Photon Controller Commands Cheatsheet

This cheatsheet lists common Photon Controller commands. The commands assume that you have installed Photon Controller with authentication turned on.

Viewing help for commands: For information about photon commands, subcommands, and options, see the help for the Photon CLi. Examples:

```
photon --help
photon resource-ticket create --help
photon cluster create -h
```

Non-interactive mode: The `-n` option suppresses prompting but assumes that the command contains all the information required to execute successfully.

Replacing variables in commands: Many of the commands in this cheatsheet contain `<variables>` that you must replace. Commands containing variables are often immediately followed by examples with the variables replaced.

Setting Targets and Logging In

Find the load balancer's IP address:

```
photon deployment show
```

Connect to the IP address of the load balancer:

```
photon target set https://<ip_address>:443
```

Log in:

```
photon target login --username <username>@<oauth_tenant> --password <password>
photon target login --username pc-admin@esxcloud --password 'Your$ecret1!'
```

Check the system's status:

```
photon system status
```

Images

Upload an image:

```
photon image upload <path-to-image> -n <name> -i <replicationType>
photon image upload /tmp/ubuntu14-04.ova -n ubuntu1404 -i ON_DEMAND
```

Create an image, list all your images, show information about an image, and then delete it:

```
photon image create <image_filename> -n <image_name> -i <image_type>
photon image create photon-kubernetes-vm-disk1.vmdk -n photon-kubernetes-vm.vmdk -i EAGER
photon image list
photon image show <image-ID>
photon image show 96cd7af4-f1d0-45ea-8ed1-e18bef6c05ca
photon image delete <image-ID>
photon image delete 96cd7af4-f1d0-45ea-8ed1-e18bef6c05ca
```

Tenants and Projects

Here are some of the commands for managing tenants and resource tickets:

```
photon tenant create <name_of_tenant>
photon tenant list
photon tenant show <tenant-ID>
photon resource-ticket list
photon resource-ticket show <resource ticket name>
photon resource-ticket create
```

Here are some examples:

```
photon tenant create plato
photon resource-ticket create --tenant "plato" --name "plato-resources"
--limits "vm.memory 100 GB, vm.cpu 100 COUNT, vm 100 COUNT, persistent-disk 100 COUNT, persistent-disk.
photon project create --tenant "plato" --name "plato-prjt" --resource-ticket "plato-resources"
--limits "vm.memory 100 GB, vm.cpu 100 COUNT, vm 100 COUNT, persistent-disk 100 COUNT, persistent-disk.
photon tenant set "plato"
photon project set "plato-prjt"
```

Flavors and Disks

Here are examples of how to provision resources for virtual machines or clusters with `photon flavor create`:

```
photon -n flavor create --name "vm-basic" --kind "vm" --cost "vm 1 COUNT, vm.cpu 2 COUNT, vm.memory 2 GI
photon -n flavor create --name "disk-eph" --kind "ephemeral-disk" --cost "ephemeral-disk 1 COUNT"
photon -n flavor create --name "disk-persist" --kind "persistent-disk" --cost "persistent-disk 1 COUNT"
photon -n flavor create --name "my-vm" --kind "vm" --cost "vm 1 COUNT, vm.cpu 1 COUNT, vm.memory 2 GB"
```

Virtual Machines and Disks

Stop a VM by its ID and create a new image from it:

```
photon vm stop bac117cb-fc32-46e0-abcd-999199c6b6d5
photon vm create_image bac117cb-fc32-46e0-abcd-999199c6b6d5 -n image-1 -r ON_DEMAND
```

More examples of creating a VM:

```
photon vm create -n vm-1 -f core-100 -d "disk-1 core-100 boot=true"
-i 5889ea6b-20ca-4706-99e8-87096d2c274
photon -n vm create --name vm-1 --flavor tiny --disks "disk-1 core-100 boot=true"
-w "ID of Network"  -i "ID of Image"  --affinities disk:"ID of Persistent disk"
```

Get a list of all the VMs in your project and show the information about one of them:

```
photon vm list
photon vm show <ID>
photon vm show bac117cb-fc32-46e0-abcd-999199c6b6d5
```

Here are examples of how to create a peristent disk:

```
photon disk create -n disk-2 -f core-100 -g 10
photon  disk create --name persistent-disk-1 --flavor core-100
--capacityGB 10 --affinities vm:"ID of VM"
```

Attach or detach a persistent disk to or from a powered-off VM:

```
photon vm stop <VM-ID>
photon vm attach_disk <VM-ID <disk-ID>
photon vm attach_disk bac117cb-fc32-46e0-abcd-999199c6b6d5 -d dab22828-8cfe-441d-b837-b197adbc651e
photon vm detach_disk <VM-ID <disk-ID>
photon vm detach_disk bac117cb-fc32-46e0-abcd-999199c6b6d5 -d dab22828-8cfe-441d-b837-b197adbc651e
```

Delete a disk:

```
photon disk delete <disk-ID>
photon disk delete dab22828-8cfe-441d-b837-b197adbc651e
```

Here's how to upload and attach an ISO to a powered-off VM:

```
photon vm attach_iso <VM-ID> -p path -n name
photon vm attach_iso bac117cb-fc32-46e0-abcd-999199c6b6d5 -p /tmp/db.iso -n test-db
```

Operate a VM by citing its ID:

```
photon vm start bac117cb-fc32-46e0-abcd-999199c6b6d5
photon vm stop bac117cb-fc32-46e0-abcd-999199c6b6d5
photon vm suspend bac117cb-fc32-46e0-abcd-999199c6b6d5
photon vm resume bac117cb-fc32-46e0-abcd-999199c6b6d5
```

Clusters

Here are examples of how to establish resources for a Kubernetes cluster:

```
wget https://s3.amazonaws.com/photon-platform/artifacts/cluster/photon-kubernetes-vm-disk1.vmdk
photon image create photon-kubernetes-vm-disk1.vmdk -n photon-kubernetes-vm.vmdk -i EAGER
photon image list
photon deployment list
photon deployment enable-cluster-type <deployment_ID> -k KUBERNETES -i <Kubernetes_image_ID>
```

Here's how to create a Kubernetes cluster. Replace the example IP addresses with those from your Photon Controller environment. The IP address for the `master-ip` option should contain the static IP address that you want to assign to the Kubernetes cluster. The `etcd` option should also contain a static IP address.

```
photon cluster create -n kube-socrates -k KUBERNETES --master-ip 198.51.100.85
--etcd1 198.51.100.86 --container-network 192.0.2.0/16 --dns 198.51.100.1
--gateway 198.51.100.253 --netmask 255.255.0.0
```

More `photon cluster` commands:

```
photon cluster list
```

To get the Kubernetes master node IP address, use `show`:

```
photon cluster show <cluster-id>
```

See all the VMs in a cluster:

```
photon cluster list_vms <cluster-ID>
```

Delete it:

```
photon cluster delete <cluster-ID>
```

Availability Zones

Create an availability zone, set it as the default, and create a VM in it:

```
Photon availability_zone create --name "zone-name"
photon host set_availability_zone <hostID> <availabilityZoneID>
photon -n vm create --name vm-2 --flavor core-200 --disks "new-disk core-200 boot=true"
--affinities "availabilityZone:UUIDofAZ"
```