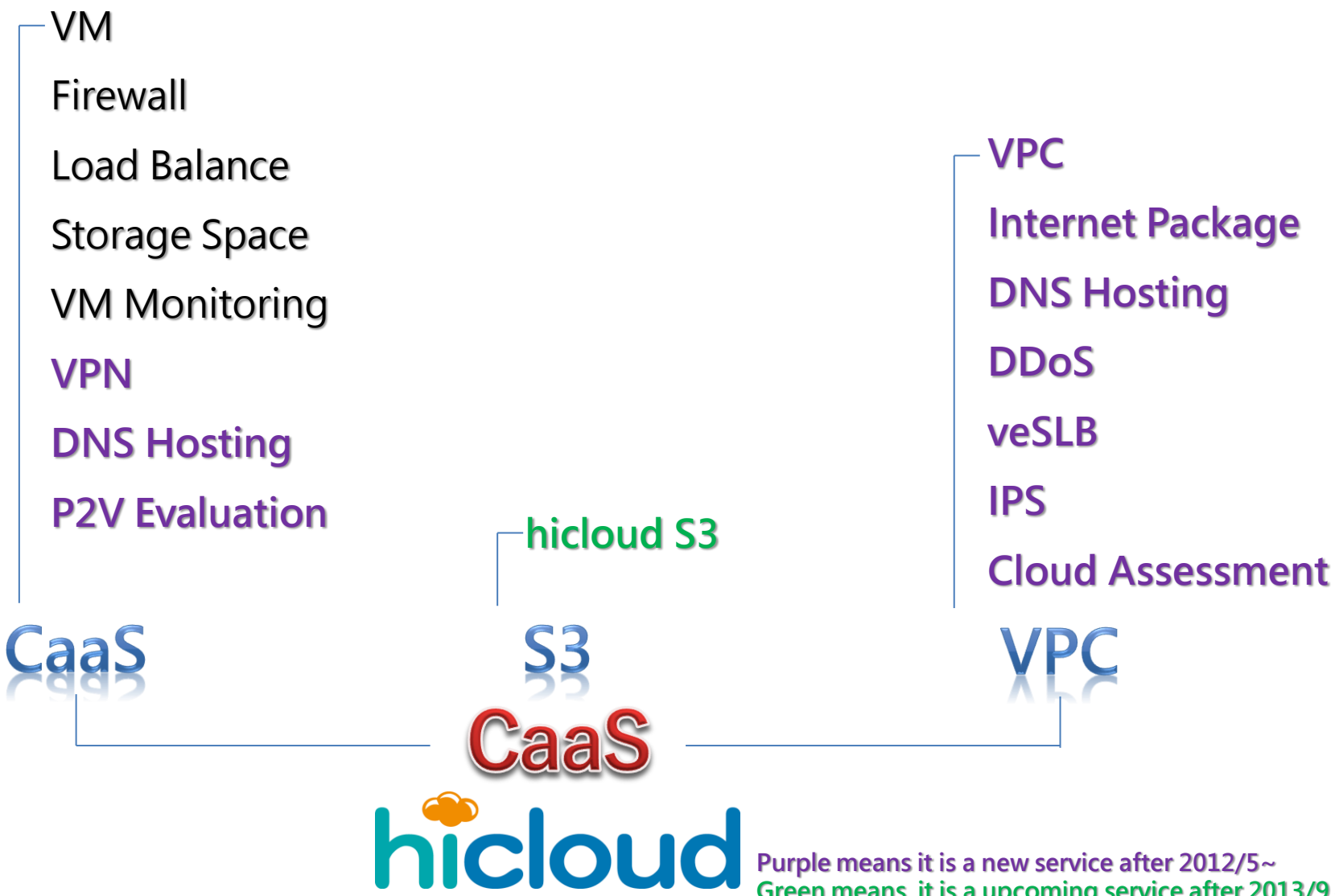
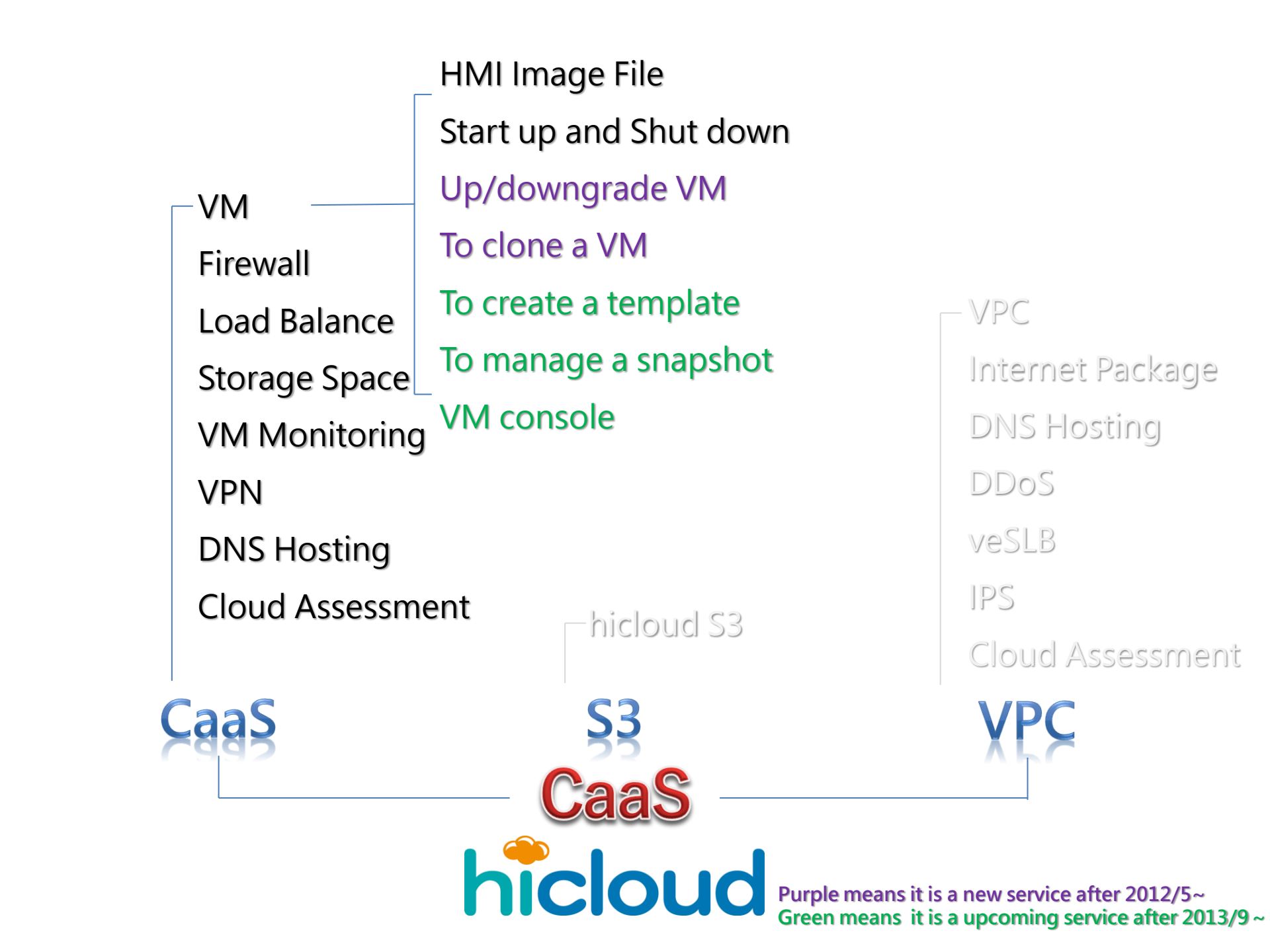
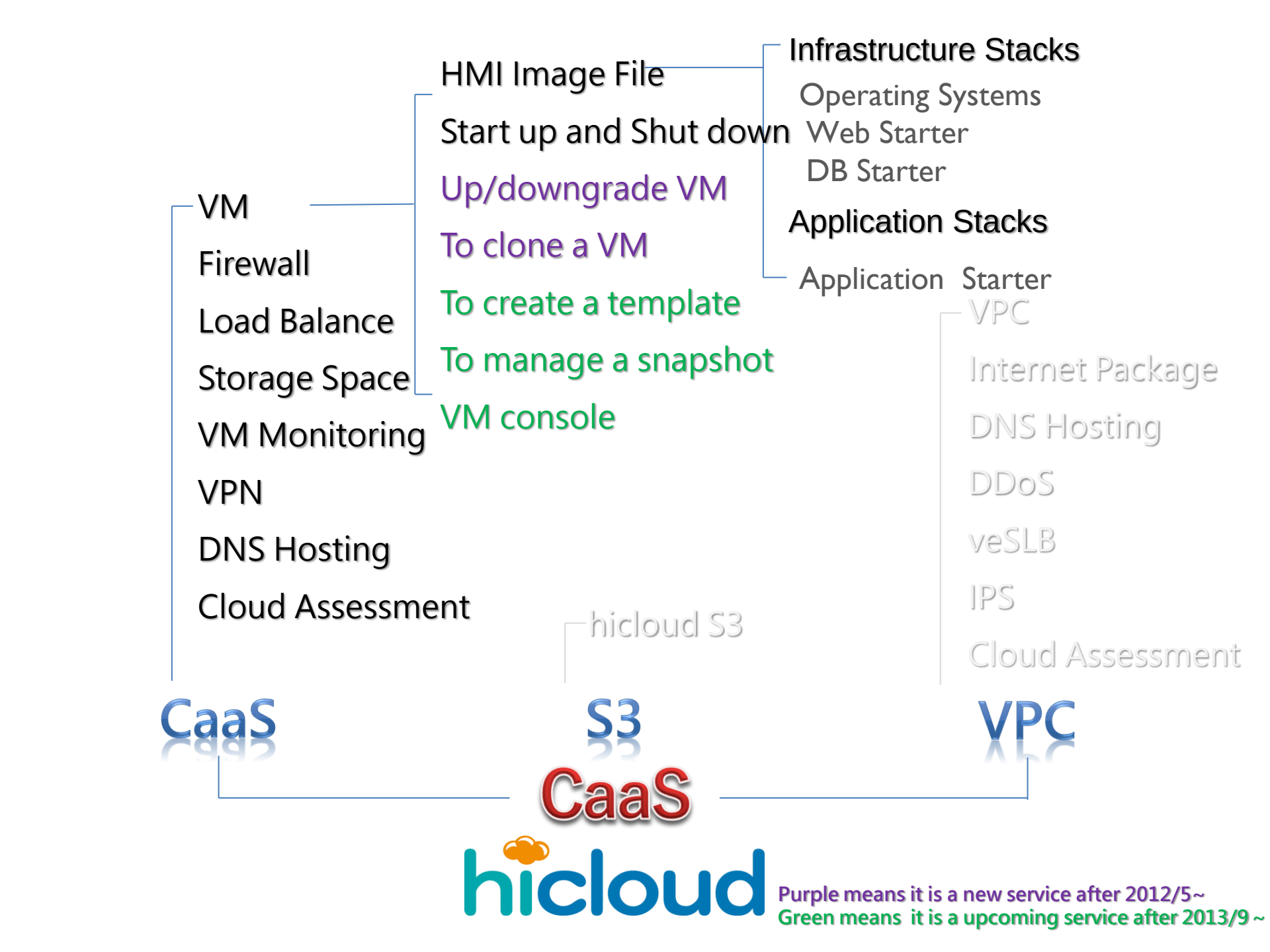
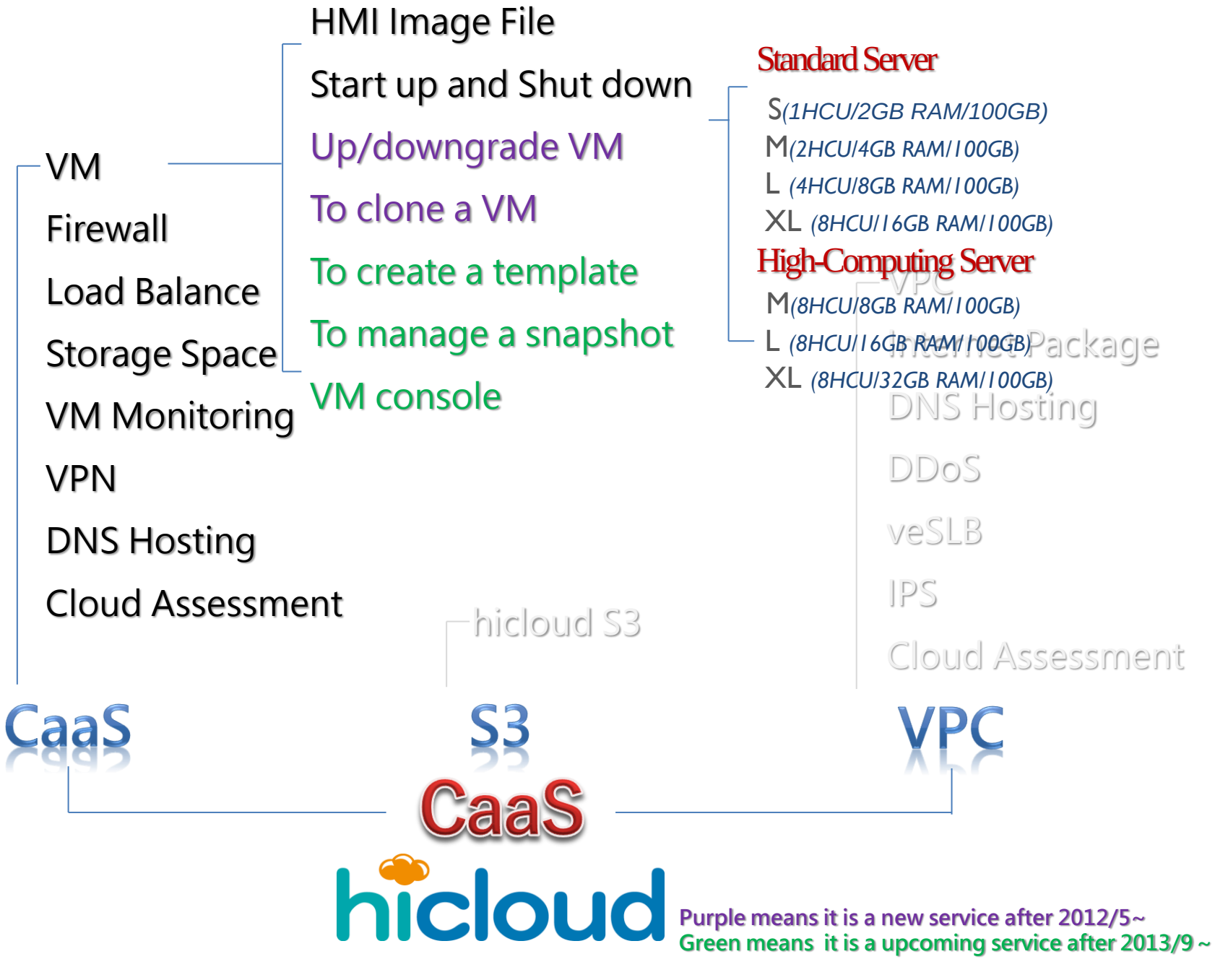
Description of API Scenarios.

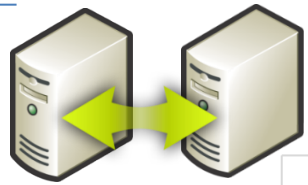

VM
Firewall
Load Balance
Storage Space
VM Monitoring
VPN
DNS Hosting
P2V Evaluation
CaaS
hicloud S3
S3
VPC
Internet Package
DNS Hosting
DDoS
veSLB
IPS
Cloud Assessment
VPC
CaaS
hicloud
Purple means it is a new service after 2012/5~
Green means it is a upcoming service after 2013/9 ~


HMI Image File
Start up and Shut down
Up/downgrade VM
To clone a VM
To create a template
To manage a snapshot
VM console
VM
Firewall
Load Balance
Storage Space
VM Monitoring
VPN
DNS Hosting
Cloud Assessment
hicloud S3
VPC
Internet Package
DNS Hosting
DDoS
veSLB
IPS
Cloud Assessment
CaaS
S3
VPC
CaaS
hicloud
Purple means it is a new service after 2012/5~
Green means it is a upcoming service after 2013/9 ~


HMI Image File
Start up and Shut down
Up/downgrade VM
To clone a VM
To create a template
To manage a snapshot
VM console
Infrastructure Stacks
Operating Systems
Web Starter
DB Starter
Application Stacks
Application Starter
VM
Firewall
Load Balance
Storage Space
VM Monitoring
VPN
DNS Hosting
Cloud Assessment
hicloud S3
VPC
Internet Package
DNS Hosting
DDoS
veSLB
IPS
Cloud Assessment
CaaS
S3
VPC
CaaS
hicloud
Purple means it is a new service after 2012/5~
Green means it is a upcoming service after 2013/9 ~


HMI Image File
Start up and Shut down
Up/downgrade VM
To clone a VM
To create a template
To manage a snapshot
VM console
VM
Firewall
Load Balance
Storage Space
VM Monitoring
VPN
DNS Hosting
Cloud Assessment
Standard Server
S(1HCU/2GB RAM/100GB)
M(2HCU/4GB RAM/100GB)
L (4HCU/8GB RAM/100GB)
XL (8HCU/16GB RAM/100GB)
High-Computing Server
M(8HCU/8GB RAM/100GB)
L (8HCU/16GB RAM/100GB)
XL (8HCU/32GB RAM/100GB)
VPC
Internet Package
DNS Hosting
DDoS
veSLB
IPS
Cloud Assessment
hicloud S3
CaaS
S3
VPC
CaaS
hicloud
Purple means it is a new service after 2012/5~
Green means it is a upcoming service after 2013/9 ~

- VM
  - HMI Image File
  - Start up and Shut down
  - Up/downgrade VM
  - To clone a VM
  - To create a template
  - To manage a snapshot
  - VM console
- Firewall
- Load Balance
- Storage Space
- VM Monitoring
- VPN
- DNS Hosting
- Cloud Assessment



- VPC
- Internet Package
- DNS Hosting
- DDoS
- veSLB
- IPS
- Cloud Assessment

- hicloud S3

CaaS S3 VPC

CaaS

hicloud

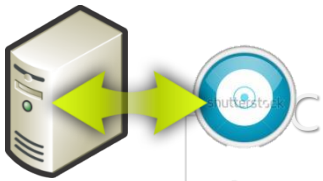
Purple means it is a new service after 2012/5~
Green means it is a upcoming service after 2013/9 ~

- VM
  - HMI Image File
  - Start up and Shut down
  - Up/downgrade VM
  - To clone a VM
  - To create a template
  - To manage a snapshot
  - VM console
- Firewall
- Load Balance
- Storage Space
- VM Monitoring
- VPN
- DNS Hosting
- Cloud Assessment

CaaS

- hicloud S3

S3



- Internet Package
- DNS Hosting
- DDoS
- veSLB
- IPS
- Cloud Assessment

VPC

CaaS

hicloud

Purple means it is a new service after 2012/5~
Green means it is a upcoming service after 2013/9 ~

- VM
  - HMI Image File
  - Start up and Shut down
  - Up/downgrade VM
  - To clone a VM
  - To create a template
  - To manage a snapshot
  - VM console
- Firewall
- Load Balance
- Storage Space
- VM Monitoring
- VPN
- DNS Hosting
- Cloud Assessment

CaaS

- hicloud S3

S3

- VPC
- Internet Package
- DNS Hosting
- DDoS
- veSLB
- IPS
- Cloud Assessment

VPC

CaaS

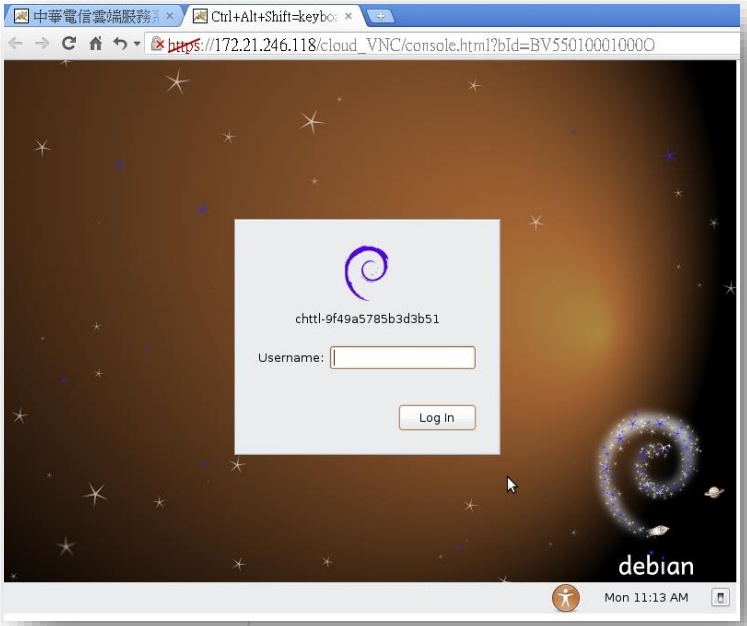
hicloud

Purple means it is a new service after 2012/5~

Green means it is a upcoming service after 2013/9 ~

- VM
- Firewall
- Load Balance
- Storage Space
- VM Monitoring
- VPN
- DNS Hosting
- Cloud Assessment

- HMI Image File
- Start up and Shut down
- Up/downgrade VM
- To clone a VM
- To create a template
- To manage a snapshot
- VM console



hicloud S3

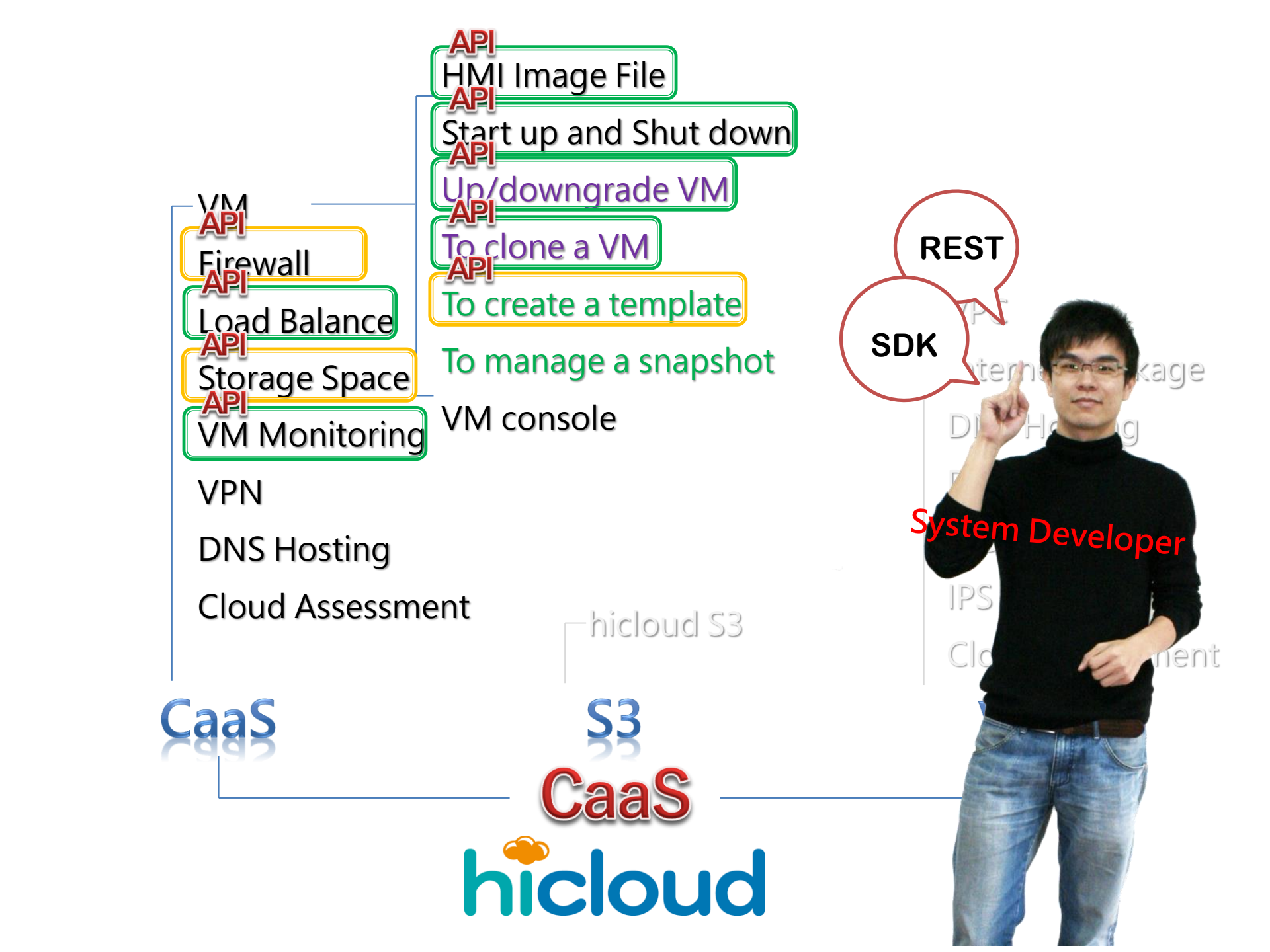
Cloud Assessment

CaaS S3 VPC

CaaS

hicloud

Purple means it is a new service after 2012/5~
Green means it is a upcoming service after 2013/9 ~


API
HMI Image File
API
Start up and Shut down
API
Up/downgrade VM
API
To clone a VM
API
To create a template
To manage a snapshot
VM console
VM
API
Firewall
API
Load Balance
API
Storage Space
API
VM Monitoring
VPN
DNS Hosting
Cloud Assessment
hicloud S3
CaaS
S3
CaaS
hicloud
REST
SDK
System Developer

API HMI Image File

API Start up and Shut down

API Up/downgrade VM

API To clone a VM

API To create a template

To manage a snapshot

VM console

VM

API Firewall

API Load Balance

API Storage Space

API VM Monitoring

VPN

DNS Hosting

Cloud Assessment

Let's see how to make CaaS API!

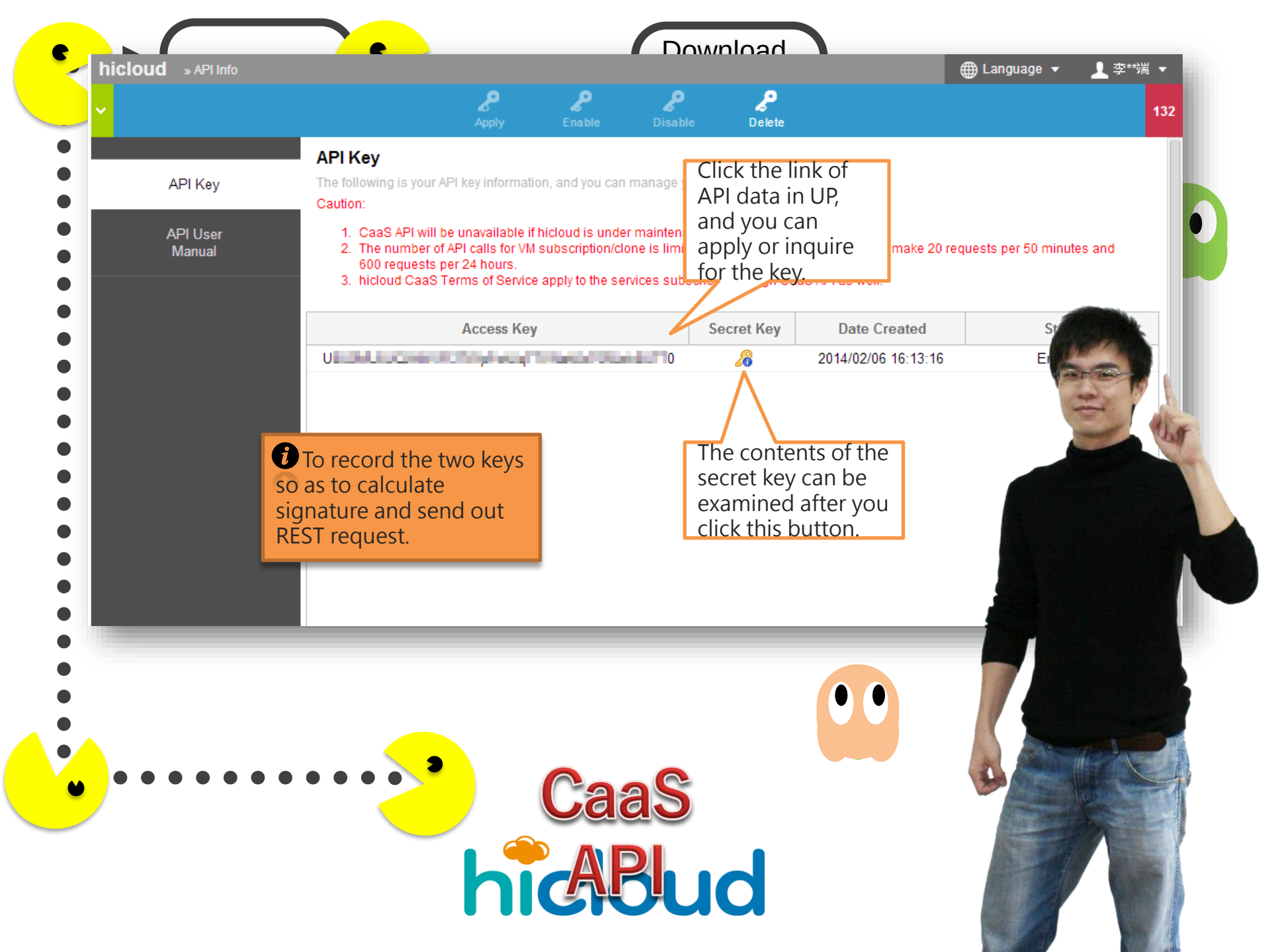
hicloud S3

CaaS

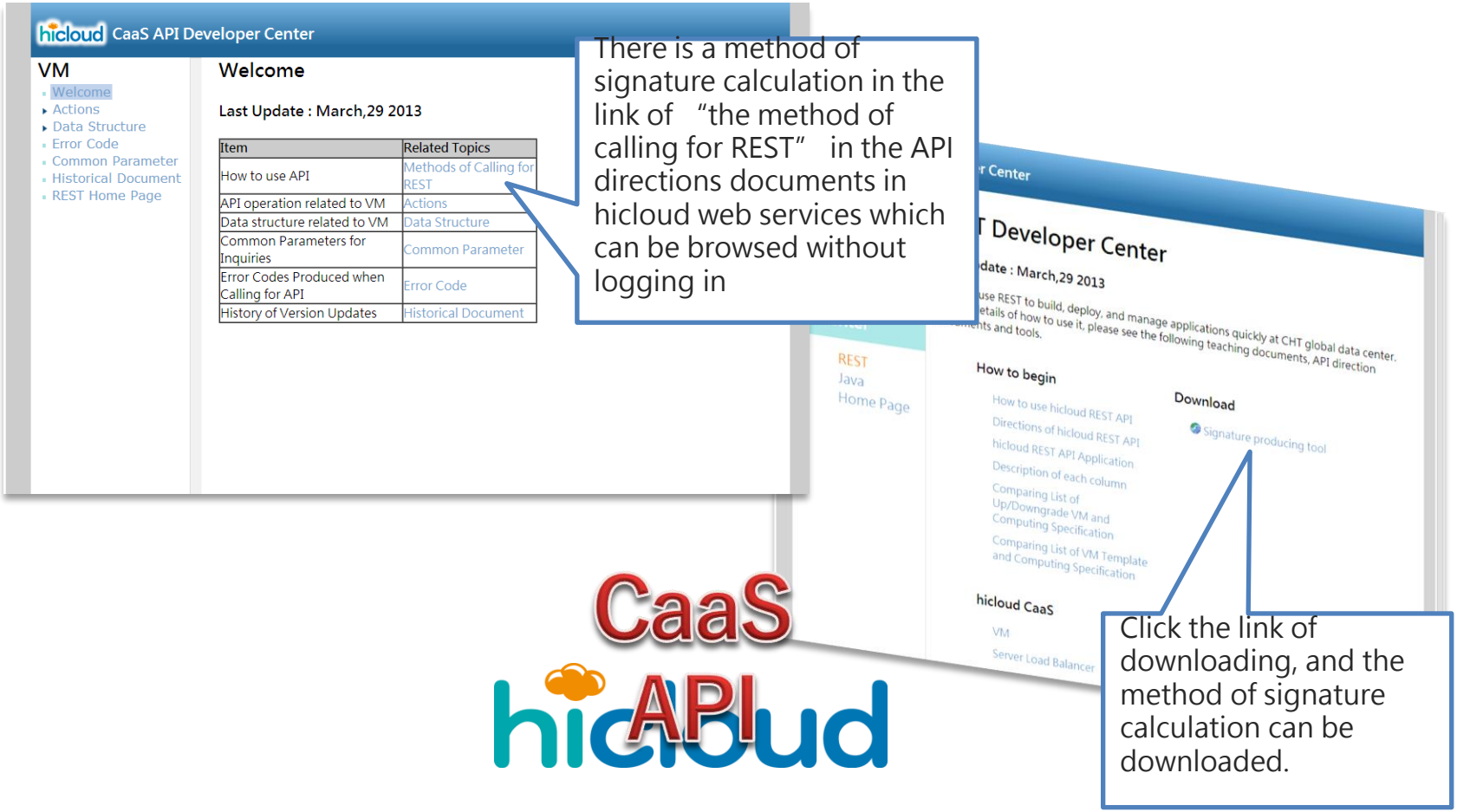
S3

CaaAP

hicloud


hicloud
» API Info
Language
李**瑞
Apply
Enable
Disable
Delete
132
API Key
API User Manual
API Key
The following is your API key information, and you can manage
Caution:
1. CaaS API will be unavailable if hicloud is under mainten
2. The number of API calls for VM subscription/clone is limi
make 20 requests per 50 minutes and 600 requests per 24 hours.
3. hicloud CaaS Terms of Service apply to the services subscrib
Access Key
Secret Key
Date Created
2014/02/06 16:13:16
Click the link of API data in UP, and you can apply or inquire for the key.
To record the two keys so as to calculate signature and send out REST request.
The contents of the secret key can be examined after you click this button.
CaaS
API
hicloud

- The platform of the API developer：http://hws.hicloud.hinet.net/hws-doc/
- The method of signature calculation.



Enter hicloud to acquire Caas API key pair.

Download SDK. Download API directions documents.

To set up key pair and environment parameters in research and development environment.

Coding…..

CaaS API

hicloud

CaaS

hicloud API


Try it ~
System Develop

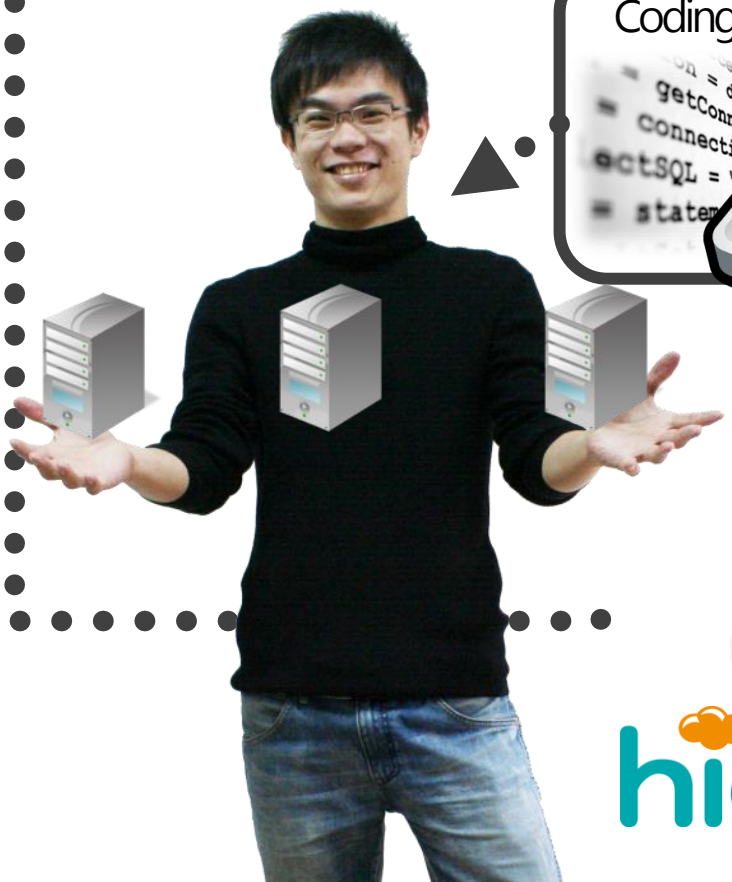

CaaS
API
hicloud

Enter hicloud to acquire Caas API key pair.

Download SDK. Download API directions documents.

To set up key pair and environment parameters in research and development environment.

Coding…..



CaaS API

hicloud

Enter hicloud to acquire Caas API key pair.

Download SDK. Download API directions documents

Do you want to understand more? No problem!

To set up key pair and environment parameters in research and development environment

Coding…..

[/code]

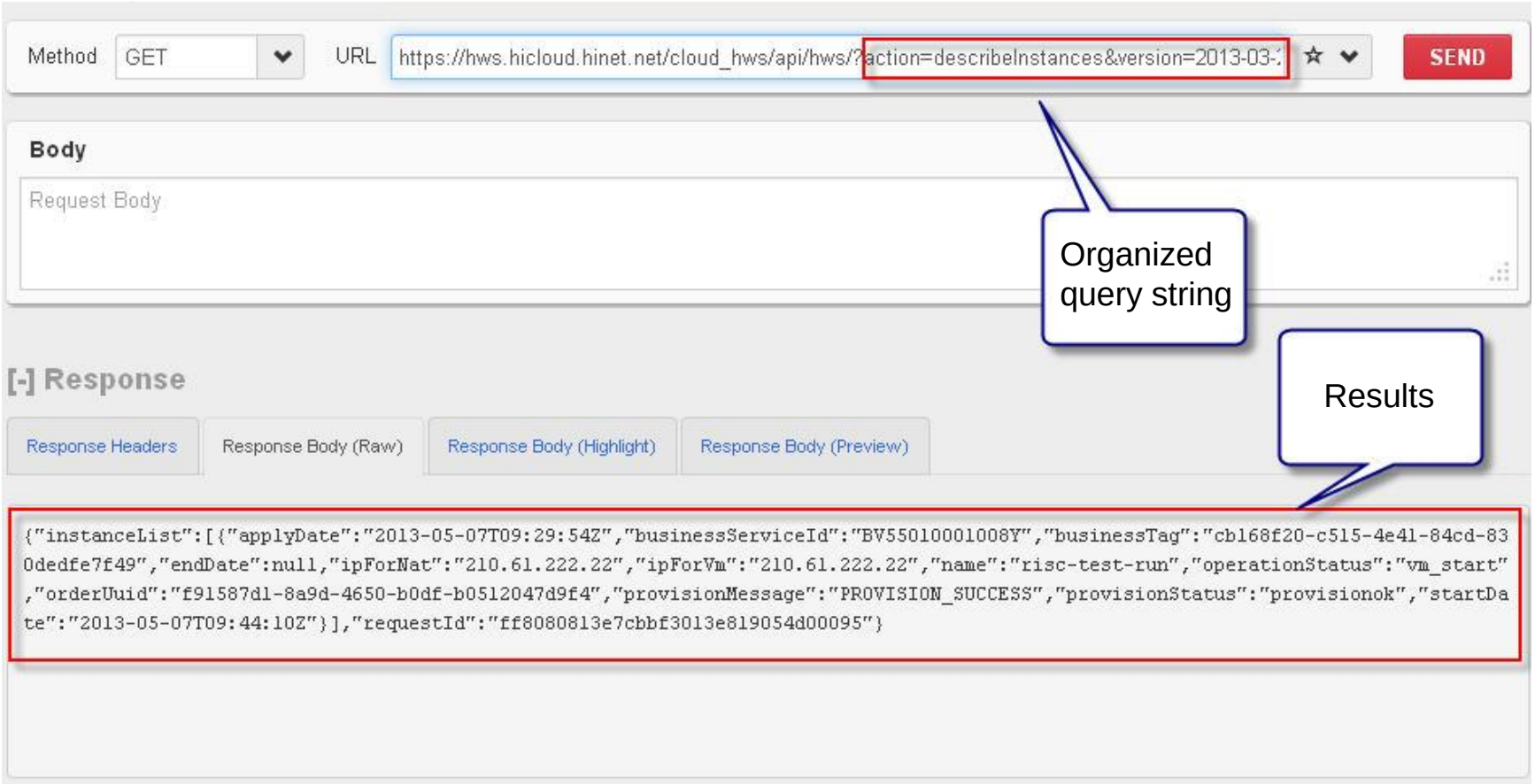
CaaS API

hicloud

To understand more about CaaS API

THE EXECUTION OF API ORDER

- Website for REST service https://hws.hicloud.hinet.net/cloud_hws/api/hws/?



COMMON PARAMETER

- action:API orders to be executed.
- version:Version of the order (Current version:2013-03-29)
- chtAuthType:Authentication mechanism (hwspass)
- expires:The time of the expiration of calling time. ISO8601 time format is adopted YYYY-MM-DDThh:mm:ssZ
- accessKey:accessKey assigned to the customer.
- signature:Captcha, to verify whether the call is legitimate.

TO APPLY FOR A VM (1/3)

- runInstances Corresponding order of runInstances
  - To use a standard VM template
    - Parameter
      - imageId:VM sample ID e.g. hi-qe4ug9ev
      - instanceType:Computing specification e.g. HC1.XS.LINUX
      - monitoringEnabled
      - instanceName
  - To clone appointed VM
    - Parameter
      - vm id

Comparison Table of VM Template Number and Computing Specification

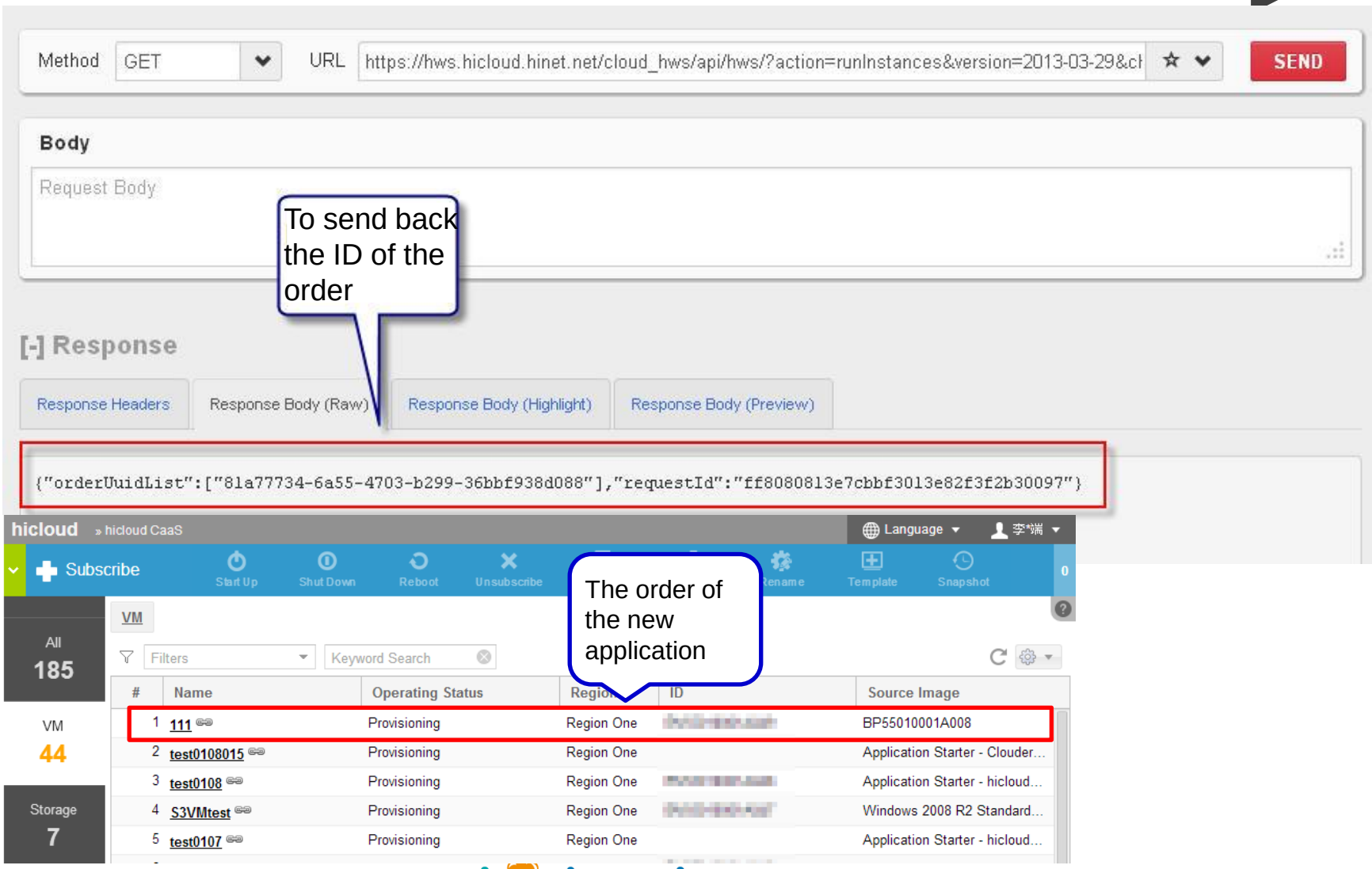
Last Update : March,29 2013

The VM template number and computing specification of the parameter runInstances (to apply for VM) is limited. The application can only be successful in the same group match.

VM Template Number	VM Template Description	Computing Specification
hi-olajtpss	CentOS 5,32bit	HC1.M.LINUX HC1.S.LINUX
hi-qe4ug9ev	CentOS 5,32bit	HC1.XS.LINUX
hi-llm5tbhp	CentOS 5.5,64bit	HC1.HIGH-L.LINUX HC1.HIGH-M.LINUX HC1.HIGH-XL.LINUX HC1.L.LINUX HC1.M.LINUX HC1.S.LINUX HC1.XL.LINUX
hi-qzs4ld5q	CentOS 6.3 eng,32bit	HC1.HIGH-L.LINUX HC1.HIGH-M.LINUX HC1.HIGH-XL.LINUX HC1.L.LINUX HC1.M.LINUX HC1.S.LINUX HC1.XL.LINUX
hi-vsyl7rmx	CentOS 6.3 eng,32bit	HC1.XS.LINUX
hi-sll3leq7	CentOS 6.3 eng,64bit	HC1.HIGH-L.LINUX HC1.HIGH-M.LINUX HC1.HIGH-XL.LINUX HC1.L.LINUX HC1.M.LINUX HC1.S.LINUX

TO APPLY FOR A VM (2/3)

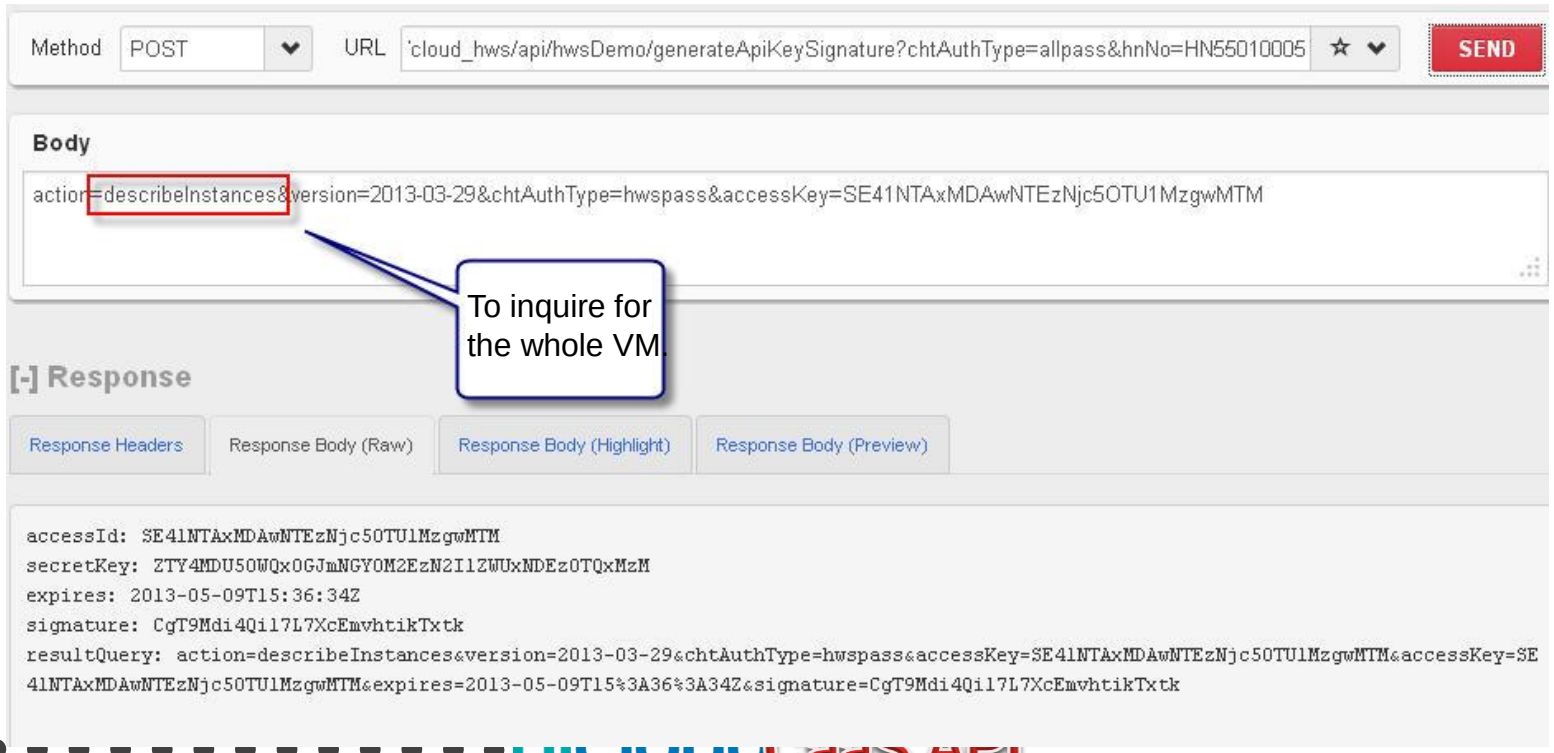
TO APPLY FOR A VM (3/3)



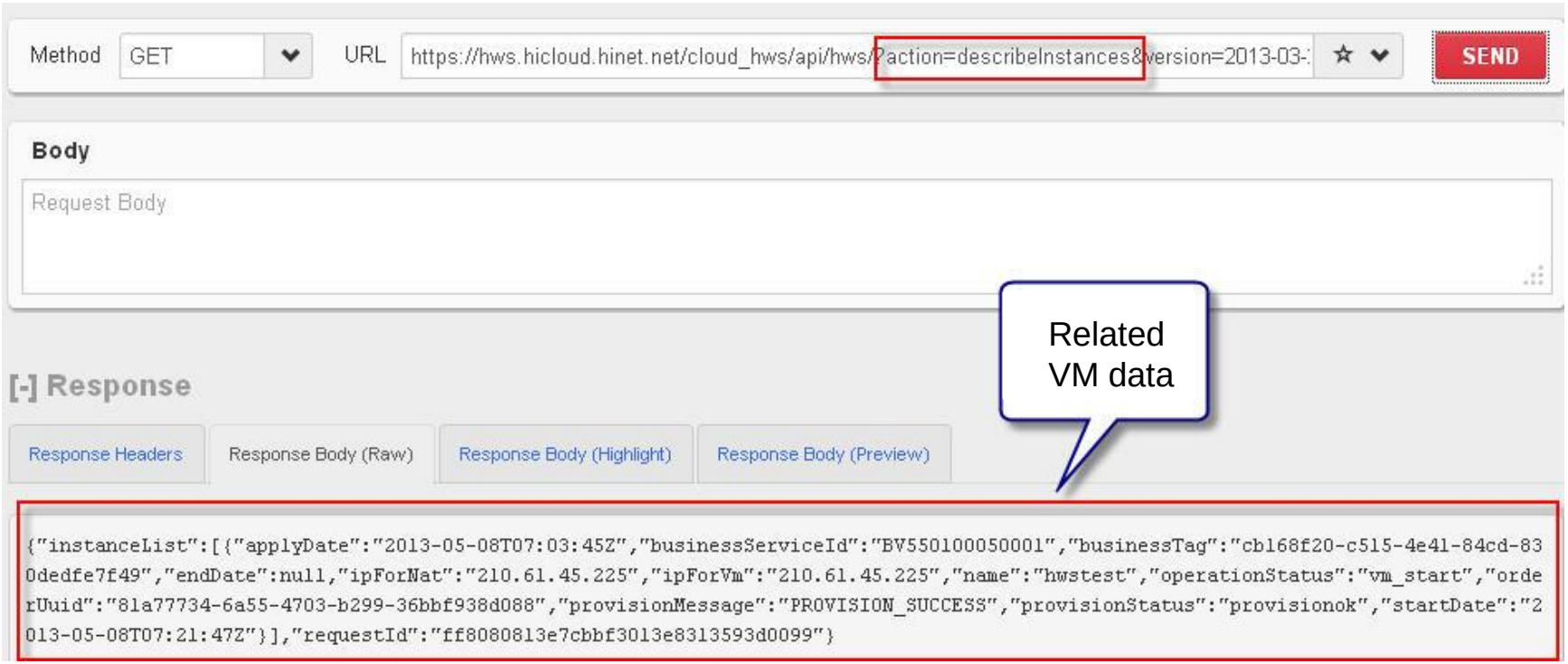
hicloud CaaS API

TO INQUIRE FOR THE VM DATA

- To inquire for the VM :describeInstances
  - Parameter
    - **businessServiceId or orderUuid (If there is no such a parameter, it would inquire for the whole data.)**

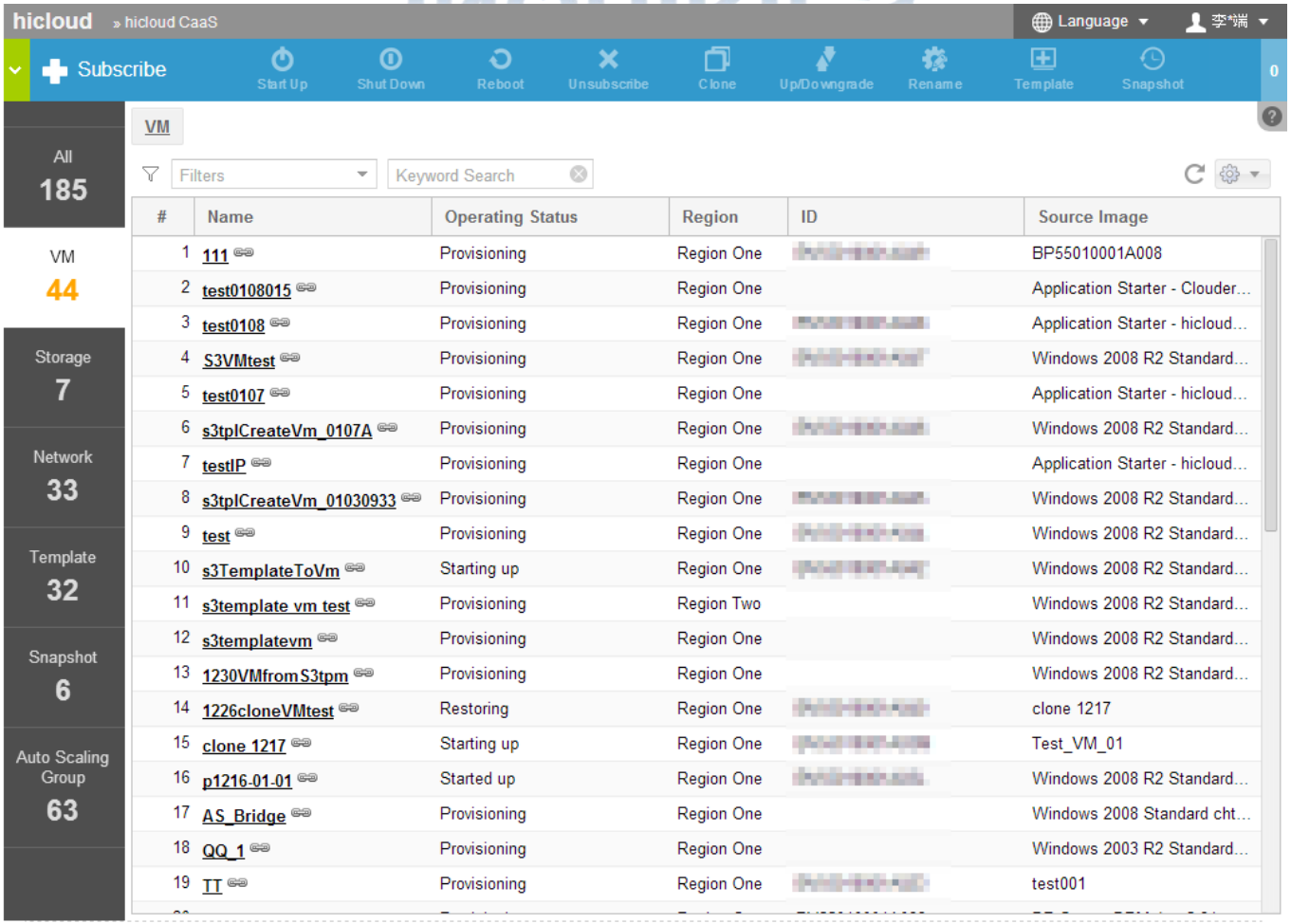


RESULTS OF THE INQUIRY



hicloud CaaS API

CLOUD BOSS ENTRY WEBSITE INQUIRIES



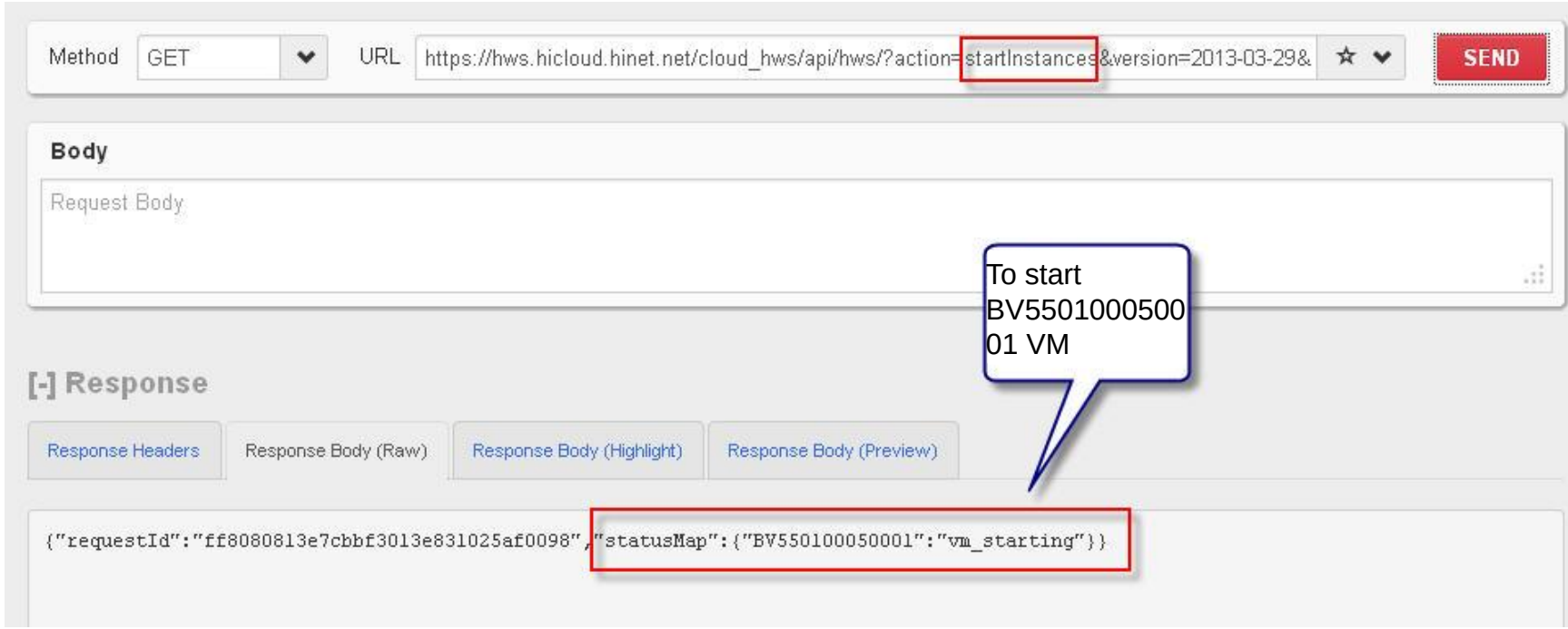
hicloud CaaS API

THE OPERATION OF VM

- Starting :startInstances
  - Parameter: businessServiceId (Can be plural)
- Shutting down: stopInstances
  - Parameter: businessServiceId (Can be plural)
- Rebooting : rebootInstances
  - Parameter: businessServiceId (Can be plural.)

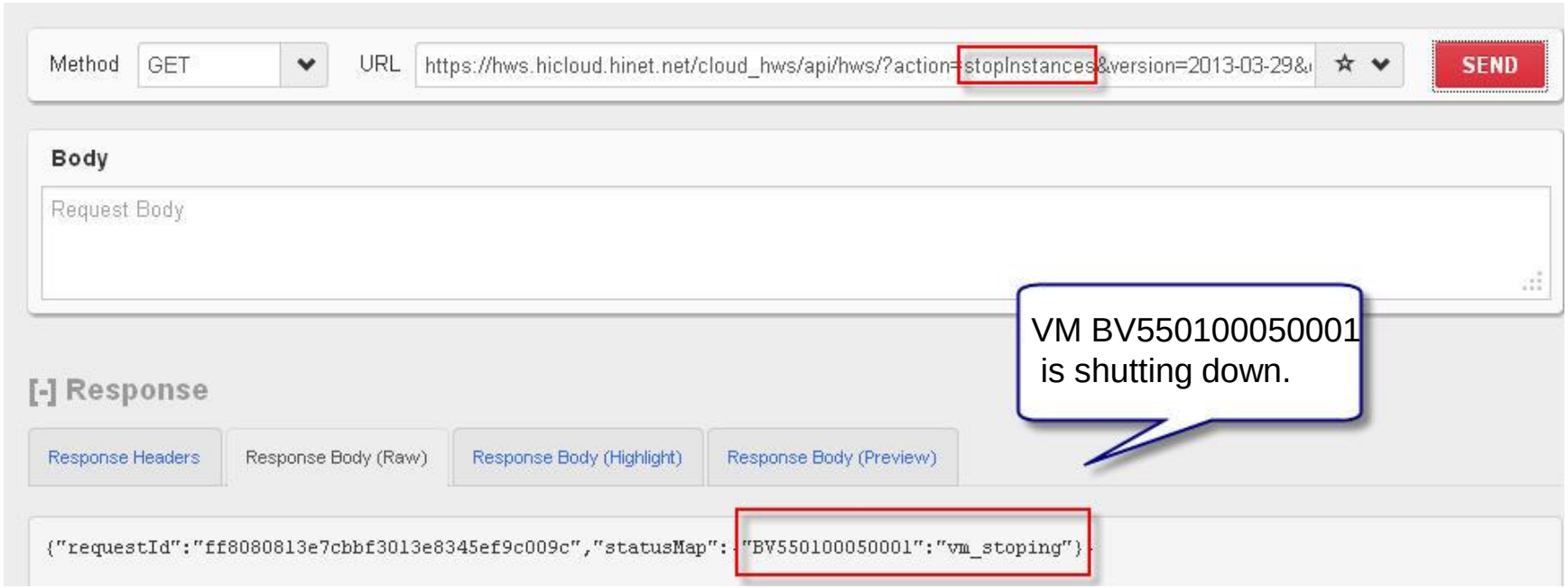
STARTING A VM (1/2)

STARTING A VM (2/2)

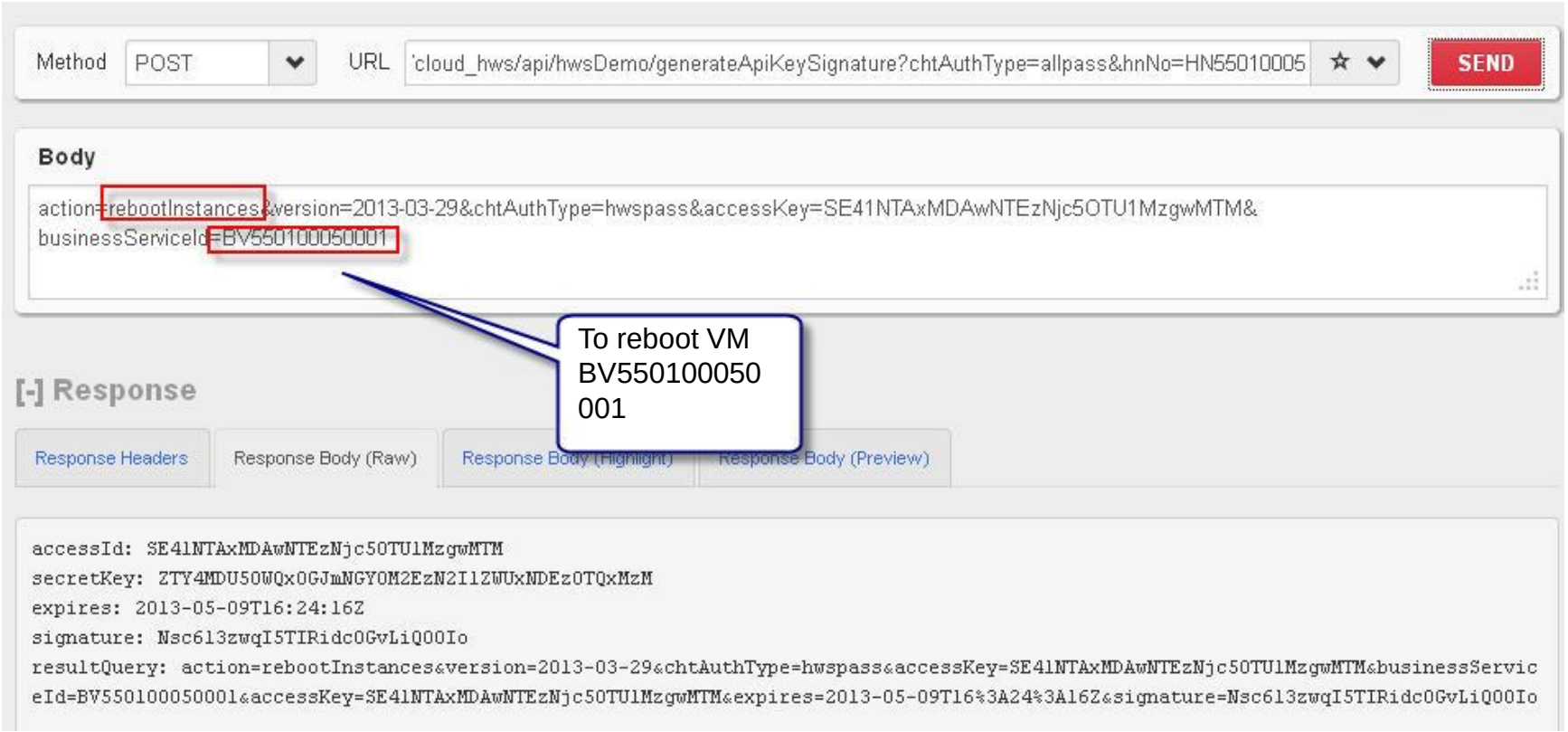


SHUTTING DOWN A VM (1/2)

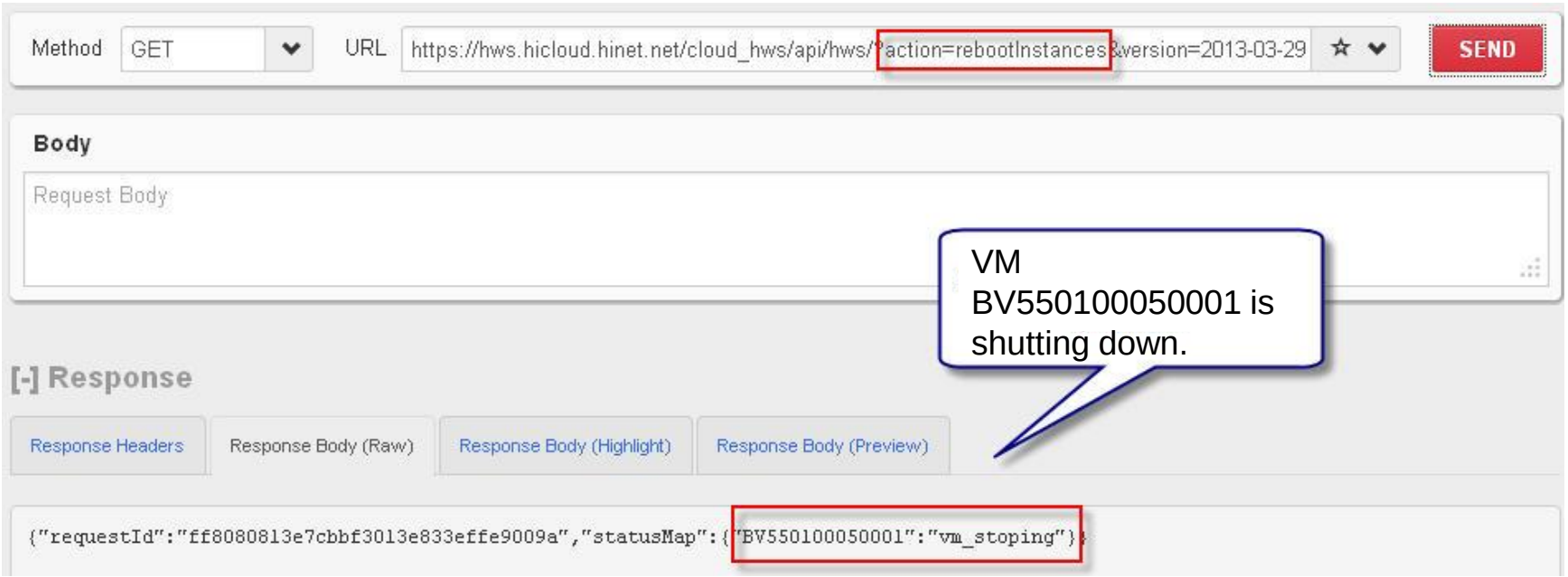
SHUTTING DOWN A VM (2/2)



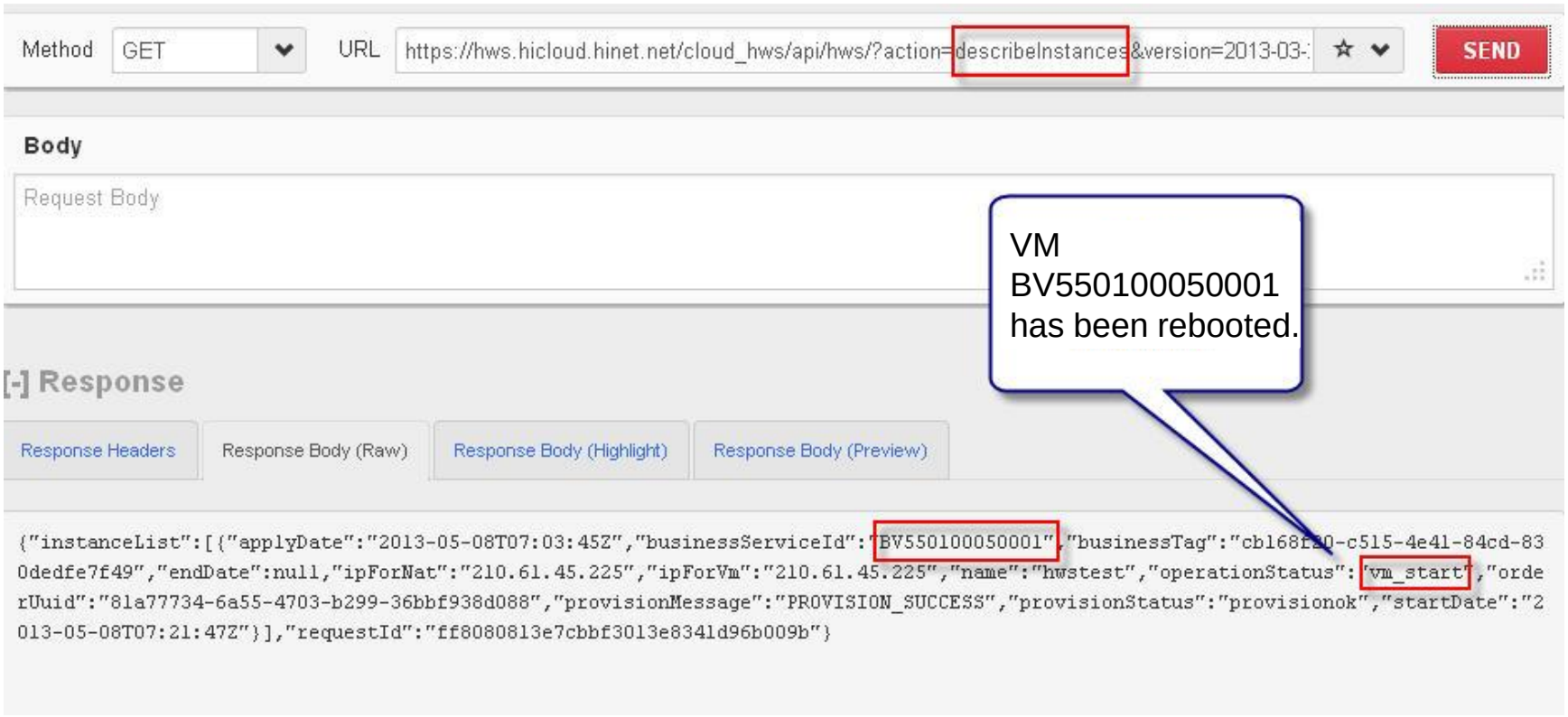
REBOOTING A VM (1/3)



REBOOTING A VM (2/3)

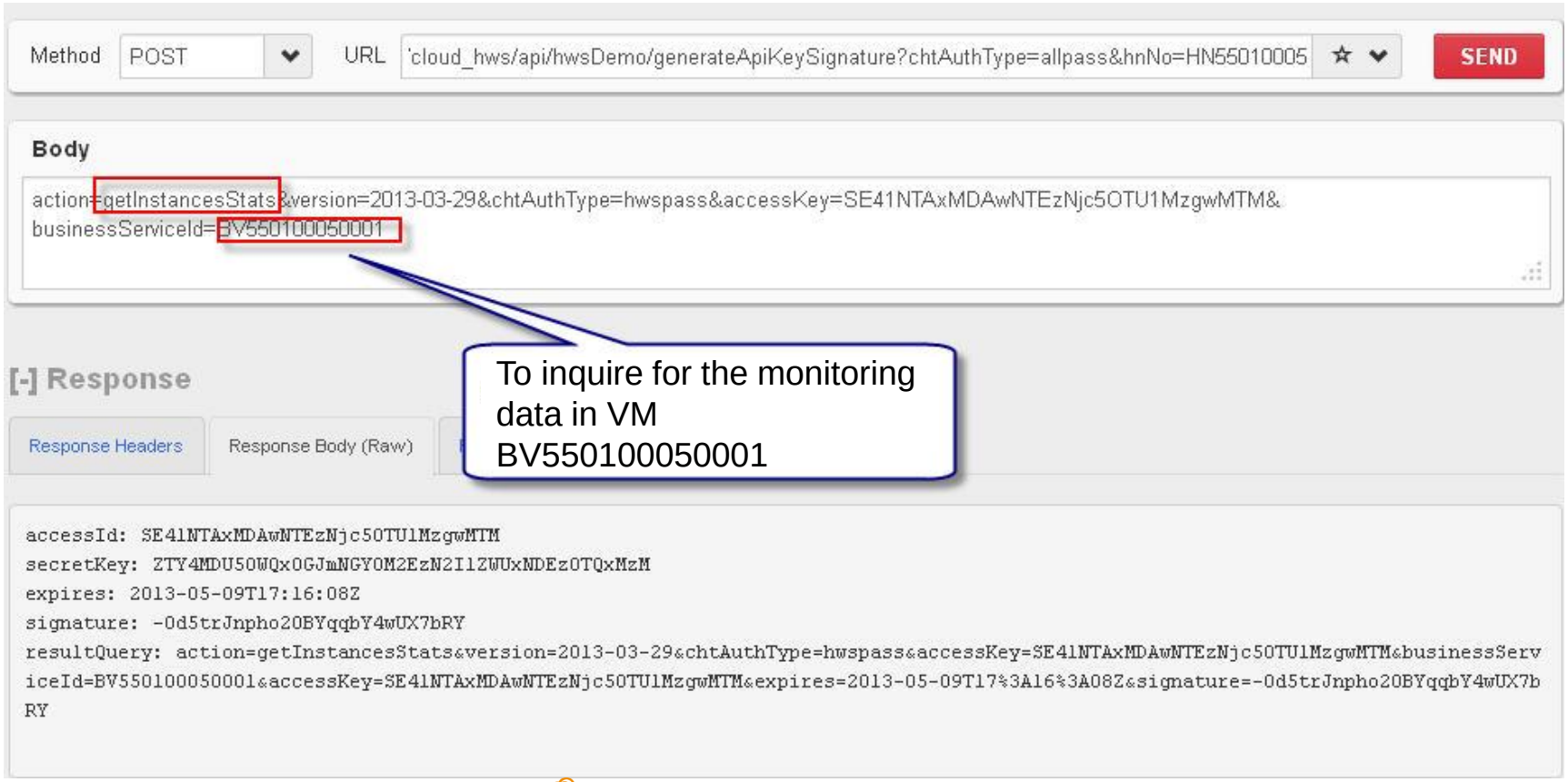


REBOOTING A VM (2/3)

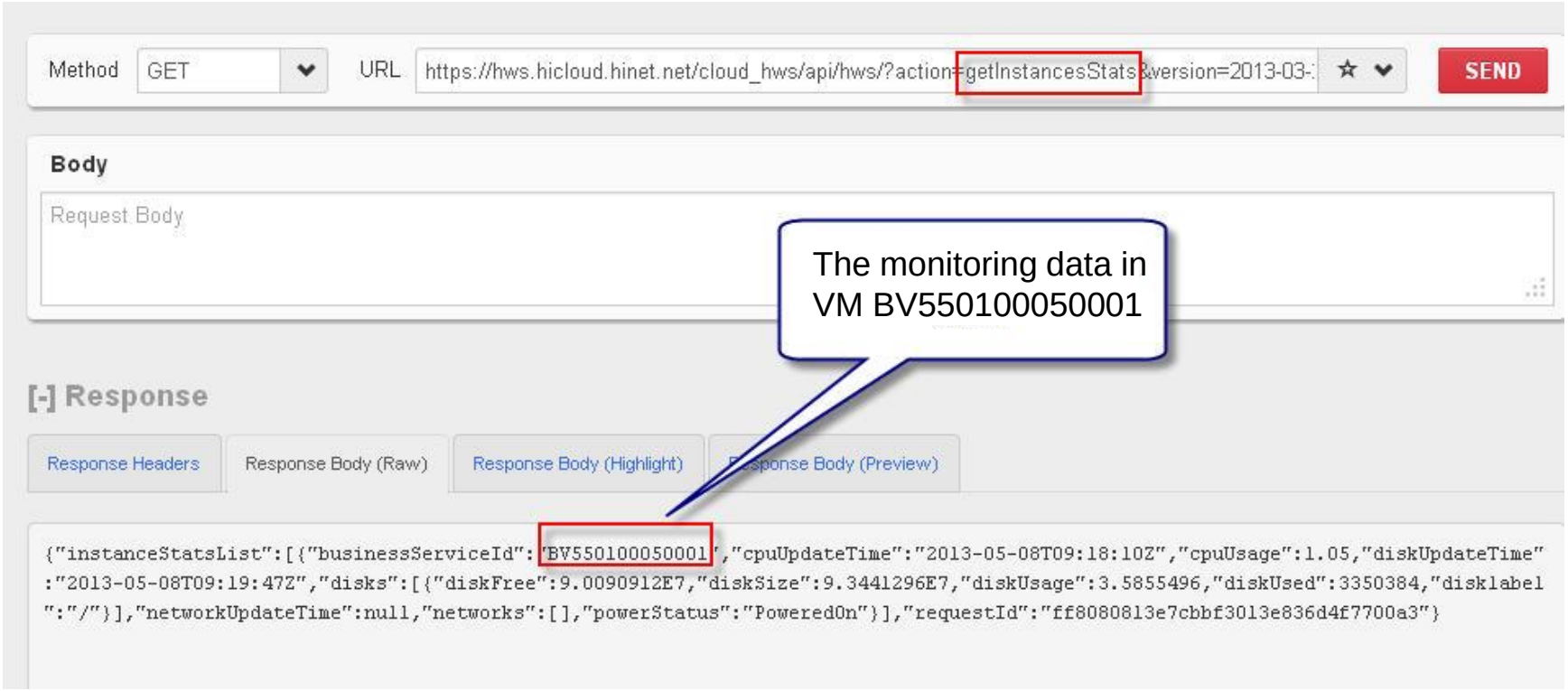


VM MONITORING (1/3)

- Related Order :getInstancesStats
  - Paramter: businessServiceId (Can be plural)

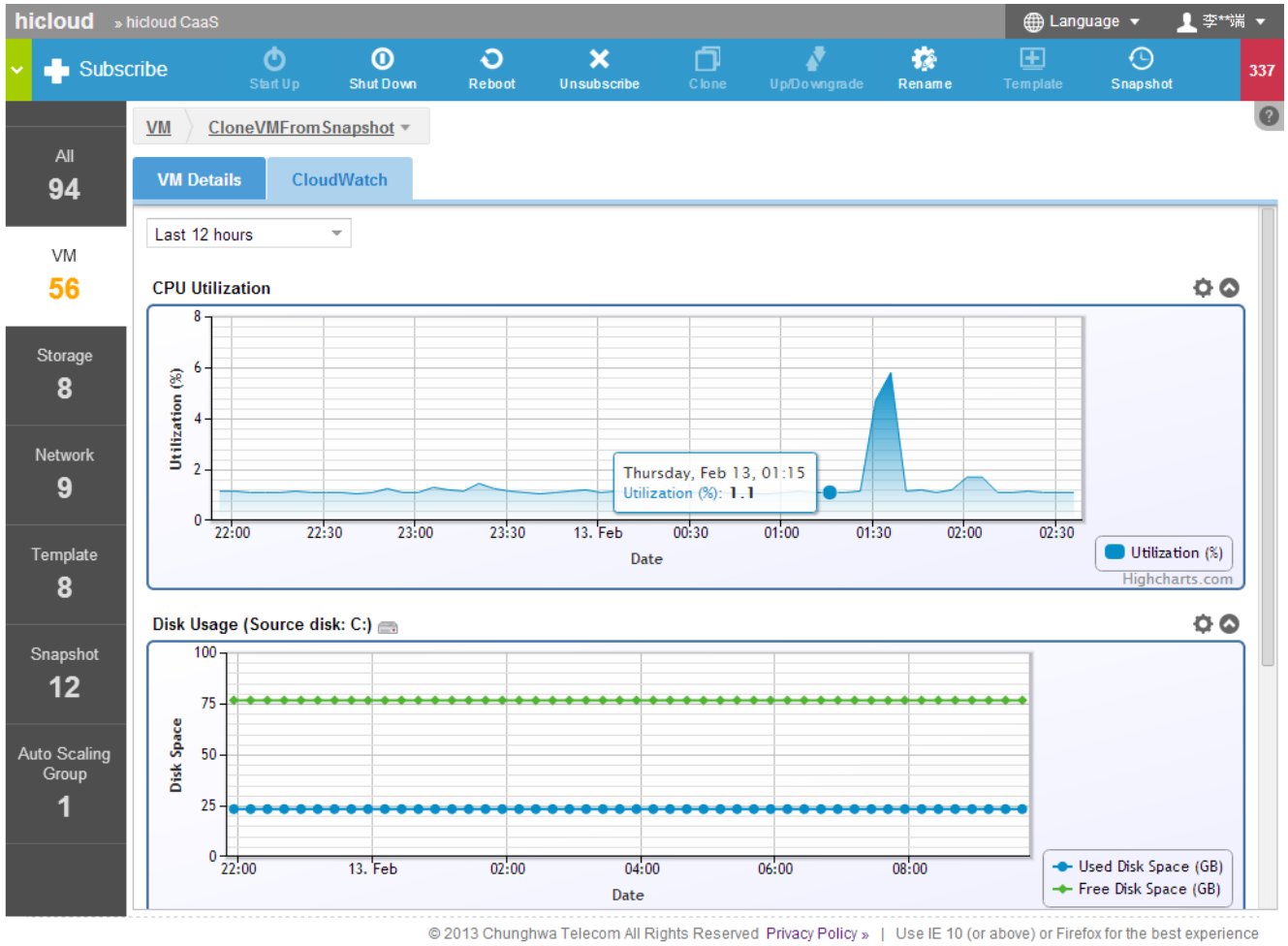


虛擬機監控VM MONITORING (2/3)



hicloud CaaS API

VM MONITORING (3/3)



hicloud CaaS API

THE SCALE OF FIRST PHASE API IN hicloud

- 12 APIs in the first phase include VM, SLB, and CloudWatch. The user can apply for VM and establish scaling mechanism through these basic APIs.

分類 Classification	API Name	Description
VM	runInstances	To build a VM (Clone From Template or VM Service ID can be assigned.)
	terminateInstances	To delete VM.
	rebootInstances	To reboot VM.
	startInstances	To initiate VM.
	stopInstances	To stop VM.
	describeInstances	To inquiry for VM list.
	modifyInstanceAttribute	To upgrade or degrade VM (including the change in CPU or RAM or Cloud Watch).
CloudWatch	getInstancesStats	To acquire the latest data in VM monitoring.
LoadBalancer	describeLoadBalancerPolicies	To inquire for the list of load balancer policies.
	createLoadBalancerPolicy	To create load balancer policies.
	replaceLoadBalancerPolicy	To change load balancer policies.
	deleteLoadBalancerPolicy	To delete load balancer policies.

hicloud CaaS API

You can also use it like this...

EXAMPLE-OO SOFTWARE TESTING COMPANY

- Example: OO Software Company
- Through several testing controller to simulate the high voltage test and stability test on the website for the tested system and find out its function indicator.

It goes through 3-10 days of testing each time.

Afterwards, the result would be reported to the customer.

The method of OO software testing project building: Through hicloud CaaS, API would work on fast setup and layout for the VM with testing software.

Demo of Repetitive Installment Project Environment

To clone the project environment quickly so as to lower the cost.

hicloud

Cloud BOSS 雲寶管控系統

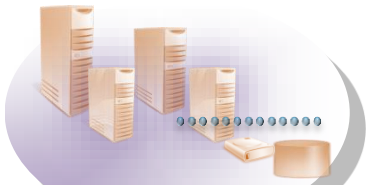
OO Software Testing Company

Security scanning and weakness analysis.

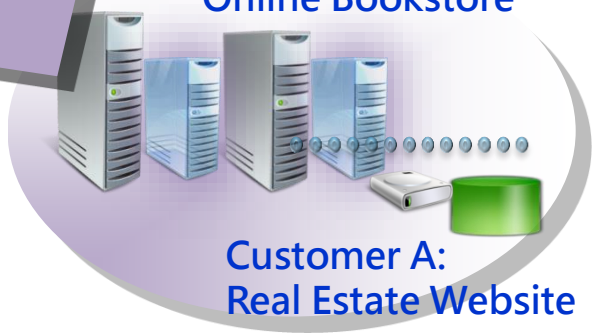
Security scanning and weakness analysis.

Security scanning and weakness analysis.
Reliability testing and availability testing.

Customer C:
Registration Website



Customer B:
Online Bookstore



Customer A:
Real Estate Website

EXAMPLE-XX SECURITIES COMPANY

- Example-XX Securities Company

  To use several VM to work on stock exchange. The IP of each VM cannot be the same each day. Each VM can only be used from 8 am to 2 pm each day.

  VM should be applied and returned at designated time each day

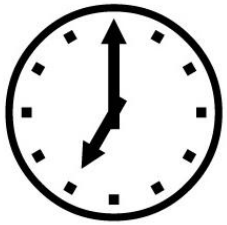
  20-40 VMs are needed each day.

  The method of XX Securities Project Establishment：

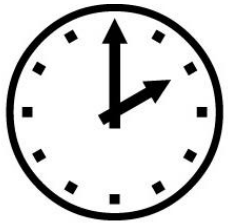
  To call for hicloud regularly each day.

  CaaS API installs VM and returns it at designated time.

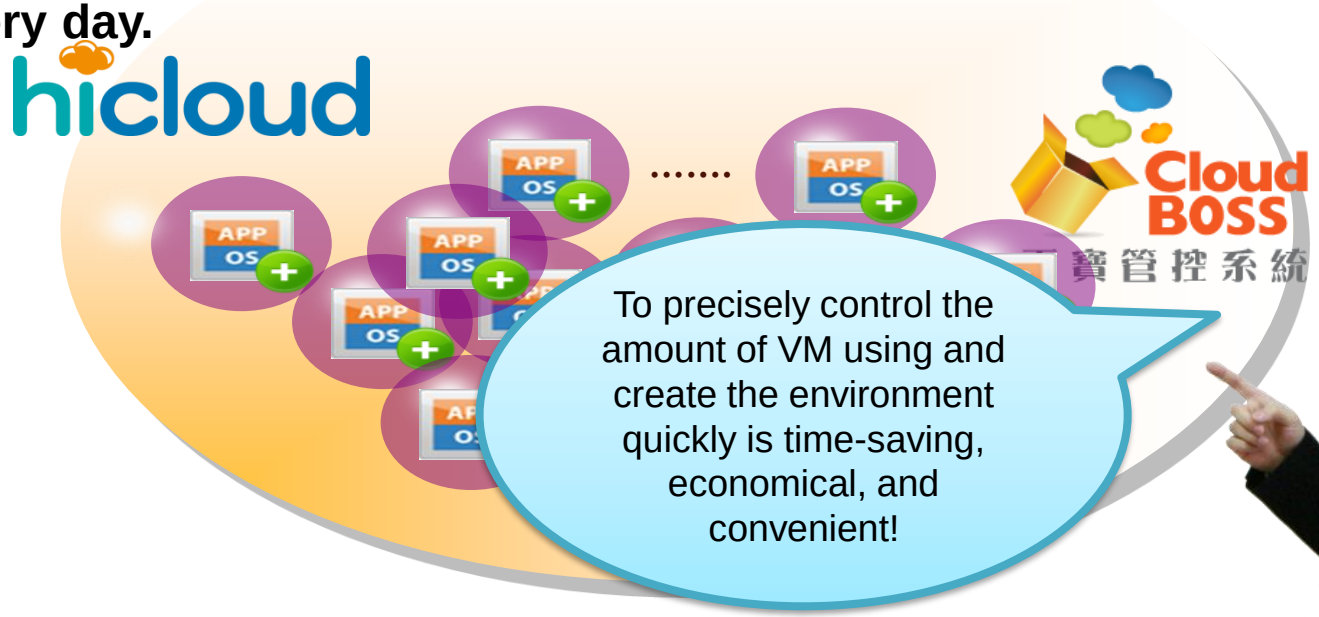
To produce VM environment at designated time.



VM To automatically apply for 20 VMs at 7 am every day.



To return every VM at 2 pm every day.



EXAMPLE: YY TICKET BOOKING WEBSITE COMPANY

- Sold-out in an instant
  - Mayday Concert

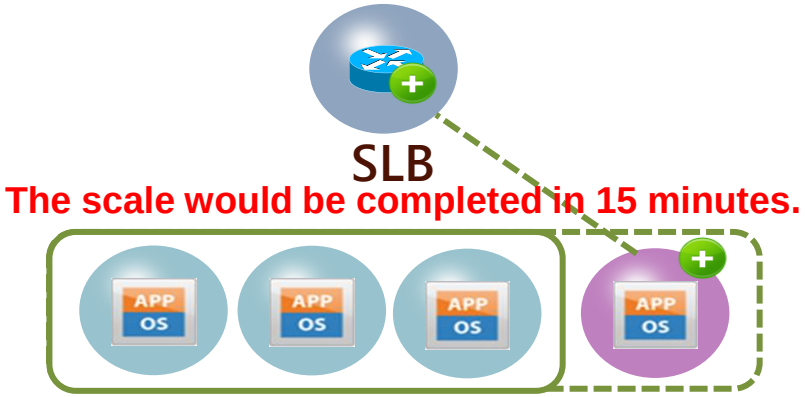
- To be sold for a while
  - Yu-tien's Concert
  - The website traffic is not expected to increase. Even if it increases, there is no jam.

- According to the contract
  - **The website traffic would not be jammed, but in order to stabilize the browsing quality, the service standard should be even and the service VM should be automatically extended.**

According to the Contract

SLA

- The average of CPU utilization every day is more than 60% for a day. Scale out is required.



hicloud CaaS API

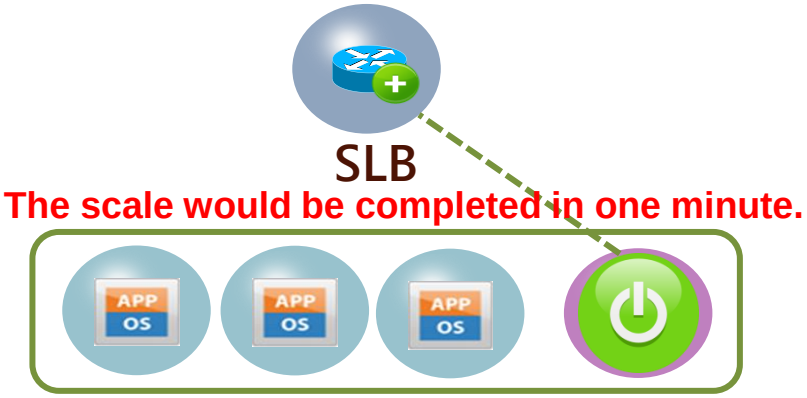
- createLoadBalancerPolicy
  To build load balance service.
- GetInstancesStats
  To check if cpu, men utilization is much too high.
  - runInstances
    VM To clone VM.
  - replaceLoadBalancerPolicy
    To include VM IP in SLB.
  - StartInstance
    To start VM

- GetInstancesStats
  To check if cpu and men utilization is too low.
  - StopInstance
    To shut down VM.
  - terminateInstances
    To return VM
  - replaceLoadBalancerPolicy
    To move VM IP out of SLB.

To be sold for a while

SLA

- The average of CPU utilization each hour is more than 60% for a hour.



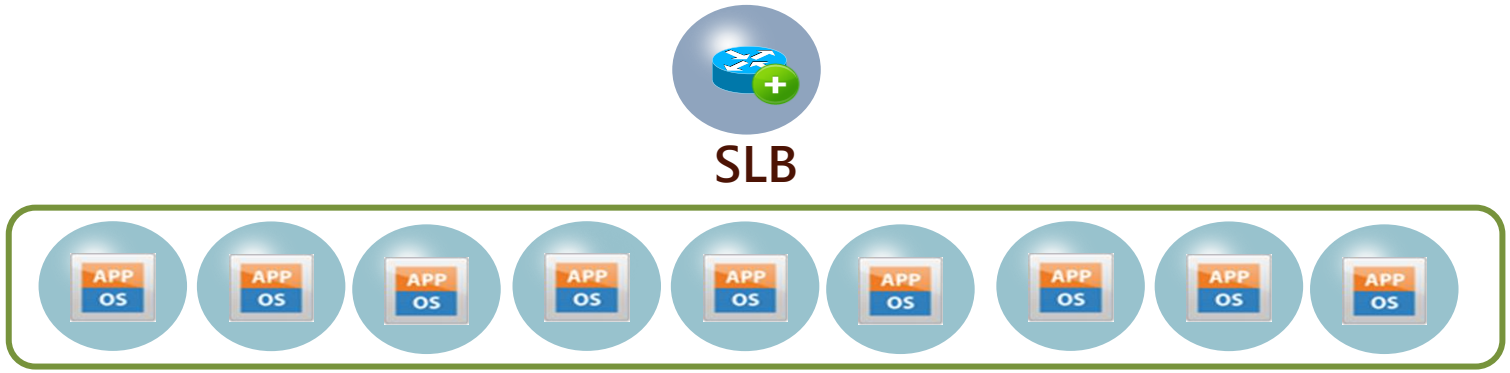
hicloud CaaS API

- createLoadBalancerPolicy
  To build load balance service.
- runInstances
  To clone VM (without starting VM)
- replaceLoadBalancerPolicy
  To include VM IP in SLB

  To check if cpu and men utilization is too high.
- GetInstancesStatus
  - startInstance
    To start VM (entering the service.

To be sold-out in an instant

When the time is up, prepare for enough VMs!



Q&A

中華電信
Chunghwa Telecom

For you, we always walk at the head of time.