

NTT Communications

Cloudⁿ

**Compute
(FLAT type)
API Manual**

Ver.1.1

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1-1) Cloudⁿ Compute (FLAT Type) API

Below is the Compute (FLAT Type) API which will be described in this manual.

	Command	Description	EC2 Compatible
Async Job	queryAsyncJobResult	Retrieves the current status of an asynchronous job.	
	listAsyncJobs	Lists all pending asynchronous jobs for this account.	
Virtual Machine	listVirtualMachines	Lists the virtual machines owned by this account.	○
	deployVirtualMachine (A)	Creates, and automatically starts, a virtual machine based on the given service offering, disk offering, and template.	○
	destroyVirtualMachine (A)	Destroys a virtual machine.	○
	rebootVirtualMachine (A)	Reboots a virtual machine.	○
	startVirtualMachine (A)	Starts a virtual machine.	○
	stopVirtualMachine (A)	Stops a virtual machine.	○
	resetPasswordForVirtualMachine(A)	Resets the password of a virtual machine.	
	changeServiceForVirtualMachine	Changes the service offering of a virtual machine.	○
	updateVirtualMachine	Updates the properties of a virtual machine.	
recoverVirtualMachine	Recovers a virtual machine.		
Security Group	listSecurityGroups	Lists all security groups.	
	createSecurityGroup	Creates a security group.	
	deleteSecurityGroup	Deletes security group.	
	authorizeSecurityGroupIngress (A)	Authorizes a particular ingress rule for this security group.	
	revokeSecurityGroupIngress (A)	Deletes a particular ingress rule from this security group.	
	authorizeSecurityGroupEgress (A)	Authorizes a particular egress rule for this security group.	
	revokeSecurityGroupEgress (A)	Deletes a particular egress rule from this security group.	



(A) Indicates that the command is asynchronous.

1-1) Cloudⁿ Compute (FLAT Type) API

	Command	Description	EC2 Compatible
Service Offering	listServiceOfferings	Lists all available service offerings.	
Disk Offering	listDiskOfferings	Lists all available disk offerings.	
Zone	listZones	Lists all available zones.	
Template	listTemplates	List all public, private, and privileged templates.	○
	createTemplate	Creates a template.	○
	uploadTemplate	Uploads a template.	
	copyTemplate	Copies a template.	
	deleteTemplate	Deletes a template.	○
	extractTemplate	Extracts a template.	
Snapshot	listSnapshot	Lists all snapshots.	○
	createSnapshot	Creates a snapshot.	○
	deleteSnapshot	Deletes a snapshot.	○
Volume	listVolumes	Lists all volumes.	○
	attachVolume (A)	Attaches a disk volume to a virtual machine.	○
	detachVolume (A)	Detaches a disk volume from a virtual machine.	○
	createVolume (A)	Creates a disk volume from a disk offering.	
	uploadVolume (A)	Uploads a data disk.	
	deleteVolume (A)	Deletes a detached disk volume.	○
	extractVolume (A)	Extracts a volume.	

1-2) Cloudⁿ Compute(FLAT Type) API Shared Information

The API's Server (End Point) will be as follows:

<https://comp-api.jp-e1.cloudn-service.com/client/api>

Common parameters used for API requests will be as follows:

Common Request Parameters		
Parameter	Description	Required
apikey	Access key ID (*1).	Yes
command	Indicates an API method.	Yes
signature	The electronic signature which corresponds with this request.	Yes
Response	If this value is "json", the response will be changed from XML to json.	No
expires	Sets an expire date for API request. Set in strftime(3) form, "%Y-%m-%dT%T%z" (*1).	No
signatureVersion	Refers to Set 3 (*1).	No



Please refer to the "Using Compute (FLAT Type) API" section of this manual to learn how to create an electronic signature.



"expires" and "signatureVersion" must always be specified together.

Common Responses (Asynchronous Methods)

Response (Body)	Format	XML, Json		
	XML / JSON	Node Name	Description	Child Node
		"async method name" response	Response container.	jobid
		jobid	jobid received when the async method was called and registered as a job.	



Depending on the asynchronous method which was executed, the response container will be different. For example, in case of "deployVirtualMachine", the response container will be of the form "deployvirtualmachineresponse."

1-3) Async Job Operations

queryAsyncJobResult

Description	Retrieves the current status of an asynchronous job.
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Request Parameters

Parameter Name	Description	Required
jobid	ID of the asynchronous job.	Yes

Response

Response (Body)	Format	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>queryasyncjobresultresponse</i>	Response container.	accountid, userid, cmd, jobstatus, jobporcstatus, jobresultcode, jobresulttype, jobresult, created , jjobid
		<i>accountid</i>	Account that executed the async command.	
		<i>userid</i>	User that executed the async command.	
		<i>cmd</i>	Async command executed.	
		<i>jobstatus</i>	Current job status, should be 0 for PENDING.	
		<i>jobprocstatus</i>	Progress information of a PENDING job.	
		<i>jobresultcode</i>	Result code for the job.	
		<i>jobresulttype</i>	Result type.	
		<i>jobresult</i>	Result reason, varies upon the job which was run.	
		<i>created</i>	Date the job was created.	
		<i>jobid</i>	ID of the async job, which is returned when the method finishes executing.	

1-3) Async Job Operation

listAsyncJobs

Description	Lists all pending asynchronous jobs for this account.
-------------	---

Request Parameters

Parameter Name	Description	Required
domainid	Lists all of the information for the specified domain.	No
account	Lists the resources of the specified account. Can be used simultaneously with domainid.	No
isrecursive	Can be set to true/false, with the default being false. If set to true, the information of sub domains are also included in the search.	No
keyword	Search for the given keyword.	No
listall	Can be set to true/false, with the default being false. If true, it's the same as setting zoneid and isrecursive to true.	No
page	Set at the same time as pagesize and specifies page numbers.	No
pagesize	Specifies the number of asynch jobs which are contained in a single request and is specified at the same time as page. The default is 500.	No
startdate	Start date of the asynch job.	No

Response

Response (Body)	Format	XML, Json		
	XML / JSON	Node	description	Child Node
		<i>listasyncjobsresponse</i>	Response container.	count, asyncjobs
		<i>count</i>	The number of asynch job objects included in the response.	
		<i>asyncjobs</i>	Container used to store an asynch job.	accountid, userid, cmd, jobstatus, jobporcstatus, jobresultcode, jobresulttype, jobresult, created , jjobid
		<i>accountid</i>	ID of the account which executed the API request.	
		<i>userid</i>	ID of the user who executed the API request.	
		<i>cmd</i>	Command (method) executed.	
		<i>jobstatus</i>	Current job status. 0 indicates a PENDING job.	
		<i>jobprocstatus</i>	Current progress of a PENDING job.	
		<i>jobresultcode</i>	Result code for the job.	
		<i>jobresulttype</i>	Type of result returned.	
		<i>jobresult</i>	Result reason, differs depending on the asynch job which was called.	
		<i>created</i>	Date and time the job was created.	
		<i>jobid</i>	jobid which is returned after an API method finishes executing.	

1-4) Virtual Machine Operations

listVirtualMachines

Description	Obtains a list of the virtual machines which are owned by this account.
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Request Parameters

Parameter Name	Description	Required
account	Specifies a certain account, and is used simultaneously with domainid.	No
details	Specifies the details of the virtual machines your searching for. The default is no specification at all, but they can be made by passing in a comma-separated list of a selection of the following: <i>all, group, nics, stats, secgrp, templ, servoff, iso, volume</i> and <i>min</i> .	No
domainid	Specifies a certain domain by which to list virtual machines.	No
groupid	Specifies a groupid by which to list virtual machines.	No
id	Specifies the id of the virtual machine you're looking for.	No
isoid	Lists virtual machines by their ISO ID.	No
isrecursive	Includes subdomains in the search for virtual machines.	No
keyword	Specifies virtual machines using a keyword.	No
listall	Can be set to true/false. If set to true, it's the same as listing virtual machines with zoneid and isrecursive set to true.	No
name	Specifies the name of the virtual machine you are looking for.	No
page	Specified along with pagesize, and indicates page number.	No
pagesize	Specifies the number of asynch jobs which are contained in a single request and is specified at the same time as page. The default is 500	No
state	Specifies the state of the virtual machines you are listing.	No
tags	Specifies the resources of virtual machines using (key/value pairs) tags[N].key="sample_key" tags[N].value="sample_value" (N=0, 1, 2, 3,)	No
templateid	Lists virtual machines using a particular ID.	No
zoneid	Lists virtual machines by zone ID.	No

1-4) Virtual Machine Operations

listVirtualMachines

Response				
Response (Body)	Format			
	XML / JSON	Node	description	Child Node
		<i>listvirtualmachinesresponse</i>	Response container.	count, virtualmachine
		<i>count</i>	The number of virtual machines contained in the response.	
		<i>virtualmachine</i>	The container which holds the virtual machine.	
		<i>id</i>	ID of the virtual machine.	
		<i>account</i>	Account which owns the virtual machine.	
		<i>cpunumber</i>	Number of CPUs contained in the virtual machine.	
		<i>cpuspeed</i>	Speed of the virtual machine's CPU.	
		<i>cpuused</i>	Usage percentage the virtual machine's CPU.	
		<i>created</i>	Date and time that the virtual machine was created.	
		<i>displayname</i>	Name of the virtual machine which was specified by its creator. If none exists, the name of the virtual machine is returned.	
		<i>domain</i>	Domain name of the virtual machine.	
		<i>domainid</i>	Domain ID of the virtual machine.	
		<i>group</i>	Group name of which the virtual machine is a part of.	
		<i>groupid</i>	Group ID of which the virtual machine is a part of.	
		<i>guestosid</i>	OS type ID of the virtual machine.	
		<i>haenable</i>	Set to true if this virtual machine has high-availability enabled.	
		<i>hypervisor</i>	Type of hypervisor upon which this template is running.	
		<i>isodisplaytext</i>	Display name of the ISO attached to the virtual machine.	
		<i>isoid</i>	ID of the ISO attached to the virtual machine.	
		<i>isoname</i>	Name of the ISO attached to the virtual machine.	
		<i>memory</i>	Amount of memory which the virtual machine has.	
		<i>name</i>	Name of the virtual machine.	
		<i>networkkbsread</i>	Amount of inbound traffic to the virtual machine.	
	<i>networkkbswrite</i>	Amount of outbound traffic coming from the virtual machine.		
	<i>password</i>	Password of the virtual machine, if one exists.		
	<i>passwordenabled</i>	Set to true if the password-reset feature is enabled for this virtual machine.		

1-4) Virtual Machine Operations

listVirtualMachines

Response (Cont)

Response (Body)	Format			
	XML / JSON	Node	Description	Child Node
		<i>rootdeviceid</i>	Shows the device ID of the root volume.	
		<i>rootdevicetype</i>	Shows the device type of the root volume.	
		<i>serviceofferingid</i>	Shows the ID of the service offerings of the virtual machine.	
		<i>serviceofferingname</i>	Shows the names of the service offerings of the virtual machine.	
		<i>state</i>	Shows the state of the virtual machine.	
		<i>templatedisplaytext</i>	Shows the display name for the virtual machine's template.	
		<i>templateid</i>	Returns the ID of the virtual machine's template or -1 if the virtual machine was created from an ISO.	
		<i>templatename</i>	Shows the template name of the virtual machine.	
		<i>zoneid</i>	Shows the ID of the zone which the virtual machine belongs to.	
		<i>zonename</i>	Shows the name of the zone which the virtual machine belongs to.	
		<i>nic</i>	Displays the information about the virtual machine's Network Interface Card (NIC).	
		<i>id</i>	ID of the NIC.	
		<i>networkid</i>	ID of the NIC's network.	
		<i>netmask</i>	Netmask of the IP of the NIC.	
		<i>gateway</i>	Default gateway of the NIC.	
		<i>ipaddress</i>	IP address assigned to the NIC.	
		<i>traffictype</i>	Traffic type of the NIC, typically "Guest".	
		<i>type</i>	Type of the NIC, typically "Shared".	
		<i>isdefault</i>	Returns true if the NIC is default, false otherwise.	
		<i>macaddress</i>	MAC address of the NIC.	
		<i>securitygroup</i>	Lists the security groups used by the virtual machine.	
		<i>id</i>	ID of the security group.	
		<i>name</i>	Name of the security group.	
		<i>description</i>	Description of the security group.	
		<i>tags</i>	Container for the virtual machine's tag data.	
		<i>key</i>	Tag key.	
		<i>value</i>	Tag value.	

1-4) Virtual Machine Operations

deployVirtualMachine (A)

Description	Creates and starts a virtual machine based on the disk size, template, service offerings, etc., given.	
Request Parameters		
Parameter Name	Description	Required
serviceofferingid	ID of the service offering of the virtual machine, which is used to indicate the specification of the virtual machine.	Yes
templateid	ID of the template, ISO used to create this virtual machine.	Yes
zoneid	Zone of which the virtual machine belongs.	Yes
account	Must be specified along with domainid and specifies a particular account.	No
diskofferingid	Indicates the ID of the disk offering for the virtual machine. If the ID contained in diskofferingid is an ISO (the virtual machine was made using an ISO), the diskOfferingId is the ID of the root disk volume. However, if the diskofferingid refers to a template (the virtual machine was made using a template), it is the ID of the virtual machine's data disk volume.	No
displayname	Optional name for the virtual machine, chosen by the user.	No
domainid	The domain ID of the virtual machine, always specified in conjunction with account.	No
group	An optional group of which the virtual machine is a part of.	No
keyboard	The keyboard-type which is specified for this virtual machine (optional). Valid keyboard-types include the following: de,de-ch,es,fi,fr,fr-be,fr-ch,is,it,jp,nl-be,no,pt,uk,us	No
keypair	Name of the SSH key-pair used when connecting to the virtual machine via SSH.	No
name	Indicates the name of the virtual machine.	No
securitygroupids	The IDs of the security groups which will be associated with this virtual machine. When a virtual machine will be associated with multiple security groups, each ID should be separated from the others by a comma. If securitygroupids is specified, securitygroupnames cannot be specified for the virtual machine being deployed.	No
securitygroupnames	The names of the security groups which will be associated with this virtual machine. When a virtual machine will be associated with multiple security groups, each name should be separated from the others by a comma. If securitygroupnames is specified, securitygroupids cannot be specified for the virtual machine being deployed.	No
userdata	An optional binary data that can be sent to the virtual machine upon a successful deployment. This binary data to be sent must be in base64 encoding before adding it to the request. Currently, only HTTP GET is supported. Using HTTP GET (via querystring), up to 2KB of data (following base64 encoding) can be sent.	No



An example of parameters which can be used with "deployVirtualMachine".

- serviceofferingid:

East Japan DC: Plan vQ=200c6378-8ae9-4718-9b25-b8c4f6c1dfc8
 Plan v1=88ce379e-a686-4ae4-946f-dc3358275276
 Plan v2=0b41ab6e-696e-4a91-b623-5b880e3be7a6
 Plan v4=3164027a-3636-4cd5-a8be-f76d51d93a1a
 Plan v8=a40f2dba-e51d-4175-a41d-8c0047e589b7

- templateid: Template ID used for the virtual machine created.
 (Please get all template information using the Compute console.)

- zoneid: The ID of the zone into which the virtual machine will be created.
 East Japan DC : jp-e1a=1b02e74c-6c21-4aa3-b96c-51042de8fccd
 jp-e1b=91e59e5f-2971-48e7-adbe-e853ed875e76

1-4) Virtual Machine Operations

deployVirtualMachine (A)

Response (*)

Response (Body)	style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>deployvirtualmachineresponse</i>	Response container.	jobid
		<i>Jobid</i>	The jobid assigned to an async method once it is called and resistered as a job.	
	To check the success of the deploy	<i>Jobresults (* jobresults of queryJobResults)</i>		
<i>virtualmachine</i>		Execute the listVirtualMachine command and ensure that in the status field that "Running" along with the virtual machine's initial password are displayed.		



Because this is an asynch method, its jobid will be returned within the "deployvirtualmachineresponse" container. By executing queryAsyncResult with this jobid, it can be checked whether the deploy was successful or not.

1-4) Virtual Machine Operations

destroyVirtualMachine (A)

Description	Destroys a virtual machine which can only then be recovered by the administrator.
-------------	---

Request Parameters

Parameter Name	Description	Required
id	The ID of the virtual machine to be destroyed.	Yes

Response (*)

Response (Body)	Format	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>destroyvirtualmachineresponse</i>	Response container.	response container
		<i>jobid</i>	The jobid which is given to an asynch method when it is called and registered as a job.	
	To check the success of the destroy	<i>Jobresults</i> (The value of <i>jobresults</i> returned in <i>queryJobResults</i>)		
<i>virtualmachine</i>		Check that the status field contained in the response of listVirtualMachine should read "Destroyed".		



Because this is an asynch method, its jobid will be returned within the "destroyvirtualmachineresponse" container. By executing queryAsyncResult with this jobid, the results of the destroy can be checked.

1-4) Virtual Machine Operations

rebootVirtualMachine (A)

Description	Reboots the virtual machine.
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Request Parameters

Parameter Name	Description	Required
id	The ID of the virtual machine to be rebooted.	Yes

Response (*)

Response (Body)	Format	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>rebootvirtualmachinereponse</i>	Response container.	jobid
		<i>jobid</i>	The jobid which is given to an asynch method when it is called and registered as a job.	
To check the success of the reboot		<i>Jobresults</i> (The value of <i>jobresults</i> returned in <i>queryJobResults</i>)		
		<i>virtualmachine</i>	Execute the listVirtualMachine command and ensure that the virtual machine's status is "Running".	



Because this is an asynch method, its jobid will be returned within the "destroyvirtualmachinereponse" container. By executing queryAsyncResult with this jobid, the results of the reboot can be checked.

1-4) Virtual Machine Operations

startVirtualMachine (A)

Description	Starts a virtual machine
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Request Parameters

Parameter Name	Description	Required
id	ID of the virtual machine to be started	Yes

Response (*)

Response (Body)	Format	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>Startvirtualmachineresponse</i>	Response container.	jobid
		<i>jobid</i>	The jobid which is given to an asynch method when it is called and registered as a job.	
	To check the success of the recovery	<i>Jobresults (The value of jobresults returned in queryJobResults)</i>		
<i>virtualmachine</i>		Execute the listVirtualMachine command and ensure that the virtual machine's status is "Running".		



Because this is an asynch method, its jobid will be returned within the "startvirtualmachineresponse" container. By executing queryAsyncResult with this jobid, the results of the start can be checked.

1-4) Virtual Machine Operations

stopVirtualMachine (A)

Description	Stops a virtual machine.
-------------	--------------------------

Request Parameters

Parameter Name	Description	Required
id	The ID of the virtual machine.	Yes
forced	Flag used for a forced stop which forces the virtual machine into a "Stopped" state.	No

Response (*)

Response (Body)	Format	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>stopvirtualmachineresponse</i>	Response container.	jobid
		<i>jobid</i>	jobid which is given to an asynch method when it is called and registered as a job.	
	To check the success of the stop operation	<i>Jobresults</i> (The value of <i>jobresults</i> returned in <i>queryJobResults</i>)		
<i>virtualmachine</i>		Execute the listVirtualMachine command and ensure that the virtual machine's status is "Stopped".		



Because this is an asynch method, its jobid will be returned within the "stopvirtualmachineresponse" container. By executing queryAsyncResult with this jobid, the results of the stop operation can be checked.

1-4) Virtual Machine Operations

resetPasswordForVirtualMachine (A)

Description	Resets the password for a virtual machine. Before password-reset can be done, the virtual machine must be in a "Stopped" state and the template must already support this feature.
-------------	--

Request Parameters

Parameter Name	Description	Required
id	The ID of the virtual machine for which the password will be reset.	Yes

Response (*)

Response (Body)	Format	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>resetpasswordforvirtualmachineresponse</i>	Response container.	jobid
		<i>jobid</i>	jobid which is given to an asynch method when it is called and registered as a job.	
	To check the success of the reset password operation	<i>Jobresults (* jobresults of queryJobResults</i>		
		<i>virtualmachine</i>	Execute the listVirtualMachine command and ensure that the virtual machine's status is "Stopped" and the new password is displayed in the password field.	



Because this is an asynch method, its jobid will be returned within the "resetpasswordforvirtualmachineresponse" container. By executing queryAsyncResult with this jobid, the results of the stop operation can be checked.

1-4) Virtual Machine Operations

changeServiceForVirtualMachine

Description	Changes the service offering for a virtual machine. Before a service offering can be changed, the virtual machine must be in a "Stopped" state.
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Request Parameters

Parameter Name	Description	Required
id	ID of the virtual machine for which the service offering will be changed.	Yes
serviceofferingid	The new service offering which will be applied to the virtual machine.	Yes

Response

Response (Body)	style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>changeserviceforvirtualmachineresponse</i>	Response container.	virtualmachine
		<i>virtualmachine</i>	Execute the listVirtualMachine command and ensure that the virtual machine's status is "Stopped" and the serviceofferingid, cpunumber, memory, have all been changed correctly..	

1-4) Virtual Machine Operations

updateVirtualMachine

Description	Updates the properties of a virtual machine.
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Request Parameters

Parameter Name	Description	Required
id	The ID of the virtual machine which will be updated.	Yes
displayname	The display name given to the virtual machine by the user.	No
group	Optional group to which the virtual machine belongs.	No
haenable	Is true if high-availability is enabled for the virtual machine, and false otherwise.	No
ostypeid	The ID of the OS which this virtual machine is running.	No
userdata	An optional binary data that can be sent to the virtual machine upon a successful deployment. This binary data to be sent must be in base64 encoding before adding it to the request. Currently, only HTTP GET is supported. Using HTTP GET (via querystring), up to 2KB of data (following base64 encoding) can be sent.	No

Response

Response (Body)	Format	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>updatevirtualmachineresponse</i>	Response container.	virtualmachine
		<i>virtualmachine</i>	Execute the listVirtualMachine command and ensure that the properties were changed properly.	

1-4) Virtual Machine Operations

recoverVirtualMachine

Description	Recovers a virtual machine.
-------------	-----------------------------

Request Parameters

Parameter Name	Description	Required
id	The ID of the virtual machine to be recovered.	Yes

Response

Response (Body)	Format	XML, Json		
To check the success of the reset recovery operation		Node	Description	Child Node
		<i>recovervirtualmachineresponse</i>	Response container	virtualmachine
		<i>virtualmachine</i>	Execute the listVirtualMachine command and ensure that the virtual machine is listed again.	



Only virtual machines in a "Destroyed" state can be recovered. Those which have been completely deleted and are in an "Expunging state are not recoverable.

1-5) Security Group Operations

listSecurityGroups

Description	Lists security groups.
-------------	------------------------

Request Parameters

Parameter Name	Description	Required
account	Lists resources by account, must always be used along with domainid.	No
domainid	Lists resources by the domain of which they're apart.	No
id	Lists security groups by ID.	No
isrecursive	Defaults to false, but if set to true, subdomains are included in the search.	No
keyword	Used to specify a keyword used for search.	No
listall	Defaults to false, if true, it is equivalent to setting zoneid and isrecursive to true.	No
page	Specifies page numbers, always set at the same time as pagesize.	No
pagesize	Set the number of responses returned from one request by an asynch job. The default value is 500 and is always set at the same time as page.	No
securitygroupname	Lists the security groups with a given name.	No
tags	<i>List resources by tags (key/value pairs)</i> Set tag information as follow: tags[N].key="sample_key" tags[N].value="sample_value" (N=0, 1, 2, 3,)	No
virtualmachineid	Lists security groups by virtual machine ID.	No

Response

Response (Body)	Style	XML, Json			
	XML / JSON	Node	Description	Child Node	
		<i>listsecuritygroupsresponse</i>	Response container.	count, asynchjobs	
		<i>count</i>	The number of security group objects which are included in the response.		
		<i>securitygroup</i>	Container which stores security group objects.	accountid, userid, cmd, jobstatus, jobporcstatus, jobresultcode, jobresulttype, jobresult, created, jjobid	
		<i>id</i>	The security group ID.		
		<i>account</i>	The owning account of the security group.		
		<i>userid</i>	The user ID which executed the asynch API request.		
		<i>description</i>	A description of the security group.		
		<i>domainid</i>	The domain ID where this security group is stored.		
		<i>domiain</i>	The name of the domain where the security group is stored.		
		<i>name</i>	The name of the security group.		
		<i>tags</i>	The container of tag data.	key, value	
			<i>key</i>	Tag key.	
			<i>value</i>	Tag value.	

1-5) Security Group Operations

listSecurityGroups

Response (Cont)					
Response (Body)	Style	XML, Json			
	XML / JSON	Node		Description	Child Node
		<i>tags</i>		Container of tag information.	key, value
			<i>key</i>	Tag key name.	
			<i>Value</i>	Tag value.	
		<i>egress</i>		Container which stores the rules for the egress filter (the filter for outbound traffic).	ruleid, protocol, startport, endpoint, cidr, icmpctype, icmpcode
			<i>ruleid</i>	Rule ID of the egress filter.	
			<i>protocol</i>	Select from tcp, udp, icmp. (all).	
			<i>startport</i>	Start point of port range when tcp or udp is being used.	
			<i>endpoint</i>	End point of port range when tcp or udp is being used.	
			<i>cidr</i>	Destination addresses which are given in CIDR(Classless Inter-Domain-Routing) Blocks (ex. 192.0.2.0/24).	
			<i>icmpcode</i>	Icmp code (http://www.iana.org/assignments/icmp-parameters/icmp-parameters.xml).	
			<i>icmpctype</i>	Icmp type (http://www.iana.org/assignments/icmp-parameters/icmp-parameters.xml).	
		<i>ingress</i>		Container which stores the rules for the ingress filter (filter for incoming traffic).	ruleid, protocol, startport, endpoint, cidr, icmpctype, icmpcode
			<i>ruleid</i>	Rule ID of the egress filter.	
			<i>protocol</i>	Select from tcp, udp, icmp. (all) .	
			<i>startport</i>	Start point of port range when tcp or udp is being used.	
			<i>endpoint</i>	End point of port range when tcp or udp is being used.	
			<i>cidr</i>	Destination addresses which are given in CIDR(Classless Inter-Domain-Routing) Blocks (ex. 192.0.2.0/24).	
			<i>icmpcode</i>	Icmp code (http://www.iana.org/assignments/icmp-parameters/icmp-parameters.xml).	
			<i>icmpctype</i>	Icmp type (http://www.iana.org/assignments/icmp-parameters/icmp-parameters.xml).	

1-5) Security Group Operations

createSecurityGroup

summary	Creates a security group
---------	--------------------------

Request Parameters

Parameter Name	Description	Required
name	Name of the security group to be created.	Yes
account	Optional account for the security group, it must be indicated along with a domainid.	No
domainid	Optional domainid for the security group, it must be indicated along with an account.	No
description	A description of the security group to be created.	No

Response (*)

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>createsecuritygroupresponse</i>	Response container.	securitygroup
		<i>securitygroup</i>	Container which holds the security group object.	id, name, description, account, domainid, domain
		<i>id</i>	ID of the new security group.	
		<i>name</i>	Name of the new security group.	
		<i>description</i>	Description of the new security group.	
		<i>account</i>	The account which will own the new security group.	
		<i>domainid</i>	The domain ID of the new security group.	
		<i>domain</i>	The domain name of the new security group.	

1-5) Security Group Operations

deleteSecurityGroup

Description	Deletes a particular security group.
-------------	--------------------------------------

Request Parameters

Parameter Name	Description	Required
id	ID of the security group to be deleted, which cannot be specified along with a name.	Yes (*)
name	Name of the security group to be deleted, which cannot be specified along with an ID.	Yes (*)
Account	Account of the security group to be deleted, which must be specified along with its domainid.	No
domainid	The domainid of the account which owns the security group to be deleted.	No



Either the id or the name of the security group to be deleted must be specified. However, they should both never be specified at the same time.

Response

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>deletesecuritygroupresponse</i>	Response container.	success
	<i>success</i>	Returns true if the delete was a success, and false otherwise.		

1-5) Security Group Operations

authorizeSecurityGroupIngress (A)

Description	Authorizes a particular ingress rule for this security group.
-------------	---

Request Parameters

Parameter Name	Description	Required
securitygroupid	The ID of the security group, it cannot be specified along with the securityGroupName.	Yes (*)
securitygroupname	The name of the security group, it cannot be specified along with the securityGroupId.	Yes (*)
account	Optional domainid for the security group, it must be indicated along with an account.	No
cidrlist	Source addresses in the form of a CIDR(Classless Inter-Domain-Routing) Block (ex. 192.0.2.0/24)	No (※1)
domainid	Optional domainid for the security group, it must be indicated along with an account.	No
endport	Ending port of the port range for the ingress rule.	No
icmpcode	Error code for this icmp message (http://www.iana.org/assignments/icmp-parameters/icmp-parameters.xml).	No
icmptype	Type of the icmp message being sent (http://www.iana.org/assignments/icmp-parameters/icmp-parameters.xml).	No
protocol	Specify that tcp, udp, or icmp will be used.	No
startport	Starting port of the port range for the ingress rule.	No

 (*) Either a securitygroupid or securitygroupname is required, although both of them are not allowed to be specified at once.

 (*1) At least one CIDR block should be included in "cidrlist" or usersecuritygrouplist. If you CIDR blocks are only contained in cidrlist, the security group's protocol will be "all".

Response

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>authorizeSecurityGroupIngressResponse</i>	Response container.	jobid
		<i>jobid</i>	jobid which is given to an asynch method when it is called and registered as a job.	
To check the success of the ingress rule addition	<i>Jobresults (* jobresults of queryJobResults)</i>			
	<i>securitygroup</i>	Execute the listSecurityGroup and ensure that the ingress rule was added.		

 As only the jobid will be returned by the authorizeSecurityGroupIngressResponse command, execution of queryAsyncResult is required to check the result.

1-5) Security Group Operations

revokeSecurityGroupIngress (A)

Description	Deletes a particular ingress rule from this security group.
-------------	---

Request Parameters

Parameter Name	Description	Required
id	The ID of the ingress rule to be removed.	Yes (*)

Response

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>revokesecuritygroup ingress</i>	Response container.	jobid
		<i>jobid</i>	jobid which is given to an asynch method when it is called and registered as a job.	
	Async job's completion status	<i>Jobresults (* jobresults of queryJobResults)</i>		
<i>success</i>		True of the operation completed successfully.		



As only the jobid will be returned by the revokeSecuritygGroupIngress command, execution of queryAsyncResult is required to check the result.

1-5) Security Group Operations

authorizeSecurityGroupEgress (A)

Description	Authorizes a particular egress rule for this security group.
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Request Parameters		
Parameter Name	Description	Required
securitygroupid	The ID of the security group, it cannot be specified along with the securityGroupName.	Yes (*)
securitygroupname	The name of the security group, it cannot be specified along with the securityGroupId.	Yes (*)
account	Optional domainid for the security group, it must be indicated along with an account.	No
cidrlist	Source addresses in the form of a CIDR(Classless Inter-Domain-Routing) Block (ex. 192.0.2.0/24)	No (※1)
domainid	Optional domainid for the security group, it must be indicated along with an account.	No
endport	Ending port of the port range for the ingress rule.	No
icmpcode	Error code for this icmp message (http://www.iana.org/assignments/icmp-parameters/icmp-parameters.xml).	No
icmptype	Type of the icmp message being sent (http://www.iana.org/assignments/icmp-parameters/icmp-parameters.xml).	No
protocol	Specify that tcp, udp, or icmp will be used.	No
startport	Starting port of the port range for the ingress rule.	No

 (*) Either a securitygroupid or securitygroupname is required, although both of them are not allowed to be specified at once.

 (*1) At least one CIDR block should be included in "cidrlist" or usersecuritygrouplist. If you CIDR blocks are only contained in cidrlist, the security group's protocol will be "all".

Response				
Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>authorizeSecurityGroupIngressResponse</i>	Response container.	jobid
		<i>jobid</i>	bid which is given to an asynch method when it is called and registered as a job.	
	To check the success of the egress rule addition	<i>Jobresults (* jobresults of queryJobResults)</i>		
<i>securitygroup</i>		Execute the listSecurityGroup and ensure that the egress rule was added.		

 As only the jobid will be returned by the authorizeSecurityGroupEgressResponse command, execution of queryAsyncResult is required to check the result.

1-5) Security Group Operations

revokeSecurityGroupEgress (A)

Description	Deletes a particular egress rule from this security group
-------------	---

Request Parameters

Parameter Name	Description	Required
id	The ID of the new egress rule.	Yes (*)

Response

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>revokesecuritygroupegress</i>	Response container.	jobid
		<i>jobid</i>	jobid which is given to an asynch method when it is called and registered as a job.	
	Async job's completion status	<i>Jobresults (* jobresults of queryJobResults)</i>		
		<i>success</i>	True of the operation completed successfully	



As only the jobid will be returned by the revokeSecurityGroupEgress command, execution of queryAsyncResult is required to check the result.

1-6) Service Offering Operations

listServiceOfferings

Description Lists all available service offerings on Cloudⁿ Compute Flat Type.

Request Parameters

Parameter Name	Description	Required
id	ID of the service offering.	No
keyword	Lists service offerings by keyword.	No
page	Specifies page numbers, always set at the same time as pagesize.	No
pagesize	Set the number of responses returned from one request by an asynch job. The default value is 500 and is always set at the same time as page.	No
name	Lists all service offerings with a given name.	No

Response

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>listserviceofferingsresponse</i>	Response container.	count, serviceoffering
		<i>count</i>	Number of ServiceOffering objects included in the response.	
		<i>serviceoffering</i>	Container to hold the ServiceOffering objects.	id, name, displaytext, cpunumber, cpuspeed, memory, created, storagetype, offerha, limitcpuuse, tags, domainid, domain, hosttag, issystem, defaultuse
		<i>id</i>	ID of the service offering.	
		<i>name</i>	Name of the service offering.	
		<i>displaytext</i>	An alternate display text for the service offering.	
		<i>cpunumber</i>	The number of CPUs.	
		<i>cpuspeed</i>	The CPU speed in MHz.	
		<i>memory</i>	Memory in Mb.	
		<i>created</i>	Date that the service offering was created.	
		<i>storagetype</i>	Storage type of the service offering, normally "Shared".	
		<i>offerha</i>	True if ha support is offered for the service offering.	
		<i>limitcpuuse</i>	Restriction of the CPU usage on a service offering (always "True").	
		<i>tags</i>	Tags for a service offering.	
		<i>domainid</i>	Domain ID of the service offering.	
		<i>domain</i>	Domain name of the service offering.	
		<i>hosttags</i>	Host tag for the service offering.	
<i>issystem</i>	False			
<i>defaultuse</i>	False			

1-7) Disk Offering Operations

listDiskOfferings

Description	Lists all available disk offerings on Cloud ⁿ Compute Flat Type.	
Request Parameters		
Parameter Name	Description	Required
id	ID of the disk offering	No
keyword	Lists service offerings by keyword.	No
page	Specifies page numbers, always set at the same time as pagesize.	No
pagesize	Set the number of responses returned from one request by an asynch job. The default value is 500 and is always set at the same time as page.	No
name	Lists all service offerings with a given name.	No

Response

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>listdiskofferingsresponse</i>	Response container.	count, diskoffering
		<i>count</i>	Number of DiskOffering objects contained in the response.	
		<i>diskoffering</i>	Container to hold disk offering objects.	id, name, displaytext, disksize, created, storagetype, tags, domainid, domain, iscustomized
		id	Unique ID of this disk offering.	
		<i>name</i>	Name of this disk offering.	
		<i>displaytext</i>	Alternate display text for this disk offering.	
		<i>disksize</i>	Size of this disk offering in GB.	
		<i>created</i>	Date that this disk offering was created.	
		<i>storagetype</i>	Storage type for this disk offering, normally "Shared".	
		<i>tags</i>	Tags for this disk offering.	
		<i>domainid</i>	Domain ID that this disk offering belongs to. This information can be ignored as it doesn't have any meaning.	
		<i>domain</i>	Domain name that this disk offering belongs to. This information can be ignored as it doesn't have any meaning.	
<i>iscustomized</i>	True if this disk offering uses a custom size, false otherwise.			

1-8) Zone Operations

listZones

Description Lists zones on Cloudⁿ Compute Flat Type.

Request Parameters

Parameter Name	Description	Required
id	D of the zone	No
keyword	Lists zones which match a certain keyword.	No
page	Specifies page numbers, always set at the same time as pagesize.	No
pagesize	Set the number of responses returned from one request by an asynch job. The default value is 500 and is always set at the same time as page.	No

Response

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>listzonesresponse</i>	Response container.	count, serviceoffering
		<i>count</i>	Number of zone objects included in the response.	
		<i>zone</i>	Container store zone objects.	id, name, displaytext, cpunumber, cpuspeed, memory, created, storagetype, offerha, limitcpuuse, tags, domainid, domain, hosttag, issytem, defaultuse
		<i>id</i>	Zone ID.	
		<i>name</i>	Zone name.	
		<i>created</i>	Registered date for Service Offering	
		<i>domainid</i>	ID of the containing domain. This value is null for public zones.	
		<i>domain</i>	Network domain name for networks contained within the zone.	
		<i>domainname</i>	Name of the containing domain. This value is null for public zones.	
		<i>networktype</i>	Network type of the zone, usually "Basic".	
		<i>securitygroupsenabled</i>	True if security-group support is enabled, false otherwise.	
		<i>allocationstate</i>	Allocation state of the cluster.	
		<i>zonetoken</i>	Zone token.	
		<i>localstorageenabled</i>	True if local storage offering is enabled, false otherwise.	

1-9) Template Operations

listTemplates

Description	List all public, private, and privileged templates on Cloud ⁿ Compute Flat Type.
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Request Parameters

Parameter Name	Description	Required
templatefilter	<p>Possible template filters are as follows:</p> <ul style="list-style-type: none"> • featured Templates provided on Cloudⁿ Compute Flat Type service. • self Templates that have been registered/created by the owner. • self-executable Templates that have been registered/created by the owner that can be used to create a new VM. • executable All templates that can be used to deploy a new VM. 	Yes
account	Restricts the search to a certain account, always indicated along with a domainid.	No
domainid	Restricts the search to a specific domainid.	No
hypervisor	Restricts the search to a specific hypervisor.	No
id	Lists all templates with a certain ID.	No
isrecursive	Is false by default, if true, includes all subdomains of the specified domain in the search.	No
keyword	Lists all templates which match a certain keyword.	No
listall	Defaults to false, if true, it is the equivalent of setting zoneid and isrecursive to true.	No
name	Lists only templates with a certain name.	No
page	Specifies page numbers, always set at the same time as pagesize.	No
pagesize	Set the number of responses returned from one request by an asynch job. The default value is 500 and is always set at the same time as page.	No
tags	<p>Lists templates by tags (key/value pairs)</p> <pre>tags[N].key="sample_key" tags[N].value="sample_value" (N=0, 1, 2, 3,)</pre>	No
zoneid	Lists templates contained within a zone with this ID.	No

1-9) Template Operations

listTemplates

Response

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>listtemplatesresponse</i>	Response container.	count, template
		<i>count</i>	Number of template objects contained in the response.	
		<i>template</i>	Container which holds all of the template objects.	id, name, displaytext, ispublic, created, isready, passwordenabled, format, isfeatured, crossZones, ostypeid, account, zoneid, zonename, status, size, type, hypervisor, tags, domainid, domain, isextractable, checksum, sshkeyenabled, sourcetemplateid
		<i>id</i>	Template ID.	
		<i>name</i>	Template name.	
		<i>displaytext</i>	Template display text.	
		<i>ispublic</i>	Returns true if the template marked as public, false otherwise.	
		<i>created</i>	Date the template was created.	
		<i>isready</i>	True if virtual machines can be created from this template, false otherwise.	
		<i>passwordenabled</i>	True if this template's password-reset feature is enabled, false otherwise.	
		<i>format</i>	Format of the template.	
		<i>isfeatured</i>	True if the template is provided by Cloudn Compute Flat Type.	
		<i>crossZones</i>	True if the template is managed across all Zones, false otherwise.	
		<i>ostypeid</i>	ID of the OS type for this template.	
		<i>ostypename</i>	Name of the OS for this template.	
		<i>account</i>	Account name which owns this template.	
		<i>zoneid</i>	ID of the zone which this template belongs in.	
		<i>zonename</i>	Name of the zone which this template belongs in.	
		<i>status</i>	Status of the template.	
		<i>size</i>	Size of the template.	
		<i>templatetype</i>	Type of the template.	
		<i>hypervisor</i>	Type of hypervisor used by this template.	
		<i>domain</i>	Name of the domain which this template belongs to.	
		<i>domainid</i>	ID of the domain to which the template belongs.	
		<i>isextractable</i>	True if the template is extractable, false otherwise.	
		<i>checksum</i>	Checksum of the template.	
	<i>tags</i>	Tag information.		
	<i>sshkeyenabled</i>	True if ssh-keys are enabled by this template, false otherwise.		
	<i>sourcetemplateid</i>	Template ID of the parent template if there is one.		

1-10) Volume Operations

listVolumes

Description	Lists all volumes.
-------------	--------------------

Request Parameters

Parameter Name	Description	Required
account	Lists volumes owned by a certain account, always specified along with a domainId..	No
details	Sets search filters such as (all, vm, account, storage type, disk_offering, min) using a comma to separate individual ones if necessary.	No
domainid	Lists only volumes belonging to the domain with the given ID.	No
id	Lists volumes with the given ID.	No
isrecursive	Defaults to false, but if true, also lists volumes contained in the subdomain of the domain given.	No
keyword	Lists volumes which match a certain keyword.	No
listall	Defaults to false, if true, it is the equivalent of setting zoneid and isrecursive to true.	No
name	Lists only volumes with a certain name.	No
page	Specifies page numbers, always set at the same time as pagesize.	No
pagesize	Set the number of responses returned from one request by an asynch job. The default value is 500 and is always set at the same time as page.	No
tags	Lists templates by tags (key/value pairs) tags[N].key="sample_key" tags[N].value="sample_value" (N=0, 1, 2, 3,)	Np
type	Lists volumes contained within a zone with this ID.	No
virtualmachineid	Defaults to false, if true, it is the equivalent of setting zoneid and isrecursive to true.	No
zoneid	Lists only volumes with a certain name.	No

1-10) Volume Operations

listVolumes

Response				
Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>listvolumesresponse</i>	Response container.	count, volume
		<i>count</i>	Number of volume objects included in response.	
		<i>volume</i>	Container which holds volume objects.	id,name,zoneid,zonename,type,deviceid,virtualmachineid,vmname,vmdisplayname,vmstate,size,created,state,account,domainid,domain,storagetype,storage,attached,destroyed,serviceofferingid,serviceofferingname,serviceofferingdisplaytext,isextractable,tags,diskofferingid,diskofferingname,diskofferingdisplaytext
		id	ID of the disk volume.	
		name	Name of the disk volume.	
		zoneid	ID of the zone in which this disk volume belongs.	
		zonename	Name of the zone in which this disk volume belongs.	
		type	Type of the disk volume (ROOT or DATADISK).	
		deviceid	ID of the device on the user's virtual machine to which the volume is attached. If the disk volume is not attached, this value is not returned.	
		virtualmachineid	ID of the virtual machine.	
		vmname	Name of the virtual machine.	
		vmdisplayname	Display name of the virtual machine.	
		vmstate	State of the virtual machine.	
		size	Size of the disk volume.	
		created	Date the disk volume was created.	
		state	State of the disk volume.	
		account	Account associated with the disk volume.	
		domainid	ID of the domain associated with the disk volume.	
		domain	Domain associated with the disk volume.	
		storagetype	Indicates if the disk volume is used for shared or local storage.	
		storage	Name of the primary storage hosting the disk volume.	
		attached	Date when the volume was attached to a VM instance.	
		destroyed	Boolean indicating whether the volume is destroyed or not.	
		serviceofferingid	ID of the service offering for the disk volume (if root).	
		serviceofferingname	Name of the service offering for the disk volume (if root).	
		serviceofferingdisplaytext	Display text of the service offering for the disk volume (if root).	
		isextractable	True if the disk volume is extractable, false otherwise.	
		tags	Tag information.	

1-10) Volume Operations

listVolumes

Response (Cont)

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>diskofferingid</i>	ID of the disk offering for the disk volume (if root).	
		<i>diskofferingname</i>	Name of the disk offering for the disk volume (if root).	
<i>diskofferingdisplaytext</i>	Disk offering of the disk offering for the disk volume (if root).			

1-10) Volume Operations

attachVolume (A)

Description	Attaches a disk volume to a virtual machine.
-------------	--

Request Parameters

Parameter Name	Description	Required
id	ID of the disk volume.	Yes
virtualmachineid	ID of the virtual machine to which it is to be attached.	Yes

Response (*)

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
To check that the attach operation was successful	XML / JSON	<i>attachvolumeresponse</i>	Response container.	jobid
		<i>jobid</i>	jobid which is given to the asynch method when it is called and registered as a job.	
		<i>Jobresults (* jobresults of queryJobResults)</i>		
	<i>Volume</i>	Execute the listVolume and ensure that the egress rule was added.		



As only the jobid will be returned by the attachVolumeResponse command, execution of queryAsyncJobResult is required to check the result.

1-10) Volume Operations

detachVolume (A)

Description	Detaches a disk volume from a virtual machine.
-------------	--

Request Parameters

Parameter Name	Description	Required
id	ID of the disk volume.	Yes (*)
virtualmachineid	ID of the virtual machine where the volume will be detached from.	Yes (*)
deviceid	Device ID on the virtual machine where volume will be detached from.	Yes (*)



Either "id" can be set by itself, or both "deviceid" and "virtualmachineid".

Response (*)

Response (Body)	Style	XML, Json			
	XML / JSON	Node	Description	Child Node	
		<i>detachvolumeresponse</i>	Response container.	jobid	
		<i>jobid</i>	jobid which is given to an asynch method when it is called and registered as a job.		
	To check if the detach operation was successful	<i>Jobresults (* jobresults of queryJobResults)</i>			
		<i>volume</i>	Execute the listVolume command and ensure that the volume was detached properly.		



As only the jobid will be returned by the detachVolumeResponse command, execution of queryAsyncJobResult is required to check the result.

1-10) Volume Operations

createVolume (A)

Description	Creates a disk volume from a disk offering.
-------------	---

Request Parameters

Parameter Name	Description	Required
name	Name of the disk volume to be created.	Yes
diskofferingid	ID of the disk offering. Either a diskOfferingId or a snapshotId must specified..	Yes (*)
snapshotid	Snapshot ID for the disk volume. Either a diskOfferingId or snapshotId must be specified.	Yes (*)
zoneid	ID of the availability zone.	Yes
account	Account associated with the disk volume. Must be specified along with a domainId.	No
domainid	Domain ID associated with the disk offering. If used with the account parameter returns the disk volume associated with the account for the specified domain.	No



Either a "diskofferingid" or "snapshotid" is needed, both cannot be specified.

Response (*)

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>createvolumeresponse</i>	Response container.	jobid
		<i>jobid</i>	jobid which is given to the async method when its called an registered as a job.	
		<i>Jobresults (* jobresults of queryJobResults)</i>		
To check if the disk volume was created properly		<i>volume</i>	Execute the listVolume command and ensure that the new disk volume is listed.	



As only the jobid will be returned by the createVolumeResponse command, execution of queryAsyncJobResult is required to check the result.

1-10) Volume Operations

uploadVolume (A)

Description	Uploads a data disk.
-------------	----------------------

Request Parameters

Parameter Name	Description	Required
format	Format for the volume. Possible formats include QCOW2, OVA, and VHD.	Yes
name	Name of the volume.	Yes
url	URL of where the volume will be hosted. URLs must begin with http:// or https://.	Yes
zoneid	ID of the zone where the volume is to be hosted on.	Yes
account	Optional accountName to which the volume will belong. Must be specified with a domainId.	No
Domainid	Optional domainId where the volume will belong, must be specified along with an account.	No

Response (*)

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>uploadvolumeresponse</i>	Response container.	jobid
		<i>jobid</i>	jobid which is assigned to a async method when its called and registered as a job.	
	Checking if creation of the volume was successful	<i>Jobresults (* jobresults of queryJobResults)</i>		
<i>volume</i>		Execute the listVolume command and ensure that the volume appears.		



As only the jobid will be returned by the updateVolumeResponse command, execution of queryAsyncJobResult is required to check the result.

1-10) Volume Operations

deleteVolume

Description	Deletes a detached disk volume.
-------------	---------------------------------

Request Parameters

Parameter Name	Description	Required
id	ID of the disk volume to be deleted.	Yes

Response

Response (Body)	Style	XML, Json		
	XML / JSON	Node	Description	Child Node
		<i>deletevolumeresponse</i>	Response container.	success
		<i>success</i>	Is true if the delete was successful.	

1-10) Volume Operations

extractVolume (A)

Description	Extracts a disk volume.
-------------	-------------------------

Request Parameters

Parameter Name	Description	Required
id	ID of the volume to be extracted.	Yes
mode	Mode of extraction, either HTTP_DOWNLOAD or FTP_UPLOAD.	Yes
zoneid	ID of the zone where the volume is located.	Yes
url	URL to which the volume will be extracted to.	No

Response (*)

Response (Body)	Style	XML, Json			
	XML / JSON	Node	Description	Child Node	
Checking if the volume extraction was successful.	XML / JSON	<i>extractvolumeresponse</i>	Response container.	jobid	
		<i>jobid</i>	jobid which is assigned to an async method when it is called and resistered as a job.		
	Checking if the volume extraction was successful.	<i>Jobresults (* jobresults of queryJobResults)</i>			
		<i>volume</i>	Containter which holds volume objects.	id,name,extractId,accountId,state,zoneid,zonename,extractMode,url,created,status,storagetype,uploadpercentage	
		<i>id</i>	ID of the extracted object.		
		<i>accountId</i>	Account id to which the extracted object belongs.		
		<i>created</i>	Time and date when the object was created.		
		<i>extractId</i>	Upload ID of the extracted object.		
		<i>extractMode</i>	Mode of extraction for upload or download (HTTP_DOWNLOAD / FTP_UPLOAD).		
		<i>name</i>	Name of the extracted object.		
		<i>state</i>	State of the extracted object.		
		<i>status</i>	Status of the extraction.		
		<i>storagetype</i>	Type of the storage extracted to.		
		<i>uploadpercentage</i>	Percentage of the entity uploaded to the specified location.		
		<i>zoneid</i>	ID of the zone the object was extracted from.		
<i>zonename</i>	Name of the zone the object was extracted from				
<i>url</i>	If "HTTP_DOWNLOAD" was set then this is the URL of the uploaded entity. if "FTP_UPLOAD" was set then this is the URL which the object will be uploaded to.				



As only the jobid will be returned by the extractVolumeResponse command, execution of queryAsyncJobResult is required to check the result.

2-1) Using AmazonWebServices EC2 Compatible API

NTT Communications also provides an AmazonWebService EC2 compatible API. Usage of this API works exactly as the normal Cloudⁿ Compute API does as commands are interpreted seamlessly by the Cloudⁿ service server. If you are using the AWS EC2 API already, the exact same API commands you're using can be used with the EC2 tools on our service.

- Use the following URL to access the API:

<https://comp-apia.jp-e1.cloudn-service.com/awsapi>

API queries are performed using the commands listed along with their respective parameters.



Java must be installed in order to use the API.

Please refer the "3-3) To Control API Access Keys and Private Keys" section of the "Cloudⁿ Portal Operation Manual" to learn about management of API access keys and certificates (SOAP) needed for our AmazonWebService EC2 compatible API .

2-1) Using AmazonWebServices EC2 Compatible API

The following steps show how to get virtual server information using the command "ec2-describe-instances."

1

Download the EC2API tool(ec2-api-tools-1.6.2.0.zip) from the following URL and unzip it.

<http://s3.amazonaws.com/ec2-downloads/ec2-api-tools-1.6.2.0.zip>

```
$ wget http://s3.amazonaws.com/ec2-downloads/ec2-api-tools-1.6.2.0.zip
```

2

Set the environment variables to be used by the API using a text editor.

※sh, bash → use "export" / csh, tesh → use "setenv"

- export EC2_HOME=/XXXXX/ec2-api-tools
/XXXX/ → where EC2API tool exists
- export EC2_CERT=/XXXXX/cert.pem
/XXXX/ → where EC2 public key exists
- export EC2_PRIVATE_KEY=/XXXXX/private_key.pem
/XXXX/ → where EC2 private key exists
- export EC2_URL= https://comp-apia.jp-e1.cloudn-service.com/awsapi
- export PATH=\$PATH:\$JAVA_HOME/bin:\$EC2_HOME/bin
- export JAVA_HOME=/usr/lib/jvm/jre-openjdk/
where java is installed

These variables must be set every time you login to the terminal.

2-1) Using AmazonWebServices EC2 Compatible API

3

In the same key file, put the certificate (SOPA API X509) and private key information for EC2 access provided from Cloudⁿ portal.

EC2 keys file

- cert.pem (X.509 certificate)
- private_key.pem (private key)

4

Run an API command, its result will be returned in XML format.

```
$ ec2-describe-instances
RESERVATION  439  187:hogehoge
INSTANCE     439  275          terminated          m1.small  2012-03-27T01:13:33-0400  zone 0
monitoring-
BLOCKDEVICE                2012-03-27T01:13:33.000-04:00
RESERVATION  449  187:hogehoge
INSTANCE     449  208          running            m1.small  2012-03-27T02:43:54-0400  zone 0
monitoring-
BLOCKDEVICE                2012-03-27T02:43:54.000-04:00
RESERVATION  447  187:hogehoge
INSTANCE     447  208          terminated          m1.small  2012-03-27T02:13:29-0400  zone 0
monitoring-
BLOCKDEVICE                2012-03-27T02:13:29.000-04:00
```

2-2) AmazonWebServices EC2 Compatible API

The following are the commands of the supported API.

Instances	Command	Option
Describes one or more of your instances.	ec2-describe-instances	None
Launches a specified number of instances.	ec2-run-instances	[template id]
Requests a reboot of one or more instances.	ec2-reboot-instances	[virtual machine id]
Starts an instance.	ec2-start-instances	[virtual machine id]
Stops an instance.	ec2-stop-instances	[virtual machine id]
Shuts down one or more instances	ec2-terminate-instances	[virtual machine id]
Modifies the plan of the specified instance.	ec2-modify-instance-attribute	[virtual machine id] -t [offering name]
Template(Image)	Command	Option
Creates an Amazon EBS-backed AMI from a running or stopped instance. (Instance will be automatically stopped in case it is running.)	ec2-create-image	[virtual machine id] -n [template name] --request-timeout [time(sec)]
Describes one or more of the images available to you.	ec2-describe-images	None
Deregisters the specified template.	ec2-deregister	[templateid]
Modifies an attribute of an template.	ec2-modify-image-attribute	[templateid] {-l (-a entity -r entity)}

2-2) AmazonWebServices EC2 Compatible API

The following are the commands of the supported API.

Snapshots	Command	Option
Creates a snapshot and stores it.	ec2-create-snapshot	[volume id] --request-timeout [time(sec)]
Deletes a snapshot.	ec2-delete-snapshot	[snapshot id]
Describes one or more of the snapshots available to you.	ec2-describe-snapshots	None
Volumes	Command	Option
Attaches a volume to a running or stopped instance and exposes it to the instance with the specified device name.	ec2-attach-volume	[volume id] -i [virtual machine id]
Deletes a volume.	ec2-delete-volume	[volume id]
Describes one or more of your volumes.	ec2-describe-volumes	None
Detaches a volume from an instance.	ec2-detach-volume	[volume id] -i [virtual machine id]