VDI by OpenStack

MHR Inc. 안명호

james@netracloud.org

facebook.com/james.ahn.9

VDI(Virtual Desktop Infrastructure)

https://vudinhnghi.wordpress.com/2013/11/05/virtual-desktop-infrastructure-vdi-vmware-horizon-view-5-2/

Why VDI?

시간과 **장소에** 얽매이지 않고 **언제 어디서나** 일할 수 있는 체제

Players in VDI

OpenStack & VDI?

=

openstack™
CLOUD SOFTWARE

Microsoft®
Windows®

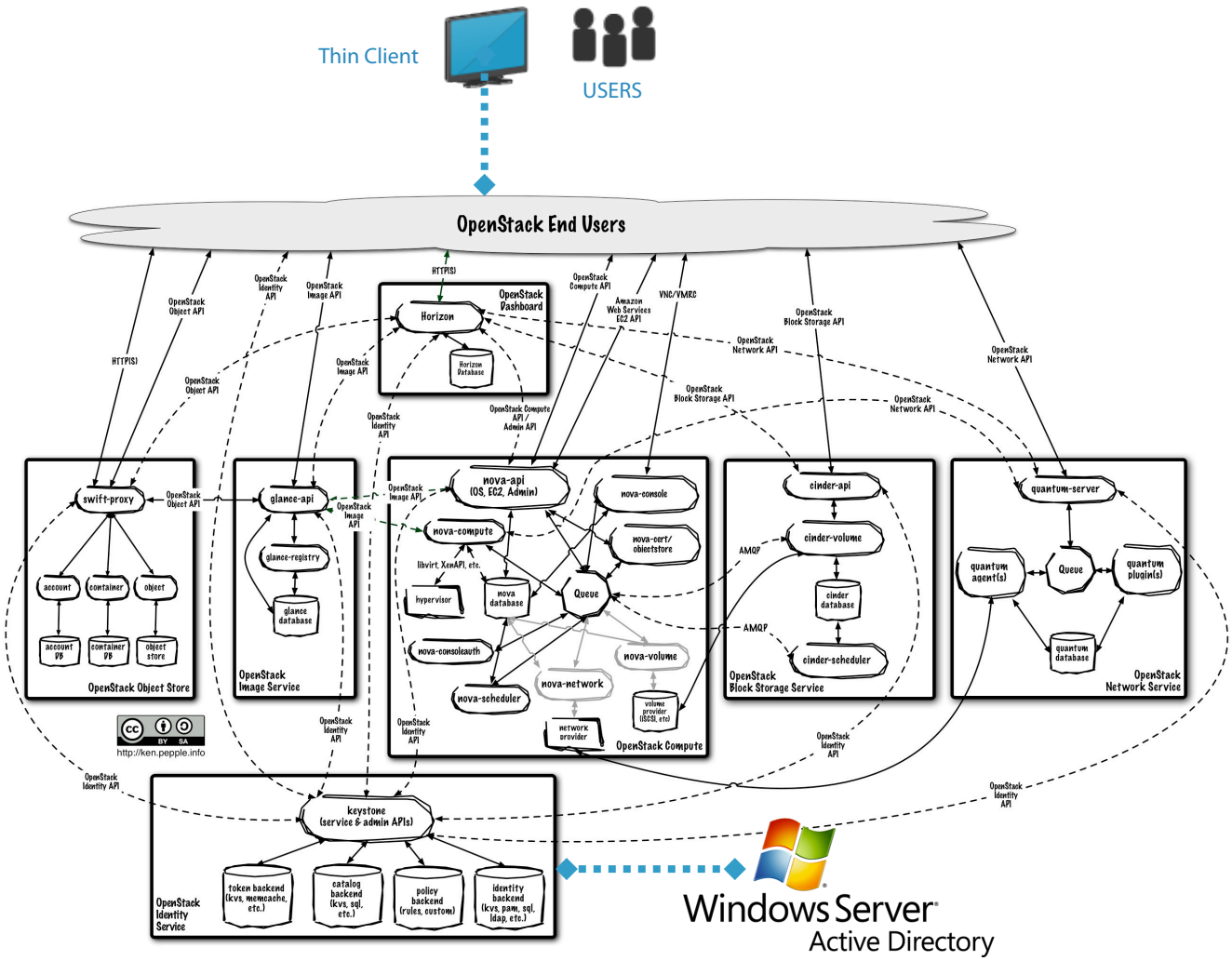
nux

Ctrip case

Ctrip VDI - 2013

- Agents : 10k+
  - Regular day : 200k+/day
- Location
  - Shanghai
  - Nantong: 12k seats
  - Chengdu
- Facebook : Hack

VDI by OpenStack



OpenStack VDI User Experience

In short, acceptable!!!

XP was a nightmare, but windows7 is ok.

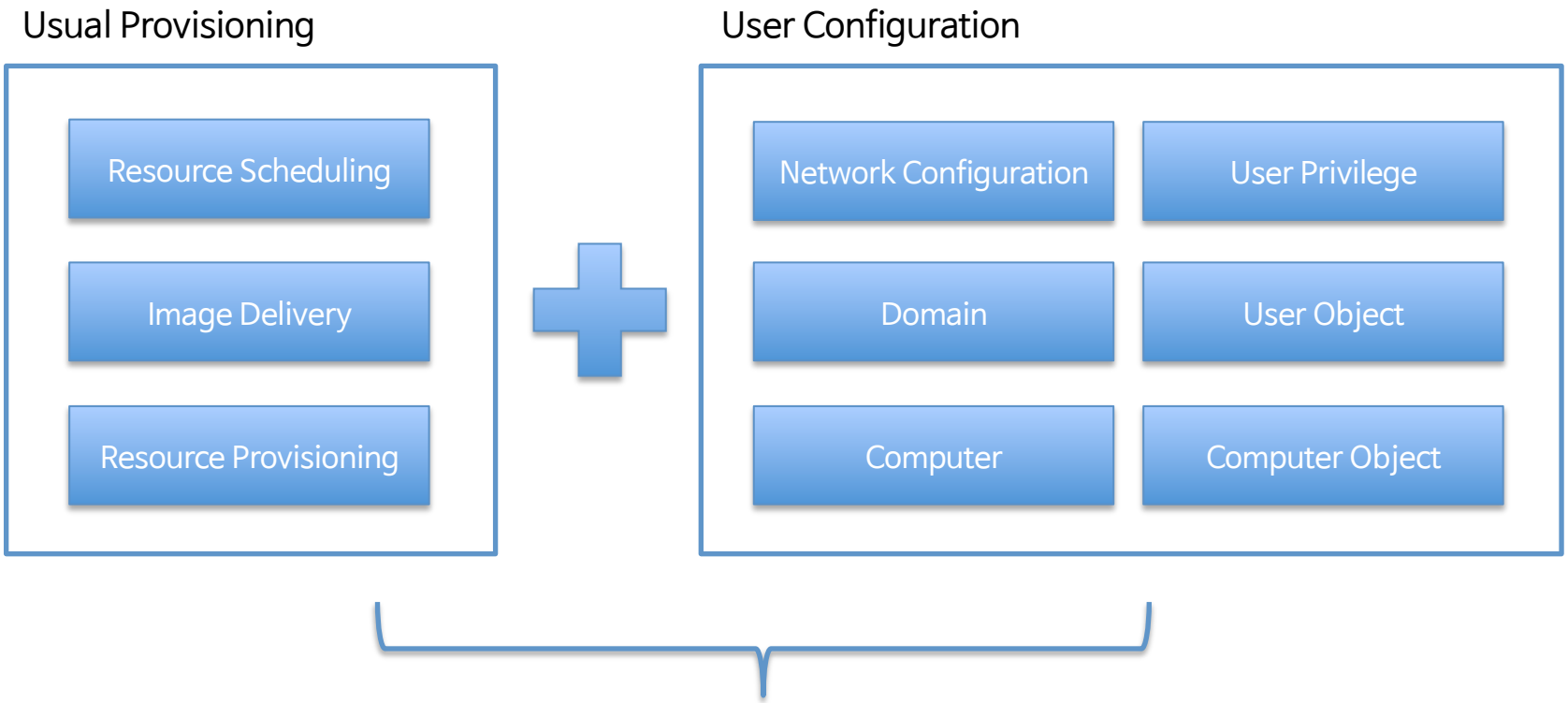
Not good

- Video
- High Graphic Processing

Technical Issues

1. Provisioning
2. Connection
3. Cloud-Init
4. Boot Storm
5. Automation

1. Provisioning!!!

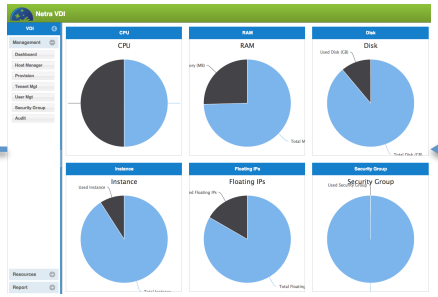


VDI Provisioning process -〉 Dedicated Provisioning Server

by image, not template

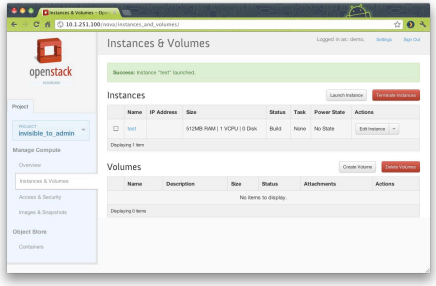
VDI Portal

Provisioning Server



VDI Portal

Windows

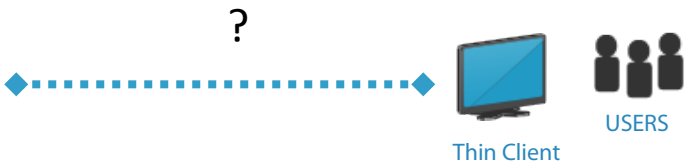


Horizon

Linux

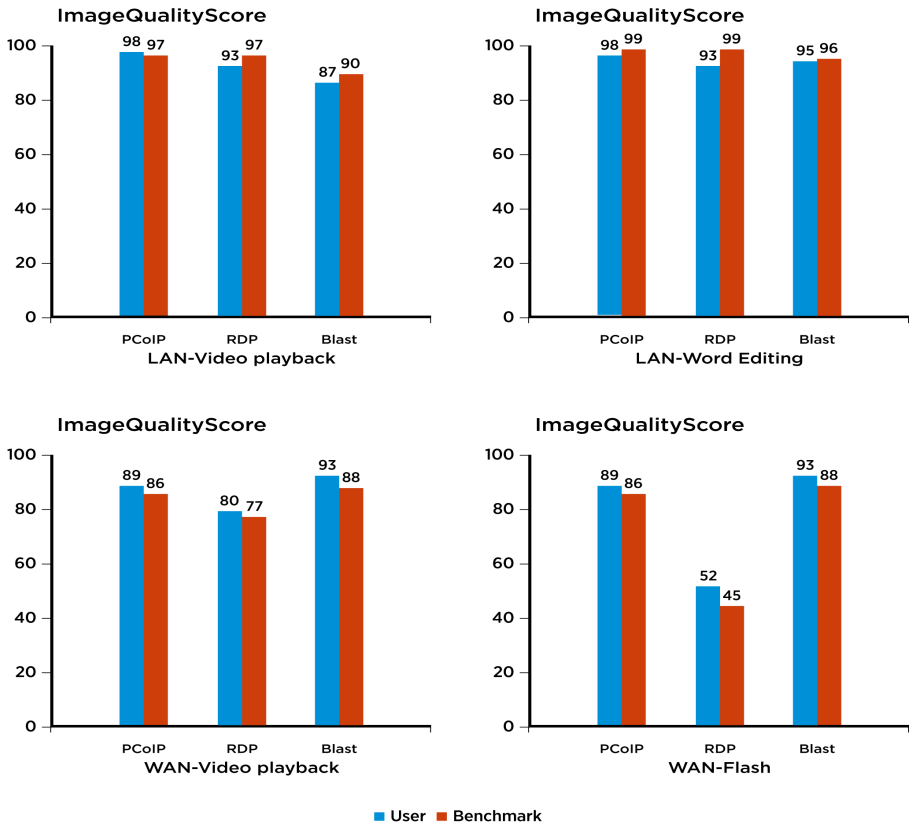
2. Connection

Virtual Desktop



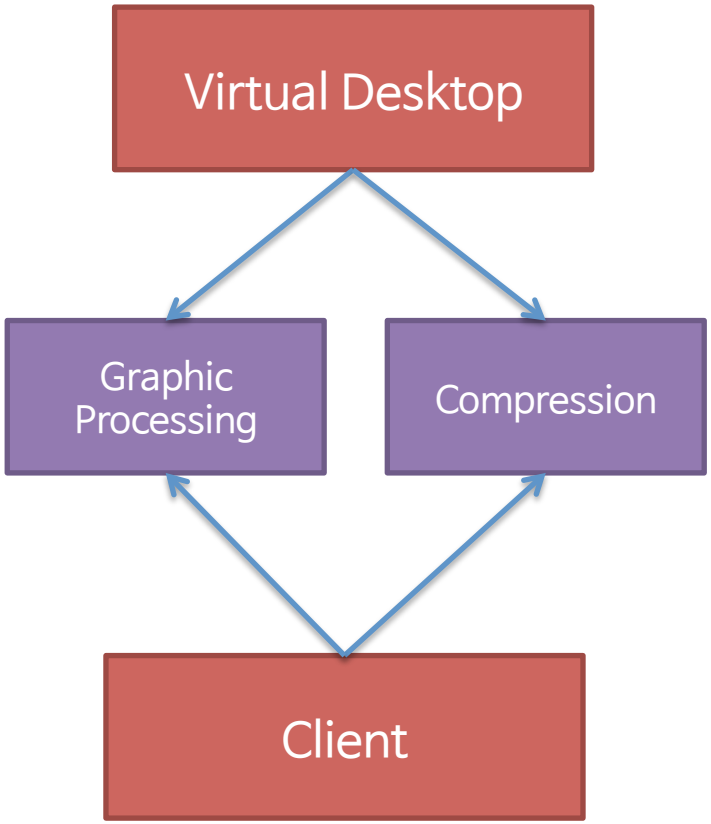
VDI Protocol Performance

Performance Comparison Chart



https://labs.vmware.com/author/dwalcoff

Screen Sharing Overview

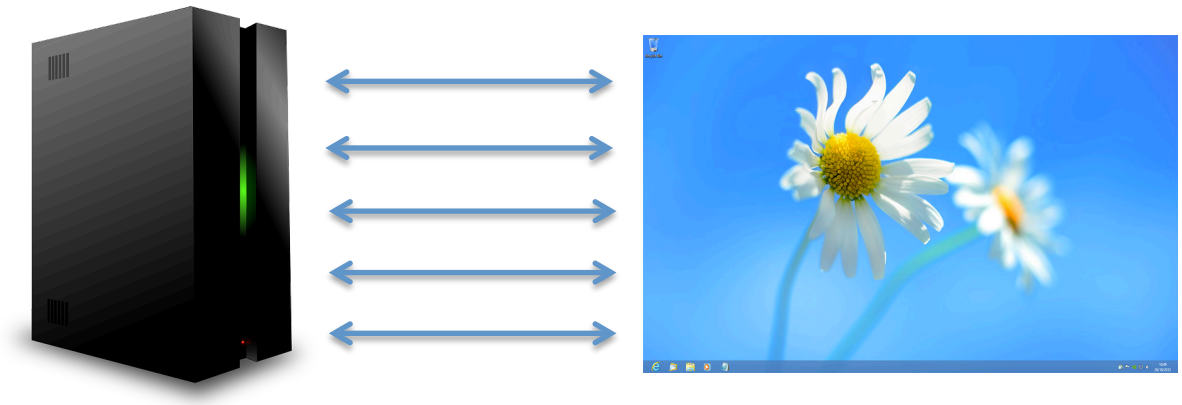


3. Cloud Init

No Network, No Event

User Configuration

- Network Configuration
- Domain
- Computer
- User Privilege
- User Object
- Computer Object



By Service Application & Power Shell

PowerShell

```
PS C:\> Get-ChildItem 'MediaCenter:\Music' -rec |
>>        where { -not $_.PSIsContainer -and $_.Extension -match 'wma|mp3' } |
>>        Measure-Object -property length -sum -min -max -ave
>>


Count    : 1307
Average  : 5491276.09563887
Sum      : 7177097857
Maximum  : 22905267
Minimum  : 3235
Property : Length


PS C:\> Get-WmiObject CIM_BIOSElement | select biosv*, man*, ser* | Format-List


BIOSVersion  : {TOSCPL - 6040000, Ver 1.00PARTTBL}
Manufacturer : TOSHIBA
SerialNumber : M821116H


PS C:\> ([wmiSearcher]@'
>> SELECT * FROM CIM_Job
>> WHERE Priority > 1
>> '@).get() | Format-Custom
>>

class ManagementObject#root\cimv2\Win32_PrintJob
{
  Document = Monad Manifesto - Public
  JobId = 6
  JobStatus =
  Owner = User
  Priority = 42
  Size = 1027088
  Name = Epson Stylus COLOR 740 ESC/P 2, 6
}


PS C:\> $rssUrl = 'http://blogs.msdn.com/powershell/rss.aspx'
PS C:\> $blog = [xml](new-object System.Net.Webclient).DownloadString($rssUrl)
PS C:\> $blog.rss.channel.item | select title -first 3

title
-----
MMS: What's Coming In PowerShell V2
PowerShell Presence at MMS
MMS Talk:  System Center Foundation Technologies


PS C:\> $host.version.ToString().Insert(0, 'Windows PowerShell: ')
Windows PowerShell: 1.0.0.0
PS C:\>
```

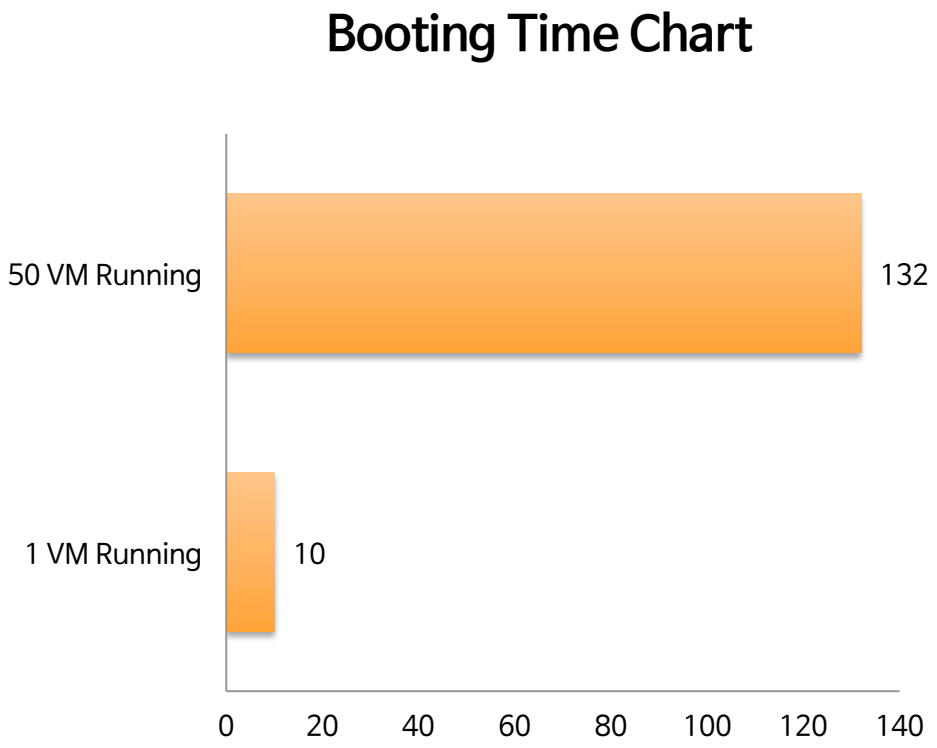
윈도 파워셸(Windows PowerShell)은 마이크로소프트가 개발한 확장 가능한 명령줄 인터페이스(CLI) 셸 및 스크립트 언어이다. 객체 지향에 근거해 설계되고 있어 닷넷 프레임워크 2.0을 기반으로 하고 있다. 이전에는 마이크로소프트 셸(MSH, 코드네임 Monad)로 불리고 있었다.

현재 윈도 XP, 윈도 서버 2003, 윈도 비스타, 윈도 서버 2008, 윈도 7, 윈도 8, 윈도 서버 2008 R2를 모두 지원한다.

http://ko.wikipedia.org/wiki/%EC%9C%88%EB%8F%84_%ED%8C%8C%EC%9B%8C%EC%85%B8

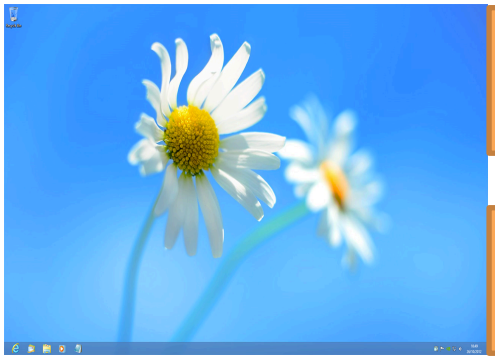
4. Boot Storm


Starting Windows


Booting Time Chart
50 VM Running
132
1 VM Running
10
0
20
40
60
80
100
120
140

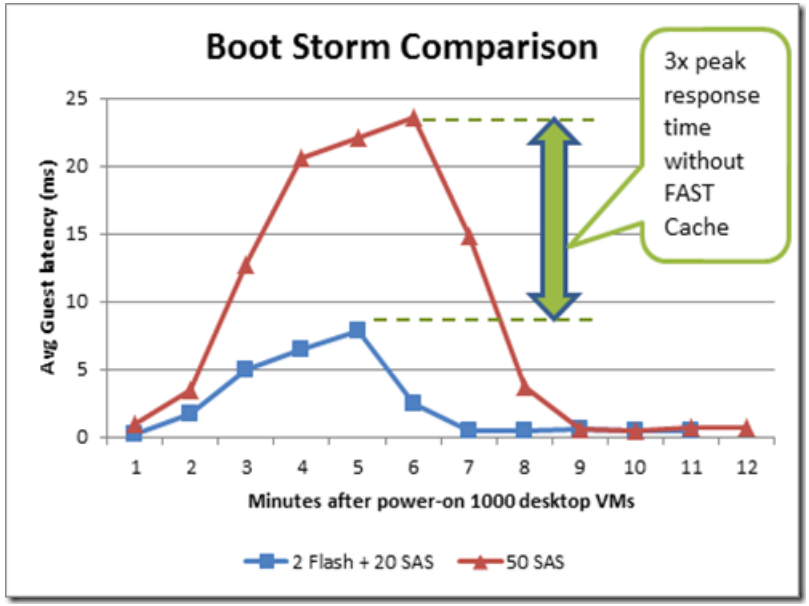
Powered by SSD

Money!!!



SSD
(OS)

SATA
(Data)



https://itzikr.wordpress.com/2011/06/09/citrix-xendesktop-5-on-emc-vnx-match-made-in-heaven-part2/

5. Automation

Automation is not an option!!!

Too many requests

- VM Backup
- Password Recovery
- Sharing Folder Configuration
- Change IP Address
- Change Personal info
- Reset VM
- Provisioning VMs
- Security Check

……

Automation by DSL Script

```
new_task = Common::Task::NetraTask.new_task("hello_world!!!")

new_task.server do
        create :name => "another", :template => "m1.tiny", :image => "cirros", :security_group => "default"
        delete :server => "another"
        snapshot :server => "another", :snapshot_name => "another_snapshot1"
        associate_floating_ip :server => "another"
        #associate_floating_ip :server => "another", :ip => "192.168.5.1"
        disassociate_floating_ip :server => "another", :ip => "192.168.56.193"
end

new_task.disk do
        create :name => "vol1", :size => 1, :type => "Performance", :description => "Test Volume"
        delete :disk => "vol1"
        backup :disk => "vol1", :backup_name => "vol1_Backup", :description => "test backup"
        attach_to :disk => "vdx", :server => "Netra"
        #attach_to :disk => "vdx", :server => "another", :device => "/dev/vdd"
        detach_from :disk => "vol1", :server => "another"
end

new_task.run
```

감사합니다.