

# CheatSheet: VMware Nimbus

## VMWARE

- PDF Link: [cheatsheet-nimbus-A4.pdf](#), Category: VMware
- Blog URL: <https://cheatsheet.dennyzhang.com/cheatsheet-nimbus-A4>
- Related posts: Prometheus CheatSheet, Nagios CheatSheet, #denny-cheatsheets

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## 1.1 Nimbus Basic

Name	Summary
Nimbus	VMware's internal vSphere based cloud written in Ruby
Nimbus Cloud	Nimbus cloud contains a lot of ESX hosts. Nimbus Pods can be seen as data centers.
Nimbus Pod	It is created during a vSphere setup, after setup, it contains one VC and associated ESX hosts.
Nimbus Site	Each site is a separate Nimbus cloud with all of its peripherals. Currently we have: SC and WDC
nimbus-ctl	Ruby CLI for vmomi client
All nimbus tools	/mts/git/bin/nimbus*

<https://raw.githubusercontent.com/dennyzhang/cheatsheet.dennyzhang.com/master/cheatsheet-nimbus-A4/nimbus.png>

## 1.2 vsphere resource

Name	Summary
Data center	
Resource pool	
VM folder	
Host group	
vc	
dvs	

## 1.3 Nimbus CLI

Name	Summary
List Testbed	/mts/git/bin/nimbus-ctl --testbed list
List all VMs of one testbed	/mts/git/bin/nimbus-ctl --testbed list \$testbed_name
Destroy a testbed/VM	/mts/git/bin/nimbus-ctl --testbed kill \$testbed_name
Extend lease of a testbed	/mts/git/bin/nimbus-ctl --lease 5 --testbed extend-lease \$testbed_name
List ip of all VMs	/mts/git/bin/nimbus-ctl ip
Choose nimbus location	NIMBUS_LOCATION=wdc /mts/git/bin/nimbus-ctl ip
Specify nimbus userid	USER=someusername /mts/git/bin/nimbus-ctl list
List all snapshot	NIMBUS={{POD}} /mts/git/bin/nimbus-ctl -testbed list-snapshot
Take snapshot for a testbed	NIMBUS=sc-prd-vc012 /mts/git/bin/nimbus-ctl -outputPath=\$HOME screenshot denny-snapsho
Take snapshot for a testbed	NIMBUS={{POD}} /mts/git/bin/nimbus-ctl -testbed -snapshotIncludeMemory -snapshot \$snaps
Take snapshot for a vm	NIMBUS={{POD}} /mts/git/bin/nimbus-ctl -snapshotIncludeMemory -snapshot \$snapshotname
Revert all snapshot	NIMBUS={{POD}} /mts/git/bin/nimbus-ctl -testbed -snapshot \$snapshotname revert-snapshot \$
Reference	Gitlab: nimbus
Reference	CheatSheet: VMware Govmomi, CheatSheet: VMware Nimbus

## 1.4 Deploy Workload In Nimbus

Name	Summary
Nimbus testbed spec file	A json/ruby spec file to setup on-demand nimbus testbed.
List Supported VM Templates	<code>/mts/git/bin/nimbus-genericdeploy --list</code>
Deploy with a spec file	<code>/mts/git/bin/nimbus-testbeddeploy --testbedSpecRubyFile testbed_iscsi.rb --run</code>
Deploy NSX Manager	<code>/mts/git/bin/nimbus-nsxmdeploy --lease 7 --nsxBuild ob-7946221 nsxm-ob-7946221</code>
Deploy NSX Controller	<code>/mts/git/bin/nimbus-nsxcdeploy --lease 7 --nsxBuild ob-7946221 nsxc-ob-7946221</code>
Deploy NFS with 1 mount point	<code>/mts/git/bin/nimbus-nfsdeploy --disk 134217728 --mountPoint /storage-1 cbrc-nf</code>
Deploy: 1 vova, 2 ESX, 2 iscsi	Sample: testbed-iscsi.rb
Deploy: 1 vsan	Sample: testbed-vsan.rb
Deploy Concourse	Sample: Deploy a Concourse Instance on Nimbus
Reference	Link: TestbedSpec, Demo: Deploy Your First Nimbus Testbed
Reference	Link: Logic of part of Nimbus-testbeddeploy code

## 1.5 nimbus tools

```
-bash-4.1$ ls -lt /mts/git/bin/nimbus*
-rwxr-xr-x 1 syncer mts      137 Dec 10 17:27 /mts/git/bin/nimbus-nsx-auto-edge-deploy
-rwxr-xr-x 1 syncer mts      133 Nov 19 22:32 /mts/git/bin/nimbus-nsxTsrmd-deploy
-rwxr-xr-x 1 syncer mts      129 Nov 19 22:32 /mts/git/bin/nimbus-vmip-retrieve
-rwxr-xr-x 1 syncer mts      129 Sep 29  2018 /mts/git/bin/nimbus-tbspec-search
-rwxr-xr-x 1 syncer mts      134 Aug 16  2018 /mts/git/bin/nimbus-srmphoton-deploy
-rwxr-xr-x 1 syncer mts      125 Jul 20  2018 /mts/git/bin/nimbus-racetrack
-rwxr-xr-x 1 syncer mts      134 Jun 13  2018 /mts/git/bin/nimbus-srm-vr-jenkin-job
-rwxr-xr-x 1 syncer mts      127 Jun 13  2018 /mts/git/bin/nimbus-vr-deploy
-rwxr-xr-x 1 syncer mts      133 Jan  4  2018 /mts/git/bin/nimbus-post-deployer-def
-rwxr-xr-x 1 syncer mts      128 Dec 20  2017 /mts/git/bin/nimbus-ldap-dump-pg
-rwxr-xr-x 1 syncer mts      144 Nov 20  2017 /mts/git/bin/nimbus-ucp-deploy
-rwxr-xr-x 1 syncer mts      609 Aug 20  2017 /mts/git/bin/nimbusvc-base
-rwxr-xr-x 1 syncer mts      139 Aug 17  2017 /mts/git/bin/nimbus-setup-master
-rwxr-xr-x 1 syncer mts      192 Jul  3  2017 /mts/git/bin/nimbus-testbed-clone
-rwxr-xr-x 1 syncer mts      141 Jul  3  2017 /mts/git/bin/nimbus-vca-wanopt-deploy
-rwxr-xr-x 1 syncer mts      144 Jun 12  2017 /mts/git/bin/nimbus-worker-deploy
-rwxr-xr-x 1 syncer mts 33791680 Jan 30  2017 /mts/git/bin/nimbus_recommend
-rwxr-xr-x 1 syncer mts      3394 Dec 16  2016 /mts/git/bin/nimbus-vropsloginsight-test-launcher
-rwxr-xr-x 1 syncer mts      205 Oct 31  2016 /mts/git/bin/nimbus
-rwxr-xr-x 1 syncer mts      185 Oct 31  2016 /mts/git/bin/nimbus-testbeddeploy
-rwxr-xr-x 1 syncer mts      185 Oct 31  2016 /mts/git/bin/nimbus-test-launcher
-rwxr-xr-x 1 syncer mts      185 Oct 31  2016 /mts/git/bin/nimbus-vcqa-launcher
-rwxr-xr-x 1 syncer mts      125 Oct 30  2016 /mts/git/bin/nimbus-ldap-dump
-rwxr-xr-x 1 syncer mts      135 Sep 27  2016 /mts/git/bin/nimbus-failure-investigate
-rwxr-xr-x 1 syncer mts      145 Aug 31  2016 /mts/git/bin/nimbus-fiaasco-deploy
-rwxr-xr-x 1 syncer mts      127 Jun  8  2016 /mts/git/bin/nimbus-srm-install
-rwxr-xr-x 1 syncer mts      134 Jun  8  2016 /mts/git/bin/nimbus-srmttestbed-deploy
-rwxr-xr-x 1 syncer mts      138 Jun  7  2016 /mts/git/bin/nimbus-vca-cgw-deploy
-rwxr-xr-x 1 syncer mts      134 May 13  2016 /mts/git/bin/nimbus-vcqa-inbox-upgrade
-rwxr-xr-x 1 syncer mts      148 May  4  2016 /mts/git/bin/nimbus-one-cloud-esxdeploy
-rwxr-xr-x 1 syncer mts      148 May  4  2016 /mts/git/bin/nimbus-one-cloud-vcvadeploy
-rwxr-xr-x 1 syncer mts      132 Mar 31  2016 /mts/git/bin/nimbus-post-config-hdrs
-rwxr-xr-x 1 syncer mts      127 Mar  2  2016 /mts/git/bin/nimbus-vum-install
-rwxr-xr-x 1 syncer mts      131 Feb  2  2016 /mts/git/bin/nimbus-quick-pod-setup
-rwxr-xr-x 1 syncer mts      130 Jan 28  2016 /mts/git/bin/nimbus-upgrade-ciswin
-rwxr-xr-x 1 syncer mts      136 Jan 22  2016 /mts/git/bin/nimbus-vrdeploy
-rwxr-xr-x 1 syncer mts      142 Dec 23  2015 /mts/git/bin/nimbus-vcopsdeploy
-rwxr-xr-x 1 syncer mts      138 Dec 23  2015 /mts/git/bin/nimbus-vcg-deploy
-rwxr-xr-x 1 syncer mts      127 Dec  9  2015 /mts/git/bin/nimbus-post-config
-rwxr-xr-x 1 syncer mts      155 Nov 21  2015 /mts/git/bin/nimbus-hostdsim-deploy
-rwxr-xr-x 1 syncer mts      149 Nov  9  2015 /mts/git/bin/nimbus-vrops-deploy
-rwxr-xr-x 1 syncer mts      145 Nov  3  2015 /mts/git/bin/nimbus-nsxcdeploy
-rwxr-xr-x 1 syncer mts      142 Nov  3  2015 /mts/git/bin/nimbus-nsxmdeploy
```

-rwxr-xr-x	1	syncer	mts	146	Oct	26	2015	/mts/git/bin/nimbus-vnimbus-deploy
-rwxr-xr-x	1	syncer	mts	125	Sep	8	2015	/mts/git/bin/nimbus-debug-esx
-rwxr-xr-x	1	syncer	mts	144	Aug	2	2015	/mts/git/bin/nimbus-sampleddeploy
-rwxr-xr-x	1	syncer	mts	129	May	12	2015	/mts/git/bin/nimbus-testesxdeploy
-rwxr-xr-x	1	syncer	mts	138	May	12	2015	/mts/git/bin/nimbus-testesxdeploy-launcher
-rwxr-xr-x	1	syncer	mts	155	Apr	24	2015	/mts/git/bin/nimbus-powercli-install
-rwxr-xr-x	1	syncer	mts	146	Apr	23	2015	/mts/git/bin/nimbus-network-deploy
-rwxr-xr-x	1	syncer	mts	142	Apr	8	2015	/mts/git/bin/nimbus-uiplatform-vamiui-test-run
-rwxr-xr-x	1	syncer	mts	714	Mar	24	2015	/mts/git/bin/nimbus-rvc
-rwxr-xr-x	1	syncer	mts	148	Mar	16	2015	/mts/git/bin/nimbus-mobagent-deploy
-rwxr-xr-x	1	syncer	mts	142	Mar	16	2015	/mts/git/bin/nimbus-fakepmdeploy
-rwxr-xr-x	1	syncer	mts	146	Feb	18	2015	/mts/git/bin/nimbus-vra-deploy
-rwxr-xr-x	1	syncer	mts	138	Feb	2	2015	/mts/git/bin/nimbus-vcddeploy
-rwxr-xr-x	1	syncer	mts	138	Jan	28	2015	/mts/git/bin/nimbus-vsmdeploy
-rwxr-xr-x	1	syncer	mts	140	Jan	28	2015	/mts/git/bin/nimbus-vcdeploy-cat
-rwxr-xr-x	1	syncer	mts	138	Jan	28	2015	/mts/git/bin/nimbus-vcvadeploy
-rwxr-xr-x	1	syncer	mts	138	Jan	28	2015	/mts/git/bin/nimbus-psadeploy
-rwxr-xr-x	1	syncer	mts	141	Jan	28	2015	/mts/git/bin/nimbus-vcbench-deploy
-rwxr-xr-x	1	syncer	mts	138	Jan	28	2015	/mts/git/bin/nimbus-pdp-deploy
-rwxr-xr-x	1	syncer	mts	147	Jan	28	2015	/mts/git/bin/nimbus-physical-esxdeploy
-rwxr-xr-x	1	syncer	mts	152	Jan	28	2015	/mts/git/bin/nimbus-loginsightdeploy
-rwxr-xr-x	1	syncer	mts	136	Jan	28	2015	/mts/git/bin/nimbus-fsdeploy
-rwxr-xr-x	1	syncer	mts	138	Jan	20	2015	/mts/git/bin/nimbus-ovfdeploy
-rwxr-xr-x	1	syncer	mts	142	Jan	20	2015	/mts/git/bin/nimbus-iscsideploy
-rwxr-xr-x	1	syncer	mts	168	Jan	12	2015	/mts/git/bin/nimbus-esxdeploy-ob
-rwxr-xr-x	1	syncer	mts	146	Jan	6	2015	/mts/git/bin/nimbus-genericdeploy
-rwxr-xr-x	1	syncer	mts	138	Jan	6	2015	/mts/git/bin/nimbus-esxdeploy
-rwxr-xr-x	1	syncer	mts	138	Dec	29	2014	/mts/git/bin/nimbus-nfsdeploy
-rwxr-xr-x	1	syncer	mts	130	Aug	6	2014	/mts/git/bin/nimbus-ovftool-deploy
-rwxr-xr-x	1	syncer	mts	132	Aug	4	2014	/mts/git/bin/nimbus-docker-ovfdeploy
-rwxr-xr-x	1	syncer	mts	140	Jul	30	2014	/mts/git/bin/nimbus-uiplatform-icui-test-run
-rwxr-xr-x	1	syncer	mts	139	Jul	30	2014	/mts/git/bin/nimbus-uiplatform-vui-test-run
-rwxr-xr-x	1	syncer	mts	119	Jul	19	2014	/mts/git/bin/nimbus-ctl
-rwxr-xr-x	1	syncer	mts	129	Jul	19	2014	/mts/git/bin/nimbus-hostdsim-kill
-rwxr-xr-x	1	syncer	mts	127	Jul	19	2014	/mts/git/bin/nimbus-nimbussetup
-rwxr-xr-x	1	syncer	mts	121	Jul	19	2014	/mts/git/bin/nimbus-touch
-rwxr-xr-x	1	syncer	mts	132	Jul	18	2014	/mts/git/bin/nimbus-hostdsim-prepare
-rwxr-xr-x	1	syncer	mts	124	Jul	18	2014	/mts/git/bin/nimbus-test-esx
-rwxr-xr-x	1	syncer	mts	127	Jul	17	2014	/mts/git/bin/nimbus-config-util
-rwxr-xr-x	1	syncer	mts	121	Jul	3	2014	/mts/git/bin/nimbus-vmserial
-rwxr-xr-x	1	syncer	mts	135	Jun	19	2014	/mts/git/bin/nimbus-vc-upgrade-and-test
-rwxr-xr-x	1	syncer	mts	129	May	29	2014	/mts/git/bin/nimbus-h5-run-testng
-rwxr-xr-x	1	syncer	mts	133	May	29	2014	/mts/git/bin/nimbus-hostclient-deploy
-rwxr-xr-x	1	syncer	mts	130	May	29	2014	/mts/git/bin/nimbus-ngc-run-testng
-rwxr-xr-x	1	syncer	mts	137	May	29	2014	/mts/git/bin/nimbus-uiplatform-run-testng
-rwxr-xr-x	1	syncer	mts	133	May	29	2014	/mts/git/bin/nimbus-vcd-supportbundle
-rw-r--r--	1	syncer	mts	128	May	29	2014	/mts/git/bin/nimbus-vcva-upgrade
-rwxr-xr-x	1	syncer	mts	133	May	29	2014	/mts/git/bin/nimbus-vc-windows-deploy
-rwxr-xr-x	1	syncer	mts	133	May	29	2014	/mts/git/bin/nimbus-vsm-supportbundle
-rwxr-xr-x	1	syncer	mts	137	May	19	2014	/mts/git/bin/nimbus-analyze-supportbundle
-rwxr-xr-x	1	syncer	mts	128	May	14	2014	/mts/git/bin/nimbus-physical-ctl
-rwxr-xr-x	1	syncer	mts	134	Aug	14	2013	/mts/git/bin/nimbus-autoinstalls
-rwxr-xr-x	1	syncer	mts	202	Apr	22	2013	/mts/git/bin/nimbus-legacy-rvc
-rwxr-xr-x	1	syncer	mts	155	Apr	21	2011	/mts/git/bin/nimbus-vim-cat-launcher
-rwxr-xr-x	1	syncer	mts	130	Feb	18	2011	/mts/git/bin/nimbus-clui
-rwxr-xr-x	1	syncer	mts	147	Feb	18	2011	/mts/git/bin/nimbus-ddt-esx
-rwxr-xr-x	1	syncer	mts	107	Feb	18	2011	/mts/git/bin/nimbus-rlui
-rwxr-xr-x	1	syncer	mts	143	Feb	18	2011	/mts/git/bin/nimbus-vc
-rwxr-xr-x	1	syncer	mts	130	Jan	11	2011	/mts/git/bin/nimbusvc-clui

```
-rwxr-xr-x 1 syncer mts      127 Jan 11  2011 /mts/git/bin/nimbusvc-vcdeploy
```

## 1.6 nimbus-ctl CLI Online Help

```
-bash-4.1$ /mts/git/bin/nimbus-ctl --help
Control VMs in the Nimbus cloud.
```

Usage:

```
nimbus-ctl [options] cmd <vm-names|testbed-name>
```

Commands: list tools\_status tools-status host\_name host-name on off kill reset destroy suspend is\_on is-on ip screenshot console vc\_supportbundle vc-supportbundle esx\_supportbundle esx-supportbundle hostdsim\_supportbund genericvm\_supportbundle genericvm-supportbundle workervm\_supportbundle workervm-supportbundle samplevp\_support vcdb\_errorlogbundle vcdb-errorlogbundle vcdb\_dbcopy vcdb-dbcopy vcdb\_dbdump vcdb-dbdump dumpstats associated\_ nfsvm-supportbundle create\_snapshot create-snapshot list\_snapshot list-snapshot revert\_snapshot revert-snapsh get-extra-cfg set\_ovf\_params set-ovf-params shutdown rename vropsvm\_supportbundle vropsvm-supportbundle tag s

VMs could be:

1. One or multiple vm names, for example:

```
nimbus-ctl kill vm1          # to kill vm1
nimbus-ctl kill vm1 vm2      # to kill vm1 and vm2
```

2. Wildcards vm name, for example:

```
nimbus-ctl kill '*'          # to kill all VMs
nimbus-ctl kill '*esx*'       # to kill all VMs whose name contain 'esx'
```

To control a testbed:

1. List all testbeds

```
nimbus-ctl --testbed list
```

2. Destroy a testbed

```
nimbus-ctl --testbed kill testbed-name
```

3. Extend lease of a testbed

```
nimbus-ctl --lease 5 --testbed extend-lease testbed-name
```

Other options:

-d, --debug	Log SOAP messages
-o, --outputPath=<s>	Path to put stuff in
-p, --path=<s>	Folder Path to search the VM
-f, --filename=<s>	Name of the file generated (applicable to support bundles)
-i, --file-prefix=<s>	Name of the file generated without the extension (applicable to support bund
-l, --lease=<f>	Days to extend the lease by
-u, --username=<s>	Authentication info for VM operations
-a, --password=<s>	Authentication info for VM operations
--vimUsername=<s>	Since VC6.0, VIM uses different credantial from VM guest, this option is use
--vimPassword=<s>	Since VC6.0, VIM uses different credantial from VM guest, this option is use
-b, --bora=<s>	
-T, --dbType=<s>	This option is used to specify the DB type for the commands vcdb-logbundle a
-m, --nimbus=<s>	nimbus pod name
-e, --excludedPod=<s>	exclusion pod for operation
-c, --context=<s>	nimbus pod context

-s, --nimbusConfigFile=<s>	nimbus pod config json file
-h, --snapshot=<s>	Name of snapshot
-I, --snapshotIncludeMemory	Whether to include memory dump in snapshot. This option only works with crea
-t, --testbed	Control testbeds instead of VMs
-n, --nsx	Control NSX networks
-v, --vxlanDetail	Show vxlan parameters
-r, --hoursToKeepVM=<i>	Number of hours to keep the VM after test fails. (Default: 12)
-w, --allowShorten	Allow hoursToKeepVM is less than lease time
-K, --autoKeptOnly	Only kill auto-kept CAT testbed.
--hoststats	Dump physical host stats alongwith VM stats
--startTime=<s>	Start time of task or event: mm/dd/yyyy hh:mm:ss
--endTime=<s>	End time of task or event: mm/dd/yyyy hh:mm:ss
--nestedVmIp=<s>	Nested VM IP address. This option could be used to collect support bundle di
--osFamily=<s>	This option only works with --nestedVmIp. When a VM IP is specified, this opt
--console-option=<s>	Operations for 'console' command. Possible options: vnc_view, web_view, remo
-F, --outputFormat=<s>	Specify results format for output. Supported Formats: text,json,yaml (defau
-N, --templateName=<s>	Template name. It's same as VM name if not specified
-P, --templatePath=<s>	Folder Path to save the template (default: /templates)
--newName=<s>	New vm name
-g, --add-tag=<s>	Tag to be added to the VM
--remove-tag=<s>	Tag to be removed from the VM
--tag=<s>	Tag to filter VMs
-k, --universalNetwork	Control Cross-vCenter vxLAN. This option only works with --nsx.
-R, --cpuReservation=<i>	CPU reservation in MHz. This option only works with --set-reservation.
-y, --memoryReservation=<i>	Memory reservation in MB. This option only works with --set-reservation.
-M, --clearMemReservation	Clear memory reservation. This option only works with --clear-reservation.
-C, --clearCpuReservation	Clear CPU reservation. This option only works with --clear-reservation.
-x, --vnicIndex=<i>	The 1-based vnic index to operate on
--vxlans=<s>	Comma separated list of vxlan-backed networks
-O, --trunkOp=<s>	trunk operation
-L, --nimbusLocation=<s>	Run Nimbus on specified datacenter, available datacenters are ["sc", "wdc",
--silentObjectNotFoundError	No exception will be raised if no vm found, will only print a log
--bootOrder=<s>	Comma separated list of boot devices (e.g. 'hdd,eth')
--disk=<i>	Additional disk size in KB. Repeat this option for as many disks you want to
-D, --pvscsiDisk=<i>	Additional pvscsi disk size in KB. Repeat this option for as many disks you
--user=<s>	User to which VM should be transferred
--help	Show this message

## 1.7 nimbus-testbeddeploy CLI Online Help

```
-bash-4.1$ /mts/git/bin/nimbus-testbeddeploy --help
Allocate testbeds in the Nimbus cloud.
```

Usage:

```
nimbus-testbeddeploy [options]
```

Notes:

- 1) The whole options for the command are not listed here, as they are specific to underlying deploy commands,
- 2) It depends on a testbed spec that which options are required. For example, if a vcva is specified in a spe

Test Run Related Options:

```
=====
```

--deployedDynamicWorkerName	Name of the deployed dynamic worker
--psodurl	Url to monitor psod status
--resultsDir	Directory to put results into (default: random in /tmp)
--resulturl	Target url to update the running result
--test	Specify which test to run by name
--testrunid	Run id of the test
--updateurl	Upstream site's url to update running status

## Testbed Deployment Options:

=====

--arg	Additional arguments
--customizeTestbed	This option can be used to modify testbed spec in a very generic way. You can specify a testbed spec like <code>'/esx cpuReservation=2048 memoryReservation=4096'</code> will set reservation for CPU and memory. Nodes can be selected multiple ways e.g. <code>'/*'</code> will select all nodes in testbed.
--customizeWorker	This option can be used to customize dynamic worker in a generic way, e.g. <code>'--worker=esx'</code> use this option as many times as you need
--disableNatAfterPostboot	Disable NAT on gateway VM. It only works with <code>--isolated-testbed</code> option.
--enablePingVm	Enable ping vms within the testbed
--excludePlugin	Specify a test framework plugin to not load. This provide a way to avoid loading a plugin
--existingTestbed	Existing testbed to use
--failureTypeToKeepVms	Type of test fails when VMs need to be kept. Valid types are FAIL, INVALID, and ERROR
--fake	Fake run, won't actually deploy vms
--forceCleanTestbed	If set, testbed will be destroyed. This option will override <code>--keepVmsOnFailure</code>
--gateway	Specify public IP of gateway VM. This option only works with <code>--vxlan</code> option.
--gencov	VC or ESX code coverage flag. E.g. <code>--gencov esx --gencov vc</code> will do code coverage for ESX and VC
--gencovConfigFile	Specify the VC/ESX code coverage config file. Currently only needed when do ESX/VC code coverage
--hoursToKeepVms	Number of hours to keep VMs after test fails. Maximum to keep VMs for 24 hours
--isolated-testbed	Deploy the testbed in vxlan that is created on the fly.
--keepVmsOnFailure	If set, VMs will be kept if the test fails
--list	List all testbeds
--nimbusResourcePool	Use a specific resource pool
--noPreparedTemplates	Do not use prepared templates to speed up deployment
--noStatsDump	Do not dump testbed stats no matter deployment success or fail
--plugin	Specify a test framework plugin to load. This provide a way to avoid loading a plugin
--pluginsLocation	Specify a location where test framework plugin are located at. This way user can specify a custom location
--runName	A prefix adding to the names of vms deployed. It is required unless <code>--list</code> option is used
--testbedName	Specify the name of the testbed to deploy
--testbedParams	Additional parameters accessible in testbed's postBoot block
--testbedSpecJsonFile	Specify a json testbed spec file
--testbedSpecRubyFile	Specify a ruby testbed spec file
--viewSpecOnly	View testbed spec definition only. Do not really deploy a testbed
--vxlan	Specify a vxlan to deploy the testbed on it. The vxlan will replace public network
--xvcTestbed	Distribute testbed to different pods

## VM Deployment Options:

=====

--affinitizeTestbed	Affinitize all (except VC) VMs of the testbed to locate on same host. Be careful if high throughput among VMs are required.
--annotation	Specify annotation for the VMs
--bootTimeout	Boot time (in sec) after which to give up if the deployed VM didn't come up.
--catMachine	The value should be either a CAT Machine (integer), the CAT Machine name or a json object like <pre>{   "id": "any id",   "macaddrs": ["e8:39:35:ae:6a:68", "e8:39:35:ae:6a:69"],   "hostname": "hostname-allocated-by-techops"   "childmodel": {     "ilo_hostname": "10.20.96.109",     "ilo_username": "vmware",     "ilo_password": "vmware123",     "suite_location": "PromC"   } }</pre>
--ciswinSettingsJsonFile	File path for ciswin settings
--cleanPxeDir	Clean image in pxe dir
--context	Nimbus pod context
--disableFirewall	Sends commands to disable the firewall in the VM

--disableTCPOffload	Sends commands to change the TCP Offload in the windows VM
--domainLocator	A locator for the domain, in the format of domain://<User>:<Password>@<Domain>
--dynamicWorkerTemplate	Template of dynamic worker and worker-template by default
--enableFirewall	Sends commands to enable the firewall in the VM
--enableIPv6	Enable IPv6
--esx:force	Use The --force
--esx:hostprofilePath	Host profile path for stateless ESX
--esx:hostprofileVMLocation	Host profile VM location for stateless ESX
--esx:scriptBundle	Startup scripts tgz file path for stateless ESX
--esx:systemRescue	PXE Boot the host with Linux System Rescue CD. May be used in conjunction with <a href="#">https://github.com/dbc106/mfurman/public_html/sysrescue</a>
--esx:wipeAllDisks	Wipes ALL partitions on ALL disks. Requires --force. USE WITH CAUTION
--esx:wipeAndDeploy	Wipe the host before deploying. Parameter is the pxeDir that will be used for deployment
--esx:wipeVsanDisks	Wipes VSAN disks. USE WITH CAUTION
--esxCount	Number of ESX
--existingIsolatedNetwork	Full path of an existing isolated network's JSON result file. This allows to reuse the
--existingUniversalNetwork	JSON file which has existing universal vxlan spec for deploying testbed
--forceAutoVC	Force automatic determination of the VC product
--hostdsim:noNfs	Do not deploy NFS VM for Host Simulator
--hwVer	Virtual hardware version, specified as an integer (e.g. 8). Value 0 implies latest
--hwimMachine	The value should be either a Hwim Machine ID/UUID (format: 8-4-4-4-12), the machine ID/UUID of the host, or a host ID/UUID (format: 8-4-4-4-12), the host ID/UUID of the host
--ip6AddressType	Type of ipv6 address (static_no_dns, static_with_dns, slaac, link_local)
--job-delay-mins	Waiting time in minute to schedule this job.
--job-schedule-at	When to schedule this job, like 2016-11-01 12:34
--lease	Lease in days
--loginsight_ovfdesc	Destination Loginsight OVF url
--maxRuntimeHint	How long the user is willing to wait (in minutes) (default: 1.5h)
--mergeLdu	Whether merging ldu
--network	Names of networks to use
--nicType	Type of NIC (e1000, e1000e, vmxnet3)
--nics	Number of NICs
--nimbus	Specify which Nimbus pod to use by name
--nimbusConfigFile	Specify the path of config file
--nimbusLocation	Run Nimbus on specified datacenter, available datacenters are ["sc", "wdc", "lax"]
--noSchedulerNotification	Whether to send email after scheduler job finishes.
--oneCloud	Deploy the testbed to OneCloud.
--powershellVCInstall	Indicates that the powershell installer should be used
--product	Build product
--pxe-base-dir	Shared folder to save pxe image instead of user home dir
--queue	Schedule this job.
--queue-ttl	Scheduler job TTL (in hour). (default: 1.0)
--remote-nimbus-root	Specify Nimbus root for remote execution (e.g. execution inside dynamic worker)
--scheduler-job-id	Scheduler job ID.
--scheduler-job-launched-url	Url for updating scheduler job 'launched' state.
--scheduler-job-reason	The reason for scheduling a job, such as final result(INVALID, TIMEOUT) or error
--scheduler-job-result-url	Url for reporting scheduler job error.
--settingsJsonFile	Used to specify a json file for installation parameters
--standaloneVCInstall	Indicates that the standalone installer should be used (default)

--stress	used to set the stress options for the ciswin firstboot
--stressMaxRange	used to set the maximum delay range for the stress ciswin firstboot (seconds)
--templateName	Specify the VM template to use
--timeout	Time (in seconds) after which to give up the deployment
--universalNetwork	Deploy the testbed in Cross-vCenter vxlan. This option only works with --iso
--useWinVersion	Specifies the base windows VM among win2008r2, win2008, win2012, win2012r2 t
--vcCount	Number of VC
--vcvaSettingsJsonFile	File path for vcva settings
--windowsDomainLocator	A locator for the domain, in the format of domain://<User>:<Password>@<Domain>

**Build Options:**

=====

--autodeployServerBuild	Build number for autodeployServer
--build	Build number
--cis_blddir	Build dir for cis
--ciswinBuild	Build number for ciswin
--ciswin_blddir	Build dir for ciswin
--ciswindevngcBuild	Build number for ciswindevngc
--cloudvmBuild	Build number for cloudvm
--cloudvm_blddir	Build dir for cloudvm
--cloudvmdevngcBuild	Build number for cloudvmdevngc
--cloudvmngcBuild	Build number for cloudvmngc
--cloudvmsssoBuild	Build number for cloudvmssso
--cloudvmvcopsBuild	Build number for cloudvmvcops
--cloudvmvimBuild	Build number for cloudvmvim
--esxBoraDir	Bora dir of ESX
--esxBoraHost	Bora Host for ESX
--esxBuild	Build number for esx
--esxPxeDir	Location of the dir for pxe config
--esx_vmtree	vmtree for esx
--hbr_blddir	Build dir for hbr
--hbrsrvBuild	Build number for hbrsrv
--ic-clientBuild	Build number for ic-client
--licensing_blddir	Build dir for licensing
--logInsightBuild	Build number for logInsight
--mobilityagentBuild	Build number for mobilityagent
--ngc_blddir	Build dir for ngc
--ngcinstallerBuild	Build number for ngcinstaller
--nsx-transformersBuild	Build number for nsx-transformers
--nsx_blddir	Build dir for nsx
--phservices_blddir	Build dir for phservices
--platform-services-controllerBuild	Build number for platform-services-controller
--sampleBuild	Build number for sample
--serverBuild	Build number of server product
--sso_blddir	Build dir for sso
--suite-uiBuild	Build number for suite-ui
--testware_blddir	Build dir for testware
--uiplatform_blddir	Build dir for uiplatform
--vcBuild	Build number for vc
--vcde_blddir	Build dir for vcde
--vcenter-allBuild	Build number for vcenter-all
--vcenter-asanBuild	Build number for vcenter-asan
--vcenter-gcc6Build	Build number for vcenter-gcc6
--vcenter-python3Build	Build number for vcenter-python3
--vcenterBuild	Build number for vcenter
--vcenterphotonBuild	Build number for vcenterphoton
--vcentersles12Build	Build number for vcentersles12
--vcenterwindowsBuild	Build number for vcenterwindows
--vcenterwindows_blddir	Build dir for vcenterwindows



--vcenterwindowsdevngcBuild	Build number for vcenterwindowsdevngc
--vcloudBuild	Build number for vcloud
--vcloud_blldir	Build dir for vcloud
--vcops_blldir	Build dir for vcops
--vcqadistBuild	Build of vcqadist
--vcqetestwarezipBuild	Build number for vcqetestwarezip
--vcvaBuild	Build number for vcva
--vcvaBuildDir	Build tree to find cloudvm OVF. e.g. ~bora/build/. Must use with --vcvaBuild
--vcvaBuildType	Build type (obj/release/beta). Must use with --vcvaBuildDir
--vddkBuild	Build number for vddk
--vimclients-h5clientBuild	Build number for vimclients-h5client
--vimclients-platformBuild	Build number for vimclients-platform
--vimclients-qaBuild	Build number for vimclients-qa
--vm2c_blldir	Build dir for vm2c
--vmc-gatewayBuild	Build number for vmc-gateway
--vmc-gateway_blldir	Build dir for vmc-gateway
--vpxBuild	Build number for vpx
--vpx_blldir	Build dir for vpx
--vpxd-comptests-covBuild	Build number for vpxd-comptests-cov
--vpxd-comptestsBuild	Build number for vpxd-comptests
--vpxdBuild	Build number for vpxd
--vpxd_blldir	Build dir for vpxd
--vraCafeBuild	Build number for vraCafe
--vraSsoBuild	Build number for vraSso
--vropsBuild	Build number for vrops
--vsmBuild	Build number for vsm
--vui-componentsBuild	Build number for vui-components
--wsBuild	Build number for ws
--ws_blldir	Build dir for ws

## Other Options:

=====

--andyPrefix	Andy's Prefix
--andyProducts	Andy's Products
--featureStates	Feature states
--logTriggerFile	Log Trigger files
--logTriggersMode	Possible values are 'off', 'always' or 'onerror'
--nimbusBreakpoint	Enable a named breakpoint in the nimbus code.
--noDefaultLogTriggers	No default Log Triggers
--noSupportBundles	Do not collect support bundles
--pxeBootOption	VMKernel boot option passed to nested ESXi
--umask	Set the umask for having desired permissions on file

## Deprecated Options:

=====

--blldir	Build dir of a product
--cis_vmtree	vmtree for cis
--ciswin_vmtree	vmtree for ciswin
--cloudvm_vmtree	vmtree for cloudvm
--esx_blldir	Build dir for esx
--esxallBuild	Build number of esxall product
--hbr_vmtree	vmtree for hbr
--licensing_vmtree	vmtree for licensing
--location	Build location
--macaddrs	MAC addresses
--ngc_vmtree	vmtree for ngc
--nsx_vmtree	vmtree for nsx
--phservices_vmtree	vmtree for phservices
--sso_vmtree	vmtree for sso

```
--testware_vmtree      vmtree for testware
--uiplatform_vmtree    vmtree for uiplatform
--vcenterwindows_vmtree vmtree for vcenterwindows
--vcloud_vmtree         vmtree for vcloud
--vcops_vmtree          vmtree for vcops
--vm2c_vmtree           vmtree for vm2c
--vmc-gateway_vmtree    vmtree for vmc-gateway
--vpx_vmtree            vmtree for vpx
--vpxd_vmtree           vmtree for vpxd
--ws_vmtree             vmtree for ws
```

## 1.8 nimbus CLI Online Help

```
-bash-4.1$ /mts/git/bin/nimbus --help
```

Nimbus root command

```
-a, --help-all    Recursively get help for all commands
-h, --help         Show this message
```

Available subcommands:

```
deploy : Deploy various vms
ctl : Nimbus-ctl commands to control vms
scheduler : nimbus-scheduler commands to control scheduler jobs
```

## 1.9 More Resources

License: Code is licensed under MIT License.