

Pivotal Cloud Foundry 2.0

BOSH CLI

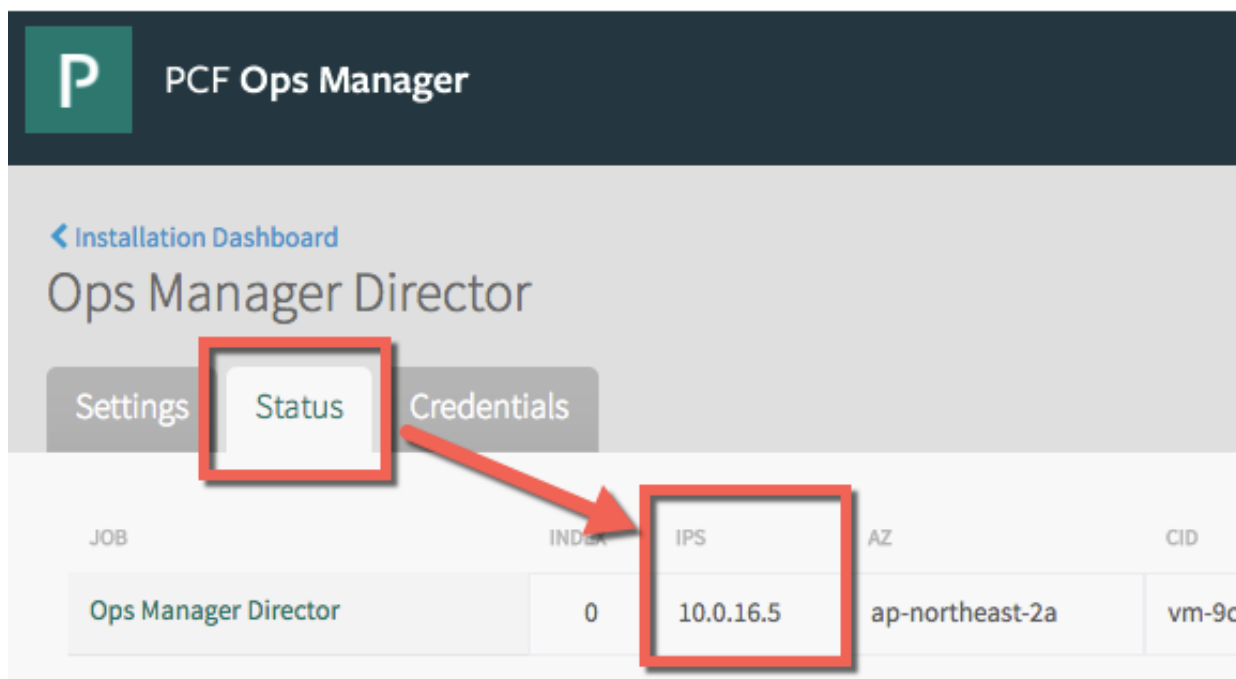
SDS Workshop
2018-02-01

참석자 별 접속 정보

수강자	Ops Manager	Apps Manager	Ops Manager SSH
SDS1	https://pcf.sds1.cfpush.net	https://apps.sys.sds1.cfpush.net	ssh -i ops.pem pcf.sds1.cfpush.net
SDS2	https://pcf.sds2.cfpush.net	https://apps.sys.sds2.cfpush.net	ssh -i ops.pem pcf.sds2.cfpush.net
SDS3	https://pcf.sds3.cfpush.net	https://apps.sys.sds3.cfpush.net	ssh -i ops.pem pcf.sds3.cfpush.net
SDS4	https://pcf.sds4.cfpush.net	https://apps.sys.sds4.cfpush.net	ssh -i ops.pem pcf.sds4.cfpush.net
SDS5	https://pcf.sds5.cfpush.net	https://apps.sys.sds5.cfpush.net	ssh -i ops.pem pcf.sds5.cfpush.net
SDS6	https://pcf.sds6.cfpush.net	https://apps.sys.sds6.cfpush.net	ssh -i ops.pem pcf.sds6.cfpush.net
SDS7	https://pcf.sds7.cfpush.net	https://apps.sys.sds7.cfpush.net	ssh -i ops.pem pcf.sds7.cfpush.net

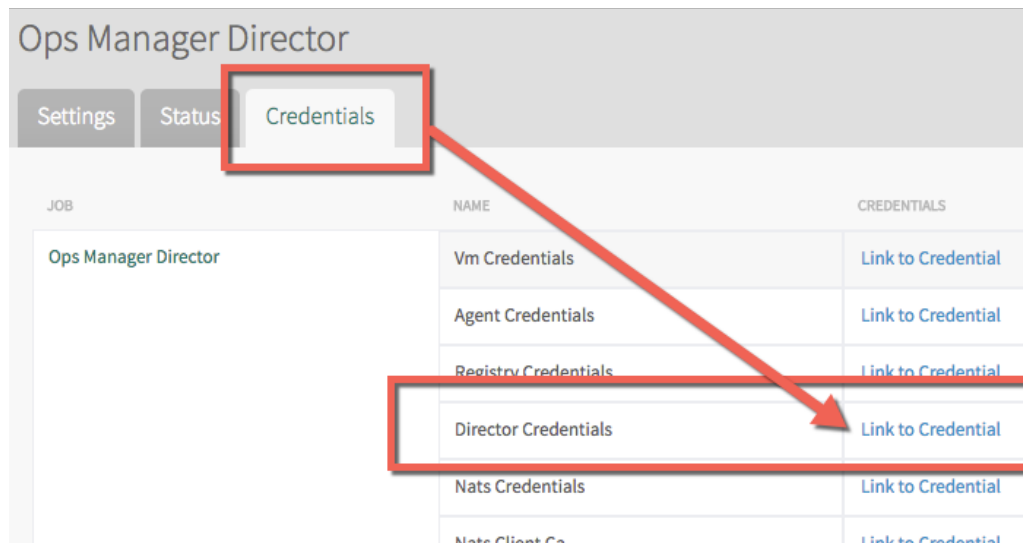
Ops Manager Director IP 정보 확인

Ops Manager 에 접속하여, “Status” tab 에 들어가면 Ops Manager Bosh director 의 IP 를 확인할 수 있다.



Ops Manager Director ID/PASSWORD 확인

“Credentials” tab 에 들어가면 director 의 id/password 정보를 확인할 수 있다.



```
{
  - credential: {
    type: "simple_credentials",
    - value: {
      identity: "director",
      password: "Q_qvS01DJCimrQZZxiF8-q_XDsic2d66"
    }
  }
}
```

Ops Manager VM 접속

ssh client 를 이용하여 Ops Manager VM 에 접속한다.

```
> ssh -i ops.key ubuntu@pcf.sds61.cfpush.net
Unauthorized use is strictly prohibited. All access and activity
is subject to logging and monitoring.
Welcome to Ubuntu 14.04.5 LTS (GNU/Linux 4.4.0-111-generic x86_64)

 * Documentation:  https://help.ubuntu.com/
Last login: Wed Jan 31 07:39:20 UTC 2018 from 122.34.171.91 on pts/4
Last login: Wed Jan 31 07:39:45 2018 from 122.34.171.91
ubuntu@ip-10-0-0-251:~$
```

Director 연결

1. Alias 등록

Ops Manager 에서 확인한 Director IP 를 사용하여 alias 'bosh1'을 등록한다.

```
$ bosh alias-env bosh1 -e 10.0.16.5 --ca-cert /var/tempest/workspaces/default/root_ca_certificate
```

2. Bosh director 로그인

```
$ bosh -e bosh1 login
```

Email (): director

Password ():

Successfully authenticated with UAA

Succeeded

```
ubuntu@ip-10-0-0-251:~$ bosh alias-env bosh1 -e 10.0.16.5 --ca-cert /var/tempest/workspaces/default/root_ca_certificate
Using environment 1 10.0.16.5 as anonymous user

Name       p-bosh
UUID       ea46cbcb-8cbe-4f8e-b9ec-7d829528ef4d
Version    264.7.0 (00000000)
CPI        aws_cpi
Features   compiled_package_cache: disabled
           config_server: enabled
           dns: disabled
           snapshots: disabled
User       (not logged in)

Succeeded
ubuntu@ip-10-0-0-251:~$ bosh -e bosh1 login
ubuntu@ip-10-0-0-251:~$ bosh -e bosh1 login
Email (): director
Password ():

Successfully authenticated with UAA

Succeeded
ubuntu@ip-10-0-0-251:~$
```

BOSH CLI

BOSH Deployments

Bosh 가 관리하고 있는 배포 목록은 "deployments"를 확인한다. 여러 개의 bosh release 의 묶음을 의미한다.

\$ bosh -e bosh1 deployments

```
ubuntu@ip-10-0-0-251:~$ bosh -e bosh1 deployments
```

Using environment '10.0.16.5' as user 'director' (bosh.*.read, openid, bosh.*.admin, bosh.read, bosh.admin)

Name	Release(s)	Stemcell(s)	Team(s)	Cloud Config
bosh-health-check	bosh-dns/0.1.0 bosh-dns-aliases/0.0.1 cf-networking/1.8.1 healthwatch/400.0.16	bosh-aws-xen-hvm-ubuntu-trusty-go_agent/3468.21	-	latest
cf-674b77f839dcd5d66092	backup-and-restore-sdk/1.2.1	bosh-aws-xen-hvm-ubuntu-trusty-go_agent/3468.21	-	latest
	binary-offline-buildpack/1.0.15 bosh-dns/0.1.0 bosh-dns-aliases/0.0.1 bosh-system-metrics-forwarder/0.0.11 capi/1.44.10 cf-autoscaling/104 cf-backup-and-restore/0.0.10 cf-mysql/36.10.0 cf-networking/1.8.1 cf-smoke-tests/39 cf-syslog-drain/2 cflinuxfs2/1.176.0 consul/187 credhub/1.6.5 diego/1.29.0 dotnet-core-offline-buildpack/1.0.30 garden-runc/1.10.0 go-offline-buildpack/1.8.13 grootfs/0.30.0 haproxy/8.4.2 java-offline-buildpack/4.7.1 loggregator/99.0.6 mysql-backup/1.38.0 mysql-monitoring/8.13.0 nats/22 nfs-volume/1.1.3 nodejs-offline-buildpack/1.6.10 notifications/44 notifications-ui/31 php-offline-buildpack/4.3.43 pivotal-account/1.8.2 push-apps-manager-release/663.0.5 push-usage-service-release/664.0.10 python-offline-buildpack/1.6.1 routing/0.168.0 ruby-offline-buildpack/1.7.5			

```
service-backup/18.1.5
staticfile-offline-buildpack/1.4.18
statsd-injector/1.0.30
syslog-migration/10
uaa/52.7
p-healthwatch-4c154591b2524cb4ac7d bosh-dns/0.1.0 bosh-aws-xen-hvm-ubuntu-trusty-go_agent/3468.21 -
latest
bosh-dns-aliases/0.0.1
cf-mysql/36.10.0
cf-networking/1.8.1
consul/189
healthwatch/400.0.16
loggregator/92

3 deployments

Succeeded
```

BOSH VMS

Bosh 가 관리하고 있는 vm 의 목록과 현재 Resource 활용 현황을 확인

\$ bosh -e bosh1 vms

\$ bosh -e bosh1 vms

Using environment '10.0.16.5' as user 'director' (bosh.*.read, openid, bosh.*.admin, bosh.read, bosh.admin)

Task 395. Done

Deployment 'cf-674b77f839dcd5d66092'

Instance	Process State	AZ	IPs	VM CID	VM Type
compute/540c034f-6685-450c-9f3d-9182e2b78f06	running		ap-northeast-2a	10.0.4.7	i-087ae813b84fdf9ad r4.xlarge
control/c74f6792-a127-4b0f-83f6-6a1058af9978	running		ap-northeast-2a	10.0.4.6	i-04395bb8bb36102a3 r4.xlarge
database/e29af73e-04ee-4ad8-bbd8-1feae74404d4	running		ap-northeast-2a	10.0.4.5	i-0d413d69ed7680900 r4.large
mysql_monitor/6952e5a1-4cc3-4453-bf97-73cff8d33e8e	running		ap-northeast-2a	10.0.4.9	i-0bf9bbce126334933 t2.micro
router/11399cbb-e1d7-41ab-b72c-4d2db78762d8	running		ap-northeast-2a	10.0.4.8	i-0aa3ae618f63b17ff t2.micro

5 vms

Task 396. Done

Deployment 'p-healthwatch-4c154591b2524cb4ac7d'

Instance	Process State	AZ	IPs	VM CID	VM Type
healthwatch-forwarder/6284f447-bd1d-4e10-b619-ae9fcbb59db	running		ap-northeast-2a	10.0.4.12	i-0420a4addc28ff621 m4.xlarge

mysql/b24ab662-ff5f-4934-a38c-4fd3b10c908e	running	ap-northeast-2a	10.0.4.10	i-000a81bf4ac510a80	c4.2xlarge
proxy/c88d1a1c-9157-4978-9f2a-f3f7668434d2	running	ap-northeast-2a	10.0.4.11	i-007e68158d66363e2	c4.large

3 vms

\$ bosh -e bosh1 vms --vitals

Using environment '10.0.16.5' as user 'director' (bosh.*.read, openid, bosh.*.admin, bosh.read, bosh.admin)

Task 411. Done

Deployment 'cf-674b77f839dcd5d66092'

Instance	Process	State	AZ	IPs	VM CID	VM Type	VM Created At										
Uptime	Load	CPU	CPU	CPU	Memory	Swap	System	Ephemeral	Persistent								
							(1m,										
5m, 15m)	Total	User	Sys	Wait	Usage	Usage	Disk Usage	Disk Usage	Disk Usage								
compute/540c034f-6685-450c-9f3d-9182e2b78f06	running	ap-northeast-2a	10.0.4.7	i-087ae813b84fdf9ad	r4.xlarge	Tue Jan 30 17:26:35 UTC 2018	0d 14h 34m 53s	1.09, 1.00, 0.93	-	3.1%	2.1%	0.1%	18% (5.8 GB)	0% (0 B)	36% (30i%)	18% (1i%)	-
control/c74f6792-a127-4b0f-83f6-6a1058af9978	running	ap-northeast-2a	10.0.4.6	i-04395bb8bb36102a3	r4.xlarge	Tue Jan 30 17:26:35 UTC 2018	0d 14h 34m 53s	0.16, 0.16, 0.17	-	3.0%	1.4%	0.0%	14% (4.4 GB)	0% (0 B)	37% (30i%)	8% (1i%)	-
database/e29af73e-04ee-4ad8-bbd8-1feae74404d4	running	ap-northeast-2a	10.0.4.5	i-0d413d69ed7680900	r4.large	Tue Jan 30 17:26:35 UTC 2018	0d 14h 34m 53s	0.08, 0.03, 0.01	-	0.6%	0.3%	0.4%	6% (979 MB)	0% (0 B)	36% (30i%)	3% (1i%)	6% (0i%)
mysql_monitor/6952e5a1-4cc3-4453-bf97-73cff8d33e8e	running	ap-northeast-2a	10.0.4.9	i-0bf9bbce126334933	t2.micro	Tue Jan 30 17:26:51 UTC 2018	0d 14h 34m 48s	0.00, 0.00, 0.00	-	0.0%	0.0%	0.1%	8% (84 MB)	0% (0 B)	36% (30i%)	1% (0i%)	-
router/11399cbb-e1d7-41ab-b72c-4d2db78762d8	running	ap-northeast-2a	10.0.4.8	i-0aa3ae618f63b17ff	t2.micro	Tue Jan 30 17:26:51 UTC 2018	0d 14h 34m 48s	0.00, 0.00, 0.00	-	0.5%	0.4%	0.1%	15% (149 MB)	0% (0 B)	36% (30i%)	3% (1i%)	-

5 vms

Task 412. Done

Deployment 'p-healthwatch-4c154591b2524cb4ac7d'

Instance	Process	State	AZ	IPs	VM CID	VM Type	VM Created At										
Uptime	Load	CPU	CPU	CPU	Memory	Swap	System	Ephemeral	Persistent								
							(1m, 5m, 15m)	Total	User	Sys	Wait	Usage	Usage	Disk Usage	Disk Usage	Disk Usage	
healthwatch-forwarder/6284f447-bd1d-4e10-b619-ae9fcbbe59db	running	ap-northeast-2a	10.0.4.12	i-0420a4addc28ff621	m4.xlarge	Wed Jan 31 06:10:16 UTC 2018	0d 1h 51m 23s	0.00, 0.00, 0.00	-	0.3%	0.0%	0.0%	1% (216 MB)	0% (0 B)	36% (30i%)	2% (0i%)	0% (0i%)
mysql/b24ab662-ff5f-4934-a38c-4fd3b10c908e	running	ap-northeast-2a	10.0.4.10	i-000a81bf4ac510a80	c4.2xlarge	Wed Jan 31 06:10:16 UTC 2018	0d 1h 51m 24s	0.06, 0.01, 0.00	-	0.1%	0.0%	0.0%	4% (652 MB)	0% (0 B)	36% (30i%)	1% (0i%)	21% (0i%)
proxy/c88d1a1c-9157-4978-9f2a-f3f7668434d2	running	ap-northeast-2a	10.0.4.11	i-007e68158d66363e2	c4.large	Wed Jan 31 06:10:01 UTC 2018	0d 1h 51m 26s	0.02, 0.01, 0.00	-	0.1%	0.1%	0.1%	3% (110 MB)	0% (0 B)	36% (30i%)	0% (0i%)	-

3 vms

Succeeded

BOSH SSH

bosh 에서 관리하는 VM 에 ssh 로 접속하여 로그나 문제 확인 시 사용한다.

```
bosh -e MY-ENV -d MY-DEPLOYMENT ssh VM-NAME/GUID
```

```
ubuntu@ip-10-0-0-251:~$ bosh -e bosh1 -d cf-674b77f839dcd5d66092 vms
```

Using environment '10.0.16.5' as user 'director' (bosh.*.read, openid, bosh.*.admin, bosh.read, bosh.admin)

Task 415. Done

Deployment 'cf-674b77f839dcd5d66092'

Instance	Process State	AZ	IPs	VM CID	VM Type
compute/540c034f-6685-450c-9f3d-9182e2b78f06 087ae813b84fdf9ad r4.xlarge	running		ap-northeast-2a	10.0.4.7	i-
control/c74f6792-a127-4b0f-83f6-6a1058af9978 04395bb8bb36102a3 r4.xlarge	running		ap-northeast-2a	10.0.4.6	i-
database/e29af73e-04ee-4ad8-bbd8-1feae74404d4 0d413d69ed7680900 r4.large	running		ap-northeast-2a	10.0.4.5	i-
mysql_monitor/6952e5a1-4cc3-4453-bf97-73cff8d33e8e 0bf9bbce126334933 t2.micro	running		ap-northeast-2a	10.0.4.9	i-
router/11399cbb-e1d7-41ab-b72c-4d2db78762d8 0aa3ae618f63b17ff t2.micro	running		ap-northeast-2a	10.0.4.8	i-

5 vms

Succeeded

```
ubuntu@ip-10-0-0-251:~$ bosh -e bosh1 -d cf-674b77f839dcd5d66092 ssh router/11399cbb-e1d7-41ab-b72c-4d2db78762d8
```

Using environment '10.0.16.5' as user 'director' (bosh.*.read, openid, bosh.*.admin, bosh.read, bosh.admin)

Using deployment 'cf-674b77f839dcd5d66092'

Task 416. Done

Unauthorized use is strictly prohibited. All access and activity
is subject to logging and monitoring.

Welcome to Ubuntu 14.04.5 LTS (GNU/Linux 4.4.0-111-generic x86_64)

* Documentation: <https://help.ubuntu.com/>

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by applicable law.

Last login: Wed Jan 31 08:05:59 2018 from 10.0.0.251

To run a command as administrator (user "root"), use "sudo <command>".

See "man sudo_root" for details.

router/11399cbb-e1d7-41ab-b72c-4d2db78762d8:~\$

BOSH TASK/TASKS

bosh 가 현재 진행 중인 작업 또는 완료한 작업에 대한 내역 확인

\$ bosh -e bosh1 tasks --recent

- 최근 작업 내역 확인

ubuntu@ip-10-0-0-251:~\$ **bosh -e bosh1 tasks --recent**

Using environment '10.0.16.5' as user 'director' (bosh.*.read, openid, bosh.*.admin, bosh.read, bosh.admin)

ID	State	Started At	Last Activity At	User	Deployment
Description		Result			
422	processing	Wed Jan 31 08:17:33 UTC 2018	Wed Jan 31 08:17:33 UTC 2018	director	bosh-health-check create deployment
420	done	Wed Jan 31 08:10:00 UTC 2018	Wed Jan 31 08:11:14 UTC 2018	director	bosh-health-check delete deployment bosh-health-check /deployments/bosh-health-check
418	done	Wed Jan 31 08:07:34 UTC 2018	Wed Jan 31 08:09:59 UTC 2018	director	bosh-health-check create deployment /deployments/bosh-health-check
402	done	Wed Jan 31 07:59:42 UTC 2018	Wed Jan 31 08:00:24 UTC 2018	director	bosh-health-check delete deployment bosh-health-check /deployments/bosh-health-check
397	done	Wed Jan 31 07:57:34 UTC 2018	Wed Jan 31 07:59:41 UTC 2018	director	bosh-health-check create deployment /deployments/bosh-health-check
391	done	Wed Jan 31 07:49:54 UTC 2018	Wed Jan 31 07:51:08 UTC 2018	director	bosh-health-check delete deployment bosh-health-check /deployments/bosh-health-check
389	done	Wed Jan 31 07:47:33 UTC 2018	Wed Jan 31 07:49:53 UTC 2018	director	bosh-health-check create deployment
...					

\$ bosh -e bosh1 task 389

Task 실패한 경우 상세한 debug 내용을 ' --debug '를 붙여서 확인 가능

ubuntu@ip-10-0-0-251:~\$ **bosh -e bosh1 task 389**

Using environment '10.0.16.5' as user 'director' (bosh.*.read, openid, bosh.*.admin, bosh.read, bosh.admin)

Task 389

Task 389 | 07:47:34 | Preparing deployment: Preparing deployment (00:00:01)

Task 389 | 07:47:36 | Preparing package compilation: Finding packages to compile (00:00:00)

Task 389 | 07:47:36 | Creating missing vms: bosh-health-check/cf746755-0134-4976-9576-7109460aa297 (0) (00:01:28)

Task 389 | 07:49:04 | Updating instance bosh-health-check: bosh-health-check/cf746755-0134-4976-9576-7109460aa297 (0) (canary) (00:00:49)

Task 389 Started Wed Jan 31 07:47:34 UTC 2018

Task 389 Finished Wed Jan 31 07:49:53 UTC 2018

Task 389 Duration 00:02:19

Task 389 done

Succeeded