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceId})	Description modified
		Create read replica virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
		Show virtual database server details (GET /v1.0/{tenantId}/instances/{instanceId})	Description modified
		Show DB log file details (GET /v1.0/{tenantId}/logfiles/{instanceId}/{logFileName})	Description modified
		Common API return codes	Description modified
		token-auth	Description modified
1.15	August 18, 2017	Create stack	Description modified
		Update stack	Description modified
		Validate template	Description modified
1.16	September 28, 2017	Create virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
1.17	November 21, 2017	API list	Description modified
		List all services (GET /v1/services)	Description modified
		Edit a service (PATCH /v1/services/{service_id}/param)	Description modified
		Purge a cached asset (DELETE /v1/services/{service_id}/assets)	Description modified
		JSON Schema for Rules	Description modified

Edition	Date of Update	Location	Overview
		cachekey-query-args	Description modified
1.18	December 4, 2017	Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	Description modified
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceId})	Description modified
		Common API request parameters	Description modified
		Delete sender ID (POST /)	Description modified
		Show sender ID verification status and verification token (POST /)	Description modified
		Show email sending limits (POST /)	Description modified
		Show sent email statistics (POST /)	Description modified
		List sender IDs (POST /)	Description modified
		Send email created from input data (POST /)	Description modified
		Send raw text email (POST /)	Description modified
		Verify domain (POST /)	Description modified
		Verify email address (POST /)	Description modified
		Create user for accessing SMTP server (POST /)	Description modified
		Delete user for accessing SMTP server (POST /)	Description modified
		Show user information for accessing SMTP server (POST /)	Description modified
1.19	December 22, 2017	Create virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
		Modify virtual database server (PUT /v1.0/{tenantId}/instances/{instanceId})	Description modified
		Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	Description modified
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceId})	Description modified
		Create read replica virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
		Show virtual database server details (GET /v1.0/{tenantId}/instances/{instanceId})	Description modified

Edition	Date of Update	Location	Overview
		Create DB parameter group (POST /v1.0/{tenantId}/parametergroups)	Description modified
		Show DB engine details (GET /v1.0/{tenantId}/engineversion)	Description modified
1.20	January 11, 2018	Create virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
		Modify virtual database server (PUT /v1.0/{tenantId}/instances/{instanceld})	Description modified
		Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	Description modified
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceld})	Description modified
		Create read replica virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
1.21	January 26, 2018	Modifying DB parameter group parameters	Description modified
1.22	February 22, 2018	Preface	Description modified
		Create virtual database server (POST /v1.0/{tenantId}/instances)	Description modified
		Modify virtual database server (PUT /v1.0/{tenantId}/instances/{instanceld})	Description modified
		Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	Description modified
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceld})	Description modified
1.23	March 22, 2018	API list	Description modified
		Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	Description modified
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceld})	Description modified
		Cancel an operation for a virtual database server (POST /v1.0/{tenantId}/instances/{instanceld}/action)	Article added
1.24	April 9, 2018	Create a service (POST /v1/services)	Description modified
1.25	June 29, 2018	Create virtual database server (POST /v1.0/{tenantId}/instances)	Article added for maintenance (DB patch)
		Modify virtual database server (PUT /v1.0/{tenantId}/instances/{instanceld})	
		Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	

Edition	Date of Update	Location	Overview
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceId})	
		Start virtual database server (POST /v1.0/{tenantId}/instances/{instanceId}/action)	
		Restart virtual database server (POST /v1.0/{tenantId}/instances/{instanceId}/action)	
		Create read replica virtual database server (POST /v1.0/{tenantId}/instances)	
		Show virtual database server details (GET /v1.0/{tenantId}/instances/{instanceId})	
		Find stack events	
1.26	August 30, 2018	Create virtual database server (POST /v1.0/{tenantId}/instances)	Description added & modified
		Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	Description added
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceId})	Description added
		Show DB engine details (GET /v1.0/{tenantId}/engineversion)	Description added
		List flavors (GET /v1.0/{tenantId}/flavors)	Description added
		List DB snapshots (GET /v1.0/{tenantId}/snapshots)	Description added
		List DB log files (GET /v1.0/{tenantId}/logfiles/{instanceId})	Description added
		List DB subnet groups (GET /v1.0/{tenantId}/subnetgroups)	Description added
		List DB parameter groups (GET /v1.0/{tenantId}/parametergroups)	Description added
		List event notification subscriptions (GET /v1.0/{tenantId}/eventnotifications)	Description added
		List event notifications (GET /v1.0/{tenantId}/events)	Description added

Edition	Date of Update	Location	Overview
1.27	September 25, 2018	<p>Create event notification subscription (POST /v1.0/{tenantId}/eventnotifications)</p> <p>Modify event notification subscription (PUT /v1.0/{tenantId}/eventnotifications/{subscriptionId})</p> <p>Add or delete monitored event (PUT /v1.0/{tenantId}/eventnotifications/{subscriptionId})</p> <p>List event notification subscriptions (GET /v1.0/{tenantId}/eventnotifications)</p> <p>Show event notification subscription details (GET /v1.0/{tenantId}/eventnotifications/{subscriptionId})</p>	Descriptions modified and added
1.28	November 22, 2018	Preface	Notes are added
		Modifying DB parameter group parameters	Description modified
		Create virtual database server (POST /v1.0/{tenantId}/instances)	Descriptions modified and added
		Modify virtual database server (PUT /v1.0/{tenantId}/instances/{instanceId})	
		Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)	
		Restore virtual database server to point in time (POST /v1.0/{tenantId}/instances/{instanceId})	
		Create read replica virtual database server (POST /v1.0/{tenantId}/instances)	
		Show virtual database server details (GET /v1.0/{tenantId}/instances/{instanceId})	
1.29	December 20, 2018	Create stack	Description modified
		Update stack	

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Part 1: Database

Topics:

- [Common information](#)
- [Virtual database servers](#)
- [DB snapshots](#)
- [DB log files](#)
- [DB subnet group](#)
- [DB parameter groups](#)
- [DB event notifications](#)

1.1 Common information

1.1.1 General requirements

This section describes general requirements to use this API.

Unless otherwise noted, the maximum length of string type input parameters is 255.

1.1.2 Creating a virtual database server accessible from the Internet

When creating a virtual database server that is accessible from the Internet, you must use a DB subnet group that meets the following requirement:

- All subnets included in the DB subnet group have an Internet gateway

If the above requirement is not met, the virtual database server status will be "Error".

1.1.3 Network settings required when creating a redundant virtual database server

When creating a redundant virtual database server, ensure that all subnets registered to the DB subnet group specified when the redundant virtual database server was created meet the following condition:

Condition

- Routing exists from the default gateway of the subnet that reaches the IP address of each subnet for all other subnets that belong to the DB subnet group.

Example: If subnet1 and subnet2 are registered in the DB subnet group.

The following must be set:

- Routing to reach an IP address on subnet2 from the default gateway of subnet1
- Routing to reach an IP address on subnet1 from the default gateway of subnet2

1.1.4 Security group to be set for a virtual database server

Set the following rules for the security group to be set for a virtual database server.

Purpose of the rule	Direction	Protocol	Party allowed to connect (*1)	Port
Communication from the DB client	ingress	tcp	DB client	Port number set when the virtual database server was created (26500 is used by default)

Purpose of the rule	Direction	Protocol	Party allowed to connect (*1)	Port
Internal communications within the virtual database server	ingress	tcp	Security group to be set for the virtual database server (security group to set this rule)	Port number set when the virtual database server was created (26500 is used by default)
Internal communications within the virtual database server	egress	tcp	Security group to be set for the virtual database server (security group to set this rule)	Port number set when the virtual database server was created (26500 is used by default)

*1: The following two formats can be used to specify the party allowed to connect in the security group.

- --remote-ip-prefix
CIDR of the party allowed to connect
- --remote-group-id
Security group of the party allowed to connect

1.1.5 Parameters requiring a restart using ModifyDBInstance

You must perform a restart after changing any of the following parameters:

- flavorRef
- volume
- multi
- multiAZ
- port
- engineVersion

1.1.6 Modifying DB parameter group parameters

- Only the parameters for which isModifiable is set to "True" can be changed.
- If applyType is set to "static", the changes will take effect only after the next restart. applyMethod can only be set to "pending-reboot"; an error will occur if applyMethod is set to "immediate".
- If applyType is set to "dynamic" and applyMethod is set to "immediate", then "immediate" is reflected. In this case, the DB does not need to be restarted.
- For details on the DB parameter groups that can be changed, refer to "Appendix A.1 List of DB Parameters That Can Be Changed" in "Appendix A List of DB Parameters That Can Be Changed" in the [Database Service User Guide](#).

1.1.7 Common parameters

Request Headers

X-Auth-Token

Specify the authentication token.

Data Type	Cardinality
String	1..1

Response type

Content-Type

Specify "application/json" when using POST or PUT.

Data Type	Cardinality
String	1..1

RESTAPI RequestURI

URL	Description
http://database.{region-name}.tps5.fujitsu.com/vx.x/1234/...	<Endpoint overall DBaaS> http://database.{region-name}.tps5.fujitsu.com <region-name> <API version information > /vx.x ex:/v1.0 <tenant ID> /{tenantId} ex:/1234

Normal status code

Return	Description	HTTP status code
OK	Succeed	200
Created	Created	201
Accepted	Accepted	202

Error and status code

Error name	Description	HTTP status code
badRequest	Invalid request	400
unauthorized	Insufficient privileges	401
forbidden	Forbidden operation	403
badMethod	Not allowed method for resource.	405

Error name	Description	HTTP status code
overLimit	Specified value exceeds the permitted value	413
unprocessableEntity	Unable to process instructions	422
instanceFault	Internal Server Error	500
notImplemented	Not implemented	501
serviceUnavailable	The service has stopped	503
gatewayTimeout	504 Gateway Time-out	504
itemNotFound	Not found	404

Status of the virtual database server

Active	While in this state, the issuance of SQL statements is accepted. Any API can be issued.
Backup	Backup is being performed. SQL statements can still be issued.
Build	A virtual database server is being created. POST and PUT are prohibited for virtual database server that are being created.
Failed	Failed state when executing POST or PUT API. Recover the virtual database server as it may be in an abnormal state.
Error	The virtual database server is in an invalid state. Report it to the system administrator.
Deleted	If a virtual database server is in a DELETED state, it indicates that the virtual database server has been deleted, but a snapshot associated with it exists.
Reboot	A virtual database server is being restarted.
Resize	A data volume is being resized.
Modifying	A virtual database server attribute is being changed.
Restart_Required	A restart is required. SQL statements can be accessed, but attribute values and settings may not have been reflected.
Degenerated	Operation is degraded for the virtual database server using a single node. This status is also displayed when redundancy is recovered for the virtual database server. The time to recover redundancy for the virtual database server depends on the amount of data, and may take more than 30 minutes. If automatic recovery starts at the time specified in preferredRecoveryTime, an event notifies the start of recovery.
Switched	Failover occurred for the DB, and primary and secondary nodes are switched for operation.

An error is returned if an API request fails.

The error has the following three elements: status code, error name, and message.

A JSON type error response is shown below:

```
{
  "Error": [
    "status":404,
    "name":"notFound",
    "message":"DBInstanceNotFound"
  ]
}
```

1.1.8 Regarding the generation of URLs when using APIs

For the URLs used in the APIs, use those in the Service catalog obtained from the identity service that have the type, "database".

The endpoint URLs are returned from the identity service in the following format.

```
https://database.***.cloud.global.fujitsu.com
```

*** indicates the region identifier

Create URLs by merging the path name of each API with the endpoint URL.

1.2 Virtual database servers

1.2.1 API list

Virtual database server

Item	API	Description
1	POST /v1.0/{tenantId}/instances Create virtual database server	Creates a virtual database server
2	DELETE /v1.0/{tenantId}/instances/{instanceId} Delete virtual database server	Deletes the specified virtual database server
3	PUT /v1.0/{tenantId}/instances/{instanceId} Modify virtual database server	Modify settings for a virtual database server
4	POST /v1.0/{tenantId}/instances Restore virtual database server from DB snapshot	Restores a virtual database server from a DB snapshot
5	POST /v1.0/{tenantId}/instances/{instanceId} Restore virtual database server to point in time	Restores a virtual database server by recovering to a point in time from a DB snapshot
6	POST /v1.0/{tenantId}/instances/{instanceId}/action Start virtual database server	Starts a virtual database server
7	POST /v1.0/{tenantId}/instances/{instanceId}/action Stop virtual database server	Stops a virtual database server
8	POST /v1.0/{tenantId}/instances/{instanceId}/action Restart virtual database server	Restarts a virtual database server
9	POST /v1.0/{tenantId}/instances Create read replica virtual database server	Creates a read replica virtual database server
10	GET /v1.0/{tenantId}/instances List virtual database servers	Lists information for all virtual database servers
11	GET /v1.0/{tenantId}/instances/{instanceId} Show virtual database server details	Shows details of the specified virtual database server
12	POST /v1.0/{tenantId}/instances/{instanceId}/action Cancel an operation for a virtual database server	Cancel an operation for a virtual database server
13	GET /v1.0/{tenantId}/engineversion Show DB engine details	Shows version details of the database

Item	API	Description
14	GET /v1.0/{tenantId}/flavors List flavors	Lists information for all server types
15	GET /v1.0/{tenantId}/flavors/{flavorId} Show flavor details	Shows details of the specified server type

1.2.2 API details

1.2.2.1 Create virtual database server (POST /v1.0/{tenantId}/instances)

Creates a virtual database server.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request Parameters

instance

Data Type	Cardinality	Parent Element	Child Element(s)
	1..1	None	flavorRef volume id name description availabilityZone subnetGroupIds multi multiAZ port preferredBackupWindow preferredMaintenanceWindow preferredRecoveryTime autoMaintenance publiclyAccessible securityGroupIds. parameterGroupIds backupRetentionPeriod autoMinorVersionUpgrade engine engineVersion masterUserName masterUserPassword characterSet collate downloadLogExtension databases users

flavorRef

ID of the predefined hardware resource list
Specify the flavor ID.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	instance	None

volume

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures	1..1	instance	size type

size

Size of the data disk
Specify from 10 to 10240 (GB).

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	1..1	volume	None

type

Disk type
M1

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	volume	None

id

ID of the virtual database server

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 63 characters

Default: random value

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

name

Name of the virtual database server

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 255 characters

Default : Random value

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

description

Description of the virtual database server
Up to 1,024 characters

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

availabilityZone

Availability zone where the instance will be created

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	instance	None

subnetGroupId

Subnet group where the virtual database server will be deployed to

The subnet group must contain a set of subnets that include at least two availability zones.

Default: default subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

multi

Multi-DB option

true | false

- If multiAZ = false and multi = true, virtual database servers will be duplicated within the same availability zone.

Default value: false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	instance	None

multiAZ

Multi-availability zone option

true | false

Default value: false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	instance	None

port

Port number

1024 to 32767

Default value: 26500

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	instance	None

preferredBackupWindow

Backup time slot

Format: hh24:mi-hh24:mi

Specify the time slot in which to perform daily backup, if automatic backup is enabled.

A time slot of at least 30 minutes must be specified.

- East Japan (east-1): 17:00-03:00 UTC
- West Japan (west-1): 17:00-03:00 UTC

Specify the time in UTC.

It is not possible to specify a time slot that overlaps with PreferredMaintenanceWindow.

Backup may take longer than 30 minutes in some conditions.

Default: A random 30-minute period within the 10-hour period prescribed for each region

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

preferredMaintenanceWindow

Specify the time slot in which to perform weekly maintenance.

Specify a time slot from 30 minutes to 23 hours 30 minutes.

A 30-minute period within the 10-hour period prescribed for each region will be randomly determined (the day of the week is also determined randomly).

Format:

ddd:hh24:mi-ddd:hh24:mi

Example: Sun:05:00-Sun:06:00

Value of day portion: Mon, Tue, Wed, Thu, Fri, Sat, Sun

Default: A random 30-minute period within the 10-hour period prescribed for each region (the day of the week is also determined randomly)

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

preferredRecoveryTime

Time to start automatic recovery

This parameter can only be specified if redundancy configuration is used for the virtual database server (this can only be specified if multi = true)

Data Type	Cardinality	Parent Element	Child Element(s)
preferredRecoveryTime Structure	0..1	instance	applyImmediately time

applyImmediately

If this parameter is defined, automatic recovery will be immediately performed when DB operation is degraded to a single node.

It is only possible to specify "applyImmediately" or "time" in the "preferredRecoveryTime" structure.

default value: true

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	preferredRecoveryTime	None

time

If this parameter is defined, automatic recovery will be performed at the time specified in the parameter value.

It is only possible to specify "applyImmediately" or "time" in the "preferredRecoveryTime" structure.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	preferredRecoveryTime	None

autoMaintenance

Whether automatic maintenance is performed or not

true | false

Default value : true

true: Automatic maintenance is performed.

False: Automatic maintenance is not performed.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	instance	None

publiclyAccessible

Whether connection from the Internet is possible during deployment of the virtual database server

true | false

Default value: false

true: External Internet connections are permitted.

false: Only access from within the VPC is permitted.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	instance	None

securityGroupIds.

List of the VPC security groups

Default:default security group

Data Type	Cardinality	Parent Element	Child Element(s)
String list	0..1	instance	None

parameterGroupId

ID of the DB parameter group

Default: default DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

backupRetentionPeriod

Backup retention period (days)

Note: Automatic backup will not be performed when the value is 0.

0 to 10

Default value: 1

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	instance	None

autoMinorVersionUpgrade

Automatic minor version upgrade

true | false

Default value: true



This parameter has no effect.

To apply a minor version upgrade, execute API "Start/Restart the virtual database server" with the parameter "applyPatch" set to true.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	instance	None

engine

Name of the DB engine

enterprisepostgres or symfoware

Default value: enterprisepostgres

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

engineVersion

DB version

Default value: Latest version

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

masterUserName

Administrator user name

- Length: 1 - 63 characters
- Usable characters: Alphanumeric characters (lower case) and underscores
- Other restrictions
You can only use an alphabetic character (lowercase) or underscore as the first character

Default value: postgres

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

masterUserPassword

Administrator password

- Alphanumeric characters and symbols other than ' (single quotation mark) can be used
- Up to 1,024 characters.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	instance	None

characterSet

Character encoding

Default: UTF8

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

collate

Collating sequence

Default: C

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

downloadLogExtension

Log extension feature

true | false

Default value: false

true: Enables log extension. When this function is enabled, the disk capacity used for managing log information increases by approximately 10% of the DB log size.

false: Disables log extension.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	instance	None

database

List of the database structures to be created

If omitted, only the default "postgres" DB is created.

Data Type	Cardinality	Parent Element	Child Element(s)
Database structures list	0..1	instance	name

name

Database name

- Specify alphanumeric characters and underscores only.
- The first character must be a letter or an underscore.
- Up to 63 characters
- Even if you specify uppercase letters, they are created in lowercase letters.

If you want to create it in uppercase letters, create it by creating a database virtual server and executing the CREATE DATABASE statement.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	database	None



Restriction

When creating a database name that uses upper-case letters, it is necessary to enclose the API database name in double quotes, but due to the specifications of the database it is not possible to use double quotes.

Therefore it is not possible to create database names using upper-case letters in the API.

users

List of the user structures to be created

If omitted, only the master user is created.

Data Type	Cardinality	Parent Element	Child Element(s)
User structures list	0..1	instance	name password (database)name

name

DB user name

- Specify alphanumeric characters and underscores only.
- The first character must be a letter or an underscore.
- Up to 63 characters
- Even if you specify uppercase letters, they are created in lowercase letters.

If you want to create it in uppercase letters, create it by creating a database virtual server and executing the CREATE DATABASE statement.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	users	None

password

User password

- Up to 1,024 characters

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	users	None

(database)name

Names of the databases that the user can log in to

- Specify alphanumeric characters and underscores only.
- The first character must be a letter or an underscore.
- Up to 63 characters

Data Type	Cardinality	Parent Element	Child Element(s)
String list	1..1	users	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

instance

Data Type	Cardinality	Parent Element	Child Element(s)
		None	created flavor id links name status updated volume privateAddress publicAddress privateIp publicIp subPrivateIp subPublicIp port characterSet collate autoMinorVersionUpgrade availabilityZone backupRetentionPeriod engine engineVersion engineMinorVersion masterUserName multi multiAZ parameterGroupId PendingModifiedValues preferredBackupWindow preferredMaintenanceWindow publiclyAccessible readReplicaDBInstanceIdentifiers readReplicaSrcDBInstanceIdentifier secondaryAvailabilityZone replicaStatus subnetGroupId securityGroupIds description downloadLogExtension readReplicaDBInstances readReplicaSrcDBInstance

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date		instance	None

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor structures		instance	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

links

URI to the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

status

Status of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

updated

Update date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date		instance	None

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		instance	None

privateAddress

Internal address to the Virtual server where the virtual database server is running (FQDN format)

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publicAddress

Global address to the Virtual server where the virtual database server is running (FQDN format)

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

privateIp

Internal IP address to the virtual database server

This is determined based on the subnet of the specified subnet group (CIDR).

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publicIp

Global IP address of the virtual database server

This will not be displayed if publiclyAccessible is "false".

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

subPrivateIp

Internal IP address of a standby database instance

This is determined based on the subnet of the specified subnet group (CIDR).

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

subPublicIp

Global IP address of a standby database instance

This will not be displayed if publiclyAccessible is "false".

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

port

Port number

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		instance	None

characterSet

Database encoding

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

collate

Database collating sequence

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

autoMinorVersionUpgrade

Flag to indicate whether to perform automatic minor version upgrade

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

availabilityZone

Availability zone where the virtual database server is running

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

backupRetentionPeriod

Backup retention period

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		instance	None

engine

Database type

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

engineVersion

Database version

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

engineMinorVersion

Database minor version

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

masterUserName

Administrator user name

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

multi

Multi-DB option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

multiAZ

Multi-availability zone option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

parameterGroupID

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

pendingModifiedValues

List of parameters that will be updated at the next restart

Data Type	Cardinality	Parent Element	Child Element(s)
PendingModifiedValues structures		instance	None

preferredBackupWindow

Backup time slot

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

preferredMaintenanceWindow

Maintenance time slot

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

autoMaintenance

Whether automatic maintenance is performed or not

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

publiclyAccessible

Whether connection from the Internet is possible during deployment of the virtual database server

true: Public IP address will be allocated.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

readReplicaDBInstanceIdentifiers

This parameter has been integrated into readReplicaDBInstances. It will always return an empty list.

Data Type	Cardinality	Parent Element	Child Element(s)
String list		instance	None

readReplicaSrcDBInstanceIdentifier

This parameter has been integrated into readReplicaSrcDBInstance. It will always return null.

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

secondaryAvailabilityZone

If the duplication option is "true":

Availability zone where the secondary virtual database server is running

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

replicaStatus

Status of the read replica

Replicating or Error

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

subnetGroupId

ID of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

securityGroupIds

List of VPC security group IDs

Data Type	Cardinality	Parent Element	Child Element(s)
String list		instance	None

downloadLogExtension

Log extension feature

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

readReplicaDBInstances

Read replica instance associated with this database virtual server

Operations performed on the read replica are reflected asynchronously.

Data Type	Cardinality	Parent Element	Child Element(s)
ReadReplicaDBInstance Structure list		instance	region tenantId id

readReplicaSrcDBInstance

Source database virtual server

Operations performed on the source database virtual server are reflected asynchronously.

Data Type	Cardinality	Parent Element	Child Element(s)
ReadReplicaSrcDBInstance Structure list		instance	region tenantId id

flavor

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id links

id

Flavor ID

Data Type	Cardinality	Parent Element	Child Element(s)
String		flavor	None

links

Flavor URI

Data Type	Cardinality	Parent Element	Child Element(s)
String		flavor	None

pendingModifiedValues

Data Type	Cardinality	Parent Element	Child Element(s)
		None	volume backupRetentionPeriod flavor id name parameterGroupId engineVersion masterUserName masterUserPassword multi multiAZ port engineMinorVersion securityUpdate

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		PendingModifiedValues	None

backupRetentionPeriod

Backup retention period

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor		PendingModifiedValues	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

parameterGroupId

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

engineVersion

Database version

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

masterUserName

Master user name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

masterUserPassword

Password of the master user of the virtual database server

For security reasons, return values are masked as "***".

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

multi

Multi-DB option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

multiAZ

Multi-availability zone option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

port

Port number

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		PendingModifiedValues	None

engineMinorVersion

Minor version of the database

When a minor version of the database is released, you can apply patches.

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

securityUpdate

Presence/absence of security update

Patch application can be implemented when security update is released.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

volume

Data Type	Cardinality	Parent Element	Child Element(s)
		None	size type

size

Size of the data storage

Data Type	Cardinality	Parent Element	Child Element(s)
String		volume	None

type

Type of the data storage

Data Type	Cardinality	Parent Element	Child Element(s)
String		volume	None

region

Region of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

tenantId

Project ID of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

id

ID of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

region

Region of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

tenantId

Project ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

id

ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

Example of Request

```
{
  "instance": {
    "flavorRef": "1",
    "volume": {
      "size": 20,
      "type": "M1"
    }
  },
  "name": "json-rack-instance",
  "availabilityZone": "jp-east-1a",
  "multi": true,
  "multiAZ": true,
  "subnetGroupId": "subnetGroup1",
  "port": 1234,
  "preferredBackupWindow": "17:00-18:00",
  "preferredMaintenanceWindow": "Sun:19:00-Sun:20:00",
  "preferredRecoveryTime": {
    "applyImmediately": true
  },
  "autoMaintenance": true,
  "publiclyAccessible": true,
  "securityGroupIds": [
    {"securityGroupId": "secid1"},
    {"securityGroupId": "secid2"}
  ],
}
```

```

"parameterGroupId":"paramid1",
"characterSet":"utf8",
"collate":"C",
"backupRetentionPeriod":10,
"autoMinorVersionUpgrade":true,
"engine":"symfoware",
"engineVersion":"12.1",
"masterUserPassword":"***"
"databases": [
  {
    "name":"sampledb",
  },
  {
    "name":"nextround"
  }
],
"users": [
  {
    "databases": [
      {
        "name":"sampledb"
      }
    ],
    "name":"demouser",
    "password":"demopassword"
  }
]
}

```

Example of Response

```

{
  "instance": {
    "created": "2013-03-18T19:09:17",
    "flavor": {
      "id": "1",
      "links": [
        {
          "href": "http://database. {region-name}. tps5. fujitsu. com/v1. 0/1234/flavors/1",
          "rel": "self"
        }
      ]
    }
  },
  "id": "44b277eb-39be-4921-be31-3d61b43651d7",
  "links": [
    {
      "href": "http://database. {region-name}. tps5. fujitsu. com/v1. 0/1234/instances/44b277eb-39be-4921-be31-3d61b43651d7",
      "rel": "self"
    }
  ],
  "status": "BUILD",
  "volume": {
    "size": 20,
    "type": "M1"
  }
}
"name": "json_rack_instance",
"privateAddress": "fujitsu. s5. dbaas. a23w4e5r6tg7yuhjik",
"privateIp": "10. 125. 52. 214",
"port": 26500,
"characterSet": "UTF-8",
"collate": "C",
"autoMinorVersionUpgrade": true,
"availabilityZone": "az-1",
"backupRetentionPeriod": 10,

```

```

"engine": "enterprisepostgres",
"engineVersion": "9.6",
"engineMinorVersion": "0",
"multi": true,
"multiAZ": true,
"parameterGroupId": "paramid1",
"preferredBackupWindow": "17:00-18:00",
"preferredMaintenanceWindow": "Sun:19:00-Sun:20:00",
"preferredRecoveryTime": {
  "applyImmediately": true,
  "time": none,
},
"autoMaintenance": true,
"downloadLogExtension": false,
"publiclyAccessible": true,
"subnetGroupId": "subnetGroup1",
"securityGroupIds": [
  {"securityGroupId": "secid1"},
  {"securityGroupId": "secid2"}
],
"readReplicaDBInstances": [],
"readReplicaSrcDBInstance": {},
"replicaStatus": null,
"readReplicaDBInstanceIdentifiers": [],
"readReplicaSrcDBInstanceIdentifier": null
}

```

1.2.2.2 Delete virtual database server (DELETE /v1.0/{tenantId}/instances/{instanceId})

Deletes a virtual database server.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{instanceId}

ID of the virtual database server

Data Type	Cardinality
String	1..1

Request parameters

n/a

Response headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

n/a

1.2.2.3 Modify virtual database server (PUT /v1.0/{tenantId}/instances/{instanceId})

Modifies settings for a virtual database server.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{instanceId}

ID of the virtual database server

Data Type	Cardinality
String	1..1

Request Parameters

instance

Data Type	Cardinality	Parent Element	Child Element(s)
		None	flavorRef volume id name description availabilityZone multi multiAZ port preferredBackupWindow preferredMaintenanceWindow preferredRecoveryTime autoMaintenance securityGroupIds. parameterGroupId backupRetentionPeriod autoMinorVersionUpgrade engineVersion masterUserPassword privateAddress publicAddress applyImmediately downloadLogExtension

flavorRef

ID of the predefined hardware resource list
Specify the flavor ID.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

volume

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structure	0..1	Instance	size type

size

Size of the data disk (GB)
10 to 10240 (GB)

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	volume	None

type

Disk type

M1

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Volume	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

availabilityZone

Availability zone where the instance will be created

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

multi

Multi-DB option

true | false

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

multiAZ

Multi-availability zone option

true | false

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

port

Port number

1024 to 32767

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	Instance	None

preferredBackupWindow

Backup time slot

Format: hh24:mi-hh24:mi

Default: A random 30-minute period within the 10-hour period prescribed for each region

Specify the time slot in which to perform daily backup, if automatic backup is enabled.

A time slot of at least 30 minutes must be specified.

- East Japan (east-1): 17:00-03:00 UTC
- West Japan (west-1): 17:00-03:00 UTC

Specify the time in UTC.

It is not possible to specify a time slot that overlaps with PreferredMaintenanceWindow.

Backup may take longer than 30 minutes in some conditions.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

preferredMaintenanceWindow

Maintenance time slot

Format:

ddd:hh24:mi-ddd:hh24:mi

Default: A random 30-minute period within the 10-hour period prescribed for each region (the day of the week is also determined randomly) Note: Specify the time slot in which to perform weekly maintenance.

Specify a time slot from 30 minutes to 23 hours 30 minutes.

A 30-minute period within the 10-hour period prescribed for each region will be randomly determined (the day of the week is also determined randomly).

Example: Sun:05:00-Sun:06:00

Value of day portion: Mon, Tue, Wed, Thu, Fri, Sat, Sun

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

preferredRecoveryTime

Time to start automatic recovery

This parameter can only be specified if redundancy configuration is used for the virtual database server (this can only be specified if multi = true)

Data Type	Cardinality	Parent Element	Child Element(s)
preferredRecoveryTime Structure	0..1	Instance	applyImmediately time

applyImmediately

If this parameter is defined, automatic recovery will be immediately performed when DB operation is degraded to a single node.

It is only possible to specify "applyImmediately" or "time" in the "preferredRecoveryTime" structure.

default value: true

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	preferredRecoveryTime	None

time

If this parameter is defined, automatic recovery will be performed at the time specified in the parameter value.

It is only possible to specify "applyImmediately" or "time" in the "preferredRecoveryTime" structure.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	preferredRecoveryTime	None

autoMaintenance

Whether automatic maintenance is performed or not

true | false

Default value : true

true: Automatic maintenance is performed.

false: Automatic maintenance is not performed.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

securityGroupIds.

Name of the VPC security group

Note: Specify the VPC security group.

Data Type	Cardinality	Parent Element	Child Element(s)
String list	0..1	Instance	None

parameterGroupId

Name of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

backupRetentionPeriod

Backup retention period

0 to 10

Note: Automatic backup will not be performed when the value is 0.

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	Instance	None

autoMinorVersionUpgrade

Automatic minor version upgrade

true | false

Default value: true



CAUTION

This parameter has no effect.

To apply a minor version upgrade, execute API "Start/Restart the virtual database server" with the parameter "applyPatch" set to true.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

engineVersion

DB version

Default value: Latest version

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

masterUserPassword

Administrator password

- Alphanumeric characters and symbols other than ' (single quotation mark) can be used
- Up to 1,024 characters.

In some cases, an old masterUserPassword may be necessary to perform recovery of a virtual database server from a DB snapshot, or execute the recovery API to recover a virtual database server by recovering to a point in time. Therefore, ensure you keep a record of the masterUserPassword before and after changing.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

privateAddress

The internal address of the virtual database server after it is changed (FQDN format)

It is not possible to specify an FQDN that has not been used

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

publicAddress

The global address of the virtual database server after it is changed (FQDN format)

It is not possible to specify an FQDN that has not been used

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

applyImmediately

If this parameter is set to "true", the instance will restart after executing the API.

true | false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

downloadLogExtension

Log extension feature

true | false

true: Enables log extension. When this function is enabled, the disk capacity used for managing log information increases by approximately 10% of the DB log size.

false: Disables log extension.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

volume

Data Type	Cardinality	Parent Element	Child Element(s)
volume structure list	0..1	Instance	size type

size

10 to 10240 (GB)

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	volume	None

type

Disk type

M1

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	volume	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented

503: serviceUnavailable
504: gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

instance

Data Type	Cardinality	Parent Element	Child Element(s)
		None	created flavor id links name status updated volume privateAddress publicAddress privateIp publicIp port characterSet collate autoMinorVersionUpgrade availabilityZone backupRetentionPeriod engine engineVersion engineMinorVersion masterUserName multi multiAZ parameterGroupId pendingModifiedValues preferredBackupWindow preferredMaintenanceWindow autoMaintenance publiclyAccessible readReplicaDBInstanceIdentifiers readReplicaSrcDBInstanceIdentifier secondaryAvailabilityZone replicaStatus subnetGroupId securityGroupIds downloadLogExtension readReplicaDBInstances readReplicaSrcDBInstance

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date		instance	None

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor structures		instance	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

links

URI to the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

status

Status of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

updated

Update date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date		instance	None

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		instance	None

privateAddress

Internal address to the Virtual server where the virtual database server is running (FQDN format)

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publicAddress

Global address to the Virtual server where the virtual database server is running (FQDN format)

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

privateIp

Internal IP address to the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publicIp

Global IP address of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

port

Port number

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		instance	None

characterSet

Database encoding

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

collate

Database collating sequence

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

autoMinorVersionUpgrade

Flag to indicate whether to perform automatic minor version upgrade

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

availabilityZone

Availability zone where the virtual database server is running

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

backupRetentionPeriod

Backup retention period

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		instance	None

engine

Database type

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

engineVersion

Database version

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

engineMinorVersion

Database minor version

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

masterUserName

Administrator user name

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

multi

Multi-DB option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

multiAZ

Multi-availability zone option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

parameterGroupID

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

pendingModifiedValues

List of parameters that will be updated at the next restart

Data Type	Cardinality	Parent Element	Child Element(s)
PendingModifiedValues structures		instance	None

preferredBackupWindow

Backup time slot

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

preferredMaintenanceWindow

Maintenance time slot

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

autoMaintenance

Whether automatic maintenance is performed or not

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

publiclyAccessible

Whether connection from the Internet is possible during deployment of the virtual database server

true: Public IP address will be allocated.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

readReplicaDBInstanceIdentifiers

This parameter has been integrated into readReplicaDBInstances. It will always return an empty list.

Data Type	Cardinality	Parent Element	Child Element(s)
String list		instance	None

readReplicaSrcDBInstanceIdentifier

This parameter has been integrated into readReplicaSrcDBInstance. It will always return null.

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

secondaryAvailabilityZone

If the duplication option is "true":

Availability zone where the secondary virtual database server is running

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

replicaStatus

Status of the read replica

Replicating or Error

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

subnetGroupId

ID of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

securityGroupIds

List of VPC security group IDs

Data Type	Cardinality	Parent Element	Child Element(s)
String list		instance	None

downloadLogExtension

Log extension feature

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

readReplicaDBInstances

Read replica instance associated with this database virtual server

Operations performed on the read replica are reflected asynchronously.

Data Type	Cardinality	Parent Element	Child Element(s)
ReadReplicaDBInstance Structure list		instance	region tenantId id

readReplicaSrcDBInstance

Source database virtual server

Operations performed on the source database virtual server are reflected asynchronously.

Data Type	Cardinality	Parent Element	Child Element(s)
ReadReplicaSrcDBInstance Structure list		instance	region tenantId id

flavor

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id links

id

Flavor ID

Data Type	Cardinality	Parent Element	Child Element(s)
String		Flavor	None

links

Flavor URI

Data Type	Cardinality	Parent Element	Child Element(s)
String		Flavor	None

pendingModifiedValues

Data Type	Cardinality	Parent Element	Child Element(s)
		None	volume backupRetentionPeriod flavor id name parameterGroupId engineVersion masterUserName masterUserPassword multi multiAZ port engineMinorVersion securityUpdate

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		PendingModifiedValues	None

backupRetentionPeriod

Backup retention period

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor		PendingModifiedValues	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

parameterGroupId

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

engineVersion

Database version

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

masterUserName

Master user name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

masterUserPassword

Password of the master user of the virtual database server

For security reasons, return values are masked as "****".

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

multi

Multi-DB option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

multiAZ

Multi-availability zone option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

port

Port number

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		PendingModifiedValues	None

engineMinorVersion

Minor version of the database

When a minor version of the database is released, you can apply patches.

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

securityUpdate

Presence/absence of security update

Patch application can be implemented when security update is released.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

volume

Data Type	Cardinality	Parent Element	Child Element(s)
		None	size type

size

Size of the data storage

Data Type	Cardinality	Parent Element	Child Element(s)
String		Volume	None

type

Type of the data storage

Data Type	Cardinality	Parent Element	Child Element(s)
String		Volume	None

region

Region of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

tenantId

Project ID of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

id

ID of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

region

Region of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

tenantId

Project ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

id

ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

Example of Request

```
{
  "instance": {
    "flavorRef": "1",
    "volume": {"size": 2}
    "name": "json-rack-instance",
    "availabilityZone": "jp-east-1a",
    "multi": true
    "multiAZ": true,
    "subnetGroupId": "subnetGroup1",
    "port": 1234,
    "preferredBackupWindow": "17:00-18:00",
    "preferredMaintenanceWindow": "Sun:19:00-Sun:20:00",
    "preferredRecoveryTime": {
      "time": "01:00",
    },
  },
  "autoMaintenance": true,
  "publiclyAccessible": true,
  "securityGroupIds": [
    {"securityGroupId": "secid1"},
    {"securityGroupId": "secid2"}
  ],
  "parameterGroupId": "paramid1",
  "character_set": "utf8",
  "collate": "C",
  "backupRetentionPeriod": 10,
  "autoMinorVersionUpgrade": true,
  "engine": "enterprisepostgres",
  "engineVersion": "9.6",
  "masterUserPassword": "***"
  "databases": [
    {
      "name": "sampledb",
    },
  ],
}
```



```

    {
      "name": "nextround"
    }
  ],
  "users": [
    {
      "databases": [
        {
          "name": "sampledb"
        }
      ],
      "name": "demouser",
      "password": "demopassword"
    }
  ]
}

```

Example of Response

```

{
  "instance": {
    "created": "2013-03-18T19:09:17",
    "flavor": {
      "id": "1",
      "links": [
        {
          "href": "http://database. {region-name}. tps5. fujitsu. com/v1.0/1234/flavors/1",
          "rel": "self"
        }
      ]
    }
  },
  "id": "44b277eb-39be-4921-be31-3d61b43651d7",
  "links": [
    {
      "href": "http://database. {region-name}. tps5. fujitsu. com/v1.0/1234/instances/44b277eb-39be-4921-be31-3d61b43651d7",
      "rel": "self"
    }
  ],
  "status": "BUILD",
  "volume": {
    "size": 20,
    "type": "M1"
  }
}
{
  "name": "json_rack_instance",
  "privateAddress": "fujitsu.s5.dbaas.a23w4e5r6tg7yuhjik",
  "privateIp": "10.125.52.214",
  "port": 26500,
  "characterSet": "UTF8",
  "collate": "C",
  "autoMinorVersionUpgrade": true,
  "availabilityZone": "jp-east-1a",
  "backupRetentionPeriod": 10,
  "engine": "enterprisepostgres",
  "engineVersion": "9.6",
  "engineMinorVersion": "0",
  "multi": true,
  "multiAZ": true,
  "parameterGroupId": "paramid1",
  "pendingModifiedValues": [
    "masterUserPassword": "***"
  ],
  "preferredBackupWindow": "17:00-18:00",
  "preferredMaintenanceWindow": "Sun:19:00-Sun:20:00",
  "preferredRecoveryTime": {

```

```

    "applyImmediately" : none,
    "time" : "01:00",
  },
  "autoMaintenance" : true,
  "downloadLogExtension" : false,
  "publiclyAccessible" : true,
  "subnetGroupId" : "subnetGroup1",
  "securityGroupIds" : [
    {"securityGroupId" : "secid1"},
    {"securityGroupId" : "secid2"}
  ],
  "readReplicaDBInstances" : [],
  "readReplicaSrcDBInstance" : {},
  "replicaStatus" : null,
  "readReplicaDBInstanceIdentifiers" : [],
  "readReplicaSrcDBInstanceIdentifier" : null
}
}

```

1.2.2.4 Restore virtual database server from DB snapshot (POST /v1.0/{tenantId}/instances)

Restores a virtual database server from a DB snapshot manually created using DB snapshot ([API \(Create DB snapshot \(POST /v1.0/{tenantId}/snapshots\)\)](#)).



CAUTION

- When restoring a virtual database server from a DB snapshot, a new virtual database server will be created. The original virtual database server, of which the DB snapshot was taken, will not be overwritten. As this is a new virtual database server, new FQDN/IP settings will be configured, and it will be billed separately from the original virtual database server.
- When creating a virtual database server using an automatic backup (a backup taken automatically when a virtual database server is created, based on the setting conditions of the system), use POST /v1.0/{tenantId}/instances/{instanceId} described in [Restore virtual database server to point in time \(POST /v1.0/{tenantId}/instances/{instanceId}\)](#).

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{instanceId}

ID of the virtual database server

If there is a DB instance from which the restore originated, the same ID can not be specified.

Data Type	Cardinality
String	1..1

Request Parameters

action

Data Type	Cardinality	Parent Element	Child Element(s)
		None	restoresnapshot

restoresnapshot

Restores a virtual database server from a snapshot if this parameter is defined.

Data Type	Cardinality	Parent Element	Child Element(s)
None	1..1	action	None

snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
		None	Id

id

ID of the snapshot that will be the backup source

Existing snapshot ID

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	snapshot	None

instance

Data Type	Cardinality	Parent Element	Child Element(s)
		None	flavorRef volume id name description availabilityZone subnetGroupIds multi multiAZ port preferredBackupWindow preferredMaintenanceWindow preferredRecoveryTime autoMaintenance publiclyAccessible securityGroupIds parameterGroupIds backupRetentionPeriod autoMinorVersionUpgrade masterUserName masterUserPassword downloadLogExtension

flavorRef

ID of the predefined hardware resource list

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	Instance	None

volume

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures	1..1	Instance	size type

size

Size of the data disk

10 to 10240 (GB)

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	1..1	volume	None

type

Disk type

M1

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	volume	None

id

ID of the virtual database server

Default: random value

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

name

Name of the virtual database server

Default value: Random value

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

description

Description of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

availabilityZone

Availability zone where the instance will be created

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	Instance	None

subnetGroupid

Subnet group where the virtual database server will be deployed to

Default: default subnet group

The subnet group which contains multiple subnets that may belong to different availability zones. They should belong to at least two different availability zones.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

multi

Multi-DB option

true | false

Default values: false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

multiAZ

Multi-availability zone option

true | false

Default value: false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

port

Port number

1024 to 32767

Default value: 26500

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	Instance	None

preferredBackupWindow

Backup time slot

Format: hh24:mi-hh24:mi

Default:

A random 30-minute period within the 10 hour-period prescribed for each region

Specify the time slot in which to perform daily backup, if automatic backup is enabled.

A time slot of at least 30 minutes must be specified.

- East Japan (east-1): 17:00-03:00 UTC
- West Japan (west-1): 17:00-03:00 UTC

Specify the time in UTC.

It is not possible to specify a time slot that overlaps with PreferredMaintenanceWindow.

Backup may take longer than 30 minutes in some conditions.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

preferredMaintenanceWindow

Maintenance time slot

Format:

ddd:hh24:mi-ddd:hh24:mi

Default:

A random 30-minute period within the 10-hour period prescribed for each region (the day of the week is also determined randomly) Note: Specify the time slot in which to perform weekly maintenance.

Specify a time slot from 30 minutes to 23 hours 30 minutes.

A 30-minute period within the 10-hour period prescribed for each region will be randomly determined (the day of the week is also determined randomly).

Example: Sun:05:00-Sun:06:00

Value of day portion: Mon, Tue, Wed, Thu, Fri, Sat, Sun

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

preferredRecoveryTime

Time to start automatic recovery

This parameter can only be specified if redundancy configuration is used for the virtual database server (this can only be specified if multi = true)

Data Type	Cardinality	Parent Element	Child Element(s)
preferredRecoveryTime structure	0..1	Instance	applyImmediately time

applyImmediately

If this parameter is defined, automatic recovery will be immediately performed when DB operation is degraded to a single node.

It is only possible to specify "applyImmediately" or "time" in the "preferredRecoveryTime" structure.

default value: true

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	preferredRecoveryTime	None

time

If this parameter is defined, automatic recovery will be performed at the time specified in the parameter value.

It is only possible to specify "applyImmediately" or "time" in the "preferredRecoveryTime" structure.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	preferredRecoveryTime	None

autoMaintenance

Whether automatic maintenance is performed or not

true | false

Default value : true

true: Automatic maintenance is performed.

False: Automatic maintenance is not performed.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

publiclyAccessible

Whether connection from the Internet is possible during deployment of the virtual database server

true | false

Default value: false

true: External Internet connections are permitted.

false: Only access from within the VPC is permitted.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

securityGroupIds.

Name of the VPC security group

Note: Specify the VPC security group.

Default value: security group of the subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String list	0..1	Instance	None

parameterGroupid

Name of the DB parameter group

Default value: default parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

backupRetentionPeriod

Backup retention period

Note: Automatic backup will not be performed when the value is 0.

Default value: 1


Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	Instance	None

autoMinorVersionUpgrade

Automatic minor version upgrade

true | false

Default value : true

 This parameter has no effect.
To apply a minor version upgrade, execute API "Start/Restart the virtual database server" with the parameter "applyPatch" set to true.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

masterUserName

- Specify alphanumeric characters and underscores only.
- The first character must be a letter or an underscore.

- Up to 63 characters.
- Specify the same value as the masterUserName of the restoration source.

Default value: postgres

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

masterUserPassword

Administrator password

- Alphanumeric characters and symbols other than ' (single quotation mark) can be used
- Up to 1,024 characters.

Specify the same value as the masterUserPassword at the date and time the snapshot specified in snapshot ID was created.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	Instance	None

downloadLogExtension

Log extension feature

true | false

Default value: false

true: Enables log extension. When this function is enabled, the disk capacity used for managing log information increases by approximately 10% of the DB log size.

false: Disables log extension.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

Response Headers

Content-Type

POST/PUT:

Specify "application/json".

Data Type	Cardinality
String	1..1

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity

500: instanceFault
501: notImplemented
503: serviceUnavailable
504: gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

instance

Data Type	Cardinality	Parent Element	Child Element(s)
		None	created flavor id links name status updated volume privateAddress publicAddress privateIp publicIp port characterSet collate autoMinorVersionUpgrade availabilityZone backupRetentionPeriod engine engineVersion engineMinorVersion masterUserName multiAZ parameterGroupId pendingModifiedValues preferredBackupWindow preferredMaintenanceWindow autoMaintenance publiclyAccessible readReplicaDBInstanceIdentifiers readReplicaSrcDBInstanceIdentifier secondaryAvailabilityZone replicaStatus subnetGroupId securityGroupIds downloadLogExtension readReplicaDBInstances readReplicaSrcDBInstance

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date		instance	None

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor structures		instance	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

links

URI to the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

status

Status of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

updated

Update date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date		instance	None

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		instance	None

privateAddress

Internal address to the Virtual server where the virtual database server is running (FQDN format)

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publicAddress

Global address to the Virtual server where the virtual database server is running (FQDN format)

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

privateIp

Internal IP address to the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publicIp

Global IP address of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

port

Port number

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		instance	None

characterSet

Database encoding

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

collate

Database collating sequence

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

autoMinorVersionUpgrade

Flag to indicate whether to perform automatic minor version upgrade

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

availabilityZone

Availability zone where the virtual database server is running

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

backupRetentionPeriod

Backup retention period

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		instance	None

engine

Database type

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

engineVersion

Database version

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

engineMinorVersion

Database minor version

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

masterUserName

Administrator user name

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

multi

Multi-DB option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

multiAZ

Multi-availability zone option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

parameterGroupId

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

pendingModifiedValues

List of parameters that will be updated at the next restart

Data Type	Cardinality	Parent Element	Child Element(s)
PendingModifiedValues structures		instance	None

preferredBackupWindow

Backup time slot

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

preferredMaintenanceWindow

Maintenance time slot

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

autoMaintenance

Whether automatic maintenance is performed or not

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

publiclyAccessible

Whether connection from the Internet is possible during deployment of the virtual database server

true: Public IP address will be allocated.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

readReplicaDBInstanceIdentifiers

This parameter has been integrated into readReplicaDBInstances. It will always return an empty list.

Data Type	Cardinality	Parent Element	Child Element(s)
String list		instance	None

readReplicaSrcDBInstanceIdentifier

This parameter has been integrated into readReplicaSrcDBInstance. It will always return null.

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

secondaryAvailabilityZone

If the duplication option is "true":

Availability zone where the secondary virtual database server is running

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

replicaStatus

Status of the read replica

Replicating or Error

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

subnetGroupId

ID of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

securityGroupIds

List of VPC security group IDs

Data Type	Cardinality	Parent Element	Child Element(s)
String list		instance	None

downloadLogExtension

Log extension feature

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

readReplicaDBInstances

Read replica instance associated with this database virtual server

Operations performed on the read replica are reflected asynchronously.

Data Type	Cardinality	Parent Element	Child Element(s)
ReadReplicaDBInstance Structure list		instance	region tenantId id

readReplicaSrcDBInstance

Source database virtual server

Operations performed on the source database virtual server are reflected asynchronously.

Data Type	Cardinality	Parent Element	Child Element(s)
ReadReplicaSrcDBInstance Structure list		instance	region tenantId id

flavor

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id links

id

Flavor ID

Data Type	Cardinality	Parent Element	Child Element(s)
String		Flavor	None

links

Flavor URI

Data Type	Cardinality	Parent Element	Child Element(s)
String		Flavor	None

pendingModifiedValues

Data Type	Cardinality	Parent Element	Child Element(s)
		None	volume backupRetentionPeriod flavor id name parameterGroupId engineVersion masterUserName masterUserPassword multiAZ port engineMinorVersion securityUpdate

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		PendingModifiedValues	None

backupRetentionPeriod

Backup retention period

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor		PendingModifiedValues	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

parameterGroupId

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

engineVersion

Database version

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

masterUserName

Master user name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

masterUserPassword

Password of the master user of the virtual database server

For security reasons, return values are masked as "***".

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

multi

Multi-DB option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

multiAZ

Multi-availability zone option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

port

Port number

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		PendingModifiedValues	None

engineMinorVersion

Minor version of the database

When a minor version of the database is released, you can apply patches.

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

securityUpdate

Minor version of the database

When a minor version of the database is released, you can apply patches.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

volume

Data Type	Cardinality	Parent Element	Child Element(s)
		None	size type

size

Size of the data storage

Data Type	Cardinality	Parent Element	Child Element(s)
String		Volume	None

type

Type of the data storage

Data Type	Cardinality	Parent Element	Child Element(s)
String		Volume	None

region

Region of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

tenantId

Project ID of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

id

ID of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

region

Region of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

tenantId

Project ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

id

ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

Example of Request

```
{
  "action": {"restoreSnapshot": ""}
  "snapshot": {"id": "snap1"},
  "instance": {
    "flavorRef": "1",
    "volume": {
      "size": 100
    },
    "name": "json-rack-instance",
    "availabilityZone": "jp-east-1a",
    "multiAZ": true,
    "subnetGroupId": "subnetGroup1",
    "port": 1234,
    "preferredBackupWindow": "17:00-18:00",
    "preferredMaintenanceWindow": "Sun:19:00-Sun:20:00",
    "preferredRecoveryTime": {
      "applyImmediately": true,
    },
    "autoMaintenance": true,
    "publiclyAccessible": true,
    "securityGroupIds": [
      {"securityGroupId": "secid1"},
      {"securityGroupId": "secid2"}
    ],
    "parameterGroupId": "paramid1",
  }
}
```

Example of response

```
{
  "instance": {
    "created": "2013-03-18T19:09:17",
    "flavor": {
      "id": "1",
      "links": [
```

```

        {
          "href": "http://database. {region-name}. tps5. fujitsu. com/v1. 0/1234/flavors/1",
          "rel": "self"
        }
      ],
      "id": "44b277eb-39be-4921-be31-3d61b43651d7",
      "links": [
        {
          "href": "http://database. {region-name}. tps5. fujitsu. com/v1. 0/1234/
instances/44b277eb-39be-4921-be31-3d61b43651d7",
          "rel": "self"
        },
      ],
      "status": "BUILD"
      "volume": {
        "size": 20,
        "type": "M1"
      }
      "name": "json-rack-instance",
      "privateAddress": "fujitsu. s5. dbaas. a23w4e5r6tg7yuhjik",
      "privateIp": "10. 125. 52. 214",
      "port": 26500,
      "characterSet": "UTF-8",
      "collate": "C",
      "autoMinorVersionUpgrade": true,
      "availabilityZone": "jp-east-1a",
      "backupRetentionPeriod": 10,
      "engine": "enterprisepostgres",
      "engineVersion": "9. 6",
      "engineMinorVersion": "0",
      "multiAZ": true,
      "parameterGroupId": "paramid1",
      "preferredBackupWindow": "17:00-18:00",
      "preferredMaintenanceWindow": "Sun: 19:00-Sun: 20:00",
      "preferredRecoveryTime": {
        "applyImmediately": true,
        "time": none,
      },
      "autoMaintenance": true,
      "downloadLogExtension": false,
      "publiclyAccessible": true,
      "subnetGroupId": "subnetGroup1",
      "securityGroupIds": [
        {"securityGroupId": "secid1"},
        {"securityGroupId": "secid2"}
      ],
      "readReplicaDBInstances": [],
      "readReplicaSrcDBInstance": {},
      "replicaStatus": null,
      "readReplicaDBInstanceIdentifiers": [],
      "readReplicaSrcDBInstanceIdentifier": null
    }
  }
}

```

1.2.2.5 Restore virtual database server to point in time (POST / v1.0/{tenantId}/instances/{instanceId})

Restores a virtual database server from an automatic backup (a backup taken automatically when a virtual database server is created, based on the setting conditions of the system).



- When restoring a virtual database server by recovering to a point in time, a new virtual database server will be created. The original virtual database server, of which the DB snapshot was taken, will not be overwritten. As this is a new virtual database server, new FQDN/IP settings will be configured, and it will be billed separately from the original virtual database server.
- When creating a virtual database server from a DB snapshot manually created using DB snapshot ([API \(Create DB snapshot \(POST /v1.0/{tenantId}/snapshots\)\)](#)), use POST /v1.0/{tenantId}/instances described in [Restore virtual database server from DB snapshot \(POST /v1.0/{tenantId}/instances\)](#).

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{instanceId}

ID of the virtual database server

If there is a DB instance from which the restore originated, the same ID can not be specified.

Data Type	Cardinality
String	1..1

Request Parameters

action

Data Type	Cardinality	Parent Element	Child Element(s)
		None	restoretointime

restoretointime

If this parameter is defined, restore the database virtual server from the automatic backup (the backup automatically acquired by the system according to the setting condition at the time of creation of the database virtual server).

Data Type	Cardinality	Parent Element	Child Element(s)
None	1..1	action	None

restore

Data Type	Cardinality	Parent Element	Child Element(s)
		None	restoreTime useLatestRestorableTime

restoreTime

Time to be restored to

Note 1: Specify a time that is earlier than the most recent restorable time.

Note 2: Specify the time in UTC.

Example: 2009-09-07T23:45:00Z

Note 1: An error will be returned if no value is specified when UseLatestRestorableTime is set to "false".

Note 2: No value can be specified when UseLatestRestorableTime is set to "true".

Data Type	Cardinality	Parent Element	Child Element(s)
DateTime	0..1	restore	None

useLatestRestorableTime

Restores a virtual database server from the last backup.

Default: false

This parameter cannot be specified if RestoreTime is specified.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	restore	None

instance

Data Type	Cardinality	Parent Element	Child Element(s)
		None	flavorRef volume id name description availabilityZone subnetGroupId multi multiAZ port preferredBackupWindow preferredMaintenanceWindow preferredRecoveryTime autoMaintenance publiclyAccessible securityGroupIds parameterGroupId backupRetentionPeriod autoMinorVersionUpgrade masterUserPassword downloadLogExtension

flavorRef

ID of the predefined hardware resource list

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

volume

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures	1..1	Instance	size type

size

Size of the data disk

10 to 10240 (GB)

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	1..1	volume	None

type

Disk type

M1

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	volume	None

id

ID of the virtual database server

Default: random value

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

name

Name of the virtual database server

Default value: Random value

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

description

Description of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

availabilityZone

Availability zone where the instance will be created

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	Instance	None

subnetGroupId

Subnet group where the virtual database server will be deployed to.

The subnet group must contain multiple subnets that belong to different availability zones. The subnets must belong to at least two different availability zones.

Default: default subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

multi

Multi-DB option

true | false

Default values: false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

multiAZ

Multi-availability zone option

true | false

Default value: false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

port

Port number

1024 to 32767

Default value: 26500

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	Instance	None

preferredBackupWindow

Backup time slot

Format: hh24:mi-hh24:mi

Default:

A random 30-minute period within the 10 hour-period prescribed for each region

Specify the time slot in which to perform daily backup, if automatic backup is enabled.

A time slot of at least 30 minutes must be specified.

- East Japan (east-1): 17:00-03:00 UTC
- West Japan (west-1): 17:00-03:00 UTC

Specify the time in UTC.

It is not possible to specify a time slot that overlaps with PreferredMaintenanceWindow.
Backup may take longer than 30 minutes in some conditions.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

preferredMaintenanceWindow

Maintenance time slot

Format:

ddd:hh24:mi-ddd:hh24:mi

Default:

A random 30-minute period within the 10-hour period prescribed for each region (the day of the week is also determined randomly) Note: Specify the time slot in which to perform weekly maintenance.

Specify a time slot from 30 minutes to 23 hours 30 minutes.

A 30-minute period within the 10-hour period prescribed for each region will be randomly determined (the day of the week is also determined randomly).

Example: Sun:05:00-Sun:06:00

Value of day portion: Mon, Tue, Wed, Thu, Fri, Sat, Sun

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

preferredRecoveryTime

Time to start automatic recovery

This parameter can only be specified if redundancy configuration is used for the virtual database server (this can only be specified if multi = true)

Data Type	Cardinality	Parent Element	Child Element(s)
preferredRecoveryTime structure	0..1	preferredRecoveryTime structure	0..1

applyImmediately

If this parameter is defined, automatic recovery will be immediately performed when DB operation is degraded to a single node.

It is only possible to specify "applyImmediately" or "time" in the "preferredRecoveryTime" structure.

default value: true

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	preferredRecoveryTime	None

time

If this parameter is defined, automatic recovery will be performed at the time specified in the parameter value.

It is only possible to specify "applyImmediately" or "time" in the "preferredRecoveryTime" structure.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	preferredRecoveryTime	None

autoMaintenance

Whether automatic maintenance is performed or not

true | false

Default value : true

true: Automatic maintenance is performed.

False: Automatic maintenance is not performed.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

publiclyAccessible

Whether connection from the Internet is possible during deployment of the virtual database server

true | false

Default value: false

true: External Internet connections are permitted.

false: Only access from within the VPC is permitted.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

securityGroupIds.

Name of the VPC security group

Default value: Default Security Group of the subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String list	0..1	Instance	None

parameterGroupId

Name of the DB parameter group

Default value: default parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

backupRetentionPeriod

Backup retention period

Note: Automatic backup will not be performed when the value is 0.

0 to 10

Default: 1


Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	Instance	None

autoMinorVersionUpgrade

Automatic minor version upgrade

true | false

Default value : true

 This parameter has no effect.
Restriction To apply a minor version upgrade, execute API "Start/Restart the virtual database server" with the parameter "applyPatch" set to true.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

masterUserName

- Specify alphanumeric characters and underscores only.
- The first character must be a letter or an underscore.
- Up to 63 characters.
- Specify the same value as the masterUserName of the restoration source.

Default value: postgres

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Instance	None

masterUserPassword

Administrator password

- Alphanumeric characters and symbols other than ' (single quotation mark) can be used
- Up to 1,024 characters.

When restoreTime has been specified, specify the value for masterUserPassword using the password for the virtual database server at the specified point in time. When "true" has been specified for useLatestRestorableTime, specify the value for masterUserPassword using the current password for the virtual database server.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	Instance	None

downloadLogExtension

Log extension feature

true | false

Default value: false

true: Enables log extension. When this function is enabled, the disk capacity used for managing log information increases by approximately 10% of the DB log size.

false: Disables log extension.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	Instance	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

instance

Data Type	Cardinality	Parent Element	Child Element(s)
		None	created flavor id links name status updated volume privateAddress publicAddress privateIp publicIp port characterSet collate autoMinorVersionUpgrade availabilityZone backupRetentionPeriod engine engineVersion engineMinorVersion masterUserName multi multiAZ parameterGroupId pendingModifiedValues preferredBackupWindow preferredMaintenanceWindow autoMaintenance publiclyAccessible readReplicaDBInstanceIdentifiers readReplicaSrcDBInstanceIdentifier secondaryAvailabilityZone replicaStatus subnetGroupId securityGroupIds downloadLogExtension readReplicaDBInstances readReplicaSrcDBInstance

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date		instance	None

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor structures		instance	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

links

URI to the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

status

Status of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

updated

Update date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date		instance	None

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		instance	None

privateAddress

Address to the Virtual server that is running the virtual database server (FQDN format)

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publicAddress

Global address to the Virtual server where the virtual database server is running (FQDN format)

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

privateIp

Internal IP address to the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publicIp

Global IP address of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

port

Port number

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		instance	None

characterSet

Database encoding

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

collate

Database collating sequence

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

autoMinorVersionUpgrade

Flag to indicate whether to perform automatic minor version upgrade

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

availabilityZone

Availability zone where the virtual database server is running

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

backupRetentionPeriod

Backup retention period

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		instance	None

engine

Database type

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

engineVersion

Database version

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

engineMinorVersion

Database minor version

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

masterUserName

Administrator user name

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

multi

Multi-DB option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

multiAZ

Multi-availability zone option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

parameterGroupId

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

pendingModifiedValues

List of parameters that will be updated at the next restart

Data Type	Cardinality	Parent Element	Child Element(s)
PendingModifiedValues structures		instance	None

preferredBackupWindow

Backup time slot

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

preferredMaintenanceWindow

Maintenance time slot

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publiclyAccessible

Whether connection from the Internet is possible during deployment of the virtual database server

true: Public IP address will be allocated.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

readReplicaDBInstanceIdentifiers

This parameter has been integrated into readReplicaDBInstances. It will always return an empty list.

Data Type	Cardinality	Parent Element	Child Element(s)
String list		instance	None

readReplicaSrcDBInstanceIdentifier

This parameter has been integrated into readReplicaSrcDBInstance. It will always return null.

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

secondaryAvailabilityZone

If the duplication option is "true":

Availability zone where the secondary virtual database server is running

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

replicaStatus

Status of the read replica

Replicating or Error

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

subnetGroupld

ID of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

securityGrouplds

List of VPC security group IDs

Data Type	Cardinality	Parent Element	Child Element(s)
String list		instance	None

downloadLogExtension

Log extension feature

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

readReplicaDBInstances

Read replica instance associated with this database virtual server

Operations performed on the read replica are reflected asynchronously.

Data Type	Cardinality	Parent Element	Child Element(s)
ReadReplicaDBInstance Structure list		instance	region tenantId id

readReplicaSrcDBInstance

Source database virtual server

Operations performed on the source database virtual server are reflected asynchronously.

Data Type	Cardinality	Parent Element	Child Element(s)
ReadReplicaSrcDBInstance Structure list		instance	region tenantId id

flavor

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id links

id

Flavor ID

Data Type	Cardinality	Parent Element	Child Element(s)
String		Flavor	None

links

Flavor URI

Data Type	Cardinality	Parent Element	Child Element(s)
String		Flavor	None

pendingModifiedValues

Data Type	Cardinality	Parent Element	Child Element(s)
		None	volume backupRetentionPeriod flavor id name parameterGroupId engineVersion masterUserName masterUserPassword multi multiAZ port engineMinorVersion securityUpdate

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		PendingModifiedValues	None

backupRetentionPeriod

Backup retention period

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor		PendingModifiedValues	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

parameterGroupId

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

engineVersion

Database version

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

masterUserName

Master user name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

masterUserPassword

Password of the master user of the virtual database server

For security reasons, return values are masked as "****".

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

multi

Multi-DB option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

multiAZ

Multi-availability zone option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

port

Port number

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		PendingModifiedValues	None

engineMinorVersion

Minor version of the database

When a minor version of the database is released, you can apply patches.

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

securityUpdate

Presence/absence of security update

Patch application can be implemented when security update is released.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

volume

Data Type	Cardinality	Parent Element	Child Element(s)
		None	size type

size

Size of the data storage

Data Type	Cardinality	Parent Element	Child Element(s)
String		Volume	None

type

Type of the data storage

Data Type	Cardinality	Parent Element	Child Element(s)
String		Volume	None

region

Region of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

tenantId

Project ID of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

id

ID of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

region

Region of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

tenantId

Project ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

id

ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

Example of Request

```
{
  "action":{"restoretopointintime":""}
  "restoreTime":"2014-07-10 10:00:00",
  "instance": {
    "flavorRef":"1",
    "name":"json-rack-instance",
    "volume": {
      "size":100
    },
    "availabilityZone":"jp-east-1a",
    "multi":true
    "multiAZ":true,
    "subnetGroupId":"subnetGroup1",
    "port":1234,
    "preferredBackupWindow":"17:00-18:00",
    "preferredMaintenanceWindow":"Sun:19:00-Sun:20:00",
    "preferredRecoveryTime": {
      "applyImmediately" : true,
    },
    "autoMaintenance":true,
    "publiclyAccessible":true,
    "securityGroupIds":[
      {"securityGroupId":"secid1"},
      {"securityGroupId":"secid2"}
    ],
    "parameterGroupId":"paramid1",
  }
}
```

Example of Response

```
{
  "instance": {
    "created":"2013-03-18T19:09:17",
    "flavor": {
      "id": "1",
      "links": [
        {
          "href": "http://database. {region-name}. tps5. fujitsu. com/v1. 0/1234/flavors/1",
          "rel": "self"
        }
      ]
    },
    "id":"44b277eb-39be-4921-be31-3d61b43651d7",
    "links": [
      {
        "href":"http://database. {region-name}. tps5. fujitsu. com/v1. 0/1234/instances/44b277eb-39be-4921-be31-3d61b43651d7",
        "rel": "self"
      }
    ],
    "status": "BUILD"
    "volume": {
      "size": 20,
      "type": "M1"
    }
  },
  "name":"json-rack-instance",
  "publicAddress":"fujitsu. s5. dbaas. a23w4e5r6tg7yuhjik",
  "ip":"10. 125. 52. 214",
  "port":26500,
  "characterSet":"UTF-8",
  "collate":"C",
  "autoMinorVersionUpgrade":true,
}
```

```

"availabilityZone": "jp-east-1a",
"backupRetentionPeriod": 10,
"engine": "enterprisepostgres",
"engineVersion": "9.6",
"engineMinorVersion": "0",
"multiAZ": true,
"parameterGroupId": "paramid1",
"preferredBackupWindow": "17:00-18:00",
"preferredMaintenanceWindow": "Sun:19:00-Sun:20:00",
"preferredRecoveryTime": {
  "applyImmediately": true,
  "time": none,
},
"autoMaintenance": true,
"downloadLogExtension": false,
"publiclyAccessible": true,
"subnetGroupId": "subnetGroup1",
"securityGroupIds": [
  {"securityGroupId": "secid1"},
  {"securityGroupId": "secid2"}
],
"readReplicaDBInstances": [],
"readReplicaSrcDBInstance": {},
"replicaStatus": null,
"readReplicaDBInstanceIdentifiers": [],
"readReplicaSrcDBInstanceIdentifier": null
}
}

```

1.2.2.6 Start virtual database server (POST /v1.0/{tenantId}/instances/{instanceId}/action)

Starts a virtual database server.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{instanceId}

ID of the virtual database server

Data Type	Cardinality
String	1..1

Request Parameters

action

Data Type	Cardinality	Parent Element	Child Element(s)
		None	start

start

Starts a virtual database server.

Data Type	Cardinality	Parent Element	Child Element(s)
None	1..1	action	None

applyPatch

If set to true, update will be performed if security update or minor version upgrade is possible.

true | false

Default value: false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	None	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

n/a

Example of Request

```
{  
  "start" : ""  
}
```

1.2.2.7 Stop virtual database server (POST /v1.0/{tenantId}/instances/{instanceId}/action)

Stops the virtual database server.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{instanceId}

ID of the virtual database server

Data Type	Cardinality
String	1..1

Request Parameters

action

Data Type	Cardinality	Parent Element	Child Element(s)
		None	stop

stop

Stops the virtual database server.

Data Type	Cardinality	Parent Element	Child Element(s)
None	1..1	action	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

n/a

Example of Request

```
{  
  "stop" : ""  
}
```

1.2.2.8 Restart virtual database server (POST /v1.0/{tenantId}/instances/{instanceId}/action)

Restarts a virtual database server.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{instanceId}

ID of the virtual database server

Data Type	Cardinality
String	1..1

Request Parameters

action

Data Type	Cardinality	Parent Element	Child Element(s)
		None	reboot

reboot

Stops the virtual database server.

A read replica instance starts if this parameter is defined.

Data Type	Cardinality	Parent Element	Child Element(s)
None	0..1	action	None

failover

Failover occurs if this parameter is set to "true" and redundancy configuration is used for the virtual database server.

true | false

Default: false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	None	None

applyPatch

If set to true, update will be performed if security update or minor version upgrade is possible.

true | false

Default value: false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	None	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

n/a

Example of Request

```
{
  "reboot": ""
  "failover": false
}
```

1.2.2.9 Create read replica virtual database server (POST /v1.0/{tenantId}/instances)

Creates a read replica virtual database server.



Note

The database virtual server that is used as the source for a reference replica database virtual server must meet the following conditions:

- "multi" is "true"
- backupRetentionPeriod is 1 or more
- "engine" is "enterprisepostgres"



Note

Up until November 2018, POST /v1.0/{tenantId}/instances/{instanceId} was used as the API for creating reference replicas, however do not use this API as it is now deprecated. Use this API instead.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request Parameters

action

Data Type	Cardinality	Parent Element	Child Element(s)
		None	readreplica

readreplica

A read replica instance starts if this parameter is defined.

Data Type	Cardinality	Parent Element	Child Element(s)
None	1..1	action	None

instance

Data Type	Cardinality	Parent Element	Child Element(s)
		None	flavorRef volume id name description availabilityZone subnetGroupld port preferredMaintenanceWindow preferredRecoveryTime autoMaintenance publiclyAccessible securityGrouplds parameterGroupld downloadLogExtension readReplicaSrcDBInstance

flavorRef

ID of the predefined hardware resource list

Specify an existing flavor ID

Default value: Value of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

volume

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures	0..1	instance	size type

size

Size of the data disk

10 to 10240 (GB)

Default value: Value of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	volume	None

type

Disk type

M1

Default value: Value of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	volume	None

id

ID of the virtual database server

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 63 characters

Default value: Value of the source database virtual server. However, if the value is the same, random value

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

name

Name of the virtual database server

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 255 characters

Default value: Value of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

description

Description of the database virtual server

Up to 1,024 characters.

Default value: Value of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

availabilityZone

Availability zone where the instance will be created

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	instance	None

subnetGroupId

Subnet group where the virtual database server will be deployed to

When using the multi-availability zone option, the subnet group must contain a set of subnets that include at least two availability zones.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	instance	None

port

Port number

1024 to 32767

Default value: Value of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	instance	None

preferredMaintenanceWindow

Specify the time slot in which to perform weekly maintenance.

Specify a time slot from 30 minutes to 23 hours 30 minutes.

Format: ddd:hh24:mi-ddd:hh24:mi

Example: Sun:05:00-Sun:06:00

Value of day portion: Mon, Tue, Wed, Thu, Fri, Sat, Sun

Default value: Value of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

preferredRecoveryTime

Time to start automatic recovery

Data Type	Cardinality	Parent Element	Child Element(s)
preferredRecoveryTime Structure	0..1	instance	applyImmediately time

applyImmediately

If this parameter is defined, automatic recovery will be performed immediately when an error occurs on the reference replica database virtual server.

It is only possible to specify either "applyImmediately" or "time" in the "preferredRecoveryTime" structure.

Default value: Value of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	preferredRecoveryTime	None

time

If this parameter is defined, automatic recovery will be performed at the time specified in the parameter value.

It is only possible to specify either "applyImmediately" or "time" in the "preferredRecoveryTime" structure.

Default value: Value of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	preferredRecoveryTime	None

autoMaintenance

Whether automatic maintenance is performed or not

true | false

true: Automatic maintenance is performed.

False: Automatic maintenance is not performed.

Default value: Value of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	instance	None

publiclyAccessible

Whether connection from the Internet is possible during deployment of the virtual database server

true | false

true: External Internet connections are permitted.

false: Only access from within the VPC is permitted.

Default value: Value of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	instance	None

securityGroupIds.

Name of the VPC security group

VPC security group list

Default value: default security group

Note: Specify the VPC security group.

Data Type	Cardinality	Parent Element	Child Element(s)
String list	0..1	instance	None

parameterGroupId

Parameter group

Default value: default parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	instance	None

downloadLogExtension

Log extension feature

true | false

true: Enables log extension. When this function is enabled, the disk capacity used for managing log information increases by approximately 10% of the DB log size.

false: Disables log extension.

Default value : Value of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	instance	None

readReplicaSrcDBInstance

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	instance	region tenantId id

region

Region of the source database virtual server

Default value: Region where the API is executed

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	readReplicaSrcDBInstance	None

tenantId

Project ID of the source database virtual server

Default value: ID of the project where the API is executed

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	readReplicaSrcDBInstance	None

Id

ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	readReplicaSrcDBInstance	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented

503: serviceUnavailable
504: gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

instance

Data Type	Cardinality	Parent Element	Child Element(s)
		None	created flavor id links name status updated volume privateAddress publicAddress privateIp publicIp port characterSet collate autoMinorVersionUpgrade availabilityZone backupRetentionPeriod engine engineVersion engineMinorVersion masterUserName parameterGroupId pendingModifiedValues preferredBackupWindow preferredMaintenanceWindow publiclyAccessible readReplicaDBInstanceIdentifiers readReplicaSrcDBInstanceIdentifier replicaStatus subnetGroupId securityGroupIds downloadLogExtension readReplicaDBInstances readReplicaSrcDBInstance

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date		instance	None

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor structures		instance	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

links

URI to the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

status

Status of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

updated

Update date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date		instance	None

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		instance	None

privateAddress

Internal address to the Virtual server where the virtual database server is running (FQDN format)

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publicAddress

Global address to the Virtual server where the virtual database server is running (FQDN format)

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

privateIp

Internal IP address to the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publicIp

Global IP address of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

port

Port number

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		instance	None

characterSet

Database encoding

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

collate

Database collating sequence

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

autoMinorVersionUpgrade

Flag to indicate whether to perform automatic minor version upgrade

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

availabilityZone

Availability zone where the virtual database server is running

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

backupRetentionPeriod

Backup retention period

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		instance	None

engine

Database type

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

engineVersion

Database version

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

engineMinorVersion

Database minor version

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

masterUserName

Administrator user name

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

parameterGroupld

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

pendingModifiedValues

List of parameters that will be updated at the next restart

Data Type	Cardinality	Parent Element	Child Element(s)
PendingModifiedValues structures		instance	None

preferredBackupWindow

Backup time slot

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

preferredMaintenanceWindow

Maintenance time slot

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publiclyAccessible

Whether connection from the Internet is possible during deployment of the virtual database server

true: Public IP address will be allocated.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

readReplicaDBInstanceIdentifiers

This parameter has been integrated into readReplicaDBInstances. It will always return an empty list.

Data Type	Cardinality	Parent Element	Child Element(s)
String list		instance	None

readReplicaSrcDBInstanceIdentifier

This parameter has been integrated into readReplicaSrcDBInstance. It will always return null.

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

replicaStatus

Status of the read replica

Replicating or Error

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

subnetGroupId

ID of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

securityGroupIds

List of VPC security group IDs

Data Type	Cardinality	Parent Element	Child Element(s)
String list		instance	None

downloadLogExtension

Log extension feature

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

readReplicaDBInstances

Read replica instance associated with this database virtual server

Operations performed on the read replica are reflected asynchronously.

Data Type	Cardinality	Parent Element	Child Element(s)
ReadReplicaDBInstance Structure list		instance	region tenantId id

readReplicaSrcDBInstance

Source database virtual server

Operations performed on the source database virtual server are reflected asynchronously.

Data Type	Cardinality	Parent Element	Child Element(s)
ReadReplicaSrcDBInstance Structure list		instance	region tenantId id

flavor

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id links

id

Flavor ID

Data Type	Cardinality	Parent Element	Child Element(s)
String		Flavor	None

links

Flavor URI

Data Type	Cardinality	Parent Element	Child Element(s)
String		Flavor	None

pendingModifiedValues

Data Type	Cardinality	Parent Element	Child Element(s)
		None	volume backupRetentionPeriod flavor id name parameterGroupId engineVersion masterUserName masterUserPassword multiAZ port engineMinorVersion securityUpdate

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		PendingModifiedValues	None

backupRetentionPeriod

Backup retention period

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor		PendingModifiedValues	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

parameterGroupId

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

engineVersion

Database version

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

masterUserName

Master user name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

masterUserPassword

Password of the master user of the virtual database server

For security reasons, return values are masked as "***".

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

port

Port number

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		PendingModifiedValues	None

engineMinorVersion

Minor version of the database

When a minor version of the database is released, you can apply patches.

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

securityUpdate

Presence/absence of security update

Patch application can be implemented when security update is released.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

volume

Data Type	Cardinality	Parent Element	Child Element(s)
		None	size type

size

Size of the data storage

Data Type	Cardinality	Parent Element	Child Element(s)
String		Volume	None

type

Type of the data storage

Data Type	Cardinality	Parent Element	Child Element(s)
String		Volume	None

region

Region of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

tenantId

Project ID of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

id

ID of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

region

Region of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

tenantId

Project ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

id

ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

Example of Request

```
{
  "action": {"readreplica": ""},
  "instance": {
    "availabilityZone": "jp-west-2a",
    "name": "replica-instance-name",
    "subnetGroupId": "replica-subnetgroup-id",
    "securityGroupIds": [{"securityGroupId": "secid1"}],
    "id": "replica-instance-id",
    "readReplicaSrcDBInstance": {
      "region": "jp-east-1",
      "tenantId": "44b277eb-39be-4921-be31-3d61b43651d7",
      "id": "test-instance-id"
    }
  }
}
```

Example of Response

```
{
  "instance": {
    "created": "2013-03-18T19:09:17",
    "flavor": {"id": "1", "links": [{"href": "http://database.{region-name}.tps5.fujitsu.com/v1.0/1234/flavors/1", "rel": "self"}]},
    "id": "44b277eb-39be-4921-be31-3d61b43651d7",
    "links": [{"href": "http://database.{region-name}.tps5.fujitsu.com/v1.0/1234/instances/44b277eb-39be-4921-be31-3d61b43651d7", "rel": "self"}],
    "status": "BUILD",
    "volume": {"size": 20, "type": "M1"}
    "name": "json-rack-instance",
    "address": "fujitsu.s5.dbaas.a23w4e5r6tg7yuhjik",
    "ip": "10.125.52.214",
    "port": 26500,
    "characterSet": "UTF-8",
    "collate": "C",
    "autoMinorVersionUpgrade": true,
    "availabilityZone": "az-1",
    "backupRetentionPeriod": 10,
    "engine": "enterprisepostgres",
    "engineVersion": "9.6",
    "engineMinorVersion": "0",
  }
}
```

```

"multiAZ" : true,
"parameterGroupId" : "paramid1",
"preferredBackupWindow" : 17:00-18:00,
"preferredMaintenanceWindow" : Sun:19:00-Sun:20:00,
"preferredRecoveryTime" : {"applyImmediately" : true, "time" : none},
"downloadLogExtension" : false,
"publiclyAccessible" : true,
"subnetGroupId" : "subnetGroup1",
"securityGroupIds" : [{"securityGroupId" : "secid1"}, {"securityGroupId" : "secid2"}],
"readReplicaDBInstances" : [],
"readReplicaSrcDBInstance" : {"region": "jp-east-1", "tenantId": "29320d5e-dd29-425c-
b386-3cbb2754ad03", "id": "source-dbinstance"},
"replicaStatus": "Replicating",
"readReplicaDBInstanceIdentifiers": [],
"readReplicaSrcDBInstanceIdentifier": null
}
}

```

1.2.2.10 List virtual database servers (GET /v1.0/{tenantId}/instances)

Lists information for all virtual database servers.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request parameters

limit

Number of elements to display

From 20 to 100

Default:20

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	none	None

marker

A pagination token used to establish the starting point for retrieving the list.

Specify the ID of the last element returned in the previous list.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	None	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

instances

List of virtual database servers

Data Type	Cardinality	Parent Element	Child Element(s)
DBInstance structures list		None	flavor id links name status volume

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor structures		instances	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instances	None

links

URI to the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instances	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instances	None

status

Status

Data Type	Cardinality	Parent Element	Child Element(s)
String		instances	None

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		instances	None

Example of Response

```

{ "instances": [
  {
    "instance": {
      "flavor": {
        "id": "1",
        "links": [
          {
            "href": "http://database. {region-name}. tps5. fujitsu. com/v1. 0/1234/
flavors/1",
            "rel": "self"
          },
        ]
      },
      "id": "098653ba-218b-47ce-936a-e0b749101f81",
      "links": [
        {
            "href": "https:// database. {region-name}. tps5. fujitsu. com /v1. 0/1234/
instances/0986rack_instance",
            "rel": "self"
          }
        ],
        "name": "test-instance1",
        "status": "ACTIVE",
        "volume": {
          "size": 20,
          "type": "M1"
        }
      },
      "instance": {
        "flavor": {
          "id": "1",
          "links": [
            {
              "href": "https:// database. {region-name}. tps5. fujitsu. com /v1. 0/1234/
flavors/1",
              "rel": "self"
            },
          ],
        },
        "id": "44b277eb-39be-4921-be31-3d61b43651d7",
        "links": [
          {

```

```

    "href": "https://database.{region-name}.tps5.fujitsu.com/v1.0/1234/instances/44b277eb-39be-4921-be31-3d61b43651d7",
    "rel": "self"
  }
],
"name": "json-rack-instance",
"status": "ACTIVE",
"volume": {
  "size": 20,
  "type": "M1"
}
}
]
}

```

1.2.2.11 Show virtual database server details (GET /v1.0/{tenantId}/instances/{instanceId})

Shows details of a virtual database server.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{instanceId}

ID of the virtual database server

Data Type	Cardinality
String	1..1

Request Parameters

n/a

Response headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
404:	itemNotFound
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response elements
instance

Data Type	Cardinality	Parent Element	Child Element(s)
		None	created flavor id links name status updated volume privateAddress publicAddress privateIp publicIp port characterSet collate autoMinorVersionUpgrade availabilityZone backupRetentionPeriod engine engineVersion engineMinorVersion masterUserName parameterGroupId pendingModifiedValues preferredBackupWindow preferredMaintenanceWindow publiclyAccessible readReplicaDBInstanceIdentifiers readReplicaSrcDBInstanceIdentifier secondaryAvailabilityZone replicaStatus subnetGroupId securityGroupIds downloadLogExtension readReplicaDBInstances readReplicaSrcDBInstance

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date		instance	None

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor structures		instance	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

links

URI to the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

status

Status of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

updated

Update date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date		instance	None

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		instance	None

privateAddress

Internal address to the Virtual server where the virtual database server is running (FQDN format)

Data Type	Cardinality	Parent Element	Child Element(s)
String		Instance	None

publicAddress

Global address to the Virtual server where the virtual database server is running (FQDN format)

Data Type	Cardinality	Parent Element	Child Element(s)
String		Instance	None

privateIp

Internal IP address to the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publicIp

Global IP address of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

port

Port number

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		instance	None

characterSet

Database encoding

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

collate

Database collating sequence

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

autoMinorVersionUpgrade

Flag to indicate whether to perform automatic minor version upgrade

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

availabilityZone

Availability zone where the virtual database server is running

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

backupRetentionPeriod

Backup retention period

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		instance	None

engine

Database type

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

engineVersion

Database version

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

engineMinorVersion

Database minor version

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

masterUserName

Administrator user name

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

multi

Multi-DB option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

multiAZ

Multi-availability zone option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

parameterGroupId

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

pendingModifiedValues

List of parameters that will be updated at the next restart

Data Type	Cardinality	Parent Element	Child Element(s)
PendingModifiedValues structures		instance	None

preferredBackupWindow

Backup time slot

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

preferredMaintenanceWindow

Maintenance time slot

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

publiclyAccessible

Whether connection from the Internet is possible during deployment of the virtual database server

true: Public IP address will be allocated.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

readReplicaDBInstanceIdentifiers

This parameter has been integrated into readReplicaDBInstances. It will always return an empty list.

Data Type	Cardinality	Parent Element	Child Element(s)
String list		instance	None

readReplicaSrcDBInstanceIdentifier

This parameter has been integrated into readReplicaSrcDBInstance. It will always return null.

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

secondaryAvailabilityZone

If the duplication option is "true":

Availability zone where the secondary virtual database server is running

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

replicaStatus

Replicating or Error

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

subnetGroupId

ID of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String		instance	None

securityGroupIds

List of VPC security group IDs

Data Type	Cardinality	Parent Element	Child Element(s)
String list		instance	None

downloadLogExtension

Log extension feature

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		instance	None

readReplicaDBInstances

Read replica instance associated with this database virtual server

Operations performed on the read replica are reflected asynchronously.

Data Type	Cardinality	Parent Element	Child Element(s)
ReadReplicaDBInstance Structure list		instance	region tenantId id

readReplicaSrcDBInstance

Source database virtual server

Operations performed on the source database virtual server are reflected asynchronously.

Data Type	Cardinality	Parent Element	Child Element(s)
ReadReplicaSrcDBInstance Structure list		instance	region tenantId id

flavor

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id links

id

Flavor ID

Data Type	Cardinality	Parent Element	Child Element(s)
String		Flavor	None

links

Flavor URI

Data Type	Cardinality	Parent Element	Child Element(s)
String		Flavor	None

pendingModifiedValues

Data Type	Cardinality	Parent Element	Child Element(s)
		None	volume backupRetentionPeriod flavor id name parameterGroupId engineVersion masterUserName masterUserPassword multi multiAZ port engineMinorVersion securityUpdate

volume

Disk type and size of data storage

Data Type	Cardinality	Parent Element	Child Element(s)
Volume structures		PendingModifiedValues	None

backupRetentionPeriod

Backup retention period

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

flavor

Virtual server specifications

Data Type	Cardinality	Parent Element	Child Element(s)
Flavor		PendingModifiedValues	None

id

ID of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

name

Name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

parameterGroupId

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

engineVersion

Database version

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

masterUserName

Master user name of the virtual database server

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

masterUserPassword

Password of the master user of the virtual database server

For security reasons, return values are masked as "****".

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

multi

Multi-DB option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

multiAZ

Multi-availability zone option

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

port

Port number

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		PendingModifiedValues	None

engineMinorVersion

Minor version of the database

When a minor version of the database is released, you can apply patches.

Data Type	Cardinality	Parent Element	Child Element(s)
String		PendingModifiedValues	None

securityUpdate

Presence/absence of security update

Patch application can be implemented when security update is released.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean		PendingModifiedValues	None

volume

Data Type	Cardinality	Parent Element	Child Element(s)
		None	size type

size

Size of the data storage

Data Type	Cardinality	Parent Element	Child Element(s)
String		Volume	None

type

Type of the data storage

Data Type	Cardinality	Parent Element	Child Element(s)
String		Volume	None

region

Region of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

tenantId

Project ID of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

id

ID of the read replica associated with this database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaDBInstances	None

region

Region of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

tenantId

Project ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

id

ID of the source database virtual server

Data Type	Cardinality	Parent Element	Child Element(s)
String		readReplicaSrcDBInstance	None

Example of Response

```
{
  "instance": {
    "created": "2013-03-18T19:09:17",
    "flavor": {
      "id": "1",
      "links": [
        {
          "href": "http://database. {region-name}. tps5. fujitsu. com/v1. 0/1234/flavors/1",
          "rel": "self"
        }
      ]
    },
    "id": "44b277eb-39be-4921-be31-3d61b43651d7",
    "links": [
      {
        "href": "http://database. {region-name}. tps5. fujitsu. com/v1. 0/1234/instances/44b277eb-39be-4921-be31-3d61b43651d7",
        "rel": "self"
      }
    ],
    "status": "BUILD",
    "volume": {
      "size": 20,
      "type": "M1"
    }
  },
  "name": "json-rack-instance",
  "address": "fujitsu. s5. dbaas. a23w4e5r6tg7yuhjik",
  "ip": "10. 125. 52. 214",
  "port": 26500,
  "characterSet": "UTF-8",
  "collate": "C",
  "autoMinorVersionUpgrade": true,
  "availabilityZone": "az-1",
  "backupRetentionPeriod": 10,
  "engine": "enterprisepostgres",
  "engineVersion": "9. 6",
  "engineMinorVersion": "0",
  "multiAZ": true,
  "parameterGroupId": "paramid1",
  "preferredBackupWindow": "17:00-18:00",
  "preferredMaintenanceWindow": "Sun:19:00-Sun:20:00",
  "preferredRecoveryTime": {
    "applyImmediately": true,
    "time": none,
  },
  "downloadLogExtension": false,
  "publiclyAccessible": true,
  "subnetGroupId": "subnetGroup1",
  "securityGroupIds": [
    {"securityGroupId": "secid1"},
    {"securityGroupId": "secid2"}
  ],
  "readReplicaDBInstances": [],
  "readReplicaSrcDBInstance": {},
  "replicaStatus": null,
  "readReplicaDBInstanceIdentifiers": [],
  "readReplicaSrcDBInstanceIdentifier": null
}
```

1.2.2.12 Cancel an operation for a virtual database server (POST /v1.0/{tenantId}/instances/{instanceId}/action)

Cancels automatic backup and DB snapshot creation.
It can take around 10 minutes until cancellation is completed.



CAUTION

When canceling automatic backup, only do so after checking and ensuring that there is a valid backup. If automatic backup is canceled without a valid backup being possessed, it becomes impossible to use point in time restoration for the virtual database server until the next time automatic backup is performed.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{instanceId}

ID of the virtual database server

Data Type	Cardinality
String	1..1

Request parameters

action

Data Type	Cardinality	Parent Element	Child Element(s)
		None	cancel

cancel

Cancels an operation for a virtual database server.

Data Type	Cardinality	Parent Element	Child Element(s)
None	1..1	action	None

Response headers

Status

Returns the status of the request.

One of the following values will be returned:

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
422:	unprocessableEntity
500:	instanceFault

501: notImplemented
 503: serviceUnavailable
 504: gatewayTimeout

Data Type	Cardinality
Int	1..1

Response elements

n/a

Example of request

```
{
  "action": {
    "cancel": ""
  }
}
```

1.2.2.13 Show DB engine details (GET /v1.0/{tenantId}/engineversion)

Shows the version details for the database.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request parameters

defaultOnly

Flag specifying whether to display only the default version

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	None	None

engine

Name of the DB engine

enterprisepostgres or symfoware

If omitted, the version details of all usable DB engines are displayed.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	None	None

engineVersion

Version of the DB engine

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	None	None

listSupportedCharacterSets

Flag indicating whether to display supported encoding

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	None	None

marker

A pagination token used to establish the starting point for retrieving the list.

Note: Specify the marker returned in the previous list.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	None	None

limit

Number of elements to display

20 to 100

Default:20

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	None	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

dbEngineVersions

List of DBEngineVersion structures

Data Type	Cardinality	Parent Element	Child Element(s)
DBEngineVersion list		None	None

marker

Marker indicating the end position of the request

Data Type	Cardinality	Parent Element	Child Element(s)
String		None	None

dbEngineDescription

Description of the DB engine

Data Type	Cardinality	Parent Element	Child Element(s)
String		None	None

dbEngineVersionDescription

Description of the DB engine version

Data Type	Cardinality	Parent Element	Child Element(s)
String		None	None

dbParameterGroupFamily

Series of DB parameter groups

Data Type	Cardinality	Parent Element	Child Element(s)
String		None	None

defaultCharacterSet

Default character set

Data Type	Cardinality	Parent Element	Child Element(s)
CharacterSet		None	None

engine

Name of the DB engine

Data Type	Cardinality	Parent Element	Child Element(s)
String		None	None

engineVersion

Version of the DB engine

Data Type	Cardinality	Parent Element	Child Element(s)
String		Event	None

engineMinorVersion

Minor version of the DB engine

Data Type	Cardinality	Parent Element	Child Element(s)
String		Event	None

supportedCharacterSets

List of the supported character sets

Data Type	Cardinality	Parent Element	Child Element(s)
CharacterSet list		None	None

characterSetDescription

Description of the character set

Data Type	Cardinality	Parent Element	Child Element(s)
String		None	None

characterSetName

Name of the character set

Data Type	Cardinality	Parent Element	Child Element(s)
String		None	None



CAUTION

Events are displayed in descending order of datetime

Example of Response

```
{
  "dbEngineVersions": [
    {
      "dbEngineDescription": "Symfoware DBaaS",
      "dbEngineVersionDescription": "Version 12.1",
      "dbParameterGroupFamily": "symfoware_v12.1",
      "engine": "symfoware",
      "engineVersion": "12.1",
      "engineMinorVersion": "1",
      "defaultCharacterSet": {
        "characterSetDescription": "UTF8 Unicode 8-bit",
        "characterSetName": "UTF8"
      },
      "supportedCharacterSets": null,
      "collates": [
        "C"
      ]
    },
    {
      "dbEngineDescription": "Enterprise Postgres DBaaS",
      "dbEngineVersionDescription": "Version 9.6",
      "dbParameterGroupFamily": "enterprisepostgres_v9.6",
      "engine": "enterprisepostgres",
      "engineVersion": "9.6",
      "engineMinorVersion": "0",
      "defaultCharacterSet": {
```

```

    "characterSetDescription": "UTF8 Unicode 8-bit",
    "characterSetName": "UTF8"
  },
  "supportedCharacterSets": null,
  "collates": [
    "C"
  ]
}
]
}
}

```

1.2.2.14 List flavors (GET /v1.0/{tenantId}/flavors)

Lists information for all flavors.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request Parameters

marker

A pagination token used to establish the starting point for retrieving the list.

Note: Specify the marker returned in the previous list.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	None	None

limit

Number of elements to display

20 to 100

Default:20

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	None	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable

504:

gatewayTimeout

Data Type	Cardinality
Int	1.1

Response Elements

flavors

List of flavors

Data Type	Cardinality	Parent Element	Child Element(s)
flavor structures list		None	id links name

id

ID of the flavor

Data Type	Cardinality	Parent Element	Child Element(s)
String		flavors	None

links

URI to the flavor

Data Type	Cardinality	Parent Element	Child Element(s)
String		flavors	None

name

Name of the flavor

Data Type	Cardinality	Parent Element	Child Element(s)
String		flavors	None

Example of Response

```
{
  "flavors": [
    {
      "id": "11",
      "name": "economy",
      "links": [
        {
          "href": "http://database. {region-name}. tps5. fujitsu. com/v1. 0/1234/flavors/11",
          "rel": "SELF"
        }
      ]
    },
    {
      "id": "12",
      "name": "standard",
      "links": [
```

```
{
  "href": "http://database. {region-name}. tps5. fujitsu. com/v1. 0/1234/flavors/12",
  "rel": "SELF"
},
]
}
```

1.2.2.15 Show flavor details (GET /v1.0/{tenantId}/flavors/{flavorId})

Shows details of a flavor.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{flavorId}

ID of the flavor

Data Type	Cardinality
String	1..1

Request Parameters

n/a

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1.1

Response Elements

flavor

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id links name ram vcpus disk swap

id

ID of the flavor

Data Type	Cardinality	Parent Element	Child Element(s)
String		flavor	None

links

URI to the flavor

Data Type	Cardinality	Parent Element	Child Element(s)
String		flavor	None

name

Name of the flavor

Data Type	Cardinality	Parent Element	Child Element(s)
String		flavor	None

ram

Memory size (MB)

Data Type	Cardinality	Parent Element	Child Element(s)
Integer		flavor	None

vcpus

Number of virtual CPU cores

Data Type	Cardinality	Parent Element	Child Element(s)
String		flavor	None

disk

Size of the root disk (GB)

Data Type	Cardinality	Parent Element	Child Element(s)
CharacterSet		flavor	None

swap

Swap space allocated to the instance (MB)

Data Type	Cardinality	Parent Element	Child Element(s)
String		flavor	None

Example of Response

```
{
  "flavor": {
    "id": "11",
    "links": [
      {
        "href": " http://database. {region-name}. tps5. fujitsu. com/v1. 0/1234/flavors/11",
        "rel": "SELF"
      }
    ],
    "name": "economy",
    "ram": "1700",
    "vcpus": "1",
    "disk": "0",
    "swap": null
  }
}
```

1.3 DB snapshots

1.3.1 API list

DB snapshots

Item	API	Description
1	POST /v1.0/{tenantId}/snapshots Create DB snapshot	Creates a DB snapshot
2	DELETE /v1.0/{tenantId}/snapshots/{snapshotId} Delete DB snapshot	Deletes a DB snapshot
3	PUT /v1.0/{tenantId}/snapshots/{snapshotId} Copy DB snapshot	Copies a DB snapshot
4	GET /v1.0/{tenantId}/snapshots List DB snapshots	Lists information for all DB snapshots
5	GET /v1.0/{tenantId}/snapshots/{snapshotId} Show DB snapshot details	Shows details of the specified DB snapshot

1.3.2 API details

1.3.2.1 Create DB snapshot (POST /v1.0/{tenantId}/snapshots)

Creates a DB snapshot.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request Parameters

snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
		None	instanceId id name

instanceId

ID of the virtual database server for which the snapshot will be taken

Data Type	Cardinality	Parent Element	Child Element(s)
None	1..1	snapshot	None

id

ID of the DB snapshot

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 63 characters

Default: random value

Data Type	Cardinality	Parent Element	Child Element(s)
string	0..1	snapshot	None

name

Name of the DB snapshot

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 255 characters

Data Type	Cardinality	Parent Element	Child Element(s)
string	1..1	snapshot	None

description

Description of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	snapshot	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault

501: notImplemented
 503: serviceUnavailable
 504: gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date			

name

Name of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

id

ID of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

instanceId

ID of the virtual database server that is the source of this snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

snapshotType

Type of DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

status

Status of the DB snapshot

Available | In_progress | Deleted | Error

Data Type	Cardinality	Parent Element	Child Element(s)
String			

description

Description of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Request

```
{
  "snapshot": {
    "instanceId": "dbinst1",
    "name": "json-rack-instance-bkup",
  }
}
```

Example of Response

```
{
  "snapshot": {
    "created" : null,
    "name" : "snapshot1",
    "Id" : "snapshot-dfrtgy3h2uj5ik",
    "instanceId" : "instance-r67fg9uj0kfp",
    "status": "Available",
    "description": "sample snapshot"
  }
}
```

1.3.2.2 Delete DB snapshot (DELETE /v1.0/{tenantId}/snapshots/{snapshotId})

Deletes a DB snapshot.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{snapshotId}

ID of the DB snapshot

Data Type	Cardinality
String	1..1

Request Parameter

n/a

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

n/a

1.3.2.3 Copy DB snapshot (PUT /v1.0/{tenantId}/snapshots/{snapshotId})

Copies a DB snapshot.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{snapshotId}

ID of the DB snapshot that will be the copy source

Data Type	Cardinality
String	1..1

Request Parameters

snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
		None	sourceSnapshotId id name

id

ID of the DB snapshot

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 63 characters

Data Type	Cardinality	Parent Element	Child Element(s)
string	0..1	snapshot	None

name

Name of the DB snapshot

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 255 characters

Data Type	Cardinality	Parent Element	Child Element(s)
string	1..1	snapshot	None

description

Description of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	snapshot	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault

501: notImplemented
 503: serviceUnavailable
 504: gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
Date			

name

Name of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

id

ID of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

instanceId

ID of the virtual database server that is the source of this snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

status

Status of the DB snapshot

Available | In_progress | Deleted | Error

Data Type	Cardinality	Parent Element	Child Element(s)
String			

description

Description of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Request

```
{
  "snapshot": {
    "name": "json-rack-instance-bkup2",
  }
}
```

1.3.2.4 List DB snapshots (GET /v1.0/{tenantId}/snapshots)

Lists information for all DB snapshots.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request Parameters

limit

Number of elements to display

20 to 100

Default:20

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	None	None

marker

A pagination token used to establish the starting point for retrieving the list.

Specify the ID or name of the last element returned in the previous list.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	None	None

snapshotType

Specifies the DB snapshot type

automated | manual

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	None	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

name

Name of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

id

ID of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

instanceId

ID of the virtual database server that is the source of this snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

snapshotType

Type of snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Response

```
{
  "snapshots": [
    "snapshot": {
      "name": "snapshot1",
      "id": "snapshot_dfrtgy3h2uj5ik",
      "instanceId": "instance_r67fg9uj0kfp",
      "snapshotType": "automated"
    },
    "snapshot": {
      "name": "snapshot2",
```

```

    "id" : "snapshot_dftgyfewaj5ik",
    "instanceId" : "instance_r67rftyufrp",
    "snapshotType": "automated"
  }
}

```

1.3.2.5 Show DB snapshot details (GET /v1.0/{tenantId}/snapshots/{snapshotId})

Shows details of a DB snapshot.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{snapshotId}

ID of the DB snapshot

Data Type	Cardinality
String	1..1

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
404:	itemNotFound
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

created

The creation date and time

When the recovery API is executed to recover a virtual database server from a DB snapshot, the DB from this point in time is recovered.

Data Type	Cardinality	Parent Element	Child Element(s)
Date			

name

Name of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

id

ID of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

instanceId

ID of the virtual database server that is the source of this snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

snapshotType

Type of DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

status

Status of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

description

Description of the DB snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String			

1.4 DB log files

1.4.1 API list

DB log files

Item	API	Description
1	GET /v1.0/{tenantId}/logfiles/{instanceId} List DB log files	Lists information for all DB log files for the specified DB instance
2	GET /v1.0/{tenantId}/logfiles/{instanceId}/ {logFileName} Show DB log file details	Shows details of the specified DB log file

1.4.2 API details

1.4.2.1 List DB log files (GET /v1.0/{tenantId}/logfiles/{instanceId})

Lists information for all DB log files for a virtual database server.



CAUTION

This can only be referenced if the virtual database server status is one of Active, Restart_Required, Switched, Degenerated, Backup, Modifying, Resize, Error, and Failed.

However, in a Modifying or Resize status, there is a temporary point where this returns 503 or 504. In that event, please retry after a while.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{instanceId}

ID of the virtual database server

Data Type	Cardinality
String	1..1

Request Parameters

filelastwritten

Date and time when the log file was last written

Note: Information on log files written to on or after the date and time specified in this parameter will be returned.

POSIX time stamp

Data Type	Cardinality	Parent Element	Child Element(s)
Long	0..1	None	None

filesize

Log file size (bytes)

Note: Information on log files larger than the size specified in this parameter will be returned.

Default: 0

Data Type	Cardinality	Parent Element	Child Element(s)
Long	0..1	None	None

filenamecontains

String contained in the log file name

Note: Information on log files with file names that contain the string specified in this parameter will be returned.

Data Type	Cardinality	Parent Element	Child Element(s)
string	0..1	None	None

marker

Marker

Pagination token used to establish the starting point for retrieving the list.

The value is returned by the previous DescribeDBInstances request.

If this value is specified, only records beyond the marker are returned by the DB server.

Data Type	Cardinality	Parent Element	Child Element(s)
string	0..1	None	None

limit

Number of elements to display

20 to 100

Default: 20

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	None	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401: unauthorized

403:	forbidden
404:	itemNotFound
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

describeDBLogFiles

List of DB log files

Data Type	Cardinality	Parent Element	Child Element(s)
DescribeDBLogFilesDetails list			

lastWritten

Time at which the last log entry was written (POSIX time stamp)

Data Type	Cardinality	Parent Element	Child Element(s)
Long			

logFileName

Name of the specified virtual database server log file

Data Type	Cardinality	Parent Element	Child Element(s)
String			

size

Size of the specified virtual database server log file (bytes)

Data Type	Cardinality	Parent Element	Child Element(s)
Long			

Example of response

```
{
  "describeDBLogFilesResult": [
    "describeDBLogFileDetails" : [
      {
        "lastWritten" : "1414330786",
        "logFileName" : "logfile1",
        "size" : 10000000
      },
      {
        "lastWritten" : "1449109892",
```

```

    "logFileName" : "logfile2",
    "size" : 330000000
  } ,
]
}

```

1.4.2.2 Show DB log file details (GET /v1.0/{tenantId}/logfiles/{instanceId}/{logFileName})

Shows details of a DB log file.



CAUTION

This can only be referenced if the virtual database server status is one of Active, Restart_Required, Switched, Degenerated, Backup, Modifying, Resize, Error, or Failed. However, in a Modifying or Resize status, there is a temporary point where this returns 404, 503, or 504. In that event, please retry after a while.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{instanceId}

ID of the virtual database server

Data Type	Cardinality
String	1..1

{logFileName}

Name of the DB log file

Data Type	Cardinality
String	1..1

Request Parameters

limit

Number of rows to display

Default:20

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	None	None

marker

A pagination token used to establish the starting point for retrieving the list.

Specify the value returned with the previous DescribeDBInstances request.

If marker is specified, the lines following marker are displayed. If marker is not specified, the lines starting from the top line of the log file are displayed.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	None	None

descending

true: The DB log will be referenced in descending order

Default: false

If this parameter is "true", the DB log will be referenced in descending order.

This can be executed on the virtual database servers for which the downloadLogExtension parameter in the instance category is set to "true".

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	None	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

additionalDataPending

A return value of "true" indicates that there is still more data that can be downloaded.

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean			

logFileData

Stores the data of the specified log file.

Data Type	Cardinality	Parent Element	Child Element(s)
String			

marker

Pagination token that can be used in subsequent DownloadDBLogFilePortion requests.

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Response

```
{
  "downloadDBLogFilePortion": {
    "additionalDataPending": true,
    "logFileData": "xxxxxx"
    "marker": "20"
  }
}
```

1.5 DB subnet group

1.5.1 API list

DB subnet group

Item	API	Description
1	POST /v1.0/{tenantId}/subnetgroups Create DB subnet group	Creates a DB subnet group
2	DELETE /v1.0/{tenantId}/subnetgroups/{subnetGroupId} Delete DB subnet group	Deletes the specified DB subnet group
3	PUT /v1.0/{tenantId}/subnetgroups/{subnetGroupId} Modify DB subnet group	Modifies settings for the specified DB subnet group
4	GET /v1.0/{tenantId}/subnetgroups List DB subnet groups	Lists information for all DB subnet groups
5	GET /v1.0/{tenantId}/subnetgroups/{subnetGroupId} Show DB subnet group details	Shows details of the specified DB subnet group

1.5.2 API details

1.5.2.1 Create DB subnet group (POST /v1.0/{tenantId}/subnetgroups)

Creates a DB subnet group.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request Parameters

subnetgroup

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id name subnetIds description

id

ID of DB subnet group

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 63 characters

Default: random value

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	subnetgroup	None

name

Name of DB subnet group

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 255 characters

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	subnetgroup	None

subnetIds

List of subnets

A DB subnet group must contain one or more subnets.

Data Type	Cardinality	Parent Element	Child Element(s)
SubnetId list	1..1	subnetgroup	None

description

Description of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	subnetgroup	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

description

Description of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

name

Name of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

status

Status of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

subnetIds

List of subnets

Data Type	Cardinality	Parent Element	Child Element(s)
SubnetId list			

id

ID of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

subnetId

ID of DB subnet

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Request

```
{
  "subnetgroup" : {
    "name": "subnetGroup1",
    "subnetIds": [
      {"subnetId": "subnetid1"},
      {"subnetId": "subnetid2"}
    ],
    "description": "this is test"
  }
}
```

Example of Response

```
{
  "subnetgroup" : {
    "name": "subnetGroup1",
    "id": "subnet_edrtfyuhijko01",
    "status": " Available"
    " subnetIds ": [
      {"subnetId": "subnetid1"},
      {"subnetId": "subnetid2"}
    ],
    "description": "this is test"
  }
}
```

1.5.2.2 Delete DB subnet group (DELETE /v1.0/{tenantId}/subnetgroups/{subnetGroupId})

Deletes a DB subnet group.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{subnetGroupId}

ID of DB subnet group

Data Type	Cardinality
String	1..1

Request Parameters

n/a

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

n/a

1.5.2.3 Modify DB subnet group (PUT /v1.0/{tenantId}/subnetgroups/{subnetGroupId})

Modifies settings for a DB subnet group.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{subnetGroupId}

ID of DB subnet group

Data Type	Cardinality
String	1..1

Request Parameters

subnetgroup

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id name subnetIds description

id

ID of DB subnet group

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 63 characters

Default: random value

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	subnetgroup	None

name

Name of DB subnet group

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 255 characters

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	subnetgroup	None

subnetIds

List of subnets

A DB subnet group must contain one or more subnets.

Data Type	Cardinality	Parent Element	Child Element(s)
SubnetId list	1..1	subnetgroup	None

description

Description of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	subnetgroup	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

description

Description of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

name

Name of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

status

Status of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

subnetIds

List of subnets

Data Type	Cardinality	Parent Element	Child Element(s)
SubnetId list			

id

ID of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

subnetId

ID of DB subnet

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Request

```
{
  "subnetgroup" : {
    "name" : "subnetGroup1",
    "subnetIds" : [
      {"subnetId" : "subnetid1"},
      {"subnetId" : "subnetid2"}
    ],
    "description" : "this is test"
  }
}
```

Example of Response

```
{
  "subnetgroup" : {
    "name" : "subnetGroup1",
    "id" : "subnet_edrtfyuhijko01",
    "status" : " Available",
    "subnetIds" : [
      {"subnetId" : "subnetid1"},
      {"subnetId" : "subnetid2"}
    ],
    "description" : "this is test"
  }
}
```

1.5.2.4 List DB subnet groups (GET /v1.0/{tenantId}/subnetgroups)

Lists information for all DB subnet groups.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request Parameters

limit

Number of elements to display

20 to 100

Default:20

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	None	None

marker

marker

A pagination token used to establish the starting point for retrieving the list.

Note: Specify the ID or name of the last element returned in the previous list.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	subnetgroups	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

subnetGroups

List of DB subnet groups

Data Type	Cardinality	Parent Element	Child Element(s)
SubnetGroupId structures list			name status id

id

ID of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

name

Name of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

status

Status of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Response

```
{
  "subnetGroups ": [
    {
      "id" : "subnetGroupid1",
      "name": "subnetGroupid1",
      "status": "Available"
    },
    {
      "id" : "subnetGroupid2",
      "name": "subnetGroupid2",
      "status": "Available"
    }
  ]
}
```

1.5.2.5 Show DB subnet group details (GET /v1.0/{tenantId}/subnetgroups/{subnetGroupId})

Show details of a DB subnet group.

Request URI**{tenantID}**

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{subnetGroupId}

ID of DB subnet group

Data Type	Cardinality
String	1..1

Request Parameters

n/a

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1.1

Response Elements

description

Description of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

name

Name of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

status

Status of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

subnetIds

List of subnets

Data Type	Cardinality	Parent Element	Child Element(s)
SubnetId list			

id

ID of DB subnet group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

subnetId

ID of DB subnet

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Response

```
{
  "subnetgroup" : {
    "name" : "subnetGroup1",
    "id" : "subnet_edrtfyuhijko01",
    "status" : " Available"
    "subnetIds" : [
      {"subnetId" : "subnetid1"},
      {"subnetId" : "subnetid2"}
    ],
    "description" : "this is test"
  }
}
```

1.6 DB parameter groups

1.6.1 API list

DB parameter groups

Item	API	Description
1	POST /v1.0/{tenantId}/parametergroups Create DB parameter group	Creates a DB parameter group
2	DELETE /v1.0/{tenantId}/parametergroups/{parameterGroupId} Delete DB parameter group	Deletes the specified DB parameter group
3	GET /v1.0/{tenantId}/parametergroups List DB parameter groups	Lists information for all DB parameter groups.
4	GET /v1.0/{tenantId}/parametergroups/{parameterGroupId} Show DB parameter group details	Shows details of the specified DB parameter group
5	PUT /v1.0/{tenantId}/parametergroups/{parameterGroupId} Modify DB parameter group	Modifies or initializes the specified parameters for a DB parameter group

1.6.2 API details

1.6.2.1 Create DB parameter group (POST /v1.0/{tenantId}/parametergroups)

Creates a DB parameter group.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request Parameters

parametergroup

Data Type	Cardinality	Parent Element	Child Element(s)
		None	parameterGroupFamily id name description

parameterGroupFamily

Type of parameter group, determined by the DB engine and version
enterprisepostgres_v9.6 or symfoware_v12.1

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	parametergroup	None

id

ID of the DB parameter group

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 63 characters

Default: random value

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	parametergroup	None

name

Name of the DB parameter group

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 255 characters

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	parametergroup	None

description

Description of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	parametergroup	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

parameterGroupFamily

Type of DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

name

Name of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

id

ID of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

description

Description of the DB parameter group

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Request

```
{
  "parametergroup" : {
```

```

    "parameterGroupFamily": "enterprisepostgres_v9.6",
    "name": "dbparam1",
    "description": "this is test"
  }
}

```

Example of Response

```

{
  "dbParameterGroup": {
    "parameterGroupFamily": "enterprisepostgres_v9.6",
    "name": "paramgroup1",
    "id": "paramgroup_w34e5r6t7yu89",
    "description": "test",
    "appliedInstances": [
    ]
  }
}

```

1.6.2.2 Delete DB parameter group (DELETE /v1.0/{tenantId}/parametergroups/{parameterGroupId})

Deletes a DB parameter group.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{ parameterGroupId }

ID of the DB parameter group

Data Type	Cardinality
String	1..1

Request Parameter

n/a

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound

422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

1.6.2.3 List DB parameter groups (GET /v1.0/{tenantId}/parametergroups)

Lists information for all DB parameter groups.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request Parameters

limit

Number of elements to display

20 to 100

Default:20

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	None	None

marker

A pagination token used to establish the starting point for retrieving the list.

Note: Specify the ID or name of the last element returned in the previous list.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	parametergroup	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden

404:	itemNotFound
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

parameterGroups

List of DB parameter groups

Data Type	Cardinality	Parent Element	Child Element(s)
DBParameterGroup list			

Example of Response

```
{
  "parameterGroups": [
    "parameterGroup": {
      "parameterGroupFamily": "symfoware_12.1",
      "name": "paramgroup1",
      "id": "paramgroup_w34e5r6t7yu89",
      "description": "test",
      "appliedInstances": [
        "dbinst_f587389gre",
        "dbinst_8489y3qre",
      ]
    },
    "parameterGroup": {
      "parameterGroupFamily": "symfoware_12.1",
      "name": "paramgroup2",
      "id": "paramgroup_w34e5r6t7ew89",
      "description": "test",
      "appliedInstances": [
        "dbinst_fet904utjhf",
        "dbinst_p9ufejowre",
      ]
    }
  ]
}
```

1.6.2.4 Show DB parameter group details (GET /v1.0/{tenantId}/parametergroups/{parameterGroupId})

Shows details of a DB parameter group.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{ parameterGroupId }

ID of the DB parameter group

Data Type	Cardinality
String	1..1

Request Parameters

n/a

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

parameters

List of parameter structures

Data Type	Cardinality	Parent Element	Child Element(s)
Parameter list			

name

Parameter

Data Type	Cardinality	Parent Element	Child Element(s)
String			

value

Parameter value

Data Type	Cardinality	Parent Element	Child Element(s)
String			

allowedValues

Range of values allowed for the parameter

Data Type	Cardinality	Parent Element	Child Element(s)
String			

applyMethod

Indicates when parameter changes are reflected

Data Type	Cardinality	Parent Element	Child Element(s)
String			

applyType

Indicates when changes are allowed for the parameter

Data Type	Cardinality	Parent Element	Child Element(s)
String			

dataType

Data type

Data Type	Cardinality	Parent Element	Child Element(s)
String			

description

Parameter description

Data Type	Cardinality	Parent Element	Child Element(s)
String			

isModifiable

Flag indicating whether the parameter can be modified

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean			

minimumEngineVersion

Version that this parameter was first supported

Data Type	Cardinality	Parent Element	Child Element(s)
String			

source

Target for which this parameter will be set
 engine | S5 |

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Response

```
{
  "parameterGroup": {
    "parameters": [
      {
        "name": "shared_buffers",
        "value": "65536",
        "allowedValues": "16-1073741823",
        "applyMethod": "pending-reboot",
        "applyType": "static",
        "dataType": "integer",
        "description": "(8kB) Sets the number of shared memory buffers used by the server.",
        "isModifiable": "true",
        "minimumEngineVersion": "12.1",
        "source": "engine"
      },
      {
        "name": "shared_preload_libraries",
        "value": "",
        "allowedValues": "",
        "applyMethod": "pending-reboot",
        "applyType": "static",
        "dataType": "string",
        "description": "Lists shared libraries to preload into server.",
        "isModifiable": "false",
        "minimumEngineVersion": "12.1",
        "source": "system"
      }
    ]
  }
}
```

1.6.2.5 Modify DB parameter group (PUT /v1.0/{tenantId}/parametergroups/{parameterGroupId})

Modifies or initializes parameters for a DB parameter group.

Request URI**{tenantID}**

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{ parameterGroupId }

ID of the DB parameter group

Data Type	Cardinality
String	1..1

Request Parameters

parametergroup

Data Type	Cardinality	Parent Element	Child Element(s)
		None	parameters resetAllparameters

parameters

List of parameters

Data Type	Cardinality	Parent Element	Child Element(s)
Parameter structure	1..1	parameter group	None

resetAllparameters

Restores all parameters to the default values

Default: false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	parameter group	None

Parameter

Data Type	Cardinality	Parent Element	Child Element(s)
		None	name value applyMethod

name

Name of parameter

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	Parameter	None

value

Parameter value

Note that any value containing a space must be enclosed in single quotation marks if parameterGroupFamily is set to "symfoware_v12.1". For example, enter 'read committed' if you want to specify "read committed".

Data Type	Cardinality	Parent Element	Child Element(s)
- depends on subnet	0..1	Parameter	None

applyMethod

How to apply parameters

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	Parameter	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Example of Request

```
{
  "parametergroup": {
    "parameters": [
      {
        "name": "shared_buffers",
        "value": "65536",
        "applyMethod": "pending-reboot"
      },
      {
        "name": "work_mem",
        "value": "8192",
        "applyMethod": "immediate"
      }
    ]
  },
  "resetAllparameters": false
}
```

1.7 DB event notifications

1.7.1 API list

DB event notifications

Item	API	Description
1	POST /v1.0/{tenantId}/eventnotifications Create event notification subscription	Creates an event notification subscription
2	DELETE /v1.0/{tenantId}/ eventnotifications/{subscriptionId} Delete event notification subscription	Deletes an event notification subscription
3	PUT /v1.0/{tenantId}/eventnotifications/{ subscriptionId} Modify event notification subscription attributes	Modifies parameters for an event notification subscription
4	PUT /v1.0/{tenantId}/eventnotifications/{ subscriptionId} Add or delete monitored event	Adds or deletes the event source for an event notification subscription
5	GET /v1.0/{tenantId}/eventnotifications List event notification subscriptions	Lists information for all event notification subscriptions
6	GET /v1.0/{tenantId}/eventnotifications/{ subscriptionId} Show event notification subscription details	Shows details of an event notification subscription
7	GET /v1.0/{tenantId}/eventcategories/{ sourceType} List event notification categories	Lists information for all event notification categories for a DB instance or DB snapshot
8	GET /v1.0/{tenantId}/events List event notifications	Lists information for all events

1.7.2 API details

1.7.2.1 Create event notification subscription (POST /v1.0/{tenantId}/eventnotifications)

Creates an event notification subscription.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request Parameters

eventnotification

Data Type	Cardinality	Parent Element	Child Element(s)
		None	enabled eventCategories. sourceIds. sourceType id name description

enabled

Enables event notification
true or false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	0..1	eventnotification	None

eventCategories.

A list containing the SourceType event categories you want to register.
The list of assigned SourceType categories can be confirmed from DescribeEventCategories.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	eventnotification	None

sourceIds.

List of event source IDs returned by the event
Default: If this specification is omitted, all source IDs are returned.
Constrained by the source type.
For example, this value must be the DBInstance ID for the instance.

Data Type	Cardinality	Parent Element	Child Element(s)
String list	0..1	eventnotification	None

sourceType

The type of source for which an event is generated.
For example, to notify an event generated by the DBInstance, specify "db-instance".
Default: If this specification is omitted, all events will be notified.
db-instance | db-snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	eventnotification	None

id

ID of event notification subscription

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 63 characters

Default: random value

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	eventnotification	None

name

Name of event notification subscription

- Only alphanumeric characters and hyphens can be used
- The string must start with a letter
- A hyphen cannot be used at the end of the string
- Two or more consecutive hyphens cannot be used
- Up to 255 characters

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	eventnotification	None

description

Description of the event notification subscription

- Up to 1024 characters

Default: None

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	eventnotification	None

Response Headers**Status**

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable

504:

gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

EventSubscription

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id name enabled eventCategoriesList sourceIdsList sourceType status created

id

ID of event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String			

name

Name of event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String			

enabled

Flag indicating whether notification is enabled

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean			

eventCategoriesList

List of event categories to notify

Data Type	Cardinality	Parent Element	Child Element(s)
String list			

sourceIdsList

List of resource IDs that will be the event source to notify

Data Type	Cardinality	Parent Element	Child Element(s)
String list			

sourceType

Type of resource that will be the event source

Data Type	Cardinality	Parent Element	Child Element(s)
String			

status

Status of event notification subscription
creating | modifying | deleting | active |

Data Type	Cardinality	Parent Element	Child Element(s)
String			

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
String			

description

Description

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Response

```
{
  "eventSubscription": {
    "subscriptionId": "subscription1",
    "name": "mysubscription1",
    "enabled": true,
    "eventCategories": [
      {
        "eventCategory": "backup"
      },
      {
        "eventCategory": "creation"
      }
    ],
    "sourceIds": [
      {
        "sourceId": "dbinst1"
      },
      {
        "sourceId": "dbinst2"
      }
    ],
    "sourceType": "db-instance",
  }
}
```

```
"created": "2013-03-18T19:09:17",
"description": " this is test "
}
```

1.7.2.2 Delete event notification subscription (DELETE /v1.0/{tenantId}/eventnotifications/{subscriptionId})

Deletes an event notification subscription.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{subscriptionId}

ID of event notification subscription

Data Type	Cardinality
String	1..1

Request Parameters

n/a

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden
404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1.1

Response Elements

n/a

1.7.2.3 Modify event notification subscription (PUT /v1.0/{tenantId}/eventnotifications/{subscriptionId})

Modifies parameters for an event notification subscription.

Request URI

{tenantId}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{subscriptionId}

ID of event notification subscription

Data Type	Cardinality
String	1..1

Request Parameters

action

Data Type	Cardinality	Parent Element	Child Element(s)
		None	modify

modify

Modify event notification subscription attributes

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	action	None

eventnotification

Data Type	Cardinality	Parent Element	Child Element(s)
		None	enabled eventCategories. sourceType id name

enabled

Enables event notification

true | false

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean	1..1	eventnotification	None

eventCategories.

A list containing the SourceType event categories you want to register. The list of assigned SourceType categories can be confirmed from DescribeEventCategories.

Data Type	Cardinality	Parent Element	Child Element(s)
String list	1..1	eventnotification	None

sourceType

The type of source for which an event is generated. For example, to notify an event generated by the DBinstance, specify "db-instance".

Default: All events will be notified if this specification is omitted.

db-instance | db-snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	eventnotification	None

id

ID of event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	eventnotification	None

name

Name of event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	eventnotification	None

description

Description of the event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	eventnotification	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

400:	badRequest
401:	unauthorized
403:	forbidden

404:	itemNotFound
413:	overLimit
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1.1

Response Elements

EventSubscription

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id name enabled eventCategoriesList sourceIdsList sourceType status created

id

ID of event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String			

name

Name of event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String			

enabled

Flag indicating whether notification is enabled

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean			

eventCategoriesList

List of event categories to notify

Data Type	Cardinality	Parent Element	Child Element(s)
String list			

sourceIdsList

List of resource IDs that will be the event source to notify

Data Type	Cardinality	Parent Element	Child Element(s)
String list			

sourceType

Type of resource that will be the event source

Data Type	Cardinality	Parent Element	Child Element(s)
String			

status

Status of event notification subscription
creating | modifying | deleting | active |

Data Type	Cardinality	Parent Element	Child Element(s)
String			

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Request

```
{
  "action" : {
    "modify": ""
  },
  "eventnotification": {
    "enabled" : true,
    "eventCategories" : [
      {"eventCategory" : "backup"}
    ],
    "sourceType" : "db-snapshot",
    "subscriptionName" : "modsubscription2"
  }
}
```

1.7.2.4 Add or delete monitored event (PUT /v1.0/{tenantId}/eventnotifications/{subscriptionId})

Adds or deletes the event source for an event notification subscription.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{subscriptionID}

ID of event notification subscription

Data Type	Cardinality
String	1..1

Request Parameters

action

Data Type	Cardinality	Parent Element	Child Element(s)
		None	add remove

add | remove

Indicates whether to add or delete an event to be monitored

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	action	None

eventnotification

Data Type	Cardinality	Parent Element	Child Element(s)
		None	sourceId

sourceIds

List of the resource IDs of the monitored events that will be added or deleted

Data Type	Cardinality	Parent Element	Child Element(s)
String list	1..1	eventnotification	sourceId list

sourceId

Resource ID of the monitored event that will be added or deleted

Constrained by the sourceType that is set.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	sourceIds	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
404:	itemNotFound
422:	unprocessableEntity
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1.1

Response Elements

eventSubscription

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id name enabled eventCategoriesList sourceIdsList sourceType status created

id

ID of event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String			

name

Name of event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String			

enabled

Flag indicating whether notification is enabled

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean			

eventCategoriesList

List of event categories to notify

Data Type	Cardinality	Parent Element	Child Element(s)
String list			

sourceIdsList

List of resource IDs that will be the event source to notify

Data Type	Cardinality	Parent Element	Child Element(s)
String list			

sourceType

Type of resource that will be the event source

Data Type	Cardinality	Parent Element	Child Element(s)
String			

status

Status of event notification subscription
creating | modifying | deleting | active |

Data Type	Cardinality	Parent Element	Child Element(s)
String			

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
String			

Example of Request

```
{
  "action" : {
    "add" : ""
  },
  "eventnotification": {
    "sourceIds" : [{
      "sourceId": "dbinst5"
    }]
  }
}
```

1.7.2.5 List event notification subscriptions (GET /v1.0/{tenantId}/eventnotifications)

Lists information for all event notification subscriptions.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request Parameters

limit

Number of elements to display

20 to 100

Default:20

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	None	None

marker

A pagination token used to establish the starting point for retrieving the list.

Note: Specify the ID or name of the last element returned in the previous list.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	None	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1.1

Response Elements

EventSubscription

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id name enabled eventCategoriesList sourceIdsList sourceType status created

id

ID of event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String			

name

Name of event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String			

enabled

Flag indicating whether notification is enabled

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean			

eventCategoriesList

List of event categories to notify

Data Type	Cardinality	Parent Element	Child Element(s)
String list			

sourceIdsList

List of resource IDs that will be the event source to notify

Data Type	Cardinality	Parent Element	Child Element(s)
String list			

sourceType

Type of resource that will be the event source

Data Type	Cardinality	Parent Element	Child Element(s)
String			

status

Status of event notification subscription
 creating | modifying | deleting | active |

Data Type	Cardinality	Parent Element	Child Element(s)
String			

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
String			

1.7.2.6 Show event notification subscription details (GET /v1.0/{tenantId}/eventnotifications/{subscriptionId})

Shows details of an event notification subscription.

Request URI**{tenantID}**

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{subscriptionID}

ID of event notification subscription

Data Type	Cardinality
String	1..1

Request Parameters

n/a

Response Headers**Status**

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
404:	itemNotFound
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable

504:

gatewayTimeout

Data Type	Cardinality
Int	1.1

Response Elements

EventSubscription

Data Type	Cardinality	Parent Element	Child Element(s)
		None	id name enabled eventCategoriesList sourceIdsList sourceType status created

id

ID of event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String			

name

Name of event notification subscription

Data Type	Cardinality	Parent Element	Child Element(s)
String			

enabled

Flag indicating whether notification is enabled

Data Type	Cardinality	Parent Element	Child Element(s)
Boolean			

eventCategoriesList

List of event categories to notify

Data Type	Cardinality	Parent Element	Child Element(s)
String list			

sourceIdsList

List of resource IDs that will be the event source to notify

Data Type	Cardinality	Parent Element	Child Element(s)
String list			

sourceType

Type of resource that will be the event source

Data Type	Cardinality	Parent Element	Child Element(s)
String			

status

Status of event notification subscription
creating | modifying | deleting | active |

Data Type	Cardinality	Parent Element	Child Element(s)
String			

created

The creation date and time

Data Type	Cardinality	Parent Element	Child Element(s)
String			

1.7.2.7 List event notification categories (GET /v1.0/{tenantId}/eventcategories/{sourceType}/)

Lists information for all event notification categories for a virtual database server or DB snapshot.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

{ sourceType }

Source type
instance | snapshot

Data Type	Cardinality
String	1..1

Request Parameters

n/a

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
404:	itemNotFound
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1.1

Response Elements

DescribeEventCategoriesResult

Data Type	Cardinality	Parent Element	Child Element(s)
		None	eventCategoriesMapList

eventCategoriesMapList

EventCategoriesMap list

Data Type	Cardinality	Parent Element	Child Element(s)
EventCategoriesMap list			

EventCategoriesMap

Data Type	Cardinality	Parent Element	Child Element(s)
String		None	eventCategories sourceType

eventCategories

Event categories for the specified source type

Data Type	Cardinality	Parent Element	Child Element(s)
String list		EventCategoriesMap	None

sourceType

Source type that the above event category belongs to

Data Type	Cardinality	Parent Element	Child Element(s)
String		EventCategoriesMap	None

Example of Response

```
{
  "eventCategoriesMaps": [
    "eventCategoriesMap": {
      "eventCategories": [
        "availability",
        "failover",
        "recovery",
        "low storage",
        "creation",
        "notification",
        "backup",
        "configuration change",
        "restoration",
        "maintenance",
        "deletion",
        "failure"
      ],
      "sourceType": "db-instance"
    },
    "eventCategoriesMap": {
      "eventCategories": [
        "deletion",
        "restoration",
        "notification",
        "failure",
        "creation"
      ],
      "sourceType": "db-snapshot"
    }
  ]
}
```

1.7.2.8 List event notifications (GET /v1.0/{tenantId}/events)

Lists information for all events.

Request URI

{tenantID}

Project ID of the owner of the instance

Data Type	Cardinality
String	1..1

Request Parameters

duration

Duration in minutes of the data to search for

Default: 60

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	None	None

startTime

Start time of the time interval for the event search

Example: 2009-07-08T18:00Z

Data Type	Cardinality	Parent Element	Child Element(s)
DateTime	0..1	None	None

endTime

End time of the time interval for the event search

Example: 2009-07-08T18:00Z

Note: ISO 8601 format

Data Type	Cardinality	Parent Element	Child Element(s)
DateTime	0..1	None	None

eventCategories.

List of event categories

Data Type	Cardinality	Parent Element	Child Element(s)
String list	0..n	None	None

sourceType

Source type used to search for the event. Events that contain this source type only are returned.

Default: If this parameter is not specified, events for all source types are returned.

db-instance | db-snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	None	None

sourceId

Resource ID used to search for the event. Events that contain this Resource ID only are returned.

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	None	None

limit

Number of elements to display

20 to 100

Default:20

Data Type	Cardinality	Parent Element	Child Element(s)
Integer	0..1	None	None

marker

A pagination token used to establish the starting point for retrieving the list.

Note: Specify the last date and time returned in the previous list display.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	None	None

Response Headers

Status

Returns the status of the request.

One of the following values will be returned.

401:	unauthorized
403:	forbidden
404:	itemNotFound
500:	instanceFault
501:	notImplemented
503:	serviceUnavailable
504:	gatewayTimeout

Data Type	Cardinality
Int	1..1

Response Elements

events

List of events

Data Type	Cardinality	Parent Element	Child Element(s)
Event list	1..1	None	None

event

Data Type	Cardinality	Parent Element	Child Element(s)
-	0..n	None	date eventCategories message sourceIdentifier sourceType

date

Date and time when the event occurred

Data Type	Cardinality	Parent Element	Child Element(s)
DateTime	1..1	event	None

eventCategories

Category of the event

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	event	None

message

Content of the event

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	event	None

sourceIdentifier

Resource ID where the event occurred

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	event	None

sourceType

Type of resource

db-instance | db-snapshot

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	event	None



CAUTION

Events are displayed in descending order of datetime

Example of Response

```
{
  "events": [
    {
      "date": "2013-03-18T19:09:17",
      "eventCategories": [
        "backup"
      ],
      "message": "Finished DB Instance backup",
      "sourceIdentifier": "dbinst_678yuhyh",
      "sourceType": "db-instance"
    }
  ]
}
```

Part 2: Email delivery service

Topics:

- [Common information](#)
- [Email delivery service](#)

2.1 Common information

2.1.1 Notes

This service is only provided in "Eastern Japan Region 1 (jp-east-1)".

2.1.2 General requirements

This section describes general requirements to use this API.

- Unless otherwise stated, the request parameters must be sent by using HTTP GET or HTTP PUT.
- If a value in the request parameter contains a character that cannot be used as is in the URL, it must be encoded using UTF-8.

The following values are also required for this service:

- The user agent (User-Agent) string for the request of this service must be "FGCP-OS-API-CLIENT".
- Restriction on calling the email delivery API
All actions are throttled at one request per second.

2.1.3 Common API request headers

Request Headers

X-Auth-Token

Specify the authentication token.

Data Type	Cardinality
String	1..1

Content-Type

This must be specified for POST requests. This can be omitted for GET requests.

If specifying this parameter, "application/x-www-form-urlencoded; charset=utf-8" must be used.

Data Type	Cardinality
String	0..1

Accept

"application/xml" must be specified.

Data Type	Cardinality
String	0..1

2.1.4 Common API request parameters

Request parameters

Action

Name of the API to run.

Data Type	Cardinality
String	1..1

Version

API version.

"v1.0" (optional)

Data Type	Cardinality
String	0..1

2.1.5 Common API response headers

Response headers

x-fj-request-id

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality
String	1..1

2.1.6 Response format when the state is normal

Response Elements

APINameResponse

Envelope of the response.

The API name will be stored in the APIName portion.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	APINameResult ResponseMetadata

APINameResult

Envelope of the result.

The API name will be stored in the APIName portion.

Each API stores unique information as Child element.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	APINameResponse	(Varies depending on the API)

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	APINameResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

2.1.7 Response format when the state is error

- Authentication error

HTTP status

Status

Returns the status of the request.

401: Authentication error

Data Type	Cardinality
Int	1..1

Response Elements

n/a

Example of Response

```
HTTP/1.1 401 Unauthorized
Date: Fri, 06 Jun 2014 11:00:38 GMT
```

- Access denied

HTTP status

Status

Returns the status of the request.

403:

Access denied

Data Type	Cardinality
Int	1..1

Response Elements

AccessDeniedException

Envelope of error response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	Message

Message

Error message.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	AccessDeniedException	None

Example of Response

```
HTTP/1.1 403 Forbidden
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: d96bd874-9bf2-11e1-8ee7-c98a0037a2b6
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<AccessDeniedException>
  <Message>Access Denied</Message>
</AccessDeniedException>
```

- Errors other than authentication error/access denied

HTTP status

Status

Returns the status of the request.

One of the following values will be returned.

400:

- XML format of request is incorrect
- Requested action or operation is invalid
- Incompatible parameters are used
- An invalid value or a value outside the range is specified to an input parameter
- Query string format is incorrect
- Query string contains a syntax error
- Action is not specified or some parameters are missing
- Parameters required for the specified action are missing

- Access denied because service use limit is exceeded
- Parameter validation error
- Query string contains a syntax error

500:

Internal server error

5xx:

Error when an availability zone goes down
The query sent by the user varies depending on when the availability zone goes down, resulting in various behaviors.

Therefore, (5xx) returned by the HTTP status code prompts the user to retry.

Data Type	Cardinality
Int	1..1

Response Elements

ErrorResponse

Envelope of error response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	Error RequestId

Error

Envelope of error information.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	ErrorResponse	Type Code Message

Type

Sender or Receiver.

Indicates whether the error was caused by the sender or the receiver.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	Error	None

Code

Error code.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	Error	None

Message

Error message (English).

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	Error	None

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ErrorResponse	None

Example of Response

```

HTTP/1.1 400 Bad Request
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: 2844de70-360d-488d-bd63-0cd88fd94be1
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ErrorResponse xmlns="https://dns.tps5.fujitsu.com/doc/2014-11-01/">
  <Error>
    <Type>Sender</Type>
    <Code>InvalidInput</Code>
    <Message>The specified Action is not valid</Message>
  </Error>
  <RequestId>2844de70-360d-488d-bd63-0cd88fd94be1</RequestId>
</ErrorResponse>

```

2.1.8 Regarding the generation of URLs when using APIs

For the URLs used in the APIs, use those in the Service catalog obtained from the identity service that have the type, "mail".

The endpoint URLs are returned from the identity service in the following format.

```
https://mail.***.cloud.global.fujitsu.com
```

*** indicates the region identifier

Create URLs by merging the path name of each API with the endpoint URL.

2.2 Email delivery service

2.2.1 API list

Item	API	Description
1	DeleteIdentity Delete sender ID	Deletes a sender ID
2	GetIdentityVerificationAttributes Show sender ID verification status and verification token	Shows the verification status and verification token (for domains) for sender IDs
3	GetSendQuota Show email sending limits	Shows the sending limits of emails for a user
4	GetSendStatistics Show sent email statistics	Shows statistics of the emails a user has sent
5	ListIdentities List sender IDs	Lists information for all sender IDs
6	SendEmail Send email created from input data	Sends email messages created from input data
7	SendRawEmail Send raw text email	Sends email messages created from raw text data
8	VerifyDomainIdentity Verify domain	Registers a domain as a sender and verifies ownership
9	VerifyEmailIdentity Verify email address	Registers an email address as a sender and verifies ownership
10	CreateSMTPUser Create user for accessing SMTP server	Creates a user for accessing the SMTP server
11	DeleteSMTPUser Delete user for accessing SMTP server	Deletes the user created for accessing the SMTP server
12	GetSMTPUserInfo Show user information for accessing SMTP server	Shows information on the user created for accessing the SMTP server

2.2.2 API details

2.2.2.1 Delete sender ID (POST /)

Deletes the ID of the email address or domain specified from the registered sender IDs.

Request Headers

Refer to "[Common API request headers](#)".

Request Parameters

Action

Name of the API to run.

"DeleteIdentity"

Data Type	Cardinality
String	1..1

Version

API version.

"v1.0" (optional)

Data Type	Cardinality
String	0..1

Identity

Sender ID to be deleted (email address or domain).

Up to 255 characters.

Data Type	Cardinality
String	1..1

Request Elements

n/a

HTTP status

Status

Returns the status of the request.

One of the following values will be returned.

200:	Normal completion
400:	Request parameter error
401:	Authentication error
403:	Access denied
500:	Internal error

Data Type	Cardinality
Int	1..1

Response elements (normal completion)

DeleteIdentityResponse

Envelope of the response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	DeleteIdentityResult ResponseMetadata

DeleteIdentityResult

Envelope of the result.

There is no element.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	DeleteIdentityResponse	None

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	DeleteIdentityResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

Example of Request

```
POST / HTTP/1.1
Date: Fri, 06 Jun 2014 11:00:37 AM GMT
Content-Length: ...
Host: mail.jp-east-1.tps5.fujitsu.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
X-Auth-Token: MIIFvgY...
```

```
Action=DeleteIdentity
&Identity=example.com
```

Example of Response

```
HTTP/1.1 200 OK
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: 035e3d62-c956-4fd2-b0ee-482337e909cf
```

```
<?xml version="1.0" encoding="UTF-8"?>
<DeleteIdentityResponse>
  <DeleteIdentityResult/>
  <ResponseMetadata>
    <RequestId>035e3d62-c956-4fd2-b0ee-482337e909cf</RequestId>
  </ResponseMetadata>
```

2.2.2.2 Show sender ID verification status and verification token (POST /)

Retrieves the verification status and verification token (for domains) for the specified sender IDs (email address or domain).

The sender ID verification status can be one of the following types:

- Pending (verifying)
- Success (successful)
- Failed (failed)
- TemporaryFailure (temporary failure)
- NotStarted (verification has not started)

Request Headers

Refer to "[Common API request headers](#)".

Request Parameters

Action

Name of the API to run.

"GetIdentityVerificationAttributes"

Data Type	Cardinality
String	1..1

Version

API version.

"v1.0" (optional)

Data Type	Cardinality
String	0..1

Identities.member.N

List of sender IDs (email address or domain)

Up to 255 characters.

Specify N from 1 to 100.

Data Type	Cardinality
String list	1..n

Request Elements

n/a

HTTP status

Status

Returns the status of the request.

One of the following values will be returned.

200:	Normal completion
400:	Request parameter error
401:	Authentication error
403:	Access denied
500:	Internal error

Data Type	Cardinality
Int	1..1

Response elements (normal completion)

GetIdentityVerificationAttributesResponse

Envelope of the response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	GetIdentityVerificationAttributesResult ResponseMetadata

GetIdentityVerificationAttributesResult

Envelope of the result.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	GetIdentityVerificationAttributesResponse	VerificationAttributes

VerificationAttributes

Envelope of the verification status list

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	GetIdentityVerificationAttributesResult	entry

entry

Envelope of the verification status

Data Type	Cardinality	Parent Element	Child Element(s)
-	0..n	VerificationAttributes	key value

key

ID (domain name or email address)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	entry	None

value

Envelope of the attribute information

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	entry	VerificationStatus VerificationToken

VerificationStatus

Verification status of the sender IDs (email address or domain)

This can be one of the following types:

- Pending (verifying)
- Success (successful)
- Failed (failed)
- TemporaryFailure (temporary failure)
- NotStarted (verification has not started)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	value	None

VerificationToken

Verification token of the sender IDs (for domains)

This will be "null" if the sender ID is an email address.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	0..1	value	None

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	GetIdentityVerificationAttributesResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

Example of Request

```
POST / HTTP/1.1
Date: Fri, 06 Jun 2014 11:00:37 AM GMT
Content-Length: ...
Host: mail.jp-east-1.tps5.fujitsu.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
X-Auth-Token: MIIFvgY...
```

```
Action=GetIdentityVerificationAttributes
&Identities.member.1=example.com
```

&Identities.member.2=user%40example.com

Example of Response

```
HTTP/1.1 200 OK
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: d96bd874-9bf2-11e1-8ee7-c98a0037a2b6

<?xml version="1.0" encoding="UTF-8"?>
<GetIdentityVerificationAttributesResponse>
  <GetIdentityVerificationAttributesResult>
    <VerificationAttributes>
      <entry>
        <key>example.com</key>
        <value>
          <VerificationStatus>Pending</VerificationStatus>
          <VerificationToken>QTKknzFg2J4ygywa+XvHAXUl1hyHoY0gVfZdfjIedHZ0=</
VerificationToken>
          </value>
        </entry>
      <entry>
        <key>user@ example.com</key>
        <value>
          <VerificationStatus>Pending</VerificationStatus>
          </value>
        </entry>
      </VerificationAttributes>
    </GetIdentityVerificationAttributesResult>
    <ResponseMetadata>
      <RequestId>d96bd874-9bf2-11e1-8ee7-c98a0037a2b6</RequestId>
    </ResponseMetadata>
  </GetIdentityVerificationAttributesResponse>
```

2.2.2.3 Show email sending limits (POST /)

Shows the sending limits of emails for a user.

Request Headers

Refer to ["Common API request headers"](#).

Request Parameters

Action

Name of the API to run.

"GetSendQuota"

Data Type	Cardinality
String	1..1

Version

API version.

"v1.0" (optional)

Data Type	Cardinality
String	0..1

Request Elements

n/a

HTTP status

Status

Returns the status of the request.

One of the following values will be returned.

200:	Normal completion
400:	Request parameter error
401:	Authentication error
403:	Access denied
500:	Internal error

Data Type	Cardinality
Int	1..1

Response Elements (normal completion)

GetSendQuotaResponse

Envelope of the response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	GetSendQuotaResult ResponseMetadata

GetSendQuotaResult

Envelope of the result.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	GetSendQuotaResponse	SentLast24Hours Max24HourSend MaxSendRate

SentLast24Hours

The number of emails the user sent in the past 24 hours.

Data Type	Cardinality	Parent Element	Child Element(s)
Double	1..1	GetSendQuotaResult	None

Max24HourSend

The maximum number of emails the user is allowed to send in a 24-hour period.

Data Type	Cardinality	Parent Element	Child Element(s)
Double	1..1	GetSendQuotaResult	None

MaxSendRate

The maximum number of emails the user is allowed to send per second.

Data Type	Cardinality	Parent Element	Child Element(s)
Double	1..1	GetSendQuotaResult	None

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	GetSendQuotaResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

Example of Request

```
POST / HTTP/1.1
Date: Fri, 06 Jun 2014 11:00:37 AM GMT
Content-Length: ...
Host: mail.jp-east-1.tps5.fujitsu.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
X-Auth-Token: MIIFvgY...

Action=GetSendQuota
```

Example of Response

```
HTTP/1.1 200 OK
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: d96bd874-9bf2-11e1-8ee7-c98a0037a2b6

<?xml version="1.0" encoding="UTF-8"?>
<GetSendQuotaResponse>
  <GetSendQuotaResult>
    <SentLast24Hours>127.0</SentLast24Hours>
    <Max24HourSend>4320000.0</Max24HourSend>
    <MaxSendRate>500.0</MaxSendRate>
  </GetSendQuotaResult>
  <ResponseMetadata>
    <RequestId>d96bd874-9bf2-11e1-8ee7-c98a0037a2b6</RequestId>
  </ResponseMetadata>
```



```
</GetSendQuotaResponse>
```

2.2.2.4 Show sent email statistics (POST /)

Shows statistics of the emails a user has sent.
Data points are shown for the send result over the last two weeks.
Each data point contains statistics for a 15-minute interval.

Request Headers

Refer to "[Common API request headers](#)".

Request Parameters

Action

Name of the API to run.
"GetSendStatistics"

Data Type	Cardinality
String	1..1

Version

API version.
"v1.0" (optional)

Data Type	Cardinality
String	0..1

Request Elements

n/a

HTTP status

Status

Returns the status of the request.
One of the following values will be returned.

200:	Normal completion
400:	Request parameter error
401:	Authentication error
403:	Access denied
500:	Internal error

Data Type	Cardinality
Int	1..1

Response elements (normal completion)

GetSendStatisticsResponse

Envelope of the response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	GetSendStatisticsResult ResponseMetadata

GetSendStatisticsResult

Envelope of the result.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	GetSendStatisticsResponse	SendDataPoints

SendDataPoints

Envelope of the list of email statistics.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	GetSendStatisticsResult	member

member

Envelope of email statistics.

Data Type	Cardinality	Parent Element	Child Element(s)
-	0..n	SendDataPoints	DeliveryAttempts Timestamp Rejects Bounces Complaints

DeliveryAttempts

The number of emails stored in the send queue.

Data Type	Cardinality	Parent Element	Child Element(s)
Long	1..1	member	None

Timestamp

The time when statistics were obtained (start time).

The date format is "YYYY-MM-DDThh:mm:ss.SSSZ".

Data Type	Cardinality	Parent Element	Child Element(s)
DateTime	1..1	member	None

Rejects

The number of discarded emails.

Data Type	Cardinality	Parent Element	Child Element(s)
Long	1..1	member	None

Bounces

The number of bounced emails.

Data Type	Cardinality	Parent Element	Child Element(s)
Long	1..1	member	None

Complaints

The number of complaint emails.

Data Type	Cardinality	Parent Element	Child Element(s)
Long	1..1	member	None

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	GetSendStatisticsResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

Example of Request

```
POST / HTTP/1.1
Date: Fri, 06 Jun 2014 11:00:37 AM GMT
Content-Length: ...
Host: mail.jp-east-1.tps5.fujitsu.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
X-Auth-Token: MIIFvgY...
```

```
Action=GetSendStatistics
```

Example of Response

```
HTTP/1.1 200 OK
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: d96bd874-9bf2-11e1-8ee7-c98a0037a2b6
```

```
<?xml version="1.0" encoding="UTF-8"?>
<GetSendStatisticsResponse>
  <GetSendStatisticsResult>
    <SendDataPoints>
      <member>
        <DeliveryAttempts>8</DeliveryAttempts>
```

```

    <Timestamp>2011-08-03T19:23:00Z</Timestamp>
    <Rejects>0</Rejects>
    <Bounces>0</Bounces>
    <Complaints>0</Complaints>
  </member>
  <member>
    <DeliveryAttempts>7</DeliveryAttempts>
    <Timestamp>2011-08-03T06:53:00Z</Timestamp>
    <Rejects>0</Rejects>
    <Bounces>0</Bounces>
    <Complaints>0</Complaints>
  </member>
  -
  -
  -
</GetSendStatisticsResult>
<ResponseMetadata>
  <RequestId>d96bd874-9bf2-11e1-8ee7-c98a0037a2b6</RequestId>
</ResponseMetadata>
</GetSendStatisticsResponse>

```

2.2.2.5 List sender IDs (POST /)

Lists the registered sender IDs of a customer account for the specified type of sender ID (email address or domain).

Lists sender IDs regardless of verification status.

Request Headers

Refer to "[Common API request headers](#)".

Request parameters

Action

Name of the API to run.

"ListIdentities"

Data Type	Cardinality
String	1..1

Version

API version.

"v1.0" (optional)

Data Type	Cardinality
String	0..1

IdentityType

Type of sender ID to list.

This can be one of the following types:

- EmailAddress
- Domain

Data Type	Cardinality
String	0..1

MaxItems

Maximum number of records that can be listed.

Specify up to 100.

Data Type	Cardinality
int	0..1

NextToken

Token for retrieving data that could not be retrieved in the previous call.

Set the value returned by the response.

Data Type	Cardinality
String	0..1

Request Elements

n/a

HTTP status**Status**

Returns the status of the request.

One of the following values will be returned.

200:	Normal completion
400:	Request parameter error
401:	Authentication error
403:	Access denied
500:	Internal error

Data Type	Cardinality
Int	1..1

Response elements (normal completion)**ListIdentitiesResponse**

Envelope of the response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	ListIdentitiesResult ResponseMetadata

ListIdentitiesResult

Envelope of the result.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	ListIdentitiesResponse	Identities NextToken

Identities

Envelope of the sender ID.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	ListIdentitiesResult	member

member

Sender ID.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	0..n	Identities	None

NextToken

Token for retrieving the next set of records.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	0..1	ListIdentitiesResult	None

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	ListIdentitiesResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

Example of Request

```
POST / HTTP/1.1
Date: Fri, 06 Jun 2014 11:00:37 AM GMT
Content-Length: ...
Host: mail.jp-east-1.tps5.fujitsu.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
X-Auth-Token: MIIFvgY...

Action=ListIdentities
&IdentityType=EmailAddress
```

Example of Response

```
HTTP/1.1 200 OK
```

```
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: d96bd874-9bf2-11e1-8ee7-c98a0037a2b6
```

```
<?xml version="1.0" encoding="UTF-8"?>
<ListIdentitiesResponse>
  <ListIdentitiesResult>
    <Identities>
      <member>user1@example.com</member>
      <member>user2@example.com</member>
    </Identities>
  </ListIdentitiesResult>
  <ResponseMetadata>
    <RequestId>d96bd874-9bf2-11e1-8ee7-c98a0037a2b6</RequestId>
  </ResponseMetadata>
</ListIdentitiesResponse>
```

2.2.2.6 Send email created from input data (POST /)

Sends email messages created from input data.



Important The Source request parameter (email sender address) must be a verified email address or domain.

The maximum size of the message is 2 MB. (Total of Message.Body.Text.Data and Message.Body.Html.Data)

The maximum number of email addresses including TO, CC and BCC per message is 50. Execute the API as many times as required to send the email to more email addresses.

Request Headers

Refer to "[Common API request headers](#)".

Request parameters

Action

Name of the API to run.

"SendEmail"

Data Type	Cardinality
String	1..1

Version

API version.

"v1.0" (optional)

Data Type	Cardinality
String	0..1

Destination.ToAddresses.member.N

Send to (To).

If the string contains non-ASCII characters, you must use the MIME format for encoding.

The format below will be used for the MIME format encoding.

=? charset?encoding?encodedText? =

Refer to RFC 2047 for details.

Data Type	Cardinality
String	0..n (Destination is a required item)

Destination.CcAddresses.member.N

Send to (Cc).

If the string contains non-ASCII characters, you must use the MIME format for encoding.

The format below will be used for the MIME format encoding.

=? charset?encoding?encodedText? =

Refer to RFC 2047 for details.

Data Type	Cardinality
String	0..n (Destination is a required item)

Destination.BccAddresses.member.N

Send to (Bcc).

If the string contains non-ASCII characters, you must use the MIME format for encoding.

The format below will be used for the MIME format encoding.

=? charset?encoding?encodedText? =

Refer to RFC 2047 for details.

Data Type	Cardinality
String	0..n (Destination is a required item)

Message.Subject.Data

Email subject data.

Data Type	Cardinality
String	0..1 (Message is a required item)

Message.Subject.Charset

Character encoding of the email subject.

Data Type	Cardinality
String	0..1 (Message is a required item)

Message.Body.Text.Data

Text data of the email body.

Data Type	Cardinality
String	0..1 (Message is a required item)

Message.Body.Text.Charset

Character encoding of the email body.

Data Type	Cardinality
String	0..1 (Message is a required item)

Message.Body.Html.Data

HTML data of the email body.

Data Type	Cardinality
String	0..1 (Message is a required item)

Message.Body.Html.Charset

HTML character encoding of the email body.

Data Type	Cardinality
String	0..1 (Message is a required item)

ReplyToAddresses.member.N

Reply-to list.

If the recipient replies to the message, it will be sent to the reply-to address.

Specify N from 1 to 10.

Data Type	Cardinality
String	0..n

ReturnPath

Address to forward a notification (bounced email) to when a message was not delivered.

Data Type	Cardinality
String	0..1

Source

Email sender address.

If the string contains non-ASCII characters, you must use the MIME format for encoding.

The format below will be used for the MIME format encoding.

=? charset?encoding?encodedText? =

Refer to RFC 2047 for details.

Data Type	Cardinality
String	1..1

Request Elements

n/a

HTTP status

Status

Returns the status of the request.

One of the following values will be returned.

200:	Normal completion
400:	The message could not be sent due to request parameter error or failed action.
401:	Authentication error
403:	Access denied
500:	Internal error

Data Type	Cardinality
Int	1..1

Response Elements (normal completion)

SendEmailResponse

Envelope of the response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	SendEmailResult ResponseMetadata

SendEmailResult

Envelope of the result.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	SendEmailResponse	MessageId

MessageId

Message ID generated to uniquely identify the message.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	SendEmailResult	None

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	SendEmailResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

Example of request

```
POST / HTTP/1.1
Date: Fri, 06 Jun 2014 11:00:37 AM GMT
Content-Length: ...
Host: mail.jp-east-1.tps5.fujitsu.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
X-Auth-Token: MIIFvgY...

Action=SendEmail
&Destination.ToAddresses.member.1=allan%40example.com
&Message.Body.Text.Data=body
&Message.Subject.Data=subject
&Source=user%40example.com
```

Example of response

```
HTTP/1.1 200 OK
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: baf96453-4867-4359-9cfc-5fee3afe7e98

<?xml version="1.0" encoding="UTF-8"?>
<SendEmailResponse>
  <SendEmailResult>
    <MessageId>000001fd985ba1-c92b-49ba-97ee-afcefdb6bab5-000000</MessageId>
  </SendEmailResult>
  <ResponseMetadata>
    <RequestId>baf96453-4867-4359-9cfc-5fee3afe7e98</RequestId>
  </ResponseMetadata>
</SendEmailResponse>
```

2.2.2.7 Send raw text email (POST /)

Sends email messages consisting of a message header and a body by specifying the raw text data.

Raw text messages need to comply with the relevant Internet email standards. If they do not, they cannot be sent.



Important The Source request parameter (email sender address) must be a verified email address or domain.

The maximum size of the message is 2 MB. (Size of RawMessage.Data after base64 decoding)

The maximum number of email addresses including TO, CC and BCC per message is 50. Execute the API as many times as required to send the email to more email addresses.

Request Headers

Refer to "[Common API request headers](#)".

Request Parameters

Action

Name of the API to run.

"SendRawEmail"

Data Type	Cardinality
String	1..1

Version

API version.

"v1.0" (optional)

Data Type	Cardinality
String	0..1

Destinations.member.N

List of email recipients.

If omitted, messages will be sent to the TO, CC, and BCC email addresses specified in the message header.

If specified, TO, CC, and BCC specified in the message header will be ignored and messages will only be sent to the email addresses specified in Destinations.

Specify N from 1 to 50.

Data Type	Cardinality
String	0..n

RawMessage.Data

Converted Base64 plain text data of the message to be sent.

The following conditions must be met:

- The message must be a header and a body separated by a blank line.
- All required header fields must be present.
- Each part of the multipart MIME message needs to be formatted appropriately.

Data Type	Cardinality
Blob	1..1

Source

Email sender address.

If Source is specified, bounced emails and complaint emails will be sent to this address, and the Return-Path header in the message will be ignored.

If the string contains non-ASCII characters, you must use the MIME format for encoding.

The format below will be used for the MIME format encoding.

=? charset?encoding?encodedText?="

Refer to RFC 2047 for details.

Data Type	Cardinality
String	0..1

Request Elements

n/a

HTTP status

Status

Returns the status of the request.

One of the following values will be returned.

200:	Normal completion
400:	The message could not be sent due to request parameter error or failed action.
401:	Authentication error
403:	Access denied
500:	Internal error

Data Type	Cardinality
Int	1..1

Response elements (normal completion)

SendRawEmailResponse

Envelope of the response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	SendRawEmailResult ResponseMetadata

SendRawEmailResult

Envelope of the result.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	SendRawEmailResponse	MessageId

MessageId

Message ID generated to uniquely identify the message.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	SendEmailResult	None

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	SendEmailResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

Example of Request

```
POST / HTTP/1.1
Date: Fri, 06 Jun 2014 11:00:37 AM GMT
Content-Length: ...
Host: mail.jp-east-1.tps5.fujitsu.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
X-Auth-Token: MIIFvgY...

Action=SendRawEmail
&RawMessage.Data=U3Viam...
```

Example of Response

```
HTTP/1.1 200 OK
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: 0ae83209-8dd0-4392-8b15-74c693c98aad

<?xml version="1.0" encoding="UTF-8"?>
<SendRawEmailResponse>
  <SendRawEmailResult>
    <MessageId>0000012d23161b-6d55-4355-981f-1f9e835008c0-000000</MessageId>
  </SendRawEmailResult>
  <ResponseMetadata>
    <RequestId>0ae83209-8dd0-4392-8b15-74c693c98aad</RequestId>
  </ResponseMetadata>
</SendRawEmailResponse>
```

2.2.2.8 Verify domain (POST /)

Registers a domain as a sender ID and verifies ownership of the domain.

Specifying the VerificationToken value of the response to a TXT record on the DNS server completes the verification procedure.

Once domain ownership is confirmed, emails can be sent from all the email addresses that belong to the domain without verifying individual email addresses.

Request Headers

Refer to "[Common API request headers](#)".

Request Parameters

Action

Name of the API to run.

"VerifyDomainIdentity"

Data Type	Cardinality
String	1..1

Version

API version.
"v1.0" (optional)

Data Type	Cardinality
String	0..1

Domain

Domain to be verified.
Up to 255 characters.

Data Type	Cardinality
String	1..1

Request Elements

n/a

HTTP status

Status

Returns the status of the request.
One of the following values will be returned.

200:	Normal completion
400:	Request parameter error
401:	Authentication error
403:	Access denied
500:	Internal error

Data Type	Cardinality
Int	1..1

Response elements (normal completion)

VerifyDomainIdentityResponse

Envelope of the response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	VerifyDomainIdentityResult ResponseMetadata

VerifyDomainIdentityResult

Envelope of the result.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	VerifyDomainIdentityResponse	VerificationToken

VerificationToken

Verification token.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	VerifyDomainIdentityResult	None

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	VerifyDomainIdentityResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

Example of request

```
POST / HTTP/1.1
Date: Fri, 06 Jun 2014 11:00:37 AM GMT
Content-Length: ...
Host: mail.jp-east-1.tps5.fujitsu.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
X-Auth-Token: MIIFvgY...

Action=VerifyDomainIdentity
&Domain=example.com
```

Example of Response

```
HTTP/1.1 200 OK
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: 0610909f-2598-4354-838b-67223520e3ea

<?xml version="1.0" encoding="UTF-8"?>
<VerifyDomainIdentityResponse>
  <VerifyDomainIdentityResult>
    <VerificationToken>95f2f6b80985...</VerificationToken>
  </VerifyDomainIdentityResult>
  <ResponseMetadata>
    <RequestId>0610909f-2598-4354-838b-67223520e3ea</RequestId>
  </ResponseMetadata>
</VerifyDomainIdentityResponse>
```

2.2.2.9 Verify email address (POST /)

Registers an email address as a sender ID and verifies ownership of the email address.

A confirmation email separate from the response will be sent to the specified email address. Accessing the URL indicated in the email completes the verification procedure. Once an email address is confirmed, emails can be sent from that address.

Request Headers

Refer to "[Common API request headers](#)".

Request Parameters

Action

Name of the API to run.

"VerifyEmailIdentity"

Data Type	Cardinality
String	1..1

Version

API version.

"v1.0" (optional)

Data Type	Cardinality
String	0..1

EmailAddress

Email address to be verified.

Up to 256 characters.

Data Type	Cardinality
String	1..1

Request Elements

n/a

HTTP status

Status

Returns the status of the request.

One of the following values will be returned.

200:	Normal completion
400:	Request parameter error
401:	Authentication error
403:	Access denied
500:	Internal error

Data Type	Cardinality
Int	1..1

Response elements (normal completion)

VerifyEmailIdentityResponse

Envelope of the response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	VerifyEmailIdentityResult ResponseMetadata

VerifyEmailIdentityResult

Envelope of the result.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	VerifyEmailIdentityResponse	None

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	VerifyEmailIdentityResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

Example of Request

```
POST / HTTP/1.1
Date: Fri, 06 Jun 2014 11:00:37 AM GMT
Content-Length: ...
Host: mail.jp-east-1.tps5.fujitsu.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
X-Auth-Token: MIIFvgY...
```

```
Action=VerifyEmailIdentity
&EmailAddress=user%40example.com
```

Example of Response

```
HTTP/1.1 200 OK
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: 65ce6f91-4e8d-44a1-b33e-5ba3de2f528b
```

```
<?xml version="1.0" encoding="UTF-8"?>
<VerifyEmailIdentityResponse>
  <VerifyEmailIdentityResult/>
```

```

<ResponseMetadata>
  <RequestId>65ce6f91-4e8d-44a1-b33e-5ba3de2f528b </RequestId>
</ResponseMetadata>
</VerifyEmailIdentityResponse>

```

2.2.2.10 Create user for accessing SMTP server (POST /)

Creates a user for accessing the SMTP server.
Only one user can be created per contract.

Request Headers

Refer to "[Common API request headers](#)".

Request parameters

Action

Name of the API to run.
"CreateSMTPUser"

Data Type	Cardinality
String	1..1

Version

API version.
"v1.0" (optional)

Data Type	Cardinality
String	0..1

Request Elements

n/a

HTTP status

Status

Returns the status of the request.
One of the following values will be returned.

200:	Normal completion
400:	Request parameter error
401:	Authentication error
403:	Access denied
409:	The SMTP user has already been created
500:	Internal error

Data Type	Cardinality
Int	1..1

Response elements (normal completion)

CreateSMTPUserResponse

Envelope of the response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	CreateSMTPUserResult ResponseMetadata

CreateSMTPUserResult

Envelope of the result.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	CreateSMTPUserResponse	SMTPUser SMTPPassword

SMTPUser

User for accessing the SMTP server.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	CreateSMTPUserResult	None

SMTPPassword

Password of the user for accessing the SMTP server.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	CreateSMTPUserResult	None

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	CreateSMTPUserResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

Example of Request

```
POST / HTTP/1.1
Date: Fri, 06 Jun 2014 11:00:37 AM GMT
Content-Length: ...
Host: mail.jp-east-1.tps5.fujitsu.com
```

```
Content-Type: application/x-www-form-urlencoded; charset=utf-8
X-Auth-Token: MIIFvgY...

Action=CreateSMTPUser
```

Example of Response

```
HTTP/1.1 200 OK
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: 65ce6f91-4e8d-44a1-b33e-5ba3de2f528b

<?xml version="1.0" encoding="UTF-8"?>
<CreateSMTPUserResponse>
  <CreateSMTPUserResult>
    <SMTPUser>NKUIGMTP0U9PUZGKL1RW</SMTPUser>
    <SMTPPassword>BiUIRJHe...</SMTPPassword>
  </CreateSMTPUserResult>
  <ResponseMetadata>
    <RequestId>65ce6f91-4e8d-44a1-b33e-5ba3de2f528b </RequestId>
  </ResponseMetadata>
</CreateSMTPUserResponse>
```

2.2.2.11 Delete user for accessing SMTP server (POST /)

Deletes the user created for accessing the SMTP server.

Request Headers

Refer to "[Common API request headers](#)".

Request Parameters

Action

Name of the API to run.

"DeleteSMTPUser"

Data Type	Cardinality
String	1..1

Version

API version.

"v1.0" (optional)

Data Type	Cardinality
String	0..1

Request Elements

n/a

HTTP status

Status

Returns the status of the request.

One of the following values will be returned.

200:	Normal completion
400:	Request parameter error
401:	Authentication error
403:	Access denied
500:	Internal error

Data Type	Cardinality
Int	1..1

Response elements (normal completion)

DeleteSMTPUserResponse

Envelope of the response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	DeleteSMTPUserResult ResponseMetadata

DeleteSMTPUserResult

Envelope of the result.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	DeleteSMTPUserResponse	None

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	DeleteSMTPUserResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

Example of request

```
POST / HTTP/1.1
Date: Fri, 06 Jun 2014 11:00:37 AM GMT
Content-Length: ...
Host: mail.jp-east-1.tps5.fujitsu.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
```

X-Auth-Token: MIIFvgY...

Action=DeleteSMTPUser

Example of response

```
HTTP/1.1 200 OK
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: 65ce6f91-4e8d-44a1-b33e-5ba3de2f528b

<?xml version="1.0" encoding="UTF-8"?>
<DeleteSMTPUserResponse>
  <DeleteSMTPUserResult/>
  <ResponseMetadata>
    <RequestId>65ce6f91-4e8d-44a1-b33e-5ba3de2f528b </RequestId>
  </ResponseMetadata>
</DeleteSMTPUserResponse>
```

2.2.2.12 Show user information for accessing SMTP server (POST /)

Shows user information for accessing the SMTP server.

Request Headers

Refer to "[Common API request headers](#)".

Request Parameters

Action

Name of the API to run.

"GetSMTPUserInfo"

Data Type	Cardinality
String	1..1

Version

API version.

"v1.0" (optional)

Data Type	Cardinality
String	0..1

Request Elements

n/a

HTTP status

Status

Returns the status of the request.

One of the following values will be returned.

200:	Normal completion
400:	Request parameter error
401:	Authentication error
403:	Access denied
404:	SMTP user has not been created
500:	Internal error

Data Type	Cardinality
Int	1..1

Response Elements (normal completion)

GetSMTPUserInfoResponse

Envelope of the response.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	None	GetSMTPUserInfoResult ResponseMetadata

GetSMTPUserInfoResult

Envelope of the result.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	GetSMTPUserInfoResponse	SMTPUser SMTPPassword

SMTPUser

User for accessing the SMTP server.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	GetSMTPUserInfoResult	None

SMTPPassword

Password of the user for accessing the SMTP server.

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	GetSMTPUserInfoResult	None

ResponseMetadata

Envelope of the metadata.

Data Type	Cardinality	Parent Element	Child Element(s)
-	1..1	GetSMTPUserInfoResponse	RequestId

RequestId

ID that uniquely identifies the request.

This is required when contacting support staff to troubleshoot an issue.

UUID format (example: 647cd254-e0d1-44a9-af61-1d6d86ea6b77)

Data Type	Cardinality	Parent Element	Child Element(s)
xsd:string	1..1	ResponseMetadata	None

Example of Request

```
POST / HTTP/1.1
Date: Fri, 06 Jun 2014 11:00:37 AM GMT
Content-Length: ...
Host: mail.jp-east-1.tps5.fujitsu.com
Content-Type: application/x-www-form-urlencoded; charset=utf-8
X-Auth-Token: MIIFvgY...

Action=GetSMTPUserInfo
```

Example of Response

```
HTTP/1.1 200 OK
Date: Fri, 06 Jun 2014 11:00:38 GMT
Content-Length: ...
Content-Type: application/xml
x-fj-request-id: 65ce6f91-4e8d-44a1-b33e-5ba3de2f528b

<?xml version="1.0" encoding="UTF-8"?>
<GetSMTPUserInfoResponse>
  <GetSMTPUserInfoResult>
    <SMTPUser>NKUIGMTP0U9PUZGKL1RW</SMTPUser>
    <SMTPPassword> BiUIRJHe... </SMTPPassword>
  </GetSMTPUserInfoResult>
  <ResponseMetadata>
    <RequestId>65ce6f91-4e8d-44a1-b33e-5ba3de2f528b </RequestId>
  </ResponseMetadata>
</GetSMTPUserInfoResponse>
```

Part 3: Content delivery service

Topics:

- [Common information](#)
- [Content delivery service](#)

3.1 Common information

3.1.1 Content delivery service

The content delivery service (CDN) is a service that delivers content at high speed. Akamai CDN (Akamai Intelligent Platform) is used on the back end and the end user front end.

3.1.2 General requirements

This section describes general requirements to use this API.

- Note: If any characters that cannot be used as is in a URL are included in the request parameter value, the request parameter value will need to be UTF-8 encoded.
- The scope of X-Auth-Token is that only items specified as "scope" for the default project are supported. (*1) 1
- Use global user management to retrieve tokens.



Note

*1: A 401 authentication error is not returned even for tokens added by the user through a local project.

3.1.3 Common API request headers

Request Headers

X-Auth-Token

Specify the authentication token.

Data Type	Cardinality
String	1..1

Content-Type

If the information to be specified in the request body is in JSON format, specify application/json

Data Type	Cardinality
String	0..1

3.1.4 Common API return codes

The following lists return codes common to the APIs.

Status

Returns the status of a request. Refer to the X-Message header for supplementary information on the status. Refer to the X-Error header or X-Access-Log-Detailed-Status for error details.

- 200 OK: Completed successfully
- 202 Accepted: Request was received

- 204 No Content: Request was received, however, there is no content to return
- 400 Bad Request: The request body was invalid (Invalid parameter, etc.)
- 401 Unauthorized: Authentication failed (When global user management determines that X-Auth-Token has expired or is invalid, etc.)
- 403 Forbidden: Access was denied (The customer's role lacks privileges, the token is not scoped to the project, etc.)
- 404 Not Found: No applicable resources (The delivery settings specified in service_id were not found, have been deleted, or their creation failed)
- 405 Method Not Allowed: Method not allowed (Error in specification of GET/POST/PATCH/DELETE)
- 409 Conflict: A conflict occurred (The delivery settings specified in service_id are being processed, etc.)
- 429 Too Many Requests: Too many requests. Wait for a few moments, and then execute again
- 500 Internal Server Error: Internal error of the service
- 503 Service Unavailable: The service is temporarily unavailable (Periodic maintenance, etc.)
- 507 Insufficient Storage: Insufficient storage capacity (The number of creatable delivery settings has been exceeded, etc.)

Data Type	Cardinality
Int	1..1

3.1.5 Common API response headers

Response Headers

Content-Length

Request length excluding the header (in bytes)

Data Type	Cardinality
String	1..1

Content-Type

Type of contents

- application/json: The response body is using JSON format

Date

Datetime of the response

Data Type	Cardinality
String	1..1

X-Message

Supplementary information about the status

- Success: Completed successfully
- No services to return: No services (empty list)
- No Content: There is no content to return
- Accepted: Request was received
- Bad Request: The request was invalid

- Invalid entry for xxx: The value of xxx is invalid
- Invalid Json: Invalid JSON format
- Quota exceeded: The maximum number that can be created is exceeded
- Service is in progress: Another process is in progress
- Service is undeployed: The service is disabled
- Parameter required: A parameter is required
- Rate limit exceeded: Too many requests. Wait for a few moments, and then execute again
- Internal Server Error: Internal error
- Service Unavailable: The service is temporarily unavailable

Data Type	Cardinality
String	0..1

X-Error

Error details

- Invalid JSON input / <errorContent>
There is an error in the JSON-formatted data. Refer to <errorContent> for details
- Internal Server Error (*3DigitNumber*)
Other internal error. The *3DigitNumber* portion may be used for inquiries.
- Service Unavailable (*3DigitNumber*)
Other temporary error. The *3DigitNumber* portion may be used for inquiries.

Data Type	Cardinality
String	0..1

X-Error-Instance-ID

Information on the command for which the error occurred. May be used for inquiries

Data Type	Cardinality
String	0..1

X-Status

Status information

Service status:

- create_in_progress - Creation in progress
- deployed - Deployment is complete and is ready for use
- undeployed - Deployment is stopped
- update_in_progress - Update in progress
- delete_in_progress - Deletion in progress
- failed - Processing failed. Refer to X-Error

Report:

- create_in_progress - Creation in progress
- deployed - Report has been created and is ready for use
- failed - Processing failed. Refer to X-Error

Data Type	Cardinality
String	0..1

X-Access-Log-Status

Status information

- deployed - Deployment is complete and is ready for use
- undeployed - Deployment is stopped
- failed - Processing failed. Refer to X-Access-Log-Status-Detailed.

Data Type	Cardinality
String	0..1

X-Access-URL

Service FQDN. your own domain name or cdn-edge domain name

Data Type	Cardinality
String	1..1

X-Protocol

Delivery protocol scheme. http or https

Data Type	Cardinality
String	1..1

Location

URL including service_id and report_id

Data Type	Cardinality
String	1..1

X-Access-Log-Container

Container of object storage where the access logs are stored

Data Type	Cardinality
String	1..1

X-Access-Log-Object-Prefix

Prefix of the access log object name

Data Type	Cardinality
String	1..1

X-Access-Log-Key-Container

The container for the object storage where the public key used for encrypting access logs is stored

Data Type	Cardinality
String	1..1

X-Access-Log-Key-Object

The object name of the public key used for encrypting access logs

Data Type	Cardinality
String	1..1

X-Access-Log-Detailed-Status

Supplementary information in the access log when an error occurs

- Access error to the container. - An error occurred while accessing the container
- Access error to the public key. - An error occurred while accessing the public key container and the public key object
- Illegal public key. - The public key object is illegal
- Internal server error. - An internal error occurred

Data Type	Cardinality
String	1..1

3.1.6 Regarding the generation of URLs when using APIs

For the URLs used in the APIs, use those in the Service catalog obtained from the identity service that have the type, "cdn".

The endpoint URLs are returned from the identity service in the following format.

```
https://cdn.gls.cloud.global.fujitsu.com
```

```
*** indicates the region identifier
```

Create URLs by merging the path name of each API with the endpoint URL.

3.2 Content delivery service

3.2.1 API list

Item	API	Description
1	GET /v1/services List All Services	Lists services.
2	POST /v1/services{?pre_fqdn, protocol, status, container, object_prefix, key_container, key_object} Create a Service	Creates a service.
3	GET /v1/services/{service_id} Retrieve a Service	List information about the specified service.
4	PATCH /v1/services/{service_id}/param{? status, container, object_prefix, key_container, key_object} Edit a Service	Updates the specified service.
5	DELETE /v1/services/{service_id} Delete a Service	Deletes the specified service.
6	DELETE /v1/services/{service_id}/assets{? url, action} Purge a Cached Asset	Purge a cached assets.
7	POST /v1/reports{?granularity, start_date, end_date, delivery_option, metrics, per_region, service_id} Create a Report	Creates a report.
8	GET /v1/reports/{report_id} Retrieve a Report	Lists the specified report.

3.2.2 API details

3.2.2.1 List all services (GET /v1/services)

Lists services available in your project. To list information about a specific service, execute the retrieve a service API.

Items in the undeployed state are also included in the response.

The table below lists the main status codes and X-Message header values.

Status code	X-Message header
200	Success: Completed successfully
200	No services to return: No services (empty list)

Request Headers

Refer to "Common API request headers" for details.

Request Parameters

None.

Response Headers

Refer to "Common API response headers" for details.

Response Elements

services

Services

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..n	None	id, status, links

id

The service_id indicating the service

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	services	None

status

Status information. Refer to the X-Status response header.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	services	None

access-log-status

Status information. Refer to the X-Access-Log-Status response header.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	services	None

links

Container for the child elements

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	services	rel, href

href

Service FQDN. Refer to X-Access-URL.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	links	None

rel

URL including service_id. Refer to the Location header.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	links	None

Example of Response

```
When 2 services are available on the project:
GET /v1/services

HTTP/1.1 200 OK
X-Message: Success
Content-Type: application/json
Content-Length: 442
{
  "services": [
    {
      "access_log_status": "undeployed",
      "id": "36adedf4-2370-476c-b531-3913b9502fe7",
      "links": {
        "href": "ct.list.00002.net",
        "rel": "https://<Endpoint>/v1/services/36adedf4-2370-476c-b531-3913b9502fe7"
      },
      "status": "deployed"
    },
    {
      "access_log_status": "undeployed",
      "id": "a71170d3-b95e-4182-9918-687e327792bf",
      "links": {
        "href": "ct.list.00003.net",
        "rel": "https://<Endpoint>/v1/services/a71170d3-b95e-4182-9918-687e327792bf"
      },
      "status": "deployed"
    }
  ]
}
```

```
When no services are available on the project:
GET /v1/services

HTTP/1.1 200 OK
Date: Fri, 30 Oct 2015 00:11:44 GMT
X-Message: No services to return
Content-Type: application/json
Content-Length: 16
{
  "services": []
}
```

3.2.2.2 Create a service (POST /v1/services)

Creates a service and starts content delivery.

Specify the parameters pre-FQDN, delivery protocol scheme, initial delivery status, container for storing access logs and object prefix, and in the request body specify (in JSON format) the caching behavior control rules. The minimum caching behavior control rule required to be specified is a match condition on the origin (for example, "url-wildcard": "/*"). For this sample code, refer to description of the contents delivery on the web site in "The use case of the Web system integration" in the "IaaS Features Handbook". In this case, specify any value (for example, "-") to the origin behavior digitalProperty of the caching behavior control rules. Refer to "Appendix A Caching Rules" for details on caching behavior control rules.

Upon successful completion, the Location response header will return `service_id` which identifies the content delivery setting. Details can then be retrieved by specifying `service_id` in the service retrieval API.

Refer to the X-Access-URL response header returned using the service retrieval API for the delivery FQDN temporarily assigned by Fujitsu to the customer when a service is created. The FQDN will be maintained until the service is deleted.

Refer to the X-Status response header returned using the service retrieval API for the propagation status of the service to Akamai CDN can be obtained using the X-Status response header obtained from the service retrieval API. When the status changes to "deployed", end-user access to the edge server is enabled (content delivery is enabled).

Syntax check for the caching behavior control rules specified in the request body is performed asynchronously. If the X-Status response header returned using the retrieval API is "failed", the description for the rules may contain errors, so refer to the X-Message and X-Error headers.

Even if the caching behavior control rules do not provide description for the origin behavior or restrict access to its FQDN, the rules are still valid, so ultimately access the edge server to check operations.

If the delivery status is set to "deactivate", only assignment is performed for domains while the propagation to Akamai CDN is stopped. If starting content delivery, change the delivery status to "activate" in the service update API.

If a valid value is specified in the "container" parameters, it starts storing access logs. A write test will be performed in the test object `objectStorageEndpointOfEastJapanRegion+AUTH_{project_id}+"/"+container+"/"+object_prefix+"_start"`. If "object_prefix" is empty or not specified, it will be stored immediately under the container.

If "container" is empty or not specified, it does not start storing access logs.

When a valid public key object is specified for `key_object`, access logs are encrypted and then stored. For details on how to create public keys and decrypt encrypted access logs, refer to the "IaaS Features Handbook".

Refer to the X-Access-Log-Status, X-Access-Log-Container, X-Access-Log-Object-Prefix, X-Access-Log-Key-Container, X-Access-Log-Key-Object, and X-Access-Log-Detailed-Status response headers in the service retrieval API for storage status, errors, and setting values of access logs.

Refer to the "IaaS Features Handbook" for details on the CSV format that can be obtained using the access log feature.

The table below lists the main status codes and X-Message header values.

Status code	X-Message header
202	Accepted: Request was received
200	No services to return: No services (empty list)
400	Invalid json: Invalid JSON format
400	Invalid entry for <code>pre_fqdn/protocol/status</code> : Invalid value
400	Invalid entry for <code>container/object_prefix</code> : Invalid value
400	Invalid entry for <code>key_container/key_object</code> : Invalid value (when the corresponding public key is not stored there)
507	Quota exceeded: The maximum number that can be created is exceeded

Request Headers

Refer to "Common API request headers" for details.

Request parameters

pre_fqdn

FQDN for the service. Refer to the "IaaS Features Handbook" for details.

- If using a your own domain name: Specify the FQDN
The user needs to set CNAME for the DNS server.
- If not using a your own domain name : Specify prefix (default: no prefix)

Data Type	Cardinality
String	0..1

protocol

Delivery protocol scheme.

- http: Use HTTP for delivery (default).
- https: Use HTTPS for delivery. HTTP access to edge server will be redirected to HTTPS.

Data Type	Cardinality
String	0..1

status

Initial status

- activate: Enables content delivery (default)
- deactivate: Disables content delivery

Data Type	Cardinality
String	0..1

container

Container of object storage where the access logs are stored

- If a value is specified: Sets the access log storage destination to the specified location
- If no value is specified: Does not store access logs (default)

Data Type	Cardinality
String	0..1

object_prefix

Prefix indicating access log object name. Pseudo path information can be included.

Example: "path/PRE01_", "PRE01_", etc.

Data Type	Cardinality
String	0..1

key_container

The container for the object storage where the public key used for encrypting access logs is stored.

- If the string indicating the container name is specified: Refers to the specified container
- If no value is specified: Uses the value for container explained above (default)

Data Type	Cardinality
String	0..1

key_object

Object name of the public key used for encrypting access logs. Pseudo path information can be included. The public key object must be stored beforehand.

- If a string indicating an object name is specified: Encrypt access logs
- If no value is specified: Does not encrypt access logs (default)

Example:"public_key"

Data Type	Cardinality
String	0..1

Request Elements

rules

Caching behavior control rules. Refer to "Appendix A Caching Rules" for details.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	None	Refer to JSON schema for details on the rules.

Response Headers

Refer to "Common API response headers" for details.

Location

URL including service_id.

Data Type	Cardinality
String	1..1

Response Elements

None.

Example of Response

```

POST/v1/services?protocol=http&status=activate
Content-type: application/json
Content-Length: 375

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-wildcard",
          "value": "/*"
        }
      ]
    },
    "behaviors": [

```

```

    {
      "params":
      {
        "cacheKeyValue": "-",
        "digitalProperty": "-",
        "cacheKeyType": "origin",
        "hostHeaderValue": "-",
        "originDomain": "jp.fujitsu.com",
        "hostHeaderType": "origin"
      },
      "name": "origin",
      "value": "-"
    },
    {
      "type": "fixed",
      "name": "caching",
      "value": "1d"
    }
  ]
}

```

HTTP/1.1 202 Accepted
 Location: http://<Endpoint>/v1/services/2b7368fd-f243-496d-a1d5-16da2e5a3e0d
 X-Message: Accepted
 Content-Length: 0

3.2.2.3 Retrieve a service (GET /v1/services/{service_id})

Lists information about the specified service.

The table below lists the main status codes and X-Message header values.

Status code	X-Message header
200	Success: Completed successfully
204	No Content: There is no content to return
204	Bad Request: The request was invalid
204	Internal Server Error: Internal error
204	Service Unavailable: The service is temporarily unavailable

If an error has occurred for the previous request, the X-Status response header will be "failed", so refer to the X-Error response header.

If the existing service can be used to respond even when an error has occurred for the previous request, the status code 200 will be returned, the caching behavior control rule will be inserted into the response body, and each setting value will be stored in the response header.

Request Headers

Refer to ["Common API request headers"](#).

Request parameters

service_id
 service_id.

Data Type	Cardinality
String	1..1

Request Elements

None.

Response Headers

Refer to "[Common API response headers](#)".

X-Error

Error details

Data Type	Cardinality
String	0..1

X-Error-Instance-ID

Information on the command for which the error occurred

Data Type	Cardinality
String	0..1

X-Status

Status information

Data Type	Cardinality
String	1..1

X-Access-Log-Status

Status information

Data Type	Cardinality
String	1..1

X-Access-URL

Delivery FQDN

Data Type	Cardinality
String	1..1

X-Protocol

Delivery protocol scheme

Data Type	Cardinality
String	1..1

X-Access-Log-Container

Container of object storage where the access logs are stored

Data Type	Cardinality
String	1..1

X-Access-Log-Object-Prefix

Prefix of the access log object name

Data Type	Cardinality
String	1..1

X-Access-Log-Key-Container

The container for the object storage where the public key used for encrypting access logs is stored

Data Type	Cardinality
String	1..1

X-Access-Log-Key-Object

The object name of the public key used for encrypting access logs

Data Type	Cardinality
String	1..1

X-Access-Log-Detailed-Status

Supplementary information in the access log when an error occurs

- Access error to the container. - An error occurred while accessing the container
- Access error to the public key. - An error occurred while accessing the public key container and the public key object
- Illegal public key. - The public key object is illegal
- Internal server error. - An internal error occurred

Data Type	Cardinality
String	1..1

Response Elements

rules

Caching behavior control rules. Refer to "Appendix A Caching Rules" for details.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	None	Refer to JSON schema for details on the rules.

Example of response

```
GET /v1/services/f460e5a4-4550-4f3b-b9ab-8ec6794bda0a
```


HTTP/1.1 200

OK X-Message: Success
X-Status: deployed
X-Access-Url: test-cccbfc24.cdn-edge.cloud.global.fujitsu.com
X-Protocol: http
X-Access-Log-Status: undeployed
X-Access-Log-Container:
X-Access-Log-Object-Prefix:
X-Access-Log-Key-Container:
X-Access-Log-Key-Object:
X-Access-Log-Detailed-Status:
Content-type: application/json
Content-Length: 429

```
{
  "rules": [
    {
      "matches": [
        {
          "name": "url-wildcard",
          "value": "/*"
        }
      ],
      "behaviors": [
        {
          "params": {
            "cacheKeyValue": "-",
            "digitalProperty": "test-cccbfc24.cdn-edge.cloud.global.fujitsu.com",
            "cacheKeyType": "origin",
            "hostHeaderValue": "-",
            "originDomain": "jp.fujitsu.com",
            "hostHeaderType": "origin"
          },
          "name": "origin",
          "value": "-"
        },
        {
          "type": "fixed",
          "name": "caching",
          "value": "1d"
        }
      ]
    }
  ]
}
```

3.2.2.4 Edit a service (PATCH /v1/services/{service_id}/param)

Updates the specified service.

When updating a caching behavior control rule, the whole rule must be specified, not only the differences (it is also necessary to specify the status). If only the status is changed, the previously specified caching behavior control rule will be used.

The table below lists the main status codes and X-Message header values.

Status code	X-Message header
202	Accepted: Request was received
200	No services to return: No services (empty list)

Status code	X-Message header
400	Invalid json: Invalid JSON format
400	Invalid entry for pre_fqdn/status: Invalid value
400	Invalid entry for container/object_prefix: Invalid value
400	Invalid entry for key_container/key_object: Invalid value (when the corresponding public key is not stored there)
400	Parameter required: A parameter is required.
409	Service is in progress: Another process is in progress

Request Headers

Refer to "Common API request headers" for details.

Request parameters

service_id

service_id.

Data Type	Cardinality
String	1..1

status

New status for the service. Note: If omitted, this item will not be updated

- activate: Enables content delivery
- deactivate: Disables content delivery

Data Type	Cardinality
String	0..1

container

Container of object storage where the access logs are stored. Note: If omitted, this item will not be updated

If object_prefix is omitted, the previously specified value will be used.

- If a value is specified: Changes the access log storage destination to the specified location
- If no value is specified: Stops access logs

Data Type	Cardinality
String	0..1

object_prefix

Prefix indicating access log object name. Pseudo path information can be included. Note: If omitted, this item will not be updated

Example: "path/PRE01_", "PRE01_", etc.

Data Type	Cardinality
String	0..1

key_container

The container for the object storage where the public key used for encrypting access logs is stored.

- If the string indicating the container name is specified: Refers to the specified container
- If no value is specified: Uses the value for container explained above (default)

Data Type	Cardinality
String	0..1

key_object

The object name of the public key used for encrypting access logs. Pseudo path information can be included. The public key object must be stored beforehand.

- If a string indicating an object name is specified: Encrypt access logs
- If no value is specified: Does not encrypt access logs (default)
Example: "public_key"

Data Type	Cardinality
String	0..1

Request Elements

rules

Caching behavior control rules. Refer to "Appendix A Caching Rules" for details.

Note: If omitted, this item will not be updated

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	None	Refer to JSON schema for details on the rules.

Response headers

Refer to "Common API response headers" for details.

Location

URL including service_id.

Data Type	Cardinality
String	1..1

Response Elements

None.

Example of Response

```
PATCH /v1/services/service_id-25/param?
status=activate&container=log&object_prefix=acclog&key_container=keys&key_object=public_key
Content-type: application/json
Content-Length: 375
...
```

```
HTTP/1.1 202 Accepted
X-Message: Accepted
Location: http://<Endpoint>/v1/services/service_id-25
Content-Length: 0
```

3.2.2.5 Delete a service (DELETE /v1/services/{service_id})

Deletes the specified service.

Storage of access logs is stopped immediately except for transactions in progress.

The table below lists the main status codes and X-Message header values.

Status code	X-Message
202	Accepted: Request was received
409	Service is in progress: Another process is in progress

Request Headers

Refer to "Common API request headers" for details.

Request Parameters

service_id

ID of the service.

Data Type	Cardinality
String	1..1

Request Elements

None.

Response Headers

Refer to "[Common API response headers](#)".

Response Elements

None.

Example of Response

```
DELETE /v1/services/ct-test-service_id-60

HTTP/1.1 202 Accepted
X-Message: Accepted
Content-Length: 0
```

3.2.2.6 Purge a cached asset (DELETE /v1/services/{service_id}/assets)

Purge cached assets from the specified service from the edge server at the specified relative URL.

Deletion applies to both HTTP and HTTPS.

When processing a large number of files, the status code 429 may be returned. If you want to disable content in batch, use the content-refresh behavior through the edit service API.

The table below lists the main status codes and X-Message header values.

Status code	X-Message
202	Accepted: Request was received. Note: Requests can be received even if the target content does not exist on the edge server.
400	Invalid entry for url/action: Invalid value
400	Service is undeployed: The service is disabled
409	Service is in progress: Another process is in progress
429	Rate limit exceeded: Too many requests. Wait for a few moments, and then execute again

Request Headers

Refer to "[Common API request headers](#)".

Request parameters

service_id

The service_id indicating the service

Data Type	Cardinality
String	1..1

action

Deletion operation

- delete: Deletes the cache (default)
- invalidate: Disables the cache

Data Type	Cardinality
String	0..1

url

Relative path of the URL of the asset to delete. The upper limit for the delivery combined with the delivery FQDN is approximately 1 KB. If this is exceeded, the "400 Invalid entry for url" code is returned.

Example: directory/file.jpg

Data Type	Cardinality
String	1..1

Request Elements

None.

Response Headers

Refer to "[Common API response headers](#)".

X-Estimated-Seconds

The estimated time (seconds) until deletion of the cache is reflected

Data Type	Cardinality
String	1..1

Response Elements

None.

Example of Response

```
DELETE /v1/services/d8fdaa40-fa39/assets? action=invalidate&url=solutions/img/img-06.jpg

HTTP/1.1 202 Accepted
X-Message: Accepted
X-Estimated-Seconds: 5
Content-Length: 0
```

3.2.2.7 Create a report (POST /v1/reports)

Creates a statistics report.

Upon successful completion, the Location response header will return the URL of the report including the report ID. Details can then be retrieved by specifying the report ID in the report retrieval API. It usually takes a few minutes to create a report.

The report ID is automatically deleted one hour after creation of a report is completed.

If you try to create a number of reports that exceeds the normal usage limit, the status code 429 may be returned.

The table below lists the main status codes and X-Message header values.

Status code	X-Message
202	Accepted: Request was received
400	Invalid entry for granularity/start_date/end_date/delivery_option/metrics/service_id: Invalid value
400	Invalid entry for service_id/per_region combination: Illegal combination
429	Rate limit exceeded: Too many requests. Wait for a few moments, and then execute again

Request Headers

Refer to "[Common API request headers](#)".

Request Parameters

granularity

Granularity in which to group the report data:

- daily: Group the report data by day
- hourly: Group the report data by hour (hh:00 to hh:59)

Data Type	Cardinality
String	1..1

start_date

Start date (UTC). The specified date can be up to 60 days before the current date

Example: 20151201

Data Type	Cardinality
String	1..1

end_date

End date (UTC). If omitted, the current date will be used.

A date earlier than start_date cannot be specified.

If the granularity is "daily", the specified end_date can be up to 31 days after start_date (for example, if start_date is Jan 1, and end_date is Feb 1, 31 days of data will be returned).

If the granularity is "hourly", the specified end_date can be up to 14 days after start_date.

Data Type	Cardinality
String	0..1

delivery_option

Protocol scheme to use for aggregation

- http: Limited to HTTP access
- ssl: Limited to HTTPS access
- all: Combined (default)

Data Type	Cardinality
String	0..1

metrics

Comma-delimited expression of metrics to output in the report:

- IncompleteDownloadCount: Count of incomplete downloads
- 200Count: Count of responses with status code 200
- 206Count: Count of responses with status code 206
- 2XXCount: Count of responses with status code 2XX combined with the count of incomplete downloads
- 302Count: Count of responses with status code 302
- 304Count: Count of responses with status code 304
- 3XXCount: Count of responses with status code 3XX
- 404Count: Count of responses with status code 404
- 4XXCount: Count of responses with status code 4XX
- 5XXCount: Count of responses with status code 5XX
- RequestCount: Count of requests from end user to edge server

- TotalBytes: Amount of data transferred from the edge server to the end user (in MB)
- IngressBytes: Amount of data transferred from the origin server to the edge server (in bytes)
- IngressCount: Count of requests made to the origin server by the edge server
- IngressRequestBytes: Amount of data transferred from the edge server to the origin server (in bytes)
- OffloadHitRatio: Proportion of offloads performed by the origin server using the edge server. Cache hit rate.

Data Type	Cardinality
String	1..1

per_region

Whether to output in each region or not

- true: Outputs by region
If per_region is specified, the granularity can be "daily".
If per_region is specified, the metrics cannot include IngressBytes, IngressCount, IngressRequestBytes, or OffloadHitRatio.
- false: Combined (default)

Data Type	Cardinality
String	0..1

service_id

service_id. If omitted, all services are specified.

If per_region is specified, the granularity can be "daily".

If service_id is specified, the metrics cannot include IngressBytes, IngressCount, IngressRequestBytes, or OffloadHitRatio.

Data Type	Cardinality
String	0..1

Request Elements

None.

Response Headers

Refer to "[Common API response headers](#)".

Location

URL including report ID

Data Type	Cardinality
String	1..1

Response Elements

None.

Example of Response

```

When report creation is successful:
POST /v1/ reports?
granularity=daily&start_date=20160812&end_date=20160814&delivery_option=all&metrics=
200Count, RequestCount&service_id=65a455b0-475a-42fd-b98e-75b396032bff&per_region=true

HTTP/1.1 202 Accepted
X-Message: Accepted
Location: http://<Endpoint>/v1/reports/96b6c7a9-1f75-4b37-88de-9a6626a13f1c
Content-Length: 0

When report creation fails due to rate limit issues:
POST ...

HTTP/1.1 429
X-Message: Rate limit exceeded
Content-Length: 0

```

3.2.2.8 Retrieve a report (GET /v1/reports/{report_id})

Lists the specified statistics report.

If creation of a report has been completed, the report can be retrieved in JSON format. If creation of a report is in progress, the status code "204 No Content" will be returned, and the X-Status response header will be "create_in_progress". Wait for a few moments, and then execute again.

The table below lists the main status codes and X-Message header values.

Status code	X-Message
200	Success: Completed successfully
204	No Content: There is no content to return
204	Bad Request: The request was invalid
204	Internal Server Error: Internal error
204	Rate limit exceeded: Too many requests. Wait for a few moments, and then execute again

If an error has occurred for the request, the X-Status response header will be "failed", so refer to the X-Error response header.

If there is no content in the report creation results, the X-Status response header will be "deployed", and the status code 204 will be returned.

Request Headers

Refer to ["Common API request headers"](#).

Request parameters

report_id

ID of the report

Data Type	Cardinality
String	1..1

Request Elements

None.

Response Headers

Refer to "[Common API response headers](#)".

X-Error

Error details

Data Type	Cardinality
String	0..1

X-Status

Status information

Data Type	Cardinality
String	1..1

Response Elements

headers

Description of report data contain in "rows" elements

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..n	None	index, name

index

Number of current header column (starts from 0)

Data Type	Cardinality	Parent Element	Child Element(s)
Int	1..1	headers	None

name

Title of current header column

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	headers	None

rows

Array containing all report data

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..n	None	(array)

(array)

Row containing data for a specific datetime

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..n	rows	None

metadata

Parameters specified at the time of report creation.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	None	start_date, end_date, granularity, delivery_option, time_created, metrics, service_id, per_region

granularity

Parameters specified at the time of report creation.

Refer to the Request parameters of the create a report API for details.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	metadata	None

start_date

Parameters specified at the time of report creation.

Refer to the Request parameters of the create a report API for details.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	metadata	None

end_date

Parameters specified at the time of report creation.

Refer to the Request parameters of the create a report API for details.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	metadata	None

delivery_option

Parameters specified at the time of report creation.

Refer to the Request parameters of the create a report API for details.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	metadata	None

metrics

List of values specified at the time of report creation.

Refer to the Request parameters of the create a report API for details.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..n	metadata	None

time_created

Datetime when report was created.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	metadata	None

service_id

service_id. Refer to the Request parameters of the create a report API for details.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	metadata	None

per_region

Output in each region. Refer to the Request parameters of the create a report API for details.

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	metadata	None

Example of Response

```

When the specified report is returned:
GET /v1/ reports/bdf5d40b-9fc4-47d4-b569-59edf3d1f91d

HTTP/1.1 200 OK
X-Message: Success
X-Status: deployed
Content-Type: application/json
Content-Length: 563
{
  "headers": [
    {
      "index": 0,
      "name": "Time"
    },
    {
      "index": 1,
      "name": "Region"
    },
    {
      "index": 2,
      "name": "200Count"
    },
    {
      "index": 3,
      "name": "RequestCount"
    }
  ],
  "metadata": {
    "delivery_option": "all",
    "end_date": "20160814",
    "granularity": "daily",
    "metrics": [

```

```

    "200Count",
    "RequestCount"
  ],
  "per_region": "true",
  "service_id": "65a455b0-475a-42fd-b98e-75b396032bff",
  "start_date": "20160812",
  "time_created": "2016/08/23 06:22"
},
"rows": [
  [
    "2016/08/12 00:00",
    "North America",
    "2",
    "2"
  ],
  [
    "2016/08/12 00:00",
    "Japan",
    "1",
    "1"
  ],
  [
    "2016/08/13 00:00",
    "North America",
    "1",
    "1"
  ]
]
]
}

```

When the specified report is not returned:
 GET /v1/cdn/reports/419be4be-a30b-4af8-97db-900260ae6ad3
 HTTP/1.1 204 No Content
 X-Message: No Content
 X-Status: deployed

3.2.3 Appendix A Caching Rules

3.2.3.1 Appendix A Caching Rules

This section is licensed by Akamai Technologies GK.

3.2.3.2 Syntax

3.2.3.2.1 Rule Structure

The format is the JSON format. The rules take the form of rules composed of matches and behaviors. For example, here is a rule containing a single rule set:

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-extension",
          "value": "jpg gif png"
        }
      ],
      "behaviors": [

```

```

    {
      "name": "ip-whitelist",
      "value": "198.18.48.211"
    }
  ]
}

```

This rule very simply denies access to all .jpg, .gif, and .png files requested from any IP address other than 198.18.48.211.

3.2.3.2.2 Nesting of Rules

One level of match nesting is supported. For example:

```

{
  "matches": [
    {
      "name": "url-path",
      "value": "path1 path2"
    },
    {
      "name": "http-method",
      "value": "GET"
    }
  ]
}

```

On the other hand, it is possible to describe parallel matches conditions using an AND condition. The code segment above declares that if the request URL begins with '/path1' or '/path2' and the request method was GET, then apply whatever behaviors are defined in the behavior tuple.

3.2.3.2.3 Invoking Multiple Behaviors

Similarly, multiple behaviors can be invoked for the same set of content. To extend the example above showing two matches:

```

{
  "matches": [
    {
      "name": "url-path",
      "value": "path1 path2"
    },
    {
      "name": "http-method",
      "value": "GET"
    }
  ],
  "behaviors": [
    {
      "name": "ip-blacklist",
      "value": "198.18.48.211"
    },
    {
      "name": "content-refresh",
      "type": "epoch",
      "value": "1388534400",
      "params": {
        "mustRevalidate" : true
      }
    }
  ]
}

```

```
}
```

Now we see that IP 198.18.48.211 will be denied access to this content, and the content in these directories will be refreshed if they were cached by the edge server before the epoch time 1388534400 (Wed, 01 Jan 2014 00:00:00 GMT).

3.2.3.2.4 JSON Schema for Rules

Following is a schema representation of the rules.

```
{
  "type": "object",
  "required": true,
  "properties": {
    "rules": {
      "type": "array",
      "required": false,
      "items": {
        "type": "object",
        "required": true,
        "properties": {
          "behaviors": {
            "type": "array",
            "required": true,
            "items": {
              "type": "object",
              "required": true,
              "properties": {
                "name": {
                  "type": "string",
                  "enum": [
                    "origin",
                    "caching",
                    "referer-whitelist",
                    "referer-blacklist",
                    "geo-whitelist",
                    "geo-blacklist",
                    "ip-whitelist",
                    "ip-blacklist",
                    "content-refresh",
                    "cachekey-query-args",
                    "modify-outgoing-request-path",
                    "site-failover",
                    "downstream-caching "
                  ]
                },
                "required": true
              }
            },
            "type": {
              "type": "string",
              "required": false
            },
            "params": {
              "type": "string",
              "required": false
            },
            "# Origin does not use value.",
            "value": {
              "type": "string",
              "required": false
            }
          }
        }
      },
      "matches": {
        "type": "array",
        "required": true,

```

```

      "items": {
        "type": "object",
        "required": true,
        "properties": {
          "name": {
            "type": "string",
            "enum": [
              "http-method",
              "url-scheme",
              "url-path",
              "url-extension",
              "url-filename",
              "header",
              "url-wildcard"
            ],
            "required": true
          },
          "value": {
            "type": "string",
            "required": true
          },
          "negated": {
            "type": "boolean",
            "required": false
          }
        }
      }
    }
  }
}

```

rules

Data Type	Cardinality	Parent Element	Child Element(s)
object	1..n	None	behaviors, matches

Data Type	Cardinality	Parent Element	Child Element(s)
object	1..n	rules	name, type, params, value

name

Data Type	Cardinality	Parent Element	Child Element(s)
enum("origin", "caching", "referrer-whitelist", "referrer-blacklist", "geo-whitelist", "geo-blacklist", "ip-whitelist", "ip-blacklist", "content-refresh", "cachekey-query-args", "modify-outgoing-request-path", "site-failover", "downstream-caching")	1..1	behaviors	None

type

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	behaviors	None

params

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	behaviors	None

value

Data Type	Cardinality	Parent Element	Child Element(s)
String	0..1	behaviors	None

matches

Data Type	Cardinality	Parent Element	Child Element(s)
object	1..n	rules	name, value, negated

name

Data Type	Cardinality	Parent Element	Child Element(s)
enum("http-method", "url-scheme", "url-path", "url-extension", "url-filename", "header", "url-wildcard")	1..1	matches	None

value

Data Type	Cardinality	Parent Element	Child Element(s)
String	1..1	matches	None

negated

Data Type	Cardinality	Parent Element	Child Element(s)
boolean	0..1	matches	None

3.2.3.2.5 Priority

In general, rules are applied from the top down. That is, the more precise the match criteria, the more important it is to ensure that subsequent rules do not alter the behavior in unexpected ways. Therefore, the more specific the criteria, the farther down in the list of rules it should be placed.

For example, if you have a "caching" policy that matches on a "/static/*" URL wildcard and also matches on URL extension, for example "png", "gif", or "jpg", and sets a TTL for this content of

1 day ("1d"), and then add a separate "caching" policy farther down in the JSON for the same "/static/*" URL wildcard pattern that sets a cache TTL of 1 hour ("1h"), then the first policy will never be applied because a more generic set of match conditions replaces the earlier setting. Therefore, the order of rules is important and must be considered when multiple policies may have been applied. The last set of behaviors across all applied "matches" will always be the resulting behavior of the CDN platform. For a more detailed overview see the "Overlapping Behaviors" examples in the ["Combining Matches and Behaviors"](#) section below.

3.2.3.2.6 Combining Matches and Behaviors

1 Rule, 2 Matches, 1 Behavior

Match on URI extension "jpg", "gif" or "png" and request method GET and apply IP whitelist. This will deny all IPs except 198.18.48.211 and 198.18.48.212 access to these objects using the GET method.

```
{
  "rules": [
    {
      "matches": [
        {
          "name": "url-extension",
          "value": "jpg gif png"
        },
        {
          "name": "http-method",
          "value": "GET"
        }
      ],
      "behaviors": [
        {
          "name": "ip-whitelist",
          "value": "198.18.48.211 198.18.48.212"
        }
      ]
    }
  ]
}
```

2 Rules 2 Matches, 2 Behaviors

The following example shows two rules, each with two match conditions and two behaviors. The first rule matches on URI extension "jpg", "gif" or "png" and request method GET and applies both IP whitelist and a referrer blacklist; only requests from 198.18.48.211 and 198.18.48.212 are allowed, unless they also have a Referer header value containing "abcd.com".

The second rule matches all GET requests for the url scheme "HTTP" and applies both IP whitelist and a referrer blacklist; only requests from 198.18.48.215 and 198.18.48.216 are allowed, unless they also have a Referer header value containing "www.abc.com".

```
{
  "rules": [
    {
      "matches": [
        {
          "name": "url-extension",
          "value": "jpg gif png"
        },
        {
          "name": "http-method",
          "value": "GET"
        }
      ]
    }
  ]
}
```

```

    ],
    "behaviors": [
      {
        "name": "ip-whitelist",
        "value": "198.18.48.211 198.18.48.212"
      },
      {
        "name": "referer-blacklist",
        "value": "*abcd.com*"
      }
    ]
  },
  {
    "matches": [
      {
        "name": "url-scheme",
        "value": "HTTP"
      },
      {
        "name": "http-method",
        "value": "GET"
      }
    ],
    "behaviors": [
      {
        "name": "ip-whitelist",
        "value": "198.18.48.215 198.18.48.216"
      },
      {
        "name": "referer-blacklist",
        "value": "*www.abc.com*"
      }
    ]
  }
]
}

```

Conflicting/Undefined Behaviors)

Match on URI extension "jpg", "gif" or "png" and request method GET and apply both an IP whitelist and IP blacklist. This will deny all IPs except 198.18.48.211 and 198.18.48.212 access to these objects. Because 198.18.48.213 and 198.18.48.214 do not match the white list they are already denied. This creates an undefined behavior.

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-extension",
          "value": "jpg gif png"
        },
        {
          "name": "http-method",
          "value": "GET"
        }
      ],
      "behaviors": [
        {
          "name": "ip-whitelist",
          "value": "198.18.48.211 198.18.48.212"
        },
        {
          "name": "ip-blacklist",
          "value": "198.18.48.213 198.18.48.214"
        }
      ]
    }
  ]
}

```

```

    ]
  }
}

```

A more practical use case might be to match on URI extension "jpg", "gif", or "png" and request method GET and apply a geographic restriction, but where an IP whitelist allows otherwise blocked clients to access the content.

The following example will deny all clients inside the United States, except IPs 198.18.48.211 and 198.18.48.212 have been explicitly granted access to these objects.

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-extension",
          "value": "jpg gif png"
        },
        {
          "name": "http-method",
          "value": "GET"
        }
      ],
      "behaviors": [
        {
          "name": "geo-blacklist",
          "type": "country",
          "value": "US"
        },
        {
          "name": "ip-whitelist",
          "value": "198.18.48.211 198.18.48.212"
        }
      ]
    }
  ]
}

```

Overlapping Behaviors)

Rule order is important because of the possibility of creating overlapping rules. Rule order is most important when the behaviors overlap. Practically, this means that keeping track of the match conditions within a given "rules" collection is required, and the more restrictive a set of match conditions is, the later it should appear in the collection.

For example, if there is a generic match for a "jpg" file extension that defines a TTL of 7 days and another match that includes both a path like "/images/*" and a file extension match for "jpg" that defines a TTL of 1 day that the second rule should appear after the first. Putting the less complex rule later in the list would override all previous matches and the related behaviors. In this example, if the order were reversed the Edge server would use a 7 day TTL, regardless of whether or not the "jpg" object was requested using the "/images/*" path.

Following is an example of a properly-constructed rules collection for the above scenario:

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-extension",
          "value": "jpg"
        }
      ]
    }
  ]
}

```

```

    ],
    "behaviors": [
      {
        "name": "caching",
        "type": "fixed",
        "value": "7d"
      }
    ]
  },
  {
    "matches": [
      {
        "name": "url-extension",
        "value": "jpg"
      },
      {
        "name": "url-wildcard",
        "value": "/images/"
      }
    ],
    "behaviors": [
      {
        "name": "caching",
        "type": "fixed",
        "value": "1d"
      }
    ]
  }
]
}

```

If, on the other hand, there is no overlap in behavior, then the order is irrelevant. Consider the case where the "/images/" path and "jpg" file extension match are used to define a TTL, but another rule has a match for "jpg" that applies a geographic blacklist behavior for, say, North Korea. Because the two rules do not share behaviors, the less restrictive rule is safe to place later in the list.

Here is an example where the rule order does not matter because there is no overlap in behavior:

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-extension",
          "value": "jpg"
        }
      ],
      "behaviors": [
        {
          "name": "geo-blacklist",
          "type": "country",
          "value": "KP"
        }
      ]
    },
    {
      "matches": [
        {
          "name": "url-extension",
          "value": "jpg"
        },
        {
          "name": "url-wildcard",

```

```

    "value": "/images/*"
  },
  "behaviors": [
    {
      "name": "caching",
      "type": "fixed",
      "value": "1d"
    }
  ]
}
]
}
}
}
}
}
}
}
}
}
}

```

3.2.3.3 Matches

3.2.3.3.1 Supported Matches

The following is a listing of matches supported in the current version of the API.

Match	Description	Examples
http-method	Compares the request method with the listed methods. The match is case-sensitive. Valid values: GET HEAD POST PUT DELETE OPTIONS TRACE CONNECT	"name":"http-method", "value":"POST PUT"
url-scheme	Compares the scheme (HTTP or HTTPS) of the incoming request	"name":"url-scheme", "value":"HTTP"
url-path	Compares each token in the space-separated list in the supplied "value" to the first path component in the incoming request URL. Wildcard characters are not supported. The match is case-sensitive	"name":"url-path", "value": "static static2" Wildcard URI paths that begin with "/static/*" and "/static/*").
url-wildcard	Compares the incoming request path (excluding query string) to the space-separated list of tokens in the match "value". Only the "*" wildcard (zero or more bytes) is supported at this time. Complete URL paths without any wildcards are also supported and are more precise than overlapping paths with wildcards. The match is case-sensitive	"name":"url-wildcard", "value":"/styles/* /images/logo.png" Would match any request whose URI path begins with "/styles/" or the exact URI path "/images/logo.png".
url-filename	Compare the listed filenames (including extension) to the filename of the incoming request. The match is recursive, meaning the filename can be in any sub-directory/URI path (e.g. - /filename.ext or /path/to/filename.ext both match a value of "filename.ext"). The match is case-sensitive	"name":"url-filename", "value":"crossdomain.xml logo.jpg"
url-extension	Compares the listed file extensions to the extension in the incoming request. Empty values are not supported at this time, so URI paths that do not include file extensions cannot use this match condition. The match is case-sensitive	"name":"url-extension", "value":"jpg png gif exe" Would match any of wildcard URI paths "*.jpg", "*.png", "*.gif" or "*.exe".

Match	Description	Examples
header	Checks for the presence or value of an incoming request header (case insensitive). The format is header-name header-values. The match on header-name is case-insensitive. header-values is a space-separated list of strings to match against. The match is case-sensitive.	"name":"header", "value":"user-agent" would match if the "user-agent" header is present

3.2.3.3.2 Condition Negation

All matches can be negated (inverting from "must match" to "must not match") by adding a "negated": true attribute to the match condition. For example, if you want to apply behaviors to all paths that are neither in "/path1/*" nor "/path2/*" then you could use the following negated match condition:

```

"matches": [
  {
    "name": "url-path",
    "value": "path1 path2",
    "negated": true
  }
]

```

3.2.3.4 Behaviors

3.2.3.4.1 Supported Behaviors

Following is a listing of behaviors supported in the current version of the API.

origin

Modifies the origin server for the request, along with other related options.

Type(s)/Param(s)	Example Values
params: digitalProperty, originDomain, cacheKeyType, cacheKeyValue, hostHeaderType, hostHeaderValue	"name":"origin", "value":"-", "params": { "digitalProperty": "www.example.com", "originDomain": "origin.com", "cacheKeyType": "origin", "hostHeaderType": "digital_property", "hostHeaderValue": "-", "cacheKeyValue": "-"}

caching

Allows control over the caching behaviors

Type(s)/Param(s)	Example Values
type: no-store, bypass-cache, fixed, honor, honor-cc, honor-expires	"name": "caching", "type": "fixed", "value": "1d"

cachekey-query-args

Controls which query arguments are included in the cache-key.

Type(s)/Param(s)	Example Values
type: include, include-all, ignore, ignore-all	"name": "cachekey-query-args", "type": "ignore", "value": "sessionid"

content-refresh

Schedules a revalidation of the content.

Type(s)/Param(s)	Example Values
type: epoch, date, datetime, natural params: mustRevalidate	"name": "content-refresh", "type": "epoch", "value": "1420070400" "params": { "mustRevalidate": true}

ip-blacklist

Sets a space-separated list of IPs or CIDR blocks from which requests will be denied.

Type(s)/Param(s)	Example Values
	"name": "ip-blacklist", "value": "198.18.48.211"

ip-whitelist

Denies requests all IPs except those IPs or CIDR blocks on the space-separated whitelist.

Type(s)/Param(s)	Example Values
	"name": "ip-whitelist", "value": "198.18.48.211"

geo-blacklist

Sets a list of space-separated geographies from which requests will be denied. Regions should be paired with a country code, followed by a colon and then the region code, to prevent ambiguity. See Appendix B and C.

Type(s)/Param(s)	Example Values
type: continent, country, region	"name": "geo-blacklist", "type": "continent", "value": "EU" "type": "country", "value": "US" "type": "region", "value": "US:CA"

geo-whitelist

Denies requests from all geographies except those on the space-separated whitelist. Regions should be paired with a country code to prevent ambiguity. See Appendix B and C.

Type(s)/Param(s)	Example Values
type: continent, country, region	"name": "geo-whitelist", "type": "continent", "value": "EU" "type": "country", "value": "US" "type": "region", "value": "US:CA"

referer-blacklist

Sets space-separated Referer values that will result in denial of the request.

Type(s)/Param(s)	Example Values
	"name": "referer-blacklist", "value": "http://my. disallowed-hostname.com/*"

referer-whitelist

Sets allowed space-separated Referer values.

Type(s)/Param(s)	Example Values
	"name": "referer-whitelist", "value": "http://my. allowed-hostname.com/*"

modify-outgoing-request-path

Altering the request URI before it is sent to the origin server.

Type(s)/Param(s)	Example Values
type: remove replace-all replace	"name": "modify-outgoing-request-path", "type": "replace", "value": "/dir1/dir2/###/dir3/dir4/"

site-failover

Defines an alternate response to serve when the edge server cannot contact the origin server.

Type(s)/Param(s)	Example Values
type: serve-301 serve-302 serve-alternate params: httpResponseStatus alternateHostname alternatePath preserveQueryString	<pre>"name": "site-failover", "type": "serve-301", "params": { "httpResponseStatus": "404 500:504", "alternateHostname": "www. alternatehostname.com", "alternatePath": "/newdir1/newdir2", "preserveQueryString": true}</pre>

downstream-caching

To control downstream caching of alternate content.

Type(s)/Param(s)	Example Values
	<pre>"name": "downstream-caching", "value": "no-store"</pre>

token-auth

Defines rules for validating the authorization token on the edge server that allows access to the content.

Type(s)/Param(s)	Example Values
params: tokenName tokenDelimiter tokenDelimiter aclDelimiter hmacAlgorithm escapeTokenInputs ignoreQueryString key transitionKey	<pre>"name": "token-auth", "params": { "tokenName": "__mytoken__", "tokenDelimiter": "~", "aclDelimiter": "!", "hmacAlgorithm": "SHA256", "escapeTokenInputs": false, "ignoreQueryString": true, "key": "ffff", "transitionKey": "0000"}</pre>

3.2.3.4.2 origin

The Edge server requires an origin behavior for every rule. The minimum settings include:

- An origin DNS hostname that is different from the user facing FQDN (hostname used by the end client to access the site/application) or IP address
- A declaration as to what value should be used in the "Host" header in HTTP requests to the origin
- A declaration as to the hostname component to be used in constructing the cache-key
- Delivery FQDN

Each of these settings is described below. As it is necessary to write at least one match condition, a url-wildcard condition is used.

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-wildcard",
          "value": "/*"
        }
      ],
      "behaviors": [
        {
          "name": "origin",
          "value": "-",
          "params": {
            "digitalProperty": "test01-123abc.cdn-edge.cloud.global.fujitsu.com",
            "originDomain": "lb-001.loadbalancing-jp-east-1.cloud.global.fujitsu.com",
            "cacheKeyType": "origin",
            "cacheKeyValue": "-",
            "hostHeaderType": "digital_property",
            "hostHeaderValue": "-"
          }
        }
      ]
    }
  ]
}

```

Origin DNS

- originDomain - Must be a valid domain name or IP address of origin server.

For example:

```
"originDomain": "lb-001.loadbalancing-jp-east-1.cloud.global.fujitsu.com"
```

Forward "Host" Header

In many cases the value in the HTTP "Host" header is not used by the origin, and the same content is served regardless of the value of this header. For multi-tenant/shared infrastructure that does rely upon the "Host" header, the most common use case is to use the "Delivery FQDN" as this is what the origin would receive without any CDN intermediary.

- hostHeaderType - One of "digital_property", "origin", "fixed" where:
 - digital_property - If the origin response is different for each Digital Property (default behavior)
 - origin - If the origin response is the same regardless of Digital Property. The value of "originDomain" is used
 - fixed - If the origin expects a specific value in the "Host" header that is neither the Digital Property nor the origin domain; the value of "hostHeaderValue" (defined below) is used.
- hostHeaderValue - If "hostHeaderType" is "fixed" you must provide a value for this field. Must be a valid domain name though it does not need to resolve in DNS. The value supplied will be sent to the origin in the HTTP "Host" header. Use a dash ("-") to indicate no value.

Cache-Key

The cache-key is the combination of request inputs and Edge server request processing that produce a unique "key" to identify an object in cache. The value to use in the cache-key depends on whether or not the origin serves different content based on the "Host" header it sees. If so, then the Digital Property should be used in the cache-key. If not, then the origin domain should

be used. The fixed string option allows the Customer to set a specific domain to be used in the cache key.

- cacheKeyType – One of "digital_property", "origin", "fixed" where:
 - digital_property – If the response is different for each Digital Property, the delivery FQDN can be used as the cache key.
 - origin – If the origin response is the same regardless of Digital Property (default behavior), the FQDN of the origin server is used as the cache key.
 - fixed – Similar to "origin", but allows for differentiation when the origin domain is the same for multiple Customers. It is also necessary to specify the following cacheKeyValue.
- cacheKeyValue – If "cacheKeyType" is "fixed" you must provide a value for this field. Must be a valid domain name though it does not need to resolve in DNS. The value supplied will be used as the hostname portion of the cache-key. Use a dash ("-") to indicate no value.

Delivery FQDN

Delivery FQDN used in Cache-key.

- digitalProperty –
CDN Service sets the own domain or cdn-edge domain. Do not omit, Specify the any value ("-") or any value retrieved by "retrieve a service" API)

Example: "digitalProperty": "test01-123abc.cdn-edge.cloud.global.fujitsu.com"

3.2.3.4.3 modify-outgoing-request-path

This behavior provides for altering the request URI before it is sent to the origin server.

The setting that can be specified by the type parameter (required) is as follows.

- remove – removes the first occurrence of the value from the outgoing request URI.
 - value(required) – path_string: the contiguous string of characters to be removed from the forward request. The value should take the form "/dir1/dir2/".
 - replace-all – the complete original request path (but not the filename, extension, or query string) is replaced with the path specified in the value element.
 - value(required) – path_string: the URI path to replace the entire original incoming URI path. The value should take the form "/dir1/dir2/".
 - replace – searches for the "find" portion of the value string in the original request URI and replaces it with the "replace" portion of the value. In this case the value must take the form /find/path/###/replace/path/, where ### is the delimiter separating the string to find and the replacement string.
 - value(required) – find_string###replace_string: The value should take the form "find_path###replace_path".
"###" is the specific delimiter pattern required between the find_string and replace_string
- NOTE: Only the first instance of the find_string in the origin path is replaced. For example: value = "/dir1/dir2/###/dir3/dir4/"

```
{
  "rules": [
    {
      "matches": [
        {
          "name": "http-method",
          "value": "GET"
        }
      ],
      "behaviors": [
        {
          "name": "modify-outgoing-request-path",
          "type": "replace",
          "value": "/dir1/dir2/###/dir3/dir4/"
        }
      ]
    }
  ]
}
```

```
}
  ]
}
]
```

3.2.3.4.4 caching

This behavior configures the time-to-live (TTL) settings. Use proper match conditions to alter the TTL for different types of content. For example, images might use a 365 day TTL, where JS and CSS files might only be cached for one day. Combine path and file-extension matches as needed to achieve the desired cache settings.

Any of the below is valid in type.

- no-store - the response must never be cached. If a prior rule has allowed the object to be cached, this setting will evict the cache entry.
- bypass-cache - A cached response must not be used to satisfy the current request, or the current response must not be cached. If a prior rule has allowed the object to be cached, this setting will evict the cache entry.
- fixed - The response is cacheable and may be cached for the amount of time specified in the "value" parameter.
- honor - The response may be cacheable, subject to the origin Cache-Control and/or Expires response headers. If the object is found in cache it may be used to satisfy the current request. If the origin does not provide either Cache-Control or Expires in its response, then the object may be cached for the amount of time specified in the "value" parameter. If the Cache-Control header provides a "no-store" or "no-cache" directive, then the edge server must not cache the response.
- honor-cc - The response may be cacheable, subject to the origin Cache-Control response header only. If the object is found in cache it may be used to satisfy the current request. If the origin does not provide a Cache-Control header in its response, then the object may be cached for the amount of time specified in the "value" parameter. If the Cache-Control header provides a "no-store" or "no-cache" directive, then the edge server must not cache the response.
- honor-expires - The response may be cacheable, subject to the origin Expires response header only. If the object is found in cache it may be used to satisfy the current request. If the origin does not provide an Expires directive in its response, then the object may be cached for the amount of time specified in the "value" parameter. If the Expires header provides an RFC 2616 time string in the past (or "-1" as is common practice to prevent downstream caching), then the Edge server must not cache the response.

The value parameter uses DeltaTime, and displayed the number of seconds elapsed. The available units are seconds (s), minutes (m), hours (h), and days (d). The following example rule sets a 30 day TTL for all content served from within the "/static/*" URI path:

```
"matches": [
  {
    "name": "url-wildcard",
    "value": "/static/*"
  }
],
"behaviors": [
  {
    "name": "caching",
    "type": "fixed",
    "value": "30d"
  }
]
```

Note that the Akamai platform supports an "Edge-Control" origin response header that can be used to override these TTL settings.

3.2.3.4.5 cachekey-query-args

This behavior includes or ignores URI query-string arguments either in total or by name when creating the Edge server cache entry (cache-key).

The setting that can be specified by the type parameter is as follows.

- include-all - This is the default Edge server behavior, where all values in the query-string are included in the cachekey.
- include - Only the space-separated name(s) of query arguments provided in the "value" attribute are included in the cache-key; all others are ignored. Supplying a parameter (key) with a value followed by a URL-encoded ampersand (e.g. - "key=value&") will only include the parameter in the cache-key if the key and value match the supplied definition
- ignore-all - No query-string arguments are included in the cache-key.
- ignore - Only the space-separated name(s) of query arguments provided in the "value" attribute are ignored in the cache-key; all others are included. Supplying a parameter (key) with a value followed by a URL-encoded ampersand (e.g. - "key=value&") will only ignore the parameter in the cache-key if the key and value match the supplied definition

A sample use case might be to ignore parameters that are traditionally cache-busting, such as unique session or user identifiers that do not modify the response in any way. For example, if the origin normally uses a "sessionid" query-string parameter to identify a user for tracking purposes but does not modify the response entity, then the parameter can be safely ignored (and definitely should be ignored if the object is cacheable). As another example, perhaps the origin publishes URLs with cache-busting parameters so browsers are forced to re-request certain objects when they are updated (E.g, adding "cache-bust={random_string}"); if the goal is to bust the browser's cache but not the CDN cache, then the parameter should be ignored.

The following sample policy addresses both of the example cases for content in a hypothetical "/" static/*" wildcard path match.

```
"matches": [
  {
    "name": "url-wildcard",
    "value": "/static/*"
  }
],
"behaviors": [
  {
    "name": "cachekey-query-args",
    "type": "ignore",
    "value": "sessionid cache-bust"
  }
]
```

3.2.3.4.6 content-refresh

Invalidate CDN cache at an explicit date/time. Epoch timestamp in GMT as the explicit moment after which new requests must be served a revalidated or new copy of the object.

The "type" parameter (required) defines the Edge server behavior. There are four possible settings for the "type":

- epoch - The "value" supplied should be a valid epoch in seconds in the future. Epoch time is an integer that is the number of seconds since January 1, 1970 as calculated by the Unix system. Example: 1388534400
- date-time - The "value" supplied should be an ISO 8601 future time string in GMT (e.g. - "YYYY-MMDDThh:mm:ssZ"; for example: "2014-01-01T12:00:00Z").
- date - The "value" supplied should be an ISO 8601 future date string in GMT (e.g. - "YYYYMM-DD"; for example: "2014-01-01") where the invalidation occurs at midnight GMT on the specified date.
- natural - Invalidate the content immediately upon publication of the policy. The value should be "now".

The following params are supported.

- mustRevalidate – Specify true or false.
 - true – The edge server must not serve content from cache if it has not been revalidated after the given invalidation time.
 - false – The edge server may serve content from cache if an attempt to revalidate the content fails to receive a response from the origin server.

Note that the origin server might return a 304 for content that is replaced with an object whose "Last-Modified" is less than or equal to the original timestamp seen in the "If-Modified-Since" conditional request header. In such cases, if the origin server returns a 304 HTTP status code, then the Edge server will serve the cached entry as it will have successfully "revalidated" the object via the origin. It is necessary to execute the Purge a cached asset API to purge cached objects completely.

In this example, the site owner wishes to publish a new version of their software application on Wednesday, January 1, 2014 at 00:00:00 GMT (epoch time "1388534400"). All cached URLs in the "/app/download/currentversion/*" path should be invalidated after midnight so that links to the most current version(s) will be displayed to end users.

```
{
  "rules": [
    {
      "matches": [
        {
          "name": "url-wildcard",
          "value": "/app/download/currentversion/*"
        }
      ],
      "behaviors": [
        {
          "name": "content-refresh",
          "type": "epoch",
          "value": "1388534400",
          "params": {
            "mustRevalidate": true
          }
        }
      ]
    }
  ]
}
```

Note that the links to new content should not be made available for download at the origin until the time indicated to avoid polluting cache with a mix of old and new objects.

3.2.3.4.7 ip-blacklist

Prevent access based on the requesting IP address. All other IP addresses are allowed. The "value" attribute should contain a list of IP addresses or CIDR blocks using standard notation (e.g. – IP address, a "/" character, and number of leading 1 bits in the routing prefix mask). Individual IP addresses can be provided as CIDR entries using the "/32" mask if this facilitates list management.

In this example, a single IP address, "198.18.48.211", is being denied access to content in a "/protected/*" wildcard URI path:

```
{
  "rules": [
    {
      "matches": [
        {
          "name": "url-wildcard",
          "value": "/protected/*"
        }
      ]
    }
  ]
}
```

```

    ],
    "behaviors": [
      {
        "name": "ip-blacklist",
        "value": "198.18.48.211"
      }
    ]
  }
}

```

3.2.3.4.8 ip-whitelist

Allow access based on the requesting IP address. All other IP addresses are denied. See "ip-blacklist" above for IP address syntax. Refer to ip-blacklist for details

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-wildcard",
          "value": "/private/*"
        }
      ],
      "behaviors": [
        {
          "name": "ip-whitelist",
          "value": "198.18.48.211"
        }
      ]
    }
  ]
}

```

3.2.3.4.9 geo-blacklist

Prevent access based on the continent, country, region/state of the requesting IP address. All other geographic areas are allowed.

The setting that can be specified by the type parameter (required) is as follows.

- continent - continent. continent - e.g.: "continent":"EU"
- country - country. country - e.g.: "country":"US"
- region - region. They have to be described in order of "Country code: Region code".

Example: "United States, Washington (State)" is "US:WA", "Australia, Western Australia" is "AU:WA", "United Kingdom, Wales" is "GB:WA"

Please refer to Appendix B for Country code, and Appendix C for Region code.

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-wildcard",
          "value": "/protected/*"
        }
      ],
      "behaviors": [
        {
          "name": "geo-blacklist",
          "type": "country",

```



```

    "value": "US"
  }
]
}

```

3.2.3.4.10 geo-whitelist

Access permission is given depend on the continent, country, region, and state/prefecture where IP address of client is belonging to. All request from the IP address that is not belonging to the list is rejected.

The setting that can be specified by the type parameter (required) is as follows.

- continent - continent. continent - e.g.: "continent":"EU"
- country - country. country - e.g.: "country":"US"
- region - region. They have to be described in order of "Country code: Region code".

Example: "United States, Washington (State)" is "US:WA", "Australia, Western Australia" is "AU:WA", "United Kingdom, Wales" is "GB:WA"

Please refer to Appendix B for Country code, and Appendix C for Region code.

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-wildcard",
          "value": "/us/*"
        }
      ],
      "behaviors": [
        {
          "name": "geo-whitelist",
          "type": "country",
          "value": "US"
        }
      ]
    }
  ]
}

```

3.2.3.4.11 referer-blacklist

Prevent access based on the HTTP "Referer" request header. Commonly used to enforce that the client is a browser that supports RFC 2616 Section 14.36 and that the containing HTML page is not among those known for deep linking to the site operator's content.

Note that for secure (HTTPS) requests the browser may not send a Referer header. As a safeguard, it is best to configure a match for "url-scheme" with a value of "HTTP" as shown in this example.

The behavior uses a wildcard syntax to allow blocking based on patterns. Examples include:

- *.somebaddomain.com*
- *.somebaddomain.com/this/path/is/not/allowed*

In this example, the content publisher customer knows that two web sites, "www.somebadsite.com" and "www.dontstealmystuff.com", frequently embed content from their site without permission. Using wildcards is required to ensure that the scheme (HTTP or HTTPS) and URL path are not a factor in deciding whether to deny the request, though it is possible to constrain based on any of these URL attributes:

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-scheme",
          "value": "HTTP"
        }
      ],
      "behaviors": [
        {
          "name": "referrer-blacklist",
          "value": "*www.somebadsite.com* *www.dontstealsmystuff.com*"
        }
      ]
    }
  ]
}

```

Another side note regarding the "Referer" header: User Agents that request content over HTTPS that link to other content using HTTP will generally display a warning to the end user. In addition, if the request is allowed the "Referer" header will be omitted. In addition, some personal firewalls, browser extensions (at least for FireFox and Chrome) and even client proxy solutions are able to omit/strip the "Referer" request header entirely.

3.2.3.4.12 referer-whitelist

Allow access based on the HTTP "Referer" request header. Commonly used to enforce that the client is a browser that supports RFC 2616 Section 14.36 and that the containing HTML page is served from a domain that is trusted by the content owner.

Note that for secure (HTTPS) requests the browser may not send a Referer header. As a safeguard, it is best to configure a false match for "url-scheme" with a value of "HTTPS" as shown in this example.

The behavior uses a wildcard syntax to allow blocking based on patterns. Examples include:

- *.somegooddomain.com*
- *.somegooddomain.com/this/path/is/allowed*

See [referrer-blacklist](#) above for additional examples and considerations related to the "value" attribute.

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-scheme",
          "value": "HTTPS",
          "negated": true
        }
      ],
      "behaviors": [
        {
          "name": "referrer-whitelist",
          "value": "*www.mysiste.com* *www.myothersite.com*"
        }
      ]
    }
  ]
}

```

3.2.3.4.13 site-failover

Site-failover defines an alternate response to serve when the edge server cannot contact the origin server. The response can be a 301 or 302 HTTP Redirect, or content retrieved from an alternate location defined in the site-failover behavior.

If the fail-action retrieves content from an alternate origin, you can also configure special downstream caching rules to prevent the end client from caching the fail-action content. This Downstream-Caching behavior is explained below in this section.

Example Use Case

Imagine that you have configured their domain (`www.example.com`) to serve content from the origin server located at `origin111.k5.com`. Further imagine that the content at `origin111.k5.com` is mirrored at `origin222.k5.com`. Since the content can be retrieved from a second source, you might desire to use that source as the failover when the primary origin is not available.

To configure this, you would do the following:

- Create a separate "alternate hostname" that will resolve to the Multi-Domain Config Edge Hostname used by `www.example.com`. For example, they could create `failover.example.com` and CNAME it to the same MDC hostname as `www.example.com`.
- Create a rule for `fail-over.example.com` that sets the origin-server behavior to retrieve content from `origin222.k5.com`. (Optionally, you could add the special downstream-caching behavior to this rule.)
- Add the site-failover behavior to the rule for `www.example.com`. This rule would set the `alternateHostname` element to `fail-over.example.com`.

Note: In case the customer does not have their own domain, the configuration that our 2 grant domains are created by the delivery settings and the `cdn-edge` domain B is changed to wording to `failover.example.com` and the `cdn-edge` domain A is changed to wording to `example.com` is allowed.

Preconditions and Exceptions

In all failover actions, it is assumed that you would have an alternate hostname and alternate origin where they have completely or partially mirrored the site's content. This alternate origin must be configured before the site-failover behavior is provisioned as a rule behavior. The alternate hostname might be served by a CDN platform in the region, in other region or elsewhere. If the alternate hostname is also not reachable, then there is no second level failover action.

Note: The alternative origin server can be deployed in another region of FJCS for OSS.

The setting that can be specified by the `type` parameter (required) is as follows.

- `serve-301` - Failover action is to "redirect" end client to the `alternateHostname` and `alternatePath` with the status code 301
- `serve-302` - Failover action is to "redirect" end client to the `alternateHostname` and `alternatePath` with the status code 302
- `serve-alternate` - Failover action is to automatically send a request to the `alternateHostname` and `alternatePath` to retrieve alternate content.

The setting that can be specified by the `params` parameter (required) is as follows.

- `httpResponseStatus`
 - A space separated list of HTTP status code(s) with integer ranges allowed. These are the status codes that would have been served to the client if no site-failover action had been declared. The status codes could have been received from the origin or generated by the edge server due to connection or read timeouts. For example: `500 503:504`
For example: `500 503:504`
- `alternateHostname`
 - `-`: A hyphen assigns no alternate hostname. The original hostname will be used to construct the new URL
 - `valid_domain.com`: A valid domain which would serve as the alternate hostname for the failover request.
For example: `failover.example.com`

- alternatePath
 - -: A hyphen assigns no alternatePath. The original path (with filename) will be used with the alternateHostname to construct the new URL.
 - The value of alternatePath completely replaces the path and filename in the original request URL. The alternatePath may also contain a query string, in which case preserveQueryString should be set to false. /valid_path/ : Valid URI path that begins and ends with a forward slash "/" Example: /dir1/filename.ext
 - In this case, only the path portion of the original request URI is replaced with the alternatePath. The original filename is retained in the newly constructed URL. Example: /dir1/dir2/
- preserveQueryString
 - true - The query string in the original request URL should be retained in the new URL for the redirect or alternate forward request.
 - false - The query string in the original URL request should be removed in the new URL for the redirect or forward request.

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "http-method",
          "value": "GET"
        }
      ],
      "behaviors": [
        {
          "name": "site-failover",
          "type": "serve-301",
          "params": {
            "httpResponseStatus": "404 500:504",
            "alternateHostname": "www.alternatehostname.com",
            "alternatePath": "/newdir1/newdir2",
            "preserveQueryString": true
          }
        }
      ]
    }
  ]
}

```

The definition of site-failover must not specify both alternateHostname and alternatePath as hyphen (-). This would lead to a failover back to the already failing origin.

If "preserveQueryString" is true, the alternatePath cannot have query parameters in it. If it does, this would be a JSON validation error. In short, new query strings cannot be added to existing query strings.

downstream-caching

You can use the downstream-caching behavior to control downstream caching of alternate content. (The only values supported currently are to bust the downstream cache.)

In the absence of this behavior in the "alternate hostname"s policy, the default downstream caching behavior as specified in the base CDN default configuration for the "alternate hostname" will be used.

The setting for which value can be specified is as follows

- no-store - the alternate response is served with an HTTP Cache-Control: no-store header.
- no-cache - the alternate response is served with an HTTP Cache-Control: no-cache header.

In the example below, all GET requests for alternate content receive a downstreamcaching setting of no-store.

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "http-method",
          "value": "GET"
        }
      ],
      "behaviors": [
        {
          "name": "downstream-caching",
          "value": "no-store"
        }
      ]
    }
  ]
}

```

3.2.3.4.14 token-auth

The token-auth behavior allows the Customer to configure the Edge server to control access to content through use of tokens. The token can be transmitted in the client request in a cookie, header, or query-parameter. Note that this behavior does not provide for generation of tokens, so the Customer is responsible for generating the appropriate token. Refer to the "IaaS Features Handbook" for details.

The setting that can be specified by the params parameter (required) is as follows.

- tokenName (required)
 - Token name. This is the name by which the token can be found in the header, cookie, or query parameter. A string that matches the following regex:
 $^([a-zA-Z][a-zA-Z0-9-_]*)$$
- tokenDelimiter (optional)
 - A single character, but NOT one of the following, which are not allowed: This character is used to separate the individual fields of the token. If not specified, the delimiter is assumed to be "~".
 $a-zA-Z \& 0-9 = \& / \backslash : \%$
- aclDelimiter (optional)
 - A single character but NOT one of the following, which are not allowed: The delimiter to separate the multiple ACL subfields. If not specified, the delimiter is assumed to be "!".
 $a-zA-Z \& 0-9 = \& / \backslash : \%$
- hmacAlgorithm (required)
 - The algorithm used for the HMAC (Hash-based Message Authentication Code) field of the token. One of: SHA256, SHA1, MD5. However, SHA256 should be used for security reasons.
- escapeTokenInputs (required)
 - Sets whether to perform URL encoding on the path string for the content to verify when calculating the MAC value of the token.
 - true: Performs URL encoding
 - false: Does not perform URL encoding
- ignoreQueryString (required)
 - Sets whether to ignore query parameters that are appended to the content path for calculating the MAC value, if there are any.
 - true: The query string portion of the URI should not be included when computing the HMAC of the token.
 - false: The query string portion of the URI should be included.
- key (required)

- A common key used for calculating the MAC value. String consisting of an even number of Hex digits not to exceed 64 characters.
- transitionKey (optional)
 - A common key used for calculating the MAC value. String consisting of an even number of Hex digits not to exceed 64 characters. Use transitionKey when changing key to a common key. The edge server allows access if the token is successfully verified using key or transitionKey.

```

{
  "rules": [
    {
      "matches": [
        {
          "name": "url-wildcard",
          "value": "/protected/*"
        }
      ],
      "behaviors": [
        {
          "name": "token-auth",
          "params": {
            "tokenName": "__mytoken__",
            "tokenDelimiter": "~",
            "aclDelimiter": "!",
            "hmacAlgorithm": "SHA256",
            "escapeTokenInputs": false,
            "ignoreQueryString": true,
            "key": "6e65775365637265744b6579",
            "transitionKey": "6f6c645365637265744b6579"
          }
        }
      ]
    }
  ]
}

```

3.2.4 Appendix B Country Codes and Continent Codes

This section is licensed by Akamai Technologies GK.

Country Code	Country Name	Continent Code
A		
AD	Andorra	EU
AE	United Arab Emirates	AS
AF	Afghanistan	AS
AG	Antigua and Barbuda	NA
AI	Anguilla	NA
AL	Albania	EU
AM	Armenia	AS
AO	Angola	AF
AQ	Antarctica	OT
AR	Argentina	SA

Country Code	Country Name	Continent Code
AS	American Samoa	OC
AT	Austria	EU
AU	Australia*	OC
AW	Aruba	NA
AZ	Azerbaijan	AS
B		
BA	Bosnia and Herzegovina	EU
BB	Barbados	NA
BD	Bangladesh	AS
BE	Belgium	EU
BF	Burkina Faso	AF
BG	Bulgaria	EU
BH	Bahrain	AS
BI	Burundi	AF
BJ	Benin	AF
BL	Saint Barthelemy	NA
BM	Bermuda	NA
BN	Brunei Darussalam	AS
BO	Bolivia	SA
BQ	Bonaire, Saint Eustatius and Saba	NA
BR	Brazil	SA
BS	Bahamas	NA
BT	Bhutan	AS
BV	Bouvet Island	AF
BW	Botswana	AF
BY	Belarus	EU
BZ	Belize	NA
C		
CA	Canada*	NA
CC	Cocos (Keeling) Islands	OC
CD	Congo, Democratic Republic of the	AF
CF	Central African Republic	AF
CG	Congo	AF
CH	Switzerland	EU
CI	Cote d'Ivoire	AF
CK	Cook Islands	OC
CL	Chile	SA

Country Code	Country Name	Continent Code
CM	Cameroon	AF
CN	China	AS
CO	Colombia	SA
CR	Costa Rica	NA
CU	Cuba	NA
CW	Curacao	NA
CX	Christmas Island	OC
CY	Cyprus	EU
CZ	Czech Republic	EU
D		
DE	Germany	EU
DJ	Djibouti	AF
DK	Denmark	EU
DM	Dominica	NA
DO	Dominican Republic	NA
DZ	Algeria	AF
E		
EC	Ecuador	SA
EE	Estonia	EU
EG	Egypt	AF
EH	Western Sahara	AF
ER	Eritrea	AF
ES	Spain	EU
ET	Ethiopia	AF
EU	Europe (generic)	EU
F		
FI	Finland	EU
FJ	Fiji	OC
FK	Falkland Islands (Malvinas)	SA
FM	Micronesia, Federated States of	OC
FO	Faroe Islands	EU
FR	France	EU
G		
GA	Gabon	AF
GB	United Kingdom*	EU
GD	Grenada	NA
GE	Georgia	EU

Country Code	Country Name	Continent Code
GF	French Guiana	SA
GH	Ghana	AF
GI	Gibraltar	EU
GG	Guernsey	EU
GL	Greenland	NA
GM	Gambia	AF
GN	Guinea	AF
GP	Guadeloupe	NA
GQ	Equatorial Guinea	AF
GR	Greece	EU
GS	South Georgia/South Sandwich Isl.	SA
GT	Guatemala	NA
GU	Guam	OC
GW	Guinea-Bissau	AF
GY	Guyana	SA
H		
HK	Hong Kong	AS
HM	Heard Island and Mcdonald Islands	OT
HN	Honduras	NA
HR	Croatia	EU
HT	Haiti	NA
HU	Hungary	EU
I		
ID	Indonesia	AS
IE	Ireland	EU
IL	Israel	AS
IM	Isle of Man	EU
IN	India	AS
IO	British Indian Ocean Territory	AS
IQ	Iraq	AS
IR	Iran	AS
IS	Iceland	EU
IT	Italy	EU
J		
JE	Jersey	EU
JM	Jamaica	NA
JO	Jordan	AS

Country Code	Country Name	Continent Code
JP	Japan	AS
K		
KE	Kenya	AF
KG	Kyrgyzstan	AS
KH	Cambodia	AS
KI	Kiribati	OC
KM	Comoros	AF
KN	Saint Kitts and Nevis	NA
KP	North Korea	AS
KR	South Korea	AS
KW	Kuwait	AS
KY	Cayman Islands	NA
KZ	Kazakhstan	AS
L		
LA	Laos	AS
LB	Lebanon	AS
LC	Saint Lucia	NA
LI	Liechtenstein	EU
LK	Sri Lanka	AS
LR	Liberia	AF
LS	Lesotho	AF
LT	Lithuania	EU
LU	Luxembourg	EU
LV	Latvia	EU
LY	Libyan Arab Jamahiriya	AF
M		
MA	Morocco	AF
MC	Monaco	EU
MD	Moldova	EU
ME	Montenegro	EU
MF	Saint Martin	NA
MG	Madagascar	AF
MH	Marshall Islands	OC
MK	Macedonia	EU
ML	Mali	AF
MM	Myanmar	AS
MN	Mongolia	AS

Country Code	Country Name	Continent Code
MO	Macau	AS
MP	Northern Mariana Islands	OC
MQ	Martinique	NA
MR	Mauritania	AF
MS	Montserrat	NA
MT	Malta	EU
MU	Mauritius	AF
MV	Maldives	AS
MW	Malawi	AF
MX	Mexico	NA
MY	Malaysia	AS
MZ	Mozambique	AF
N		
NA	Namibia	AF
NC	New Caledonia	OC
NE	Niger	AF
NF	Norfolk Island	OC
NG	Nigeria	AF
NI	Nicaragua	NA
NL	Netherlands	EU
NO	Norway	EU
NP	Nepal	AS
NR	Nauru	OC
NU	Niue	OC
NZ	New Zealand	OC
O		
OM	Oman	AS
P		
PA	Panama	NA
PE	Peru	SA
PF	French Polynesia	OC
PG	Papua New Guinea	OC
PH	Philippines	AS
PK	Pakistan	AS
PL	Poland	EU
PM	Saint Pierre and Miquelon	NA
PN	Pitcairn	OC

Country Code	Country Name	Continent Code
PR	Puerto Rico	NA
PS	Palestinian Territory, Occupied	AS
PT	Portugal	EU
PW	Palau	OC
PY	Paraguay	SA
Q		
QA	Qatar	AS
R		
RE	Reunion	AF
RO	Romania	EU
RS	Serbia	EU
RU	Russian Federation	EU
RW	Rwanda	AF
S		
SA	Saudi Arabia	AS
SB	Solomon Islands	OC
SC	Seychelles	AF
SD	Sudan	AF
SE	Sweden	EU
SG	Singapore	AS
SH	Saint Helena AF	AF
SI	Slovenia	EU
SJ	Svalbard and Jan Mayen	EU
SK	Slovakia	EU
SL	Sierra Leone	AF
SM	San Marino	EU
SN	Senegal	AF
SO	Somalia	AF
SR	Suriname	SA
SS	South Sudan	AF
ST	Sao Tome and Principe	AF
SV	El Salvador	NA
SX	Sint Maarten	NA
SY	Syrian Arab Republic	AS
SZ	Swaziland	AF
T		
TC	Turks and Caicos Islands	NA

Country Code	Country Name	Continent Code
TD	Chad	AF
TF	French Southern Territories	OT
TG	Togo	AF
TH	Thailand	AS
TJ	Tajikistan	AS
TK	Tokelau	OC
TM	Turkmenistan	AS
TN	Tunisia	AF
TO	Tonga	OC
TL	East Timor	AS
TR	Turkey	EU
TT	Trinidad and Tobago	NA
TV	Tuvalu	OC
TW	Taiwan, Province of China	AS
TZ	Tanzania, United Republic of	AF
U		
UA	Ukraine	EU
UG	Uganda	AF
UM	USA Minor Outlying Islands	OC
US	United States	NA
UY	Uruguay	SA
UZ	Uzbekistan	AS
V		
VA	Vatican City State	EU
VC	St Vincent and the Grenadines	NA
VE	Venezuela	SA
VG	Virgin Islands, British	NA
VI	Virgin Islands, U.S.	NA
VN	Viet Nam	AS
VU	Vanuatu	OC
W		
WF	Wallis and Futuna	OC
WS	Samoa	OC
X		
Y		
YE	Yemen	AS
YT	Mayotte	AF

Country Code	Country Name	Continent Code
Z		
ZA	South Africa	AF
ZM	Zambia	AF
ZW	Zimbabwe	AF

3.2.5 Appendix C Region Codes

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Region Code(Country Code)	Region Name
Japan (JP)	
1	Hokkaido
2	Aomori-ken
3	Iwate-ken
4	Miyagi-ken
5	Akita-ken
6	Yamagata-ken
7	Fukushima-ken
8	Ibaraki-ken
9	Tochigi-ken
10	Gunma-ken
11	Saitama-ken
12	Chiba-ken
13	Tokyo-to
14	Kanagawa-ken
15	Niigata-ken
16	Toyama-ken
17	Ishikawa-ken
18	Fukui-ken
19	Yamanashi-ken
20	Nagano-ken
21	Gifu-ken
22	Shizuoka-ken
23	Aichi-ken
24	Mie-ken
25	Shiga-ken
26	Kyoto-fu

Region Code(Country Code)	Region Name
27	Osaka-fu
28	Hyogo-ken
29	Nara-ken
30	Wakayama-ken
31	Tottori-ken
32	Shimane-ken
33	Okayama-ken
34	Hiroshima-ken
35	Yamaguchi-ken
36	Tokushima-ken
37	Kagawa-ken
38	Ehime-ken
39	Kochi-ken
40	Fukuoka-ken
41	Saga-ken
42	Nagasaki-ken
43	Kumamoto-ken
44	Oita-ken
45	Miyazaki-ken
46	Kagoshima-ken
47	Okinawa-ken
United States (US)	
AL	Alabama
AK	Alaska
AZ	Arizona
AR	Arkansas
CA	California
CO	Colorado
CT	Connecticut
DE	Delaware
DC	District of Columbia
FL	Florida
GA	Georgia
HI	Hawaii
ID	Idaho
IL	Illinois
IN	Indiana

Region Code(Country Code)	Region Name
IA	Iowa
KS	Kansas
KY	Kentucky
LA	Louisiana
ME	Maine
MD	Maryland
MA	Massachusetts
MI	Michigan
MN	Minnesota
MS	Mississippi
MO	Missouri
MT	Montana
NE	Nebraska
NV	Nevada
NH	New Hampshire
NJ	New Jersey
NM	New Mexico
NY	New York
NC	North Carolina
ND	North Dakota
OH	Ohio
OK	Oklahoma
OR	Oregon
PA	Pennsylvania
RI	Rhode Island
SC	South Carolina
SD	South Dakota
TN	Tennessee
TX	Texas
UT	Utah
VT	Vermont
VA	Virginia
WA	Washington
WV	West Virginia
WI	Wisconsin
WY	Wyoming
Canada (CA)	

Region Code(Country Code)	Region Name
AB	Alberta
BC	British Columbia
MB	Manitoba
NB	New Brunswick
NF	Newfoundland
NS	Nova Scotia
NT	Northwest Territories
NU	Nunavut Territory
ON	Ontario
PE	Prince Edward Island
QC	Quebec
SK	Saskatchewan
YT	Yukon Territory
Australia (AU)	
AC	Australian Capital Territory
NS	New South Wales
NT	Northern Territory
QL	Queensland
SA	South Australia
TA	Tasmania
VI	Victoria
WA	Western Australia
United Kingdom (GB)	
EN	England
NI	Northern Ireland
SC	Scotland
WA	Wales
Brazil (BR)	
AC	Acre
AL	Alagoas
AM	Amazonas
AP	Amapa
BA	Bahia
CE	Ceara
DF	Federal District
ES	Espirito Santo
GO	Goias

Region Code(Country Code)	Region Name
IS	Santa Ana Dos Remedios
MA	Maranhao
MG	Minas Gerais
MS	Mato Grosso Sul
MT	Mato Grosso
PA	Para
PB	Paraiba
PE	Pernambuco
PI	Piaui
PR	Parana
RJ	Rio de Janeiro
RN	Rio Grande Norte
RO	Rondonia
RR	Roraima
RS	Rio Grande Sul
SC	Santa Catarina
SE	Sergipe
SP	Sao Paulo
TO	Tocantins
Germany (DE)	
BB	Brandenburg
BE	Berlin
BW	Baden-Wurttemberg
BY	Bayern
HB	Bremen
HE	Hessen
HH	Hamburg
MV	Mecklenburg-Vorpommern
NI	Niedersachsen
NW	Nordrhein-Westfalen
RP	Rheinland-Pfalz
SH	Schleswig-Holstein
SL	Saarland
SN	Sachsen
ST	Sachsen-Anhalt
TH	Thuringen
China (CN)	

Region Code(Country Code)	Region Name
AH	Anhui
BJ	Beijing
CQ	Chongqing
FJ	Fujian
GS	Gansu
GD	Guangdong
GX	Guangxi Zhuang
GZ	Guizhou
HI	Hainan
HE	Hebei
HL	Heilongjiang
HA	Henan
HB	Hubei
HN	Hunan
JS	Jiangsu
JX	Jiangxi
JL	Jilin
LN	Liaoning
NM	Nei Mongol
NX	Ningxia Hui
QH	Qinghai
SN	Shaanxi
SD	Shandong
SH	Shanghai
SX	Shanxi
SC	Sichuan
TJ	Tianjin
XJ	Xinjiang Uygur
XZ	Xizang
YN	Yunnan
ZJ	Zhejiang
India (IN)	
AN	Andaman and Nicobar Islands
AP	Andhra Pradesh
AR	Arunachal Pradesh
AS	Assam
BR	Bihar

Region Code(Country Code)	Region Name
CH	Chandigarh
CT	Chattisgarh
DD	Daman and Diu
DL	Delhi
DN	Dadra and Nagar
GA	Goa
GJ	Gujarat
HP	Himachal Pradesh
HR	Haryana
JH	Jharkhand
JK	Jammu & Kashmir
KA	Karnataka
KL	Kerala
LD	Lakshadweep
MH	Maharashtra
ML	Meghalaya
MN	Manipur
MP	Madhya Pradesh
MZ	Mizoram
NL	Nagaland
OR	Orissa
PB	Punjab
PY	Puducherry
RJ	Rajasthan
SK	Sikkim
TN	Tamil Nadu
TR	Tripura
UL	Uttarakhand
UP	Uttar Pradesh
WB	West Bengal
Sweden (SE)	
K	Blekinge
X	Gavleborg
I	Gotland
N	Halland
Z	Jamtland
F	Jonkoping

Region Code(Country Code)	Region Name
H	Kalmar
W	Dalarna
G	Kronoberg
BD	Norrbotten
T	Orebro
E	Ostergotland
D	Sodermanland
C	Uppsala
S	Varmland
AC	Vasterbotten
Y	Vasternorrland
U	Vastmanland
AB	Stockholm
M	Skane
O	Vastra Gotaland
Mexico (MX)	
AGU	Aguascalientes
BCN	Baja California
BCS	Baja California Sur
CAM	Campeche
CHP	Chiapas
CHH	Chihuahua
COA	Coahuila
COL	Colima
DIF	Distrito Federal
DUR	Durango
GUA	Guanajuato
GRO	Guerrero
HID	Hidalgo
JAL	Jalisco
MEX	Mexico State
MIC	Michoacan
MOR	Morelos
NAY	Nayarit
NLE	Nuevo Leon
OAX	Oaxaca
PUE	Puebla

Region Code(Country Code)	Region Name
QUE	Queretaro
ROO	Quintana
SLP	San Luis Potosi
SIN	Sinaloa
SON	Sonora
TAB	Tabasco
TAM	Tamaulipas
TLA	Tlaxcala
VER	Veracruz
YUC	Yucatan
ZAC	Zacatecas
Ukraine (UA)	
CRIMEA	Crimea

Part 4: Automatic deployment of systems

Topics:

- [Common information](#)
- [Automatic deployment of systems](#)

4.1 Common information

4.1.1 Regarding the generation of URLs when using APIs

For the URLs used in the APIs, use those in the Service catalog obtained from the identity service that have the type, "orchestration".

The endpoint URLs are returned from the identity service in the following format.

```
https://orchestration.***.cloud.global.fujitsu.com
```

*** indicates the region identifier

Create URLs by merging the path name of each API with the endpoint URL.

4.2 Automatic deployment of systems

4.2.1 API list

Item	API	Description
1	Create stack	Creates a stack using the specified template
2	List stack data	Lists stack summary information
3	Find stack	Retrieves the URL for a specified stack
4	Show stack details	Shows details of a specified stack
5	Update stack	Updates a specified stack
6	Delete stack	Deletes a specified stack
7	Find stack resources	Retrieves the URL for the resource list for a specified stack
8	List resources	Lists resources in a stack
9	Show resource data	Shows data for a specified resource
10	Find stack events	Retrieves the URL for the event list for a specified stack
11	List stack events	Lists events for a specified stack
12	List resource events	Lists events for a specified stack resource
13	Get stack template	Gets a template for a specified stack
14	Validate template	Validates a specified template

4.2.2 API details

4.2.2.1 Create stack

Method	URI	Description
POST	/v1/{tenant_id}/stacks	Creates a stack.

Normal response codes: 201

Error response codes: badRequest (400), unauthorized (401), conflict (409), internalServerError (500)

Request



CAUTION

It is necessary to set full permission ".r:*" for the read ACL of the container in which the template file specified in `template_url` is stored.

This table shows the parameters for the create stack request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
stack_name	plain	String	Yes	The name of a stack to be created. Specify a string of halfwidth alphanumeric characters, underscores (<code>_</code>), hyphens (<code>-</code>), and periods (<code>.</code>), and that starts with a letter. The maximum length is 255 characters. Subsequent characters are ignored.
template_url	plain	String	No	The URL for a template. This parameter is ignored if the template parameter is specified. Specify either the <code>template_url</code> or template parameter.
template	plain	String	No	The string for a template. Use escape characters in the template if necessary so that the correct JSON format is used in the request body. For example, replace double quotation marks (<code>"</code>) with (<code>\</code> "), and line feeds with (<code>\n</code>). This parameter has priority if it is specified with <code>template_url</code> . Specify either the <code>template_url</code> or template parameter.
environment	plain	JSON	No	Replace the resource type defined in the template with another resource type.
files	plain	JSON	No	Mapping of file name and file contents. Specify this parameter when the embedded function <code>get_file</code> is used in the template. Use escape characters in the file contents if necessary so that the correct JSON format is used in the request body. For example, replace double quotation marks (<code>"</code>) with (<code>\</code> "), and line feeds with (<code>\n</code>).
parameters	plain	object	No	The pair of the name and value of an input parameter to be passed to the template.
timeout_mins	plain	Number	No	The timeout value. The unit is minutes. If omitted, 60 will be used.
disable_rollback	plain	Boolean	No	Specify <code>"false"</code> to delete the resources already created in a stack when creation of the stack failed. If omitted, <code>"true"</code> will be used. If creation of resources fails after performing stack creation using the parameter value <code>"true"</code> , resources already created before the stack creation process fails will not be deleted. In this case, the actual resources may have been created even if the resource status for the stack is <code>CREATE_FAILED</code> . To reference information on the created resources, use an API for the service that corresponds to the resource.

Example. Create stack: JSON request

```
{
  "stack_name": "{stack_name}",
  "template_url": "{template_url}",
  "parameters": {
    "param_name-1": "param_value-1", "param_name-2": "param_value-2"
  },
  "timeout_mins": "{timeout_mins}"
}
```

Response

Example. Create stack: JSON response

```
{
  "stack": {
    "id": "3095aefc-09fb-4bc7-b1f0-f21a304e864c",
    "links": [
      {
        "href": "http://192.168.123.200:8004/v1/ eb1c63a4f77141548385f113a28f0f52/stacks/
simple_stack/3095aefc-09fb-4bc7-b1f0- f21a304e864c",
        "rel": "self"
      }
    ]
  }
}
```



CAUTION

- If you create a stack for a template that contains security group rules, and the security group rule limit has been reached, the stack that contains a security group for which security group rules are not set is still created. To add a security group rule while in this state, reduce the number of security group rules below the limit, and perform the steps ("API reference (Network)" - "Network" - "Network adapter" - "API details" - "Create security group").
- When creating a router that will be connected to an external network, create a stack for which the router is created, modify the properties so that it will be connected to the external network, and update the stack using "update stack".

4.2.2.2 List stack data

Method	URI	Description
GET	/v1/{tenant_id}/stacks{?status, name, limit, marker, sort_keys, sort_dir}	Lists active stacks.

Normal response codes: 200

Error response codes: badRequest (400), unauthorized (401), internalServerError (500)

Request

This table shows the parameters for the list stack data request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
status	query	String	No	The status of stacks to list. The "name=value" pair can be specified as the query string multiple times. The valid statuses are shown below: <ul style="list-style-type: none"> • COMPLETE • FAILED • IN_PROGRESS
name	query	String	No	The name of a stack to list. The "name=value" pair can be specified as the query string multiple times.
limit	query	String	No	The number of stacks to list. This parameter is used in conjunction with the marker parameter.
marker	query	String	No	Specifies the ID of the last stack from the stack list retrieved with the specified limit parameter. Retrieves the list of stacks in the specified sort order beginning with the stack that follows the one with the specified ID. The default sort order is descending order of stack creation datetime. If an ID of a non-existing stack is specified, this option is ignored.
sort_keys	query	String	No	Specifies an item to sort on. Multiple items separated with commas can be specified as the query string. The valid items are shown below. If omitted, created_at will be used. <ul style="list-style-type: none"> • name • status • created_at • updated_at
sort_dir	query	String	No	Specifies the sort order. <ul style="list-style-type: none"> • asc Sorts in ascending order. • desc Sorts in descending order.

This operation does not accept a request body.

Response

Example. List stack data: JSON response

```
{
  "stacks": [
    {
      "creation_time": "2014-06-03T20:59:46Z",
      "description": "sample stack",
      "id": "3095aefc-09fb-4bc7-b1f0-f21a304e864c",

```

```

    "links": [
      {
        "href": "http://192.168.123.200:8004/v1/ eb1c63a4f77141548385f113a28f0f52/stacks/
simple_stack/3095aefc-09fb-4bc7-b1f0- f21a304e864c",
        "rel": "self"
      }
    ],
    "stack_name": "simple_stack",
    "stack_status": "CREATE_COMPLETE",
    "stack_status_reason": "Stack CREATE completed successfully",
    "updated_time": ""
  }
]
}

```

4.2.2.3 Find stack

Method	URI	Description
GET	/v1/{tenant_id}/stacks/{stack_name}	Finds the canonical URL for a specified stack.

Also works with verbs other than **GET**, so you can perform **PUT** and **DELETE** operations on a current stack. Set your client to follow redirects. Note that when redirecting, the request method should not change, as defined in RFC2626. However, in many clients the default behavior is to change the method to **GET** when you receive a 302 because this behavior is ubiquitous in web browsers.

Normal response codes: 302

Error response codes: badRequest (400), unauthorized (401), notFound (404), internalServerError (500)

Request

This table shows the parameters for the find stack request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
stack_name	URI	String	Yes	The name of a stack.

This operation does not accept a request body.

4.2.2.4 Show stack details

Method	URI	Description
GET	/v1/{tenant_id}/stacks/{stack_name}/{stack_id}	Shows details for a specified stack.

Normal response codes: 200

Error response codes: badRequest (400), unauthorized (401), notFound (404), internalServerError (500)

Request

This table shows the parameters for the show stack details request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
stack_name	URI	String	Yes	The name of a stack.
stack_id	URI	String	Yes	The unique identifier for a stack.

This operation does not accept a request body.

Response

Example. Show stack details: JSON response

```
{
  "stack": {
    "capabilities": [],
    "creation_time": "2014-06-03T20:59:46Z",
    "description": "sample stack",
    "disable_rollback": "True",
    "id": "3095aefc-09fb-4bc7-b1f0-f21a304e864c",
    "links": [
      {
        "href": "http://192.168.123.200:8004/v1/eb1c63a4f77141548385f113a28f0f52/stacks/simple_stack/3095aefc-09fb-4bc7-b1f0-f21a304e864c",
        "rel": "self"
      }
    ],
    "notification_topics": [],
    "outputs": [],
    "parameters": {
      "OS::stack_id": "3095aefc-09fb-4bc7-b1f0-f21a304e864c",
      "OS::stack_name": "simple_stack"
    },
    "stack_name": "simple_stack",
    "stack_status": "CREATE_COMPLETE",
    "stack_status_reason": "Stack CREATE completed successfully",
    "template_description": "sample stack",
    "timeout_mins": "",
    "updated_time": ""
  }
}
```

4.2.2.5 Update stack

Method	URI	Description
PUT	/v1/{tenant_id}/stacks/{stack_name}/{stack_id}	Updates a specified stack.

Normal response codes: 202

Error response codes: badRequest (400), unauthorized (401), notFound (404), internalServerError (500)

Request



CAUTION

It is necessary to set full permission ".r:*" for the read ACL of the container in which the template file specified in `template_url` is stored.

This table shows the parameters for the update stack request:

Parameter	Style	Type	Required	Description
<code>tenant_id</code>	URI	String	Yes	Project ID
<code>stack_name</code>	URI	String	Yes	The name of a stack.
<code>stack_id</code>	URI	String	Yes	The unique identifier for a stack.
<code>template_url</code>	plain	String	No	The URL for a template. This parameter is ignored if the <code>template</code> parameter is specified. Specify either the <code>template_url</code> or <code>template</code> parameter.
<code>template</code>	plain	String	No	The string for a template. Use escape characters in the template if necessary so that the correct JSON format is used in the request body. For example, replace double quotation marks (") with (\"), and line feeds with (\n). This parameter has priority if it is specified with <code>template_url</code> . Specify either the <code>template_url</code> or <code>template</code> parameter.
<code>environment</code>	plain	JSON	No	Replace the resource type defined in the template with another resource type.
<code>files</code>	plain	JSON	No	Mapping of file name and file contents. Specify this parameter when the embedded function <code>get_file</code> is used in the template. Use escape characters in the file contents if necessary so that the correct JSON format is used in the request body. For example, replace double quotation marks (") with (\"), and line feeds with (\n).
<code>parameters</code>	plain	object	No	The pair of the name and value of an input parameter to be passed to the template.
<code>timeout_mins</code>	plain	Number	No	The timeout value. The unit is minutes. If omitted, the value specified at the time of last stack creation or update will be used. If the value has never previously been specified, 60 will be used.

Example. Update stack: JSON request

```
{
  "template_url": "{template_url}",
  "parameters": {
    "param_name-1": "param_value-1", "param_name-2": "param_value-2"
  }
}
```

```

},
"timeout_mins": "{timeout_mins}"
}

```

4.2.2.6 Delete stack

Method	URI	Description
DELETE	/v1/{tenant_id}/stacks/{stack_name}/{stack_id}	Deletes a specified stack.

Normal response codes: 204

Error response codes: badRequest (400), unauthorized (401), notFound (404), internalServerError (500)

Request

This table shows the parameters for the delete stack request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
stack_name	URI	String	Yes	The name of a stack.
stack_id	URI	String	Yes	The unique identifier for a stack.

This operation does not accept a request body.



CAUTION

When deleting a router that is connected to an external network using a customized role, the router will not be deleted - it will remain after deleting the stack. Disconnect the external network from the target router using an API after the stack is deleted, and then delete the router.

4.2.2.7 Find stack resources

Method	URI	Description
GET	/v1/{tenant_id}/stacks/{stack_name}/resources	Finds the canonical URL for the resource list of a specified stack.

Normal response codes: 302

Error response codes: badRequest (400), unauthorized (401), notFound (404)

Request

This table shows the parameters for the find stack resources request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
stack_name	URI	String	Yes	The name of a stack.

This operation does not accept a request body.

4.2.2.8 List resources

Method	URI	Description
GET	/v1/{tenant_id}/stacks/{stack_name}/{stack_id}/resources{?nested_depth}	Lists resources in a stack.

Normal response codes: 200

Error response codes: badRequest (400), unauthorized (401), notFound (404)

Request

This table shows the parameters for the list resources request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
stack_name	URI	String	Yes	The name of a stack.
stack_id	URI	String	Yes	The unique identifier for a stack.

This operation does not accept a request body.

4.2.2.9 Show resource data

Method	URI	Description
GET	/v1/{tenant_id}/stacks/{stack_name}/{stack_id}/resources/{resource_name}	Shows data for a specified resource.

Normal response codes: 200

Error response codes: badRequest (400), unauthorized (401), notFound (404)

Request

This table shows the parameters for the show resource data request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
stack_name	URI	String	Yes	The name of a stack.
stack_id	URI	String	Yes	The unique identifier for a stack.
resource_name	URI	String	Yes	The name of a resource in the stack.

This operation does not accept a request body.

4.2.2.10 Find stack events

Method	URI	Description
GET	/v1/{tenant_id}/stacks/{stack_name}/events	Finds the canonical URL for the event list of a specified stack.



Event data deleted more than one year ago is not displayed.

Normal response codes: 302

Error response codes: badRequest (400), unauthorized (401), notFound (404), internalServerError (500)

Request

This table shows the parameters for the find stack events request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
stack_name	URI	String	Yes	The name of a stack.

This operation does not accept a request body.

4.2.2.11 List stack events

Method	URI	Description
GET	/v1/{tenant_id}/stacks/{stack_name}/{stack_id}/events	Lists events for a specified stack.

Normal response codes: 200

Error response codes: badRequest (400), unauthorized (401), notFound (404), internalServerError (500)

Request

This table shows the parameters for the list stack events request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
stack_name	URI	String	Yes	The name of a stack.
stack_id	URI	String	Yes	The unique identifier for a stack.

This operation does not accept a request body.

4.2.2.12 List resource events

Method	URI	Description
GET	/v1/{tenant_id}/stacks/{stack_name}/{stack_id}/resources/{resource_name}/events	Lists events for a specified stack resource.

Normal response codes: 200

Error response codes: badRequest (400), unauthorized (401), notFound (404), internalServerError (500)

Request

This table shows the parameters for the list resource events request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
stack_name	URI	String	Yes	The name of a stack.
stack_id	URI	String	Yes	The unique identifier for a stack.
resource_name	URI	String	Yes	The name of a resource in the stack.

This operation does not accept a request body.

4.2.2.13 Get stack template

Method	URI	Description
GET	/v1/{tenant_id}/stacks/{stack_name}/{stack_id}/template	Gets a template for a specified stack.

Normal response codes: 200

Error response codes: badRequest (400), unauthorized (401), notFound (404), internalServerError (500)

Request

This table shows the parameters for the get stack template request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
stack_name	URI	String	Yes	The name of a stack.
stack_id	URI	String	Yes	The unique identifier for a stack.

This operation does not accept a request body.

4.2.2.14 Validate template

Method	URI	Description
POST	/v1/{tenant_id}/validate	Validates a specified template.

Normal response codes: 200

Error response codes: badRequest (400), unauthorized (401), notFound (404), internalServerError (500)

Request



CAUTION

It is necessary to set full permission ".r:*" for the read ACL of the container in which the template file specified in template_url is stored.

This table shows the parameters for the validate template request:

Parameter	Style	Type	Required	Description
tenant_id	URI	String	Yes	Project ID
template_url	URI	String	No	The URL for a template. This parameter is ignored if the template parameter is specified. Specify either the template_url or template parameter.
template	URI	String	No	The string for a template. This parameter has priority if it is specified with template_url. Specify either the template_url or template parameter.

Example. Validate template: JSON request

```
{
  "template_url": "{template_url}"
}
```

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