



# Aspen Cloud Server API

## Development Guideline

Defining next generation of cloud based grid

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**Change Log**

Changes	Page	Date
New API, refill server	98	2012-04-02
New API, cancel backup	100	2012-04-02
New API, query template status	102	2012-04-12
New API, create SmartClone	90	2011-12-02
New API, get SmartClone list	92	2011-12-02
New API, swap network	94	2011-12-02
New API, repair server	96	2011-12-02
New API, query VM console	88	2011-09-19
New API, create backup schedule	72	2011-05-17
New API, update backup schedule	74	2011-05-17
New API, remove backup schedule	76	2011-05-17
New API, get backup schedule	78	2011-05-17
New API, get backup schedule information	81	2011-05-17
New API, restore backup	84	2011-05-17
New API, get server backup list	86	2011-05-17
Revise API 2 – Get server information which show more information for backup	24	2011-02-24
Revise API 13 – Query supported template which show price of bandwidth	69	2011-01-28
New API, read consumed bandwidth	69	2011-01-28
“Query extra parts plan” API supported	56	2010-10-19
“Add extra parts” API supported	59	2010-10-19
“Query subscribed parts” API supported	61	2010-10-19
“Remove subscribed parts” API supported	63	2010-10-19
Revise API 12 “Query supported IDC”.	49	2010-10-19
“Attach SASP-M disk” API supported	65	2010-10-19
“Detach SASP-M disk” API supported	67	2010-10-19
Revise API 2 (Get server information)	24	2010-10-19
Support “Super user” mode for “Cloud Server Subscription”.	38	2010-07-12
Cloud Server subscription API supported	38	2010-06-23
Cloud Server termination API supported	42	2010-06-23
“Daily Billing” API supported	44	2010-06-23
“Query city” API supported	47	2010-06-23
“Query IDC” API supported	49	2010-06-23



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"Query template" API supported	51	2010-06-23
"Query template's plan" API supported	54	2010-06-23
Enhance the XML result for function, "Server List" and "Get Server Information"	22, 24	2010-03-17
Detailed description for Cloud Server	24	2010-03-17

## Overview

Aspen Cloud Server provides cloud computing virtual server to client. You can subscribe your own virtual server via <http://cserver.cloudwww.com> anytime.

Now we further provide API to each user for own development of program and integrate to existing system.

All APIs are RESTful web service call which are platform independent and for fast development. Even you are JAVA, Microsoft .NET, or PHP developer, you can easily develop without obstacle.

More about Aspen Cloud Server API

Q : Why and who need API ?

A : If you don't want to control the subscribed Cloud Server via our control panel, you can use our RESTful API to control.

You can integrate these Cloud Server functions to your existing system.

Q : What functions provided by Cloud Server API now?

A : Now only Control Panel functions are provided in API.

	API Name	Description
1	Server list	Show all subscribed Cloud Server in XML format.
2	Get server information	Show a specified Cloud Server in details.
3	Server startup	Boot up a specified Cloud Server.
4	Server soft reboot	Soft reboot a specified Cloud Server.
5	Server hard reboot	Hard reboot a specified Cloud Server.
6	Server soft shutdown	Soft shutdown a specified Cloud Server.
7	Server hard shutdown	Hard shutdown a specified Cloud Server.
8	New server subscription	Subscribe new cloud server
9	Server termination	Terminate a subscribed cloud server.
10	Get billing	Get daily billing records for specified date range.
11	Query supported cities	Show which city supports cloud server
12	Query supported IDC	Show which data center supports cloud server in a city or specified service (e.g. SASP-M).
13	Query supported templates	Show what templates are available in specified city. It includes "Standard", "Custom" templates and "Zone".
14	Query template plan	Show all plan for specified template.
15	Query extra parts plan	Show extra parts' price plan. e.g. CPU/RAM
16	Add extra parts	Add extra parts to specified server or IDC.
17	Query subscribed parts	Show what parts are subscribed.
18	Remove subscribed parts	Remove subscribed extra parts from server or IDC.
19	Attach SASP-M disk	Attach SASP-M disk to specified server.
20	Detach SASP-M disk	Detach SASP-M disk from specified server.
21	Read consumed bandwidth	Read consumed bandwidth for specified cloud server.



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22	Create Backup Schedule	Make a backup request for specified server.
23	Update Backup Schedule	Change backup schedule for specified server.
24	Remove Backup Schedule	Remove a backup schedule for specified server.
25	Get Backup Schedule	Show the backup schedule list in XML format.
26	Get Backup Schedule Information	Show a specified backup schedule in details.
27	Restore Backup	Restore disks from backup version.
28	Get Server Backup List	Show the server backup list in XML format.
29	Query VM Console	Get console connection for specified server.
30	Create SmartClone	Support copy cloud server from one IDC to another IDC.
31	Get SmartClone List	Show the SmartClone list in XML format.
32	Swap Network	Swap network to specified server.
33	Repair Server	Repair specified server in case of swap network failure.
34	Refill Server	Refill OS disk for a specified server.
35	Cancel Backup	Cancel backup process for a specified server.
36	Query Template Status	Show the status for specified template.



## What skill is required ?

Before starting, everyone will ask a question, “what’s skill I should know for calling Aspen Cloud Server API”? To a programmer, this question is more important than pricing. Aspen Cloud Server API provides the world-wide popular method and powerful method. i.e. REST. All provided web services are in RESTful.

Nowadays, REST is a hot web service method because of its flexible and easy to understand. REST is similar to browse a web page via http URL only. In browser, you always utilize the GET method in HTTP to browse web page. In rest, we will take advantages of other HTTP methods such as PUT, DELETE and so on. You can visit [http://en.wikipedia.org/wiki/Representational\\_State\\_Transfer](http://en.wikipedia.org/wiki/Representational_State_Transfer) for details understand of REST.

It is program independent function call so different developer can develop own program base on his/her favorite programming platform and language. Web service call uses http protocol (port 80) to communicate so it can reduce the trouble made by firewall. Besides, all result queries are in XML format.

Even you are a newbie in web service. We can sure you can understand how to start your first step via this development guideline.

## What skills required?

- Basic XML knowledge
- Basic knowledge of web services especially in REST.

### Which programming language platform supported?

The advantage of Aspen Cloud Server API is platform and language independent so you can use what language you like. Main point is that your language can call web services. In general, following language can call our services.

- Java
- PHP
- .Net including C# and VB.Net
- Python
- C++
- Perl
- Ruby
- Even some old language such as Visual Basic v6.0

### What software required?

If programming language support general XML handling functions and http access functions (Best have specified REST call modules), then you can use Aspen Cloud Server API more easily. No any installation or add-on software is required.

## Terminology and Cloud Server Status

### Terminology

Terms	Description
<b>1. Access ID</b>	It is a global unique ID for each user a/c. It is system generated and can't be changed. Once user registers in portal, it will be generated.
<b>2. Secret Access Key</b>	It is a global unique key for signature generation. This key is secret except of owner. Don't share this key to other people. Use this key to generate resource signature for authorization.
<b>3. Server ID</b>	It is a global unique label of your subscribed server which is generated by system.
<b>4. Locale</b>	It is used to control the output language of xml. It includes general output and error message. Now we support English (en), Traditional Chinese (zh_TW) and Simplified Chinese (zh_CN).
<b>5. REST Http Method</b>	In Aspen Cloud Server, some http methods are supported. i.e. <b>POST, GET</b>
<b>6. Parts Code</b>	It is used to represent a parts. You can use the "parts code" to subscribe the parts.
<b>7. Parts ID</b>	After subscribe an extra parts, an unique "parts id" will be assigned to such parts. You can further handle the parts via "parts id".
<b>8. Service type</b>	It is used to identify what parts / service you specify in API. This is a constant value. Now only support <b>cpu, ram, sasp6</b> and <b>saspm</b> .

### Cloud Server Status

Each subscribed cloud server has a status. You can get it via API 1 and 2 but this status may not real time show your server status because you can manual change server. Not by Control Panel.

Terms	Description
<b>PO</b>	Power off
<b>S</b>	Standby i.e. your cloud server is booted up.
<b>R</b>	Rebooting. If your server is be rebooting. Don't try to run other process on it. It will cause error.
<b>U</b>	Undfined/Unclassify – Sometimes the server status can't be get well. If you get this status, you can retry after a while.

## Authentication

Each request should be authenticated. Aspen Cloud Server API uses signature to identify the access user. The signature is composed in client side (i.e. your developed program) and then sends via http header “Authorization”. It is the standard http header. For security issue, most provided functions require user to provide “Access Proof” when access the resource. A valid signature is a proof.

After Aspen Cloud Server API side received the web service request from client. It will check the incoming header whether has “Authorization”.

### Example:

The http header should be similar to following. From following example, the header “Authorization” is specified in header. The format is “access id + signature”.

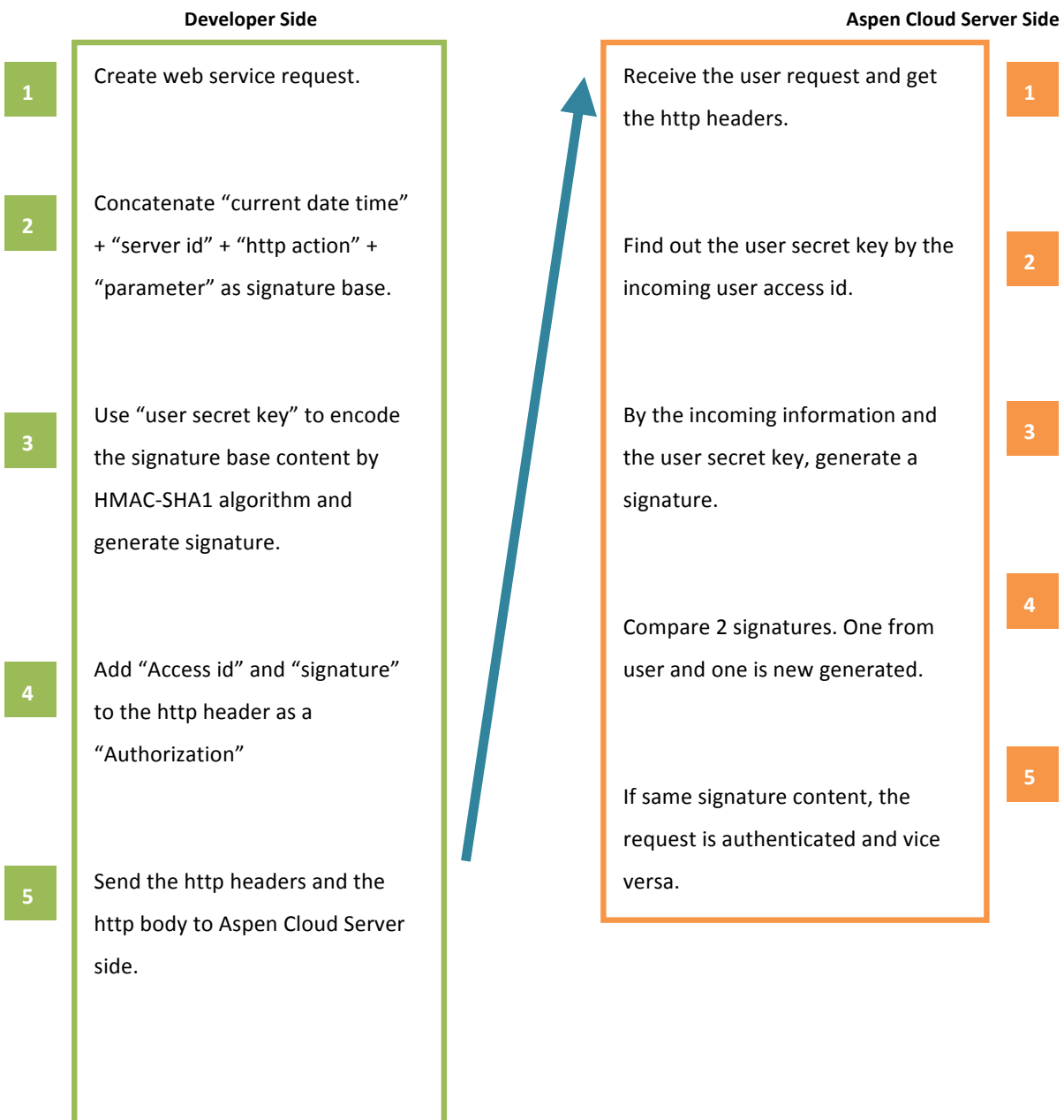
```
GET / HTTP/1.1
Host: a.cserver.mygrid.asia
Date: Wed, 01 Mar 2006 12:00:00 GMT
(or “x-pan-date” instead of “Date” because some language (e.g. C#) don’t let user to edit
“Date”)
```

### Formula of Authorization header

```
Authorization = access ID + colon + signature
(e.g. Authorization: 0000001:dskfjdsklfjdksljfd9890dsffsdsf)
```

The access ID is given to user after he/she registers. The signature is generated by developer who wants to access Aspen Cloud Server API. Without “Authorization”, Aspen Cloud Server API must reject your request. Thus, developer must understand how to create a signature.

The signature is composed of date time, access api and user secret key. The access id and user secret key are global unique. After Aspen Cloud side receives the submitted http header information. Aspen Cloud will try to generate an identical signature by the provided information such as header time, host, and api and so on. Then compare the system generated signature to user provided signature. If same, that's mean the user is authenticated and vice versa.



The generated signature will be expired after 15 minutes for security issue.

Three steps to generate signature.

### Step 1. Form “request content base”

```
Request Content Base = "<" + HTTP Action (PUT, GET, POST, or DELETE) + ">" +  
                      "<" + current date time (Use RFC 2822 format) + ">" +  
                      "<" + Access ID + ">" +  
                      "<" + API Name + ">" +  
                      "<" + Server ID + ">" (Optional. Server ID is depended on API)
```

#### Explanation:

HTTP Action is PUT or GET or DELETE or POST of your web service request. It is string. The date format is in RFC 2822 format e.g. Thu, 21 Dec 2000 16:01:07 +0800. If your API is no server ID, no need to use server ID.

“Server ID” is not a must. Depends on what API you call. If your API is not related to server, no need to assign “server ID”.

### Step 2 Generate a signature

Every registered member has a “Secret Access Key”. Use it as a key and use algorithm HMAC-SHA1 to encode the “Request Content Base”. Then, use Base64 to encode the output signature. It makes the signature is ASCII string and for header data passing.

1. Incomplete Signature=HMAC-SHA1 (Request Content Base, User Secret Key)
2. Signature =Base64 (Incomplete Signature)

### Step 3 Form the http authentication header

There is no “Authentication” in standard http so we only utilize the other attribute “Authorization”. Now, you have a signature and Access ID. You only concatenate together.

```
Authorization: 0000001:dskfjdsklfjdskljfd9890dsffdsf
```

Pass above “authorization” in header to Cloud Server API side.

### You should know before coding

1. Before using API, you must register in <http://cserver.cloudwww.com/>. After you register, you can login and get the Access ID and Secret Access Key for authorization.
2. Adopt RFC2822 (<http://www.faqs.org/rfcs/rfc2822>) date format. e.g. Fri, 30 May 2008 12:00:00 GMT (Greenwich) or Fri, 30 May 2008 08:00:00 +0800 (Hong Kong and China time zone) Both refer to same time.  
“day of week” and “second” are optional. Date and time is local date time. Time zone is the difference from UT/GMT.
3. Most web services request a signature to identify the user. Each signature will be expired after 15 minutes.
4. In each request, user should send header “Date” to Aspen Cloud. For example, pass “Date: Sun, 27 Jul 2008 15:25:16 +0800”. However, some programming language such as C# protects the standard http header field including “Date”. Thus, user can’t assign “Date” directly via C#. Aspen Cloud also provides other http header to replace “Date”. i.e. x-pan-date. If both “Date” and “x-pan-date” are passed to Aspen Cloud Server API. The “x-pan-date” has higher priority than “Date”.



## Provided web service API list

	API Name	Description	HTTP
1	Server list	Show all subscribed Cloud Server in XML format. e.g. <a href="http://a.cserver.mygrid.asia/server_list/locale/en">http://a.cserver.mygrid.asia/server_list/locale/en</a>	GET
2	Get server information	Show a specified Cloud Server in details. e.g. <a href="http://a.cserver.mygrid.asia/get_server_info/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/get_server_info/serverid/abcde/locale/en</a> (General mode) or <a href="http://a.cserver.mygrid.asia/get_server_info/serverid/abcde/locale/en/admin_mode">http://a.cserver.mygrid.asia/get_server_info/serverid/abcde/locale/en/admin_mode</a> (Administrator mode)	GET
3	Server startup	Boot up a specified Cloud Server. e.g. <a href="http://a.cserver.mygrid.asia/startup/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/startup/serverid/abcde/locale/en</a>	POST
4	Server soft reboot	Soft reboot a specified Cloud Server. e.g. <a href="http://a.cserver.mygrid.asia/soft_reboot/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/soft_reboot/serverid/abcde/locale/en</a>	POST
5	Server hard reboot	Hard reboot a specified Cloud Server. e.g. <a href="http://a.cserver.mygrid.asia/hard_reboot/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/hard_reboot/serverid/abcde/locale/en</a>	POST
6	Server soft shutdown	Soft shutdown a specified Cloud Server. e.g. <a href="http://a.cserver.mygrid.asia/soft_shutdown/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/soft_shutdown/serverid/abcde/locale/en</a>	POST
7	Server hard shutdown	Hard shutdown a specified Cloud Server. e.g. <a href="http://a.cserver.mygrid.asia/hard_shutdown/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/hard_shutdown/serverid/abcde/locale/en</a>	POST
8	Server subscription	Subscribe a new cloud server e.g. (with zone) <a href="http://a.cserver.mygrid.asia/server_subscribe/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%2/plan_code/5Dq%26q/zone_code/Sp">http://a.cserver.mygrid.asia/server_subscribe/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%2/plan_code/5Dq%26q/zone_code/Sp</a>	PUT

		<a href="#">c3xH%60mKOquk</a> or (without zone) <a href="http://a.cserver.mygrid.asia/server_subscribe/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%2/plan_code/5Dq%26g">http://a.cserver.mygrid.asia/server_subscribe/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%2/plan_code/5Dq%26g</a>	
9	Server termination	Terminate a subscribed cloud server e.g. <a href="http://a.cserver.mygrid.asia/server_terminate/serverid/111111/locale/en">http://a.cserver.mygrid.asia/server_terminate/serverid/111111/locale/en</a>	DELETE
10	Daily billing	Get daily billing record e.g. <a href="http://a.cserver.mygrid.asia/daily_billing_report/locale/en/start_date/2010-06-21/end_date/2010-06-30/offset/1/max/10">http://a.cserver.mygrid.asia/daily_billing_report/locale/en/start_date/2010-06-21/end_date/2010-06-30/offset/1/max/10</a>	GET
11	Query supported cities	Show which city supports cloud server e.g. <a href="http://a.cserver.mygrid.asia/query_support_city/locale/en">http://a.cserver.mygrid.asia/query_support_city/locale/en</a>	GET
12	Query supported IDC	Show which data center supports cloud server in a city. 2 formats supported e.g. <a href="http://a.cserver.mygrid.asia/query_support_idc/locale/en/citycode/nQ%40%3B">http://a.cserver.mygrid.asia/query_support_idc/locale/en/citycode/nQ%40%3B</a> or, <a href="http://a.cserver.mygrid.asia/query_support_idc/locale/en/service_type/saspm">http://a.cserver.mygrid.asia/query_support_idc/locale/en/service_type/saspm</a>	GET
13	Query supported templates	Show what templates are available in specified city. It includes “Standard”, “Custom” templates and “Zone”. e.g. <a href="http://a.cserver.mygrid.asia/query_support_template/locale/en/idc_code/nQ%40%3B">http://a.cserver.mygrid.asia/query_support_template/locale/en/idc_code/nQ%40%3B</a>	GET
14	Query template plan	Show all plans for specified template. e.g. <a href="http://a.cserver.mygrid.asia/query_template_price/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%28F.%5Dq%26g">http://a.cserver.mygrid.asia/query_template_price/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%28F.%5Dq%26g</a>	GET
15	Query extra parts plan	Show extra parts’ price plan. e.g. CPU/RAM/SASP-6/SASP-M 2 formats supported. e.g. <a href="http://a.cserver.mygrid.asia/query_extra_parts_plan/locale/en/serverid/111111/service_type/cpu">http://a.cserver.mygrid.asia/query_extra_parts_plan/locale/en/serverid/111111/service_type/cpu</a>	GET

		or <a href="http://a.cserver.mygrid.asia/query_extra_parts_plan/locale/en/idc_code/111/service_type/saspm">http://a.cserver.mygrid.asia/query_extra_parts_plan/locale/en/idc_code/111/service_type/saspm</a>	
16	Add extra parts	Add extra parts to specified server or IDC. 2 formats supported e.g. <a href="http://a.cserver.mygrid.asia/add_extra_parts/locale/en/serverid/11111/service_type/ram/parts_code/xyz">http://a.cserver.mygrid.asia/add_extra_parts/locale/en/serverid/11111/service_type/ram/parts_code/xyz</a> or <a href="http://a.cserver.mygrid.asia/add_extra_parts/locale/en/idc_code/00001/service_type/saspm/parts_code/xyz">http://a.cserver.mygrid.asia/add_extra_parts/locale/en/idc_code/00001/service_type/saspm/parts_code/xyz</a>	PUT
17	Query subscribed parts	Show what parts are subscribed. e.g. <a href="http://a.cserver.mygrid.asia/query_extra_subscribed_service/locale/en/service_type/cpu">http://a.cserver.mygrid.asia/query_extra_subscribed_service/locale/en/service_type/cpu</a>	GET
18	Remove subscribed parts	Remove subscribed extra parts from server or IDC. 2 formats supported e.g. <a href="http://a.cserver.mygrid.asia/remove_extra_parts/locale/en/serverid/11111/service_type/cpu/parts_id/abcdef">http://a.cserver.mygrid.asia/remove_extra_parts/locale/en/serverid/11111/service_type/cpu/parts_id/abcdef</a> or <a href="http://a.cserver.mygrid.asia/remove_extra_parts/locale/en/service_type/saspm/parts_id/zyx">http://a.cserver.mygrid.asia/remove_extra_parts/locale/en/service_type/saspm/parts_id/zyx</a>	DELETE
19	Attach SASP-M disk	Attach SASP-M disk to specified server. e.g. <a href="http://a.cserver.mygrid.asia/attach_disk/locale/en/serverid/111111/parts_id/abcdefg">http://a.cserver.mygrid.asia/attach_disk/locale/en/serverid/111111/parts_id/abcdefg</a>	PUT
20	Detach SASP-M disk	Detach SASP-M disk from specified server. e.g. <a href="http://a.cserver.mygrid.asia/detach_disk/locale/en/serverid/111111/parts_id/abcdefg">http://a.cserver.mygrid.asia/detach_disk/locale/en/serverid/111111/parts_id/abcdefg</a>	DELETE
21	Read consumed bandwidth	Read consumed bandwidth (incoming and outgoing) for specified cloud Server	GET

		e.g. <a href="http://a.cserver.mygrid.asia/read_bandwidth_metering/locale/en/start_date/2011-01/end_date/2011-01/serverid/40d56d31-2f61-4d20-9873-ae85e0567202">http://a.cserver.mygrid.asia/read_bandwidth_metering/locale/en/start_date/2011-01/end_date/2011-01/serverid/40d56d31-2f61-4d20-9873-ae85e0567202</a>	
22	Create Backup Schedule	Make a backup request for specified server. 2 formats supported e.g. <a href="http://a.cserver.mygrid.asia/create_backup_schedule/locale/en/serverid/abcde/backup_type/I">http://a.cserver.mygrid.asia/create_backup_schedule/locale/en/serverid/abcde/backup_type/I</a> or <a href="http://a.cserver.mygrid.asia/create_backup_schedule/locale/en/serverid/abcde/backup_type/S">http://a.cserver.mygrid.asia/create_backup_schedule/locale/en/serverid/abcde/backup_type/S</a>	PUT
23	Update Backup Schedule	Change backup schedule for specified server. e.g. <a href="http://a.cserver.mygrid.asia/update_backup_schedule/locale/en/backup_code/nQ%40%28F.%5D59g/serverid/abcde/backup_type/S">http://a.cserver.mygrid.asia/update_backup_schedule/locale/en/backup_code/nQ%40%28F.%5D59g/serverid/abcde/backup_type/S</a>	PUT
24	Remove Backup Schedule	Remove a backup schedule for specified server. e.g. <a href="http://a.cserver.mygrid.asia/remove_backup_schedule/locale/en/backup_code/nQ%40%28F.%5D59g">http://a.cserver.mygrid.asia/remove_backup_schedule/locale/en/backup_code/nQ%40%28F.%5D59g</a>	PUT
25	Get Backup Schedule	Show the backup schedule list in XML format. e.g. <a href="http://a.cserver.mygrid.asia/get_backup_schedule/locale/en">http://a.cserver.mygrid.asia/get_backup_schedule/locale/en</a>	GET
26	Get Backup Schedule Information	Show a specified backup schedule in details. e.g. <a href="http://a.cserver.mygrid.asia/get_backup_schedule_info/locale/en/backup_code/nQ%40%28F.%5D59P">http://a.cserver.mygrid.asia/get_backup_schedule_info/locale/en/backup_code/nQ%40%28F.%5D59P</a>	GET
27	Restore Backup	Restore disks from backup version. e.g. <a href="http://a.cserver.mygrid.asia/restore_backup/locale/en/serverid/abcde/target_server_id/bcdef">http://a.cserver.mygrid.asia/restore_backup/locale/en/serverid/abcde/target_server_id/bcdef</a>	PUT
28	Get Server Backup List	Show the server backup list in XML format. e.g. <a href="http://a.cserver.mygrid.asia/get_server_backup_list/locale/en/serverid/abcde">http://a.cserver.mygrid.asia/get_server_backup_list/locale/en/serverid/abcde</a>	GET
29	Query VM Console	Get console connection for specified server. e.g.	GET

29	Query VM Console	Get console connection for specified server. e.g. <a href="http://a.cserver.mygrid.asia/query_vm_console/locale/en/serverid/abcde">http://a.cserver.mygrid.asia/query_vm_console/locale/en/serverid/abcde</a>	GET
30	Create SmartClone	Support copy cloud server from one IDC to another IDC. e.g. <a href="http://a.cserver.mygrid.asia/create_smart_clone/locale/en">http://a.cserver.mygrid.asia/create_smart_clone/locale/en</a>	PUT
31	Get SmartClone List	Show the SmartClone list in XML format. e.g. <a href="http://a.cserver.mygrid.asia/get_smart_clone_list/locale/en">http://a.cserver.mygrid.asia/get_smart_clone_list/locale/en</a>	GET
32	Swap Network	Swap network to specified server. e.g. <a href="http://a.cserver.mygrid.asia/swap_network/locale/en/first_server_id/abcde/second_server_id/bcdef">http://a.cserver.mygrid.asia/swap_network/locale/en/first_server_id/abcde/second_server_id/bcdef</a>	PUT
33	Repair Server	Repair specified server in case of swap network failure. e.g. <a href="http://a.cserver.mygrid.asia/repair_server/locale/en/server_id/abcde">http://a.cserver.mygrid.asia/repair_server/locale/en/server_id/abcde</a>	PUT
34	Refill Server	Refill OS disk for a specified server. e.g. <a href="http://a.cserver.mygrid.asia/refill_server/locale/en/server_id/abcde/os_disk">http://a.cserver.mygrid.asia/refill_server/locale/en/server_id/abcde/os_disk</a>	PUT
35	Cancel Backup	Cancel backup process for a specified server. e.g. <a href="http://a.cserver.mygrid.asia/cancel_backup/locale/en/backup_code/nQ%40%28F.%5D59P">http://a.cserver.mygrid.asia/cancel_backup/locale/en/backup_code/nQ%40%28F.%5D59P</a>	DELETE
36	Query Template Status	Show the status for specified template. e.g.	GET

**API 1 – Server List**

Web Service Name	server_list (ID_1)	REST http method	GET																														
<b>Description</b>	Get the subscribed cloud server list in XML																																
<b>REST example</b>	http://a.cserver.mygrid.asia/server_list/locale/en																																
<b>Http Code if success</b>	200																																
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<b>REST Request Header</b>	GET / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i>																																

	Authorization: 112122334214:dsfdksfjdklsfjklfsfd= <i>(access_id : signature)</i>
<b>REST Respond Header if success</b>	HTTP/1.1 200 OK Date: Mon, 03 Mar 2008 12:00:00 GMT Content-Length: 112 Connection: close Content-Type: application/xml
<b>REST XML Expected Result</b>	<pre> &lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;SubscribedServer&gt;   &lt;Profile&gt;     &lt;AccessID&gt;dsfsdfCga6Ug8ORWyayE51eQ1ke58sbyaCO&lt;/AccessID&gt;     &lt;LoginName&gt;peterpan&lt;/LoginName&gt;     &lt;NoOfServer&gt;1&lt;/NoOfServer&gt;   &lt;/Profile&gt;   &lt;ServerList&gt;     &lt;Server&gt;       &lt;ServerID&gt;dsfjksdfjksdjfdjfkdsjfkds&lt;/ServerID&gt;       &lt;ServerDescription&gt;first server&lt;/ServerDescription&gt;       &lt;Location&gt;Malaysia&lt;/Location&gt;       &lt;IDC&gt;AIMS IDC&lt;/IDC&gt;       &lt;Plan&gt;Plan A&lt;/Plan&gt;       &lt;OSType&gt;Linux&lt;/OSType&gt;       &lt;OSName&gt;Centos 5.2 (64bit)&lt;/OSName&gt;       &lt;Template&gt; Centos 5.2 (64bit)&lt;/Template&gt;       &lt;DNS&gt;29-h99.my00001.cserver.mygrid.asia&lt;/DNS&gt;       &lt;ServerZone&gt;Zone A&lt;/ServerZone&gt;       &lt;IsSuspended&gt;Y&lt;/Suspended&gt;  <b>(Y-YES / N- NO)</b>       &lt;ServerStatusCode&gt;PO&lt;/ServerStatusCode&gt;       &lt;ServerStatusDescription&gt;Poweroff&lt;/ServerStatusDescription&gt;     &lt;/Server&gt;   &lt;/ServerList&gt; &lt;/SubscribedServer&gt; </pre>

**API 2 – Get Server Information**

Web Service Name	get_server_info (ID_2)	REST http method	GET																																	
<b>Description</b>	Get the subscribed cloud server list in XML																																			
<b>REST example</b>	2 modes General mode : <a href="http://a.cserver.mygrid.asia/get_server_info/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/get_server_info/serverid/abcde/locale/en</a> or, Administrator mode (for super user only. General user can't use): <a href="http://a.cserver.mygrid.asia/get_server_info/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/get_server_info/serverid/abcde/locale/en</a>																																			
<b>Http Code if success</b>	200																																			
<b>Request Signature</b>	Yes																																			
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<b>REST Request Header</b>	<p>GET / HTTP/1.1</p> <p>Host: a.cserver.mygrid.asia</p> <p>Content-Length: 0</p> <p>Date: Mon, 03 Mar 2008 12:00:00 +0800</p> <p><i>(or passing x-pan-date instead of Date)</i></p> <p>Authorization: 112122334214:dsfdksfjdklsfjkldsfd= <i>(access_id : signature)</i></p>
<b>REST Respond Header if success</b>	<p>HTTP/1.1 200 OK</p> <p>Date: Mon, 03 Mar 2008 12:00:00 GMT</p> <p>Content-Length: 112</p> <p>Connection: close</p> <p>Content-Type: application/xml</p>
<b>REST XML Expected Result for “General Mode”.</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;ServerInformation&gt; &lt;Profile&gt;   &lt;AccessID&gt;MUg8ORWyayE51eQ1ke58sbyaCO&lt;/AccessID&gt;   &lt;LoginName&gt;davidchan&lt;/LoginName&gt; &lt;/Profile&gt; &lt;Server&gt;   &lt;ServerID&gt;e80211f0-7aa6-44b5-bc80-ba47f06bb42d&lt;/ServerID&gt;   &lt;ServerDescription&gt;test server&lt;/ServerDescription&gt;   &lt;Group /&gt;   &lt;Zone&gt;Zone A&lt;/Zone&gt;   &lt;DNS&gt;29-h99.my00001.cserver.mygrid.asia&lt;/DNS&gt;   &lt;PublicIP&gt;202.x.x.x &lt;/PublicIP&gt;   &lt;PrivateIP&gt;192.168.10.1&lt;PrivateIP&gt;   &lt;IsSuspended&gt;N&lt;/IsSuspended&gt;   &lt;ServerStatusCode&gt;PO&lt;/ServerStatusCode&gt;   &lt;ServerStatusDescription&gt;Power Off&lt;/ServerStatusDescription&gt;   &lt;ActivationDate&gt;2010-10-19 GMT&lt;/ActivationDate&gt;   &lt;City&gt;Malaysia&lt;/City&gt;   &lt;IDC&gt;Sapura, Malaysia &lt;/IDC&gt;   &lt;OSType&gt;Linux&lt;/OSType&gt;   &lt;OSName&gt;Centos 5.2 (64bit)&lt;/OSName&gt;   &lt;Template&gt;Centos 5.2 (64bit)&lt;/Template&gt;   &lt;Plan&gt;Plan A&lt;/Plan&gt; &lt;/HardwareConfig&gt;</pre>

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<Local_Disk_Size_In_GB>10</Local_Disk_Size_In_GB>
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<SASP_6_Drive>
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</SASP_M_Drive>
</SASP_M>
</HardwareConfig>
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</ExtraCPU>
</ExtraCPUList>
<ExtraRAMList>
<ExtraRAM>
<RAM_Parts_ID>03ce5b29-53a8-4360-b8ae-7dc045f7e626</RAM_Parts_ID>
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</ExtraRAM>
</ExtraRAMList>
</ExtraHardware>
</Server>
  
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	<pre>&lt;/ServerInformation&gt;</pre>
<b>REST XML Expected Result for “Administrator Mode”.</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;ServerInformation&gt;   &lt;ServerID&gt;e812324f0-7aa6-44b5-bc80-ba47f06bb42d&lt;/ServerID&gt;   &lt;IsSuspended&gt;N&lt;/IsSuspended&gt;   &lt;IsReserved&gt;N&lt;/IsReserved&gt;   &lt;IsLocked&gt;N&lt;/IsLocked&gt;   &lt;IsTerminated&gt;N&lt;/IsTerminated&gt;   &lt;ServerStatusCode&gt;PO&lt;/ServerStatusCode&gt;   &lt;IsSubscribed&gt;Y&lt;/IsSubscribed&gt;   &lt;HasVG&gt;Y&lt;/HasVG&gt;   &lt;AccessID&gt;MUg8ORWyayE51eQ1ke58sbyaCO&lt;/AccessID&gt; &lt;/ServerInformation&gt;</pre>

**API 3 – Server Startup**

Web Service Name	Startup (ID_3)	REST http method	POST																																							
<b>Description</b>	Boot up a specified server																																									
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/startup/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/startup/serverid/abcde/locale/en</a>																																									
<b>Http Code if success</b>	200																																									
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<b>REST Request Header</b>	POST / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i>																																									



## Aspen Cloud Server API – Development Guideline

	Authorization: 112122334214:dsfdksfjdklsfjkldsfd= <i>(access_id : signature)</i>
<b>REST Respond</b> <b>Header if success</b>	HTTP/1.1 200 OK Date: Mon, 03 Mar 2008 12:00:00 GMT Content-Length: 112 Connection: close Content-Type: application/xml
<b>REST XML Expected</b> <b>Result</b>	<?xml version="1.0" encoding="UTF-8" ?> <CloudServerAPI> <Status>SUCCESS</Status> </CloudServerAPI>

**API 4 – Server Soft Reboot**

<b>Web Service Name</b>	<b>soft_reboot (ID_4)</b>	<b>REST http method</b>	<b>POST</b>																																							
<b>Description</b>	Soft reboot the cloud server																																									
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/soft_reboot/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/soft_reboot/serverid/abcde/locale/en</a>																																									
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## Aspen Cloud Server API – Development Guideline

	Authorization: 112122334214:dsfdksfjdklsfjkldsfd= <i>(access_id : signature)</i>
<b>REST Respond</b> <b>Header if success</b>	HTTP/1.1 200 OK Date: Mon, 03 Mar 2008 12:00:00 GMT Content-Length: 112 Connection: close Content-Type: application/xml
<b>REST XML Expected</b> <b>Result</b>	<?xml version="1.0" encoding="UTF-8" ?> <CloudServerAPI> <Status>SUCCESS</Status> </CloudServerAPI>

**API 5 – Server Hard Reboot**

<b>Web Service Name</b>	<b>hard_reboot (ID_5)</b>	<b>REST http method</b>	<b>POST</b>																																							
<b>Description</b>	Hard reboot the cloud server																																									
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/hard_reboot/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/hard_reboot/serverid/abcde/locale/en</a>																																									
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	Authorization: 112122334214:dsfdksfjdklsfjkldsfj-dsfd= <i>(access_id : signature)</i>
<b>REST Respond Header if success</b>	HTTP/1.1 200 OK Date: Mon, 03 Mar 2008 12:00:00 GMT Content-Length: 112 Connection: close Content-Type: application/xml
<b>REST XML Expected Result</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;CloudServerAPI&gt;   &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>

**API 6 – Server Soft Shutdown**

<b>Web Service Name</b>	<b>soft_shutdown (ID_6)</b>	<b>REST http method</b>	<b>POST</b>																																							
<b>Description</b>	Soft shutdown the cloud server																																									
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/soft_shutdown/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/soft_shutdown/serverid/abcde/locale/en</a>																																									
<b>Http Code if success</b>	200																																									
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	Authorization: 112122334214:dsfdksfjdklsfjkldsfd= <i>(access_id : signature)</i>
<b>REST Respond Header if success</b>	HTTP/1.1 200 OK Date: Mon, 03 Mar 2008 12:00:00 GMT Content-Length: 112 Connection: close Content-Type: application/xml
<b>REST XML Expected Result</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;CloudServerAPI&gt;   &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>

**API 7 – Server Hard Shutdown**

<b>Web Service Name</b>	<b>hard_shutdown (ID_7)</b>	<b>REST http method</b>	<b>POST</b>																																							
<b>Description</b>	Hard shutdown the cloud server																																									
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/hard_shutdown/serverid/abcde/locale/en">http://a.cserver.mygrid.asia/hard_shutdown/serverid/abcde/locale/en</a>																																									
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## Aspen Cloud Server API – Development Guideline

	Authorization: 112122334214:dsfdksfjdklsfjkldsfd= <i>(access_id : signature)</i>
<b>REST Respond Header if success</b>	HTTP/1.1 200 OK Date: Mon, 03 Mar 2008 12:00:00 GMT Content-Length: 112 Connection: close Content-Type: application/xml
<b>REST XML Expected Result</b>	<?xml version="1.0" encoding="UTF-8" ?> <CloudServerAPI> <Status>SUCCESS</Status> </CloudServerAPI>

**API 8 – Server Subscription**

Web Service Name	server_subscribe (ID_8)	REST http method	PUT																																										
<b>Description</b>	Subscribe new cloud server																																												
<b>REST example</b>	With Zone <a href="http://a.cserver.mygrid.asia/server_subscribe/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%28F/plan_code/nQ%40%28/zone_code/Spc3xH%60mKOqukM0yyDGe">http://a.cserver.mygrid.asia/server_subscribe/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%28F/plan_code/nQ%40%28/zone_code/Spc3xH%60mKOqukM0yyDGe</a>  Without Zone <a href="http://a.cserver.mygrid.asia/server_subscribe/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%28F/plan_code/nQ%40%28">http://a.cserver.mygrid.asia/server_subscribe/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%28F/plan_code/nQ%40%28</a>  Administration Mode (for super user only. General user can't use) <a href="http://a.cserver.mygrid.asia/server_subscribe/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%28F/vm_uuid/dsfjdskfjkslfjksdfkjf">http://a.cserver.mygrid.asia/server_subscribe/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%28F/vm_uuid/dsfjdskfjkslfjksdfkjf</a>																																												
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	Invalid Zone Code	InvalidZoneCode	400								
	Insufficient balance to subscribe	InsufficientBalance	400								
	Over the maximum subscription server number.	OverMaxSubscribedServers	400								
	No stock for such template	NoStock	400								
	No stock for template in specified zone	NoStockInZone	400								
	No administration right	NoAdminAccessRight	400								
	Invalid server ID you provided	InvalidServerID	400								
	No IDC approval	NoApproval	400								
	The demo a/c has no quota to add	DemoACNotAllowed	403								
	Must provide the "Server Description"	NotProvideServerDescription	412								
<b>More details</b>	<p>"Zone" is optional parameter. If not passing, system will random assign a zone.</p> <p>"idc_code", "plan_code", and "template_code" can be get from other "Query" API. i.e. API 11 – 14.</p>										
<b>REST Request Header</b>	<p>PUT / HTTP/1.1</p> <p>Host: a.cserver.mygrid.asia</p> <p>Content-Length: 0</p> <p>Date: Mon, 03 Mar 2008 12:00:00 +0800</p> <p><i>(or passing x-pan-date instead of Date)</i></p> <p>Authorization: 112122334214:dsfdksfjdklsfjkljsfd= <i>(access_id : signature)</i></p>										
<b>Possible result</b>	<p>Even the status code is "200". There are many possible situations will be returned to requester via XML.</p> <table border="1"> <thead> <tr> <th>Condition</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>condition_1</td> <td>Subscribe the server successfully. The subscribed server configuration information will be returned.</td> </tr> <tr> <td>condition_2</td> <td>The server is no stock but accept the order. It will return the template details in XML.</td> </tr> <tr> <td>condition_3</td> <td>Return error XML e.g. no stock, insufficient balance and so on.</td> </tr> </tbody> </table>			Condition	Description	condition_1	Subscribe the server successfully. The subscribed server configuration information will be returned.	condition_2	The server is no stock but accept the order. It will return the template details in XML.	condition_3	Return error XML e.g. no stock, insufficient balance and so on.
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condition_3	Return error XML e.g. no stock, insufficient balance and so on.										
<b>Returned XML for condition 1</b>	<pre>&lt;NewSubscribedServer&gt; &lt;Profile&gt;   &lt;AccessID&gt;MCGa6Ug851eQ1ke58sbyaCO&lt;/AccessID&gt;   &lt;LoginName&gt;peterjason&lt;/LoginName&gt;   &lt;EMail&gt;peter@jmail.com&lt;/EMail&gt; &lt;/Profile&gt;</pre>										

	<pre> &lt;Server&gt;   &lt;ServerID&gt;938d410a-8d6-8880-cbae48b2ebef&lt;/ServerID&gt;   &lt;ServerDescription&gt;first server&lt;/ServerDescription&gt;   &lt;ServerPassword&gt;abcd&lt;/ServerPassword&gt;   &lt;Group /&gt;   &lt;Zone&gt;Zone A&lt;/Zone&gt;   &lt;DNS&gt;vm1.abc.com&lt;/DNS&gt;   &lt;PublicIP&gt;202.85.1.1&lt;/PublicIP&gt;   &lt;IsSuspended&gt;N&lt;/IsSuspended&gt;   &lt;ServerStatusCode&gt;PO&lt;/ServerStatusCode&gt;   &lt;ServerStatusDescription&gt;Power Off&lt;/ServerStatusDescription&gt;   &lt;ActivationDate&gt;2010-06-24 GMT&lt;/ActivationDate&gt;   &lt;City&gt;Taiwan&lt;/City&gt;   &lt;IDC&gt;ACT, Taiwan&lt;/IDC&gt;   &lt;OSType&gt;Linux&lt;/OSType&gt;   &lt;OSName&gt;Centos 5.2 (64bit)&lt;/OSName&gt;   &lt;Template&gt;Centos 5.2 (64bit)&lt;/Template&gt;   &lt;Plan&gt;Plan A&lt;/Plan&gt; &lt;/Server&gt; &lt;/NewSubscribedServer&gt; </pre>
<b>Returned XML for condition 2</b>	<pre> &lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;OrderedServer&gt;   &lt;IDCCode&gt;nQ%40%3B&lt;/IDCCode&gt;   &lt;IDCName&gt;ACT, Taiwan&lt;/IDCName&gt;   &lt;TemplateCode&gt;nQ%40%28F.%5Dq%26q&lt;/TemplateCode&gt;   &lt;TemplateName&gt;Centos 5.2 (64bit)&lt;/TemplateName&gt;   &lt;PlanCode&gt;nQ%40%28F.%5Dq%26q&lt;/PlanCode&gt;   &lt;PlanName&gt;Plan A&lt;/PlanName&gt;   &lt;ZoneCode&gt;Spc3xH%60mKOqukM0P&lt;/ZoneCode&gt;   &lt;ZoneName&gt;Zone A&lt;/ZoneName&gt;   &lt;WaitingDays&gt;10&lt;/WaitingDays&gt;   &lt;ServerDescription&gt;First linux server&lt;/ServerDescription&gt; &lt;/OrderedServer&gt; </pre>
<b>Returned XML for condition 3</b>	<pre> &lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;Error&gt;   &lt;ErrorCode&gt;NoStockInZone&lt;/ErrorCode&gt;   &lt;ErrorMessage&gt;No stock in this zone.&lt;/ErrorMessage&gt; </pre>





	<pre>&lt;HttpStatusCode&gt;400&lt;/HttpStatusCode&gt; &lt;/Error&gt;</pre>
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**API 9 – Server Termination**

<b>Web Service Name</b>	<b>server_terminate (ID_9)</b>	<b>REST http method</b>	<b>DELETE</b>																																													
<b>Description</b>	Terminate a subscribed server																																															
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/server_terminate/serverid/938d410a-8de2-42a6-8880-cba/locale/en">http://a.cserver.mygrid.asia/server_terminate/serverid/938d410a-8de2-42a6-8880-cba/locale/en</a>																																															
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The server was suspended.	VMSuspended	403																																														
Fail to terminate in server side.	FailTerminateVM	500																																														

<b>REST Request Header</b>	DELETE / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjklfsj-dsfd= <i>(access_id : signature)</i>
<b>Returned XML for success termination</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;CloudServerAPI&gt; &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>

**API 10 – Daily Billing Report**

<b>Web Service Name</b>	<b>daily_billing_report (ID_10)</b>	<b>REST http method</b>	<b>GET</b>																																													
<b>Description</b>	Get daily billing records in specified date range.																																															
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/daily_billing_report/locale/en/start_date/2010-06-01/end_date/2010-06-30/offset/1/max/10">http://a.cserver.mygrid.asia/daily_billing_report/locale/en/start_date/2010-06-01/end_date/2010-06-30/offset/1/max/10</a>																																															
<b>Http Code if success</b>	200																																															
<b>Request Signature</b>	Yes																																															
<b>Anonymous access</b>	Not accept																																															
<b>More details</b>	<p>“start_date” is the starting date for report. The format should be in YYYY-MM-DD. e.g. 2010-1-1 or 2010-02-29</p> <p>“end_date” is the ending date for report. The format should be in YYYY-MM-DD. e.g. 2010-1-1 or 2010-02-29</p> <p>“offset” is used to set the starting record number . Must be 1 or greater.</p> <p>“max” is used to set the maximum return record no. Must be 1 to 30. e.g. if get record from 11<sup>th</sup> to 20<sup>th</sup>. Offset = 11 and max = 10</p>																																															
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<b>More details</b>	<p>There are many “Code” applied in returned XML.</p> <p>Account Status (A – Active, S – Suspended, T – Trial)</p> <p>PaymentModeCode (D – Daily, M – Monthly (Reserved) )</p> <p>ItemTypeCode (S – Cloud Server, C – CPU, R – RAM, LPS – SASP-6, NPS – SASP – M, IA – IP address, MD – Migratable Domain, FW – Firewall)</p> <p><b><i>P.S. Not all IDC provide same parts.</i></b></p>
<b>REST Request Header</b>	<p>GET / HTTP/1.1</p> <p>Host: a.cserver.mygrid.asia</p> <p>Content-Length: 0</p> <p>Date: Mon, 03 Mar 2008 12:00:00 +0800</p> <p><i>(or passing x-pan-date instead of Date)</i></p> <p>Authorization: 112122334214:dsfdksfjdklsfjkljsfd= <i>(access_id : signature)</i></p>
<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;BillingInformation&gt; &lt;Profile&gt;   &lt;AccessID&gt;ayE51eQ1ke58sbyaCO&lt;/AccessID&gt;   &lt;LoginName&gt;peterjason&lt;/LoginName&gt;   &lt;AccountStatus&gt;A&lt;/AccountStatus&gt;   &lt;CurrencyCode&gt;USD&lt;/CurrencyCode&gt;   &lt;CurrencyName&gt;US Dollars&lt;/CurrencyName&gt;   &lt;CurrencySign&gt;\$&lt;/CurrencySign&gt;   &lt;AccountBalance&gt;9,751.04&lt;/AccountBalance&gt;   &lt;OutstandingBalance&gt;0.00&lt;/OutstandingBalance&gt;   &lt;PaymentModeCode&gt;D&lt;/PaymentModeCode&gt; &lt;/Profile&gt; &lt;ResultSet&gt;   &lt;TotalNoOfRecord&gt;171&lt;/TotalNoOfRecord&gt;   &lt;StartRecordOffset&gt;1&lt;/StartRecordOffset&gt;   &lt;NoOfRecordReturn&gt;1&lt;/NoOfRecordReturn&gt;   &lt;HasMoreRecord&gt;YES&lt;/HasMoreRecord&gt; &lt;/ResultSet&gt; &lt;Transaction&gt; &lt;TransactionRecord&gt;   &lt;TransactionDate&gt;2010-06-01T23:59:59Z&lt;/TransactionDate&gt;</pre>



## Aspen Cloud Server API – Development Guideline

	<pre>&lt;ItemTypeCode&gt;LPS&lt;/ItemTypeCode&gt; &lt;ItemDescription&gt;50GB SASP-6 Storage&lt;/ItemDescription&gt; &lt;IsValueAddedService&gt;YES&lt;/IsValueAddedService&gt; &lt;PlanID /&gt; &lt;PartsCode&gt;nQ%40%28F.%5Dq%265&lt;/PartsCode&gt; &lt;ResourcesUUID&gt;APU%3FOj%282XF58jxrac&lt;/ResourcesUUID&gt; &lt;Amount&gt;0.01&lt;/Amount&gt; &lt;/TransactionRecord&gt; &lt;/Transaction&gt; &lt;GrandTotal&gt; &lt;TotalAmount&gt;0.01&lt;/TotalAmount&gt; &lt;/GrandTotal&gt; &lt;/BillingInformation&gt;</pre>
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**API 11 – Query supported cities**

<b>Web Service Name</b>	<b>query_support_city (ID_11)</b>	<b>REST http method</b>	<b>GET</b>																														
<b>Description</b>	Show which city supports cloud server																																
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/query_support_city/locale/en">http://a.cserver.mygrid.asia/query_support_city/locale/en</a>																																
<b>Http Code if success</b>	200																																
<b>Request Signature</b>	Yes																																
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<b>REST Request Header</b>	GET / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjkljsfdj-dsfd= <i>(access_id : signature)</i>																																
<b>Returned XML</b>	<pre> &lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;QuerySupportedCity&gt;   &lt;Profile&gt;     &lt;AccessID&gt;ayE51eQ1ke58sbyaCO&lt;/AccessID&gt;     &lt;LoginName&gt;peterjason&lt;/LoginName&gt;     &lt;NoOfCity&gt;2&lt;/NoOfCity&gt;   &lt;/Profile&gt;                     </pre>																																

```
<CityList>
  <SupporteCity>
    <CityName>Taipei, Taiwan</CityName>
    <CityCode>nQ%40%3B</CityCode>
  </SupporteCity>
  <SupporteCity>
    <CityName>Beijing, China</CityName>
    <CityCode>nQ%40L</CityCode>
  </SupporteCity>
</CityList>
</QuerySupportedCity>
```



**API 12 – Query supported IDC**

Web Service Name	query_support_idc (ID_12)	REST http method	GET																																							
<b>Description</b>	Show which data center supports cloud server in a city. Or, Show which data center provide specified service such as SASP-M.																																									
<b>REST example</b>	There are 2 URI methods. Method 1 (show IDC under specified city) : <a href="http://a.cserver.mygrid.asia/query_support_idc/locale/en/citycode/nQ%40%3B">http://a.cserver.mygrid.asia/query_support_idc/locale/en/citycode/nQ%40%3B</a>  Method 2 (show IDC under specified service) : <a href="http://a.cserver.mygrid.asia/query_support_idc/locale/en/service_type/saspm">http://a.cserver.mygrid.asia/query_support_idc/locale/en/service_type/saspm</a>																																									
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No such service	NoSuchService	400																																								

<b>REST Request</b>  <b>Header</b>	GET / HTTP/1.1  Host: a.cserver.mygrid.asia  Content-Length: 0  Date: Mon, 03 Mar 2008 12:00:00 +0800  <i>(or passing x-pan-date instead of Date)</i>  Authorization: 112122334214:dsfdksfjdklsfjklfsfd= <i>(access_id : signature)</i>
<b>Returned XML</b>	<pre> &lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;QuerySupportedIDC&gt; &lt;Profile&gt;   &lt;AccessID&gt;ayE51eQ1ke58sbyaCO&lt;/AccessID&gt;   &lt;LoginName&gt;peterjason&lt;/LoginName&gt;   &lt;NoOfIDC&gt;3&lt;/NoOfIDC&gt; &lt;/Profile&gt; &lt;IDCList&gt; &lt;SupporteIDC&gt;   &lt;IDCName&gt;PCCW, Hong Kong&lt;/IDCName&gt;   &lt;IDCCode&gt;nQ%40%3B&lt;/IDCCode&gt; &lt;/SupporteIDC&gt; &lt;SupporteIDC&gt;   &lt;IDCName&gt;TRUE, Thailand&lt;/IDCName&gt;   &lt;IDCCode&gt;nQ%40t&lt;/IDCCode&gt; &lt;/SupporteIDC&gt; &lt;SupporteIDC&gt;   &lt;IDCName&gt;ACT, Taiwan&lt;/IDCName&gt;   &lt;IDCCode&gt;nQ%40-&lt;/IDCCode&gt; &lt;/SupporteIDC&gt; &lt;/IDCList&gt; &lt;/QuerySupportedIDC&gt; </pre>

**API 13 – Query supported template**

<b>Web Service Name</b>	<b>query_support_template (ID_13)</b>	<b>REST http method</b>	<b>GET</b>																																				
<b>Description</b>	Show what templates are available in specified city. It includes “Standard”, “Custom” templates and “Zone”.																																						
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/query_support_template/locale/en/idc_code/nQ%3B">http://a.cserver.mygrid.asia/query_support_template/locale/en/idc_code/nQ%3B</a>																																						
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<b>Returned XML</b>	<pre> &lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;QuerySupportedTemplate&gt; &lt;Profile&gt;   &lt;AccessID&gt;yayE51eQ1ke58sbyaCO&lt;/AccessID&gt;   &lt;LoginName&gt;peterjason&lt;/LoginName&gt; &lt;/Profile&gt; &lt;ZoneList&gt;   &lt;NoOfZone&gt;2&lt;/NoOfZone&gt; &lt;ZoneRecord&gt;   &lt;ZoneName&gt;Zone A&lt;/ZoneName&gt;   &lt;ZoneCode&gt;Spc3xH%60mKOqukM%2Bld%5DU8cGF%7Br%7E6P&lt;/ZoneCode&gt; &lt;/ZoneRecord&gt; &lt;ZoneRecord&gt;   &lt;ZoneName&gt;Zone B&lt;/ZoneName&gt;   &lt;ZoneCode&gt;c8j3_%2CYFGKKoYI%33%7CXT%7ER6%7DVI&lt;/ZoneCode&gt; &lt;/ZoneRecord&gt; &lt;/ZoneList&gt; &lt;StandardTemplateList&gt;   &lt;NoOfStandardTemplate&gt;2&lt;/NoOfStandardTemplate&gt; &lt;StandardTemplate&gt;   &lt;TemplateName&gt;Centos 5.2 (64bit)&lt;/TemplateName&gt;   &lt;TemplateCode&gt;nQ%40%28F.%5Dq%26q&lt;/TemplateCode&gt;   &lt;HaveStockNow&gt;Y&lt;/HaveStockNow&gt;   &lt;PrepareDays&gt;0&lt;/PrepareDays&gt; &lt;/StandardTemplate&gt; &lt;StandardTemplate&gt;   &lt;TemplateName&gt;Centos 5.2 (32bit) (Out of Stock, need 2 days of   delivery.)&lt;/TemplateName&gt;   &lt;TemplateCode&gt;nQ%40%28F.%5Dq%261&lt;/TemplateCode&gt;   &lt;HaveStockNow&gt;N&lt;/HaveStockNow&gt;   &lt;PrepareDays&gt;2&lt;/PrepareDays&gt; &lt;/StandardTemplate&gt; &lt;/StandardTemplateList&gt; &lt;IDCTemplateList&gt;   &lt;NoOfIDCTemplate&gt;1&lt;/NoOfIDCTemplate&gt; &lt;IDCTemplate&gt; </pre>



	<pre>&lt;TemplateName&gt;IDC Template&lt;/TemplateName&gt; &lt;TemplateCode&gt;nQ%40%28F.%5Dq57&lt;/TemplateCode&gt; &lt;HaveStockNow&gt;Y&lt;/HaveStockNow&gt; &lt;PrepareDays&gt;0&lt;/PrepareDays&gt; &lt;/IDCTemplate&gt; &lt;/IDCTemplateList&gt; &lt;/QuerySupportedTemplate&gt;</pre>
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**API 14 – Query template’s plan**

<b>Web Service Name</b>	<b>query_template_plan (ID_14)</b>	<b>REST http method</b>	<b>GET</b>																																							
<b>Description</b>	Show all plans for specified template.																																									
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/query_template_price/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%28F.%5Dq%26q">http://a.cserver.mygrid.asia/query_template_price/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%28F.%5Dq%26q</a>																																									
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Incorrect template code	InvalidTemplateCode	400																																								
<b>REST Request Header</b>	GET / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjklfsfd= <i>(access_id : signature)</i>																																									

<b>Network plan</b>	<p>There are 3 type of network consumption plan for incoming and outgoing traffic.</p> <ul style="list-style-type: none"> <li>- U (unlimited bandwidth. It's free to user)</li> <li>- P (Free for amount of specified bandwidth. If over usage, charge user with specified price)</li> <li>- B (Charge user for consumption of bandwidth with specified price)</li> </ul>
<b>Returned XML</b>	<pre> &lt;QueryTemplatePrice&gt; &lt;Profile&gt; &lt;AccessID&gt;RWyayE51eQ1ke58sbyaCO&lt;/AccessID&gt; &lt;LoginName&gt;peterjason&lt;/LoginName&gt; &lt;Currency&gt;USD&lt;/Currency&gt; &lt;/Profile&gt; &lt;PlanList&gt; &lt;NoOfPlan&gt;2&lt;/NoOfPlan&gt; &lt;PlanDetail&gt; &lt;PlanName&gt;Plan A&lt;/PlanName&gt; &lt;PlanCode&gt;nQ%40%28F.%5Dq%26q&lt;/PlanCode&gt; &lt;VirtualCPU&gt;1&lt;/VirtualCPU&gt; &lt;RAMSize&gt;256&lt;/RAMSize&gt; &lt;RAMSizeUnit&gt;MB&lt;/RAMSizeUnit&gt; &lt;HardDiskSize&gt;10&lt;/HardDiskSize&gt; &lt;HardDiskSizeUnit&gt;GB&lt;/HardDiskSizeUnit&gt; &lt;Price&gt;0.01&lt;/Price&gt; &lt;/PlanDetail&gt; &lt;NetworkPlan&gt; &lt;IncomingTraffic&gt; &lt;IncomingType&gt;B&lt;/IncomingType&gt; (total 3 types : U, P, and B) &lt;IncomingFreeQuota&gt;10&lt;/IncomingFreeQuota&gt; (Free 10MB for incoming usage) &lt;IncomingExtraBW&gt;1&lt;/IncomingExtraBW&gt; (Over 1MB, charge \$2) &lt;IncomingExtraPrice&gt;2.0000&lt;/IncomingExtraPrice&gt; &lt;/IncomingTraffic&gt; &lt;OutingTraffic&gt; &lt;OutgoingType&gt;U&lt;/OutgoingType&gt; &lt;/OutingTraffic&gt; &lt;/NetworkPlan&gt; &lt;/PlanList&gt; &lt;/QueryTemplatePrice&gt; </pre>

**API 15 – Query extra parts' plan**

<b>Web Service Name</b>	<b>query_extra_parts_plan (ID_15)</b>	<b>REST http method</b>	<b>GET</b>																																										
<b>Description</b>	Show extra parts' price plan. e.g. CPU/RAM/SASP-6/SASP-M																																												
<b>REST example</b>	There are 2 URI formats supported. Method 1 : query for CPU/RAM/SASP-6 <a href="http://a.cserver.mygrid.asia/query_extra_parts_plan/locale/en/serverid/111111/service_type/cpu">http://a.cserver.mygrid.asia/query_extra_parts_plan/locale/en/serverid/111111/service_type/cpu</a> or Method 2 : query for SASP-M <a href="http://a.cserver.mygrid.asia/query_extra_parts_plan/locale/en/idc_code/111/service_type/saspm">http://a.cserver.mygrid.asia/query_extra_parts_plan/locale/en/idc_code/111/service_type/saspm</a>																																												
<b>Http Code if success</b>	200																																												
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No such service	NoSuchService	400																																											
Incorrect server ID	InvalidServerID	400																																											
<b>REST Request</b>	GET / HTTP/1.1																																												



<b>Header</b>	Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjkljsfd= <i>(access_id : signature)</i>
<b>Returned XML</b>	<p>Following is example XML output for SASP-6. If you query for other parts, the output has slightly different on content.</p> <pre> &lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;QueryExtraPartsPlan&gt; &lt;Profile&gt;   &lt;AccessID&gt;Ma6Ug8ORWyayE51eQ1ke58sbyaCO&lt;/AccessID&gt;   &lt;LoginName&gt;david&lt;/LoginName&gt;   &lt;PartsType&gt;sasp6&lt;/PartsType&gt;   &lt;NoOfPlan&gt;4&lt;/NoOfPlan&gt; &lt;/Profile&gt; &lt;PlanList&gt; &lt;SupportedPlan&gt;   &lt;PartsCode&gt;nQ%40%28F.%5Dq%265&lt;/PartsCode&gt;   &lt;PlanDesc&gt;Plan A&lt;/PlanDesc&gt;   &lt;Disk_Size_In_GB&gt;1&lt;/Disk_Size_In_GB&gt;   &lt;Currency&gt;USD&lt;/Currency&gt;   &lt;DollarSign&gt;\$&lt;/DollarSign&gt;   &lt;Amount&gt;0.03&lt;/Amount&gt; &lt;/SupportedPlan&gt; &lt;SupportedPlan&gt;   &lt;PartsCode&gt;nQ%40%28F.%5Dq%26w&lt;/PartsCode&gt;   &lt;PlanDesc&gt;Plan B&lt;/PlanDesc&gt;   &lt;Disk_Size_In_GB&gt;2&lt;/Disk_Size_In_GB&gt;   &lt;Currency&gt;USD&lt;/Currency&gt;   &lt;DollarSign&gt;\$&lt;/DollarSign&gt;   &lt;Amount&gt;0.01&lt;/Amount&gt; &lt;/SupportedPlan&gt; &lt;SupportedPlan&gt;   &lt;PartsCode&gt;nQ%40%28F.%5Dq%26_&lt;/PartsCode&gt;   &lt;PlanDesc&gt;Plan C&lt;/PlanDesc&gt; </pre>

```
<Disk_Size_In_GB>3</Disk_Size_In_GB>
<Currency>USD</Currency>
<DollarSign>$</DollarSign>
<Amount>0.01</Amount>
</SupportedPlan>
<SupportedPlan>
<PartsCode>nQ%40%28F.%5Dqqq</PartsCode>
<PlanDesc>Plan D</PlanDesc>
<Disk_Size_In_GB>4</Disk_Size_In_GB>
<Currency>USD</Currency>
<DollarSign>$</DollarSign>
<Amount>0.01</Amount>
</SupportedPlan>
</PlanList>
</QueryExtraPartsPlan>
```

## API 16 – Add extra parts

Web Service Name	add_extra_parts (ID_16)	REST http method	PUT																																																
<b>Description</b>	Add extra parts to specified server or IDC.																																																		
<b>REST example</b>	There are 2 URI formats supported. Method 1 : Add CPU/RAM/SASP-6 <a href="http://a.cserver.mygrid.asia/add_extra_parts/locale/en/serverid/11111/service_type/ram/parts_code/xyz">http://a.cserver.mygrid.asia/add_extra_parts/locale/en/serverid/11111/service_type/ram/parts_code/xyz</a> or Method 2 : Add SASP-M <a href="http://a.cserver.mygrid.asia/add_extra_parts/locale/en/idc_code/00001/service_type/saspm/parts_code/xyz">http://a.cserver.mygrid.asia/add_extra_parts/locale/en/idc_code/00001/service_type/saspm/parts_code/xyz</a>																																																		
<b>Http Code if success</b>	200																																																		
<b>Request Signature</b>	Yes																																																		
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Invalid parts	InvalidParts	400																																																	
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	No such server	NoSuchVM	400
	Server should be shutdown	MustShutdownServer	400
	Over max allowed CPU no.	ExceedMaxCPU	400
	Over max allowed RAM size	ExceedMaxRAM	400
	Over max allowed connect drive no.	ExceedMaxDriveNo	400
	Fail to adjust CPU	FailAdjustCPUNumber	400
	Fail to adjust RAM size	FailAdjustRAMSize	400
	Fail to add hard drive	FailAddDrive	400
	Server was suspended before	VMSuspended	403
	Server is locked by other procedure	VMLocked	403
<b>REST Request Header</b>	PUT / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjklfsfj-dsfd= <i>(access_id : signature)</i>		
<b>Returned XML for</b>	- <CloudServerAPI> <Status>SUCCESS</Status> </CloudServerAPI>		

**API 17 – Query subscribed parts**

<b>Web Service Name</b>	<b>query_extra_subscribed_service (ID_17)</b>	<b>REST http method</b>	<b>GET</b>																																				
<b>Description</b>	Show what parts are subscribed.																																						
<b>REST example</b>	e.g. <a href="http://a.cserver.mygrid.asia/query_extra_subscribed_service/locale/en/service_type/cpu">http://a.cserver.mygrid.asia/query_extra_subscribed_service/locale/en/service_type/cpu</a>																																						
<b>Http Code if success</b>	200																																						
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Error Description	Error Code	Http Status Code																																					
No such service	NoSuchService	400																																					
<b>REST Request Header</b>	GET / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i>																																						

	Authorization: 112122334214:dsfdksfjdklsfjklfsfd= <i>(access_id : signature)</i>
<b>Returned XML</b>	<pre> &lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;QueryExtraSubscribedService&gt;   &lt;Profile&gt;     &lt;AccessID&gt;M6Ug8ORWyayE51eQ1ke58sbyaCO&lt;/AccessID&gt;     &lt;LoginName&gt;david&lt;/LoginName&gt;     &lt;PartsType&gt;cpu&lt;/PartsType&gt;     &lt;NoOfRecord&gt;2&lt;/NoOfRecord&gt;   &lt;/Profile&gt;   &lt;ExtraList&gt;   &lt;ExtraParts&gt;     &lt;IDC&gt;Sapura, Malaysia&lt;/IDC&gt;     &lt;ServerID&gt;e80224f0-7aa6-44b5-bc80-ba47f06bb42d&lt;/ServerID&gt;     &lt;CPU_Parts_ID&gt;f4a2c788-48ea-41a3-843b-8df0fbc6973c&lt;/CPU_Parts_ID&gt;     &lt;No_Of_CPU&gt;1&lt;/No_Of_CPU&gt;   &lt;/ExtraParts&gt;   &lt;ExtraParts&gt;     &lt;IDC&gt;Sapura, Malaysia&lt;/IDC&gt;     &lt;ServerID&gt;e80224f0-7aa6-44b5-bc80-ba47f06bb42d&lt;/ServerID&gt;     &lt;CPU_Parts_ID&gt;ff8d5708-3207-4805-8454-916d04b22991&lt;/CPU_Parts_ID&gt;     &lt;No_Of_CPU&gt;1&lt;/No_Of_CPU&gt;   &lt;/ExtraParts&gt;   &lt;/ExtraList&gt; &lt;/QueryExtraSubscribedService&gt; </pre>

**API 18– Remove subscribed parts**

<b>Web Service Name</b>	<b>remove_extra_parts (ID_18)</b>	<b>REST http method</b>	<b>DELETE</b>																																													
<b>Description</b>	Remove subscribed extra parts from server or IDC.																																															
<b>REST example</b>	There are 2 URI formats supported. Method 1 : query for CPU/RAM/SASP-6 <a href="http://a.cserver.mygrid.asia/remove_extra_parts/locale/en/serverid/111111/service_type/cpu/parts_id/abcdef">http://a.cserver.mygrid.asia/remove_extra_parts/locale/en/serverid/111111/service_type/cpu/parts_id/abcdef</a> or Method 2 : query for SASP-M <a href="http://a.cserver.mygrid.asia/remove_extra_parts/locale/en/service_type/saspm/parts_id/zyx">http://a.cserver.mygrid.asia/remove_extra_parts/locale/en/service_type/saspm/parts_id/zyx</a>																																															
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Error Description	Error Code	Http Status Code																																														
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No such service	NoSuchService	400																																														
Incorrect server ID	InvalidServerID	400																																														
Server should be shutdown	MustShutdownServer	400																																														



## Aspen Cloud Server API – Development Guideline

	<table border="1"> <tr> <td>Parts was removed before</td> <td>PartsRemovedBefore</td> <td>400</td> </tr> <tr> <td>Parts type incorrect</td> <td>InvalidPartsType</td> <td>400</td> </tr> <tr> <td>Fail to adjust CPU</td> <td>FailAdjustCPUNumber</td> <td>400</td> </tr> <tr> <td>Fail to adjust RAM size</td> <td>FailAdjustRAMSize</td> <td>400</td> </tr> <tr> <td>Fail to remove hard drive</td> <td>FailRemoveDrive</td> <td>400</td> </tr> <tr> <td>Server was suspended before</td> <td>VMSuspended</td> <td>403</td> </tr> <tr> <td>Server is locked by other procedure</td> <td>VMLocked</td> <td>403</td> </tr> </table>	Parts was removed before	PartsRemovedBefore	400	Parts type incorrect	InvalidPartsType	400	Fail to adjust CPU	FailAdjustCPUNumber	400	Fail to adjust RAM size	FailAdjustRAMSize	400	Fail to remove hard drive	FailRemoveDrive	400	Server was suspended before	VMSuspended	403	Server is locked by other procedure	VMLocked	403
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<b>REST Request Header</b>	<p>DELETE / HTTP/1.1</p> <p>Host: a.cserver.mygrid.asia</p> <p>Content-Length: 0</p> <p>Date: Mon, 03 Mar 2008 12:00:00 +0800</p> <p><i>(or passing x-pan-date instead of Date)</i></p> <p>Authorization: 112122334214:dsfdksfjdklsfjklfsfj-dsfd= <i>(access_id : signature)</i></p>																					
<b>Returned XML</b>	<pre>&lt;CloudServerAPI&gt;   &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>																					



**API 19 – Attach SASP-M disk**

<b>Web Service Name</b>	<b>attach_disk (ID_19)</b>	<b>REST http method</b>	<b>PUT</b>																																																												
<b>Description</b>	Attach SASP-M disk to specified server.																																																														
<b>REST example</b>	e.g. <a href="http://a.cserver.mygrid.asia/attach_disk/locale/en/serverid/11111/parts_id/abcdefg">http://a.cserver.mygrid.asia/attach_disk/locale/en/serverid/11111/parts_id/abcdefg</a>																																																														
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Server is locked by other procedure	VMLocked	403		
<b>REST Request</b>  <b>Header</b>	PUT / HTTP/1.1  Host: a.cserver.mygrid.asia  Content-Length: 0  Date: Mon, 03 Mar 2008 12:00:00 +0800  <i>(or passing x-pan-date instead of Date)</i>  Authorization: 112122334214:dsfdksfjdklsfjkljsfj-dsfd= <i>(access_id : signature)</i>			
<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;&lt;CloudServerAPI&gt;   &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>			

**API 20 – Detach SASP-M disk**

<b>Web Service Name</b>	<b>detach_disk (ID_20)</b>	<b>REST http method</b>	<b>DELETE</b>																																																												
<b>Description</b>	Detach SASP-M disk from specified server.																																																														
<b>REST example</b>	e.g. <a href="http://a.cserver.mygrid.asia/detach_disk/locale/en/serverid/1111/parts_id/abcdefg">http://a.cserver.mygrid.asia/detach_disk/locale/en/serverid/1111/parts_id/abcdefg</a>																																																														
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<b>REST Request</b>  <b>Header</b>	DELETE / HTTP/1.1  Host: a.cserver.mygrid.asia  Content-Length: 0  Date: Mon, 03 Mar 2008 12:00:00 +0800  <i>(or passing x-pan-date instead of Date)</i>  Authorization: 112122334214:dsfdksfjdklsfjkljsfj-dsfd= <i>(access_id : signature)</i>
<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;&lt;CloudServerAPI&gt;   &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>

**API 21 – Read consumed bandwidth**

<b>Web Service Name</b>	<b>read_bandwidth_metering (ID_21)</b>	<b>REST http method</b>	<b>GET</b>																																										
<b>Description</b>	Get incoming and outgoing consumed bandwidth for specified server.																																												
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/read_bandwidth_metering/locale/en/start_date/2011-01/end_date/2011-01/serverid/40d56d31-2f61-4d20-9873-ae85e0567202">http://a.cserver.mygrid.asia/read_bandwidth_metering/locale/en/start_date/2011-01/end_date/2011-01/serverid/40d56d31-2f61-4d20-9873-ae85e0567202</a>																																												
<b>Http Code if success</b>	200																																												
<b>Request Signature</b>	Yes																																												
<b>Anonymous access</b>	Not accept																																												
<b>More details</b>	<p>“start_date” is the starting date for report. The format should be in YYYY-MM-DD / YYYY-MM. e.g. 2010-02-29 or 2010-02</p> <p>“end_date” is the ending date for report. The format should be in YYYY-MM-DD / YYYY-MM. e.g. 2010-02-29 or 2010-02</p>																																												
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<p><b>Returned XML</b></p>	<pre>&lt;?xml version="1.0" encoding="UTF-8" ?&gt; &lt;BandwidthMetering&gt; &lt;Profile&gt;   &lt;AccessID&gt;c1KjE6wK7AMs9cA9uIUussus0Gfbsi7ko&lt;/AccessID&gt;   &lt;LoginName&gt;lucas&lt;/LoginName&gt;   &lt;AccountStatus&gt;A&lt;/AccountStatus&gt;   &lt;CurrencyCode&gt;HKD&lt;/CurrencyCode&gt;   &lt;CurrencyName&gt;Hong Kong Dollars&lt;/CurrencyName&gt;   &lt;CurrencySign&gt;\$&lt;/CurrencySign&gt; &lt;/Profile&gt; &lt;ServerProfile&gt;   &lt;CityName&gt;China&lt;/CityName&gt;   &lt;IDCName&gt;China&lt;/IDCName&gt;   &lt;ServerID&gt;40d56d31-2f61-4d20-9873-ae85e0567202&lt;/ServerID&gt;   &lt;DNS&gt;18-h1.cn10001.cserver.mygrid.asia&lt;/DNS&gt;   &lt;PublicIP /&gt;   &lt;ServerDescription&gt;Test&lt;/ServerDescription&gt;   &lt;BandwidthMeterUnit&gt;MB&lt;/BandwidthMeterUnit&gt; &lt;/ServerProfile&gt; &lt;NetworkMeter&gt; &lt;DataMetering&gt;   &lt;MeterDate&gt;2011-01-14&lt;/MeterDate&gt;   &lt;InTrafficSum&gt;123.17&lt;/InTrafficSum&gt;   &lt;OutTrafficSum&gt;177.20&lt;/OutTrafficSum&gt; &lt;/DataMetering&gt; &lt;DataMetering&gt;   &lt;MeterDate&gt;2011-01-18&lt;/MeterDate&gt;   &lt;InTrafficSum&gt;123.17&lt;/InTrafficSum&gt;   &lt;OutTrafficSum&gt;177.20&lt;/OutTrafficSum&gt; &lt;/DataMetering&gt; &lt;DataMetering&gt;   &lt;MeterDate&gt;2011-01-19&lt;/MeterDate&gt;</pre>



	<pre>&lt;InTrafficSum&gt;267.97&lt;/InTrafficSum&gt; &lt;OutTrafficSum&gt;341.59&lt;/OutTrafficSum&gt; &lt;/DataMetering&gt; &lt;/NetworkMeter&gt; &lt;GrandTotal&gt; &lt;TotalIncomingTraffic&gt;514.31&lt;/TotalIncomingTraffic&gt; &lt;TotalOutgoingTraffic&gt;695.99&lt;/TotalOutgoingTraffic&gt; &lt;/GrandTotal&gt; &lt;/BandwidthMetering&gt;</pre>
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**API 22 – Create Backup Schedule**

Web Service Name	create_backup_schedule (ID_22)	REST http method	PUT																																													
<b>Description</b>	Make a backup request for specified server.																																															
<b>REST example</b>	There are 2 backup schedule supported. 1: Instant backup <a href="http://a.cserver.mygrid.asia/create_backup_schedule/locale/en/serverid/abcde/backup_type/I">http://a.cserver.mygrid.asia/create_backup_schedule/locale/en/serverid/abcde/backup_type/I</a> or, 2. Schedule backup <a href="http://a.cserver.mygrid.asia/create_backup_schedule/locale/en/serverid/abcde/backup_type/S">http://a.cserver.mygrid.asia/create_backup_schedule/locale/en/serverid/abcde/backup_type/S</a>																																															
<b>Http Code if success</b>	200																																															
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Must provide "Day of the	NotProvideScheduleWeekDay	412																																														



	week”		
	Incorrect day of the week	InvalidScheduleWeekDay	400
	Must Provide “Month”	NotProvideScheduleMonthDay	412
	Incorrect month	InvalidScheuldeMonthDay	400
	Incorrect schedule type	InvalidScheduleType	400
	Must Provide “Effective From Date”	NotProvideEffectiveFromDate	412
	Must Provide “Effective To Date”	NotProvideEffectiveToDate	412
	Incorrect from date	InvalidEffectiveFromDate	400
	Incorrect to date	InvalidEffectiveToDate	400
	Incorrect date range	InvalidEffectiveDateRange	400
	Must provide “Schedule Time”	NotProvideScheduleTime	412
	Incorrect schedule time	InvalidScheduleTime	400
	Must provide “Is Enabled”	NotProvidedIsEnabled	412
	Incorrect is enabled provided	InvalidIsEnabled	400
	Incorrect backup type	InvalidBackupType	400
	Fail to create backup schedule	FailCreateBackupSchedule	400
<b>REST Request Header</b>	PUT / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjkljsfj-dsfd= <i>(access_id : signature)</i>		
<b>Returned XML</b>	<?xml version="1.0" encoding="UTF-8"?> <CloudServerAPI> <Status>SUCCESS</Status> </CloudServerAPI>		

**API 23 – Update Backup Schedule**

<b>Web Service Name</b>	<b>update_backup_schedule (ID_23)</b>	<b>REST http method</b>	<b>PUT</b>																																																						
<b>Description</b>	Change backup schedule for specified server.																																																								
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/update_backup_schedule/locale/en/backup_code/nQ%40%28F.%5D59g/serverid/abcde/backup_type/S">http://a.cserver.mygrid.asia/update_backup_schedule/locale/en/backup_code/nQ%40%28F.%5D59g/serverid/abcde/backup_type/S</a>																																																								
<b>Http Code if success</b>	200																																																								
<b>Request Signature</b>	Yes																																																								
<b>Anonymous access</b>	Not accept																																																								
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Error Description	Error Code	Http Status Code																																																							
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Incorrect backup schedule code	InvalidBackupScheduleCode	400																																																							
Unmatch server ID	UnmatchServerID	400																																																							
Schedule is locked by backup process	ScheduleLockedByBackupProcess	400																																																							
Schedule is locked by restore process	ScheduleLlockedByRestoreProcess	400																																																							
Schedule is locked	ScheduleIsLocked	400																																																							
Incorrect server ID	InvalidServerID	400																																																							
Must provide "Backup Disk List"	NotProvideBackupDiskList	412																																																							

	No such disk	NoSuchDisk	400
	Must provide "Day of the week"	NotProvideScheduleWeekDay	412
	Incorrect day of the week	InvalidScheduleWeekDay	400
	Must Provide "Month"	NotProvideScheduleMonthDay	412
	Incorrect month	InvalidScheuldeMonthDay	400
	Incorrect schedule type	InvalidScheduleType	400
	Must Provide "Effective From Date"	NotProvideEffectiveFromDate	412
	Must Provide "Effective To Date"	NotProvideEffectiveToDate	412
	Incorrect from date	InvalidEffectiveFromDate	400
	Incorrect to date	InvalidEffectiveToDate	400
	Incorrect date range	InvalidEffectiveDateRange	400
	Must provide "Schedule Time"	NotProvideScheduleTime	412
	Incorrect schedule time	InvalidScheduleTime	400
	Must provide "Is Enabled"	NotProvidedIsEnabled	412
	Incorrect is enabled provided	InvalidIsEnabled	400
	Incorrect backup type	InvalidBackupType	400
	Fail to update backup schedule	FailUpdateBackupSchedule	400
<b>REST Request Header</b>	PUT / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjkljsfd= <i>(access_id : signature)</i>		
<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;CloudServerAPI&gt;   &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>		

**API 24 – Remove Backup Schedule**

<b>Web Service Name</b>	<b>remove_backup_schedule (ID_24)</b>	<b>REST http method</b>	<b>PUT</b>																																																
<b>Description</b>	Remove a backup schedule for specified server.																																																		
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/remove_backup_schedule/locale/en/backup_code/nQ%40%28F.%5D59g">http://a.cserver.mygrid.asia/remove_backup_schedule/locale/en/backup_code/nQ%40%28F.%5D59g</a>																																																		
<b>Http Code if success</b>	200																																																		
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Fail to remove a backup schedule	FailRemoveBackupSchedule	400																																																	
<b>REST Request Header</b>	PUT / HTTP/1.1 Host: a.cserver.mygrid.asia																																																		



	<p>Content-Length: 0</p> <p>Date: Mon, 03 Mar 2008 12:00:00 +0800</p> <p><i>(or passing x-pan-date instead of Date)</i></p> <p>Authorization: 112122334214:dsfdksfjdklsfjklfsfj-dsfd= <i>(access_id : signature)</i></p>
<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;CloudServerAPI&gt;   &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>

**API 25 – Get Backup Schedule**

<b>Web Service Name</b>	<b>get_backup_schedule (ID_25)</b>	<b>REST http method</b>	<b>GET</b>																														
<b>Description</b>	Show the backup schedule list in XML format.																																
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/get_backup_schedule/locale/en">http://a.cserver.mygrid.asia/get_backup_schedule/locale/en</a>																																
<b>Http Code if success</b>	200																																
<b>Request Signature</b>	Yes																																
<b>Anonymous access</b>	Not accept																																
<b>Possible Error</b>	<b>General errors</b> <table border="1" data-bbox="424 801 1342 1290"> <thead> <tr> <th>Error Description</th> <th>Error Code</th> <th>Http Status Code</th> </tr> </thead> <tbody> <tr> <td>Expired signature</td> <td>ExpiredSig</td> <td>400</td> </tr> <tr> <td>Invalid headers</td> <td>InvalidHeader</td> <td>400</td> </tr> <tr> <td>Incorrect Locale code passing</td> <td>InvalidLocale</td> <td>400</td> </tr> <tr> <td>No such member</td> <td>NotExistMem</td> <td>400</td> </tr> <tr> <td>Fail Authentication</td> <td>FailAuth</td> <td>403</td> </tr> <tr> <td>Account problem or suspended</td> <td>ACPrb</td> <td>403</td> </tr> <tr> <td>Unsupported REST action</td> <td>NoRestMethod</td> <td>405</td> </tr> <tr> <td>Server unexpected error</td> <td>UnexpectedError</td> <td>500</td> </tr> <tr> <td>Service unavailable</td> <td>UnavailableService</td> <td>503</td> </tr> </tbody> </table>			Error Description	Error Code	Http Status Code	Expired signature	ExpiredSig	400	Invalid headers	InvalidHeader	400	Incorrect Locale code passing	InvalidLocale	400	No such member	NotExistMem	400	Fail Authentication	FailAuth	403	Account problem or suspended	ACPrb	403	Unsupported REST action	NoRestMethod	405	Server unexpected error	UnexpectedError	500	Service unavailable	UnavailableService	503
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No such member	NotExistMem	400																															
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Unsupported REST action	NoRestMethod	405																															
Server unexpected error	UnexpectedError	500																															
Service unavailable	UnavailableService	503																															
<b>REST Request Header</b>	GET / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjkljsfd= <i>(access_id : signature)</i>																																
<b>Returned XML</b>	<?xml version="1.0" encoding="UTF-8"?> <BackupScheduleInformation> <Profile> <AccessID>c1KjE6wK7AMs9cA9uU0Gfbsi7ko</AccessID> <LoginName>lucas</LoginName> <NoOfBackupSchedule>0</NoOfBackupSchedule>																																

```

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  <BackupScheduleInfo>
    <BackupCode>nQ%40%28F.%5D59B</BackupCode>
    <ServerID>05807aad-9266-40da-89fd-44463242c1f0</ServerID>
    <ServerDescription>Source Server</ServerDescription>
    <DNS>Source</DNS>
    <BackupType>I</BackupType>
    <ScheduleType/>
    <EffectiveFromDate/><EffectiveToDate/>
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    <ScheduleMonthDay/>
    <ScheduleTime/>
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  </BackupScheduleInfo>
  <BackupScheduleInfo>
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    <ServerID>05807aad-9266-40da-89fd-44463242c1f0</ServerID>
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    <DNS>Source</DNS>
    <BackupType>I</BackupType>
    <ScheduleType/>
    <EffectiveFromDate/>
    <EffectiveToDate/>
    <ScheduleWeekDay/>
    <ScheduleMonthDay/>
  
```

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<IsLocked>N</IsLocked>
<IsActive>N</IsActive>
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<Status>Completed on 2012-04-17 06:01:11</Status>
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  <DeviceName>sdb</DeviceName>
</DiskList>
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<IsCancelled>N</IsCancelled></BackupScheduleInfo>
</BackupSchedule>
</BackupScheduleInformation>
```



**API 26 – Get Backup Schedule Information**

<b>Web Service Name</b>	<b>get_backup_schedule_info (ID_26)</b>	<b>REST http method</b>	<b>GET</b>																																				
<b>Description</b>	Show a specified backup schedule in details.																																						
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/get_backup_schedule_info/locale/en/backup_code/nQ%40%28F.%5D59P">http://a.cserver.mygrid.asia/get_backup_schedule_info/locale/en/backup_code/nQ%40%28F.%5D59P</a>																																						
<b>Http Code if success</b>	200																																						
<b>Request Signature</b>	Yes																																						
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Error Description	Error Code	Http Status Code																																					
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Error Description	Error Code	Http Status Code																																					
Incorrect backup schedule code	InvalidBackupScheduleCode	400																																					
<b>REST Request Header</b>	GET / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjklfsfj-dsfd= <i>(access_id : signature)</i>																																						

<b>Returned XML</b>	<pre> &lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;BackupScheduleInformation&gt;   &lt;Profile&gt;     &lt;AccessID&gt;c1KjE6wK7AMs9cA9uIUsusss0Gfbsi7ko&lt;/AccessID&gt;     &lt;LoginName&gt;lucas&lt;/LoginName&gt;     &lt;CurrencyCode&gt;HKD&lt;/CurrencyCode&gt;   &lt;/Profile&gt;   &lt;BackupSchedule&gt;     &lt;BackupScheduleInfo&gt;       &lt;BackupCode&gt;nQ%40%28F.%5D59P&lt;/BackupCode&gt;       &lt;ServerID&gt;07e171c7-f9ec-47ac-8b46-2c326fa23e6f&lt;/ServerID&gt;       &lt;BackupType&gt;l&lt;/BackupType&gt;       &lt;ScheduleType/&gt;       &lt;EffectiveFromDate/&gt;       &lt;EffectiveToDate/&gt;       &lt;ScheduleWeekDay/&gt;       &lt;ScheduleMonthDay/&gt;       &lt;ScheduleTime/&gt;       &lt;IsEnabled&gt;Y&lt;/IsEnabled&gt;       &lt;IsLocked&gt;N&lt;/IsLocked&gt;       &lt;Status&gt;Idle&lt;/Status&gt;       &lt;DiskList&gt;         &lt;Disk&gt;           &lt;DiskID&gt;07e171c7-f9ec-47ac-8b46-2c326fa23e6f&lt;/DiskID&gt;           &lt;DeviceName&gt;sda&lt;/DeviceName&gt;           &lt;IsBaseDrive&gt;Y&lt;/IsBaseDrive&gt;           &lt;BackupPrice&gt;2.0000&lt;/BackupPrice&gt;           &lt;RestorePrice&gt;3.0000&lt;/RestorePrice&gt;           &lt;LatestBackupTime/&gt;           &lt;Status&gt;Idle&lt;/Status&gt;         &lt;/Disk&gt;         &lt;Disk&gt;           &lt;DiskID&gt;b6f7e90e-b769-4b5a-b646-ff084e4586b8&lt;/DiskID&gt;           &lt;DeviceName&gt;sdf&lt;/DeviceName&gt;           &lt;IsBaseDrive&gt;N&lt;/IsBaseDrive&gt;           &lt;BackupPrice&gt;3.0000&lt;/BackupPrice&gt;         &lt;/Disk&gt;       &lt;/DiskList&gt;     &lt;/BackupScheduleInfo&gt;   &lt;/BackupSchedule&gt; &lt;/BackupScheduleInformation&gt; </pre>

	<pre>&lt;RestorePrice&gt;3.5000&lt;/RestorePrice&gt; &lt;LatestBackupTime/&gt; &lt;Status&gt;Idle&lt;/Status&gt; &lt;/Disk&gt; &lt;/DiskList&gt; &lt;/BackupScheduleInfo&gt; &lt;/BackupSchedule&gt; &lt;/BackupScheduleInformation&gt;</pre>
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**API 27 – Restore Backup**

<b>Web Service Name</b>	<b>restore_backup (ID_27)</b>	<b>REST http method</b>	<b>PUT</b>																																																												
<b>Description</b>	Restore disks from backup version.																																																														
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/restore_backup/locale/en/serverid/abcde/target_server_id/bcdef">http://a.cserver.mygrid.asia/restore_backup/locale/en/serverid/abcde/target_server_id/bcdef</a>																																																														
<b>Http Code if success</b>	200																																																														
<b>Request Signature</b>	Yes																																																														
<b>Anonymous access</b>	Not accept																																																														
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Restore disk is not match	UnmatchRestoreDisk	400																																																													



## Aspen Cloud Server API – Development Guideline

	<table border="1"> <tr> <td>Restore disk size is not match</td> <td>UnmatchRestoreDiskSize</td> <td>400</td> </tr> <tr> <td>VM disk size is not match</td> <td>UnmatchVMDiskSize</td> <td>400</td> </tr> <tr> <td>Fail to restore backup</td> <td>FailRestoreBackup</td> <td>400</td> </tr> </table>	Restore disk size is not match	UnmatchRestoreDiskSize	400	VM disk size is not match	UnmatchVMDiskSize	400	Fail to restore backup	FailRestoreBackup	400
Restore disk size is not match	UnmatchRestoreDiskSize	400								
VM disk size is not match	UnmatchVMDiskSize	400								
Fail to restore backup	FailRestoreBackup	400								
<b>REST Request Header</b>	<p>PUT / HTTP/1.1</p> <p>Host: a.cserver.mygrid.asia</p> <p>Content-Length: 0</p> <p>Date: Mon, 03 Mar 2008 12:00:00 +0800</p> <p><i>(or passing x-pan-date instead of Date)</i></p> <p>Authorization: 112122334214:dsfdksfjdklsfjkl dsfj-dsfd= <i>(access_id : signature)</i></p>									
<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;CloudServerAPI&gt;   &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>									

**API 28 – Get Server Backup List**

<b>Web Service Name</b>	<b>get_server_backup_list (ID_28)</b>	<b>REST http method</b>	<b>GET</b>																																				
<b>Description</b>	Show the server backup list in XML format.																																						
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/get_server_backup_list/locale/en/serverid/abcde">http://a.cserver.mygrid.asia/get_server_backup_list/locale/en/serverid/abcde</a>																																						
<b>Http Code if success</b>	200																																						
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<b>REST Request Header</b>	GET / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjklfsfd= <i>(access_id : signature)</i>																																						
<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;ServerBackupInformation&gt;   &lt;Profile&gt;     &lt;AccessID&gt;c1KjE6wK7AMs9cA9uIUu0Gfbsi7ko&lt;/AccessID&gt;</pre>																																						

```

<LoginName>lucas</LoginName>
  <CurrencyCode>HKD</CurrencyCode>
</Profile>
<Server>
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  <DiskList>
    <Disk>
      <DiskID>05807aad-9266-40da-89fd-44463242c1f0</DiskID>
      <VersionID>nQ%40%28F.%5Dq%261</VersionID>
      <DeviceName>sda</DeviceName>
      <IsBaseDrive>Y</IsBaseDrive>
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      <RestorePrice>3.1000</RestorePrice>
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      <RestoreStatusDescription>N/A</RestoreStatusDescription>
    </Disk>
    <Disk>
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      <VersionID>nQ%40%28F.%5Dq%261</VersionID>
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      <RestoreStatusCode>N/A</RestoreStatusCode>
      <RestoreStatusDescription>N/A</RestoreStatusDescription>
    </Disk>
  </DiskList>
</Server>
</ServerBackupInformation>
  
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## API 29 – Query VM Console

<b>Web Service Name</b>	<b>query_vm_console (ID_29)</b>	<b>REST http method</b>	<b>GET</b>																																																
<b>Description</b>	Get console connection for specified server.																																																		
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/query_vm_console/locale/en/serverid/abcde">http://a.cserver.mygrid.asia/query_vm_console/locale/en/serverid/abcde</a>																																																		
<b>Http Code if success</b>	200																																																		
<b>Request Signature</b>	Yes																																																		
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<b>REST Request Header</b>	GET / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i>																																																		





	Authorization: 112122334214:dsfdksfjdklsfjklfsfj-dsfd= <i>(access_id : signature)</i>
<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;ConsoleConnection&gt;   &lt;InternalIP&gt;192.168.10.2&lt;/InternalIP&gt;   &lt;InternalPortNo&gt;5900&lt;/InternalPortNo&gt;   &lt;ExternalIP&gt;202.85.10.3&lt;/ExternalIP&gt;   &lt;ExternalPortNo&gt;15900&lt;/ExternalPortNo&gt;   &lt;ConsolePassword&gt;y9YYT68Q&lt;/ConsolePassword&gt; &lt;/ConsoleConnection&gt;</pre>

**API 30 – Create SmartClone**

<b>Web Service Name</b>	<b>create_smart_clone (ID_30)</b>	<b>REST http method</b>	<b>PUT</b>																																																												
<b>Description</b>	Support copy cloud server from one IDC to another IDC.																																																														
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/create_smart_clone/locale/en">http://a.cserver.mygrid.asia/create_smart_clone/locale/en</a>																																																														
<b>Http Code if success</b>	200																																																														
<b>Request Signature</b>	Yes																																																														
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Must provide SmartClone target disk list	NotProvideSmartCloneTargetDiskList	412																																																													



## Aspen Cloud Server API – Development Guideline

	No such target disk	NoSuchTargetDisk	400
	SmartClone disk pair is not match	UnmatchSmartCloneDiskPair	400
	Disk size is incompatible	IncompatibleDiskSize	400
	Source disk is not exist	SourceDiskNotExist	400
	Target disk is not exist	TargetDiskNotExist	400
	Incorrect target primary drive	InvalidTargetPrimaryDrive	400
	Fail to create SmartClone	FailCreateSmartClone	403
<b>REST Request Header</b>	PUT / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjkljsfdj-dsfd= <i>(access_id : signature)</i>		
<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;CloudServerAPI&gt;   &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>		

**API 31 – Get SmartClone List**

<b>Web Service Name</b>	<b>get_smart_clone_list (ID_31)</b>	<b>REST http method</b>	<b>GET</b>																														
<b>Description</b>	Show the SmartClone list in XML format.																																
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/get_smart_clone_list/locale/en">http://a.cserver.mygrid.asia/get_smart_clone_list/locale/en</a>																																
<b>Http Code if success</b>	200																																
<b>Request Signature</b>	Yes																																
<b>Anonymous access</b>	Not accept																																
<b>Possible Error</b>	<b>General errors</b> <table border="1" data-bbox="422 801 1340 1294"> <thead> <tr> <th>Error Description</th> <th>Error Code</th> <th>Http Status Code</th> </tr> </thead> <tbody> <tr> <td>Expired signature</td> <td>ExpiredSig</td> <td>400</td> </tr> <tr> <td>Invalid headers</td> <td>InvalidHeader</td> <td>400</td> </tr> <tr> <td>Incorrect Locale code passing</td> <td>InvalidLocale</td> <td>400</td> </tr> <tr> <td>No such member</td> <td>NotExistMem</td> <td>400</td> </tr> <tr> <td>Fail Authentication</td> <td>FailAuth</td> <td>403</td> </tr> <tr> <td>Account problem or suspended</td> <td>ACPrb</td> <td>403</td> </tr> <tr> <td>Unsupported REST action</td> <td>NoRestMethod</td> <td>405</td> </tr> <tr> <td>Server unexpected error</td> <td>UnexpectedError</td> <td>500</td> </tr> <tr> <td>Service unavailable</td> <td>UnavailableService</td> <td>503</td> </tr> </tbody> </table>			Error Description	Error Code	Http Status Code	Expired signature	ExpiredSig	400	Invalid headers	InvalidHeader	400	Incorrect Locale code passing	InvalidLocale	400	No such member	NotExistMem	400	Fail Authentication	FailAuth	403	Account problem or suspended	ACPrb	403	Unsupported REST action	NoRestMethod	405	Server unexpected error	UnexpectedError	500	Service unavailable	UnavailableService	503
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<b>Returned XML</b>	<pre> &lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;SmartCloneList&gt;   &lt;Profile&gt;     &lt;AccessID&gt; c1KjE6wK7AMs9cA9uUUsu0Gfbsi7ko&lt;/AccessID&gt;     &lt;LoginName&gt;lucas&lt;/LoginName&gt;     &lt;NoOfSmartClone&gt;1&lt;/NoOfSmartClone&gt;   &lt;/Profile&gt;   &lt;SmartCloneRecord&gt;                     </pre>																																

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</SmartCloneList>

```

**API 32 – Swap Network**

<b>Web Service Name</b>	<b>swap_network (ID_32)</b>	<b>REST http method</b>	<b>PUT</b>																																																									
<b>Description</b>	Swap network to specified server.																																																											
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/swap_network/locale/en/first_server_id/abcde/second_server_id/bcdef">http://a.cserver.mygrid.asia/swap_network/locale/en/first_server_id/abcde/second_server_id/bcdef</a>																																																											
<b>Http Code if success</b>	200																																																											
<b>Request Signature</b>	Yes																																																											
<b>Anonymous access</b>	Not accept																																																											
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<b>REST Request</b>	PUT / HTTP/1.1																																																											

<b>Header</b>	Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjkldsfj-dsfd= <i>(access_id : signature)</i>
<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;CloudServerAPI&gt;   &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>

**API 33 – Repair Server**

<b>Web Service Name</b>	<b>repair_server (ID_33)</b>	<b>REST http method</b>	<b>PUT</b>																																																									
<b>Description</b>	Repair specified server in case of swap network failure.																																																											
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/repair_server/locale/en/server_id/abcde">http://a.cserver.mygrid.asia/repair_server/locale/en/server_id/abcde</a>																																																											
<b>Http Code if success</b>	200																																																											
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<b>REST Request Header</b>	PUT / HTTP/1.1 Host: a.cserver.mygrid.asia																																																											





## Aspen Cloud Server API – Development Guideline

	<p>Content-Length: 0</p> <p>Date: Mon, 03 Mar 2008 12:00:00 +0800</p> <p><i>(or passing x-pan-date instead of Date)</i></p> <p>Authorization: 112122334214:dsfdksfjdklsfjklfsfj-dsfd= <i>(access_id : signature)</i></p>
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**API 34 – Refill Server**

<b>Web Service Name</b>	<b>refill_server (ID_34)</b>	<b>REST http method</b>	<b>PUT</b>																																																									
<b>Description</b>	Refill OS disk for a specified server.																																																											
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/refill_server/locale/en/server_id/abcde/os_disk">http://a.cserver.mygrid.asia/refill_server/locale/en/server_id/abcde/os_disk</a>																																																											
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<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;CloudServerAPI&gt;   &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>

**API 35 – Cancel Backup**

<b>Web Service Name</b>	<b>cancel_backup (ID_35)</b>	<b>REST http method</b>	<b>DELETE</b>																																										
<b>Description</b>	Cancel backup process for a specified server.																																												
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/cancel_backup/locale/en/backup_code/nQ%40%28F.%5D59P">http://a.cserver.mygrid.asia/cancel_backup/locale/en/backup_code/nQ%40%28F.%5D59P</a>																																												
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<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;CloudServerAPI&gt;   &lt;Status&gt;SUCCESS&lt;/Status&gt; &lt;/CloudServerAPI&gt;</pre>
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**API 36 – Query Template Status**

<b>Web Service Name</b>	<b>query_template_status (ID_36)</b>	<b>REST http method</b>	<b>GET</b>																																							
<b>Description</b>	Show the status for specified template.																																									
<b>REST example</b>	<a href="http://a.cserver.mygrid.asia/query_template_status/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%28F.%5Dq%26g">http://a.cserver.mygrid.asia/query_template_status/locale/en/idc_code/nQ%40%3B/template_code/nQ%40%28F.%5Dq%26g</a>																																									
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Service unavailable	UnavailableService	503																																								
Error Description	Error Code	Http Status Code																																								
Incorrect IDC code	InvalidIDCCode	400																																								
Incorrect template code	InvalidTemplateCode	400																																								
<b>REST Request Header</b>	GET / HTTP/1.1 Host: a.cserver.mygrid.asia Content-Length: 0 Date: Mon, 03 Mar 2008 12:00:00 +0800 <i>(or passing x-pan-date instead of Date)</i> Authorization: 112122334214:dsfdksfjdklsfjkl dsfj-dsfd= <i>(access_id : signature)</i>																																									



<b>Returned XML</b>	<pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;QueryTemplateStatus&gt;   &lt;TemplateName&gt;Centos 5.2 (64bit)&lt;/TemplateName&gt;   &lt;TemplateCode&gt;nQ%40%28F.%5Dq%26q&lt;/TemplateCode&gt;   &lt;HaveStockNow&gt;N&lt;/HaveStockNow&gt; &lt;/QueryTemplateStatus&gt;</pre>
---------------------	---

## Error Handling

In Aspen Cloud, it returns the error in XML format and takes advantages of http status code.

Besides, Aspen Cloud Server API also returns the error in XML format. If you require more details about your failure call, you can refer to the XML content.

The XML error message can be English, Traditional Chinese and Simplified Chinese due to user request. All unrecognized error will be shown in English.

Following are the sample returned XML format.

### http header sample :

```
Date: Mon, 03 Mar 2008 06:08:42 GMT
Content-Type: application/xml
Content-Length: 112
Connection: close
```

### XML Body sample :

```
<Error>
  <ErrorCode>FailAuth</ErrorCode>
  <ErrorMessage>Fail to authentication</ErrorMessage>
  <HttpStatusCode>400</HttpStatusCode>
  (The http status code also be shown in XML)
</Error>
```



**Error Code Table**

Error Description	Error Code	Http Status Code	Related Functions
Expired signature	ExpiredSig	400	All APIs
Invalid headers	InvalidHeader	400	All APIs
Incorrect Locale code passing	InvalidLocale	400	All APIs
No such member	NotExistMem	400	All APIs
No such Cloud Server	NoSuchVM	400	ID 3 – 7, 16, 29, 32 – 34
Invalid IDC code	InvalidIDCCode	400	ID 8, 13, 14, 15, 16, 36
Invalid Template Code	InvalidTemplateCode	400	ID 8, 14, 36
Invalid Plan Code	InvalidPlanCode	400	ID 8
Invalid Zone Code	InvalidZoneCode	400	ID 8
Insufficient balance to subscribe	InsufficientBalance	400	ID 8, 16, 34
Over the maximum subscription server number.	OverMaxSubscribedServers	400	ID 8
Incorrect starting date	InvalidBillingStartDate	400	ID 10
Incorrect ending date	InvalidBillingEndDate	400	ID 10
Incorrect starting offset	InvalidStartingOffset	400	ID 10
Incorrect maximum record number	InvalidMaxRecordReturn	400	ID 10
Incorrect city code	InvalidCityCode	400	ID 12
No administration right	NoAdminAccessRight	400	ID 8
Invalid server ID you provided	InvalidServerID	400	ID 8, 15, 16, 18, 19, 20, 22, 23, 27, 28, 30
No IDC approval	NoApproval	400	ID 8
No such service	NoSuchService	400	ID 12, 15, 16, 17, 18
Invalid parts	InvalidParts	400	ID 16, 18
Should shutdown server	MustShutdownServer	400	ID 16, 18, 19, 20, 32 – 34
Over max allowed CPU no.	ExceedMaxCPU	400	ID 16
Over max allowed RAM size	ExceedMaxRAM	400	ID 16
Over max allowed connect drive no.	ExceedMaxDriveNo	400	ID 16, 19
Fail to adjust CPU	FailAdjustCPUNumber	400	ID 16, 18
Fail to adjust RAM size	FailAdjustRAMSize	400	ID 16, 18



## Aspen Cloud Server API – Development Guideline

Fail to add hard drive	FailAddDrive	400	ID 16
Fail to remove hard drive	FailRemoveDrive	400	ID 18
Parts was removed before	PartsRemovedBefore	400	ID 18, 19, 20
Parts type incorrect	InvalidPartsType	400	ID 18, 19, 20
Parts ID incorrect	InvalidPartsID	400	ID 19, 20
Disk drive was attached before	DiskAttachedBefore	400	ID 19
Fail to attach drive	FailAttachDrive	400	ID 19
Disk drive was detached before	DiskDetachedBefore	400	ID 20
Fail to detach drive	FailDetachDrive	400	ID 20
Must provide "Backup Disk List"	NotProvideBackupDiskList	412	ID 22, 23
No such disk	NoSuchDisk	400	ID 22, 23, 27
Must provide "Day of week"	NotProvideScheduleWeekDay	412	ID 22, 23
Incorrect day of the week	InvalidScheduleWeekDay	400	ID 22, 23
Must provide "Month"	NotProvideScheduleMonthDay	412	ID 22, 23
Incorrect month	InvalidScheduleMonthDay	400	ID 22, 23
Incorrect schedule type	InvalidScheduleType	400	ID 22, 23
Must provide "Effective From Date"	MustProvideEffectiveFromDate	412	ID 22, 23
Must provide "Effective To Date"	MustProvideEffectiveToDate	412	ID 22, 23
Incorrect from date	InvalidEffectiveFromDate	400	ID 22, 23
Incorrect to date	InvalidEffectiveToDate	400	ID 22, 23
Incorrect date range	InvalidEffectiveDateRange	400	ID 22, 23
Must provide "Schedule Time"	NotProvideScheduleTime	412	ID 22, 23
Incorrect schedule time	InvalidScheduleTime	400	ID 22, 23
Must provide "Is Enabled"	NotProvidedIsEnabled	412	ID 22, 23
Incorrect is enabled provided	InvalidIsEnabled	400	ID 22, 23
Incorrect backup type	InvalidBackupType	400	ID 22, 23
Fail to create backup schedule	FailCreateBackupSchedule	400	ID 22
Invalid backup schedule code	InvalidBackupScheduleCode	400	ID 23, 24, 26, 35
Unmatch server ID	UnmatchServerID	400	ID 23
Schedule is locked by backup process	ScheduleLockedByBackupProcess	400	ID 23, 24
Schedule is locked by restore process	ScheduleLockedByRestoreProcess	400	ID 23, 24



## Aspen Cloud Server API – Development Guideline

Fail to update backup schedule	FailUpdateBackupSchedule	400	ID 23
Schedule is locked	ScheduleIsLocked	400	ID 24
Fail to remove a backup schedule	FailRemoveBackupSchedule	400	ID 24
Incorrect target server ID	InvalidTargetServerID	400	ID 27, 30
Server template and plan is not match	UnmatchServerTemplateAndPlan	400	ID 27
Must provide restore disk list	NotProvideRestoreDiskList	412	ID 27
Restore already exist	RestoreAlreadyExist	400	ID 27
Must provide restore target disk list	NotProvideRestoreTargetDiskList	412	ID 27
No such target disk	NoSuchTargetDisk	400	ID 27, 30
Restore disk is not match	UnmatchRestoreDisk	400	ID 27
Restore disk size is not match	UnmatchRestoreDiskSize	400	ID 27
VM disk size is not match	UnmatchVMDiskSize	400	ID 27
Fai to restore backup	FailRestoreBackup	400	ID 27
Fail to get console information	FailGetConsoleInfo	400	ID 29
Console server is not available	ConsoleServerNotAvailable	400	ID 29
Fail to connect console when cloud server is not start	FailConsoleConnectionServerOff	400	ID 29
No file transfer right	NoFileTransferRight	400	ID 30
Virtual Type of server is incompatible	IncompatibleVirtualType	400	ID 30
Source server is locked	SourceVMIsLocked	403	ID 30
Target server is locked	TargetVMIsLocked	403	ID 30
Must provide SmartClone source disk list	NotProvideSmartCloneSourceDiskList	412	ID 30
No such source disk	NoSuchSourceDisk	400	ID 30
Must provide SmartClone target disk list	NotProvideSmartCloneTargetDiskList	412	ID 30
SmartClone disk pair is not match	UnmatchSmartCloneDiskPair	400	ID 30
Disk size is incompatible	IncompatibleDiskSize	400	ID 30
Source disk is not exist	SourceDiskNotExist	400	ID 30
Target disk is not exist	TargetDiskNotExist	400	ID 30
Incorrect target primary drive	InvalidTargetPrimaryDrive	400	ID 30



## Aspen Cloud Server API – Development Guideline

Fail to create SmartClone	FailCreateSmartClone	403	ID 30
Server should be subscribed	ShouldBeSubscribedServer	400	ID 32
Server is disabled	IsDisabled	400	ID 32 –34
Server should be reserved	ServerNotReady	403	ID 32 –34
Sservers are not subscribed by the same owner	NotSameOwner	400	ID 32
Fail to swap network	FailSwapNetwork	403	ID 32
Incorrect server owner	NotServerOwner	400	ID 33, 34
Server has no abnormal	ServerHealthy	400	ID 33
Fail to repair server	FailRepairServer	400	ID 33
Fail to refill server	FailRefillServer	400	ID 34
Backup process is completed	BackupHadCompleted	400	ID 35
Backup is not found	BackupNotFound	400	ID 35
Fail Authentication	FailAuth	403	All APIs
Account problem or suspended	ACPrb	403	All APIs
The cloud server is locked by other process.	VMLocked	403	ID 3 – 7, 16, 18, 19, 20, 32 – 34
The cloud server was suspended.	VMSuspended	403	ID 3 – 7, 16, 18, 19, 20, 29
Unsupported REST action	NoRestMethod	405	All APIs
Server unexpected error	UnexpectedError	500	All APIs
Fail to terminate in server side.	FailTerminateVM	500	ID 9
Service unavailable	UnavailableService	503	All APIs