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Google Kubernetes Engine is a powerful cluster manager and orchestration system for running your Docker containers. GKE schedules your containers into the cluster and manages them automatically based on the requirements you define (such as CPU and memory). It's built on the open source Kubernetes system, giving you the flexibility to take advantage of on-premises, hybrid, or public cloud infrastructure.

Read the [Google Cloud PowerShell cmdlet reference](#) (<http://googlecloudplatform.github.io/google-cloud-powershell/>) to learn more about GKE cmdlets. To learn more about GKE in general, read the [Overview of GKE](#) (/kubernetes-engine).

You can create a cluster by first creating a `NodeConfig` object with `New-GkeNodeConfig` cmdlet. After that, you can pass in the `NodeConfig` object to the `Add-GkeCluster` cmdlet. It will then create a cluster whose node pools will have their configurations set from the `NodeConfig` object.

Instead of passing in the `NodeConfig` object, you can also use the parameters provided in the `Add-GkeCluster` cmdlet to create a cluster (a `NodeConfig` object will be created internally by the cmdlet).

You can update a cluster with `Set-GkeCluster` cmdlet. Only one property of the cluster can be updated at a time.

You can list available clusters with `Get-GkeCluster` cmdlet.

A node pool is a subset of machines within a cluster that all have the same configuration. While all nodes in a container cluster are identical, node pools let you create pools of machines within your

cluster that have different configurations. For example, you might create a pool of nodes in your cluster that have local SSDs or larger instance sizes. Because of this, node pools are useful for customizing the instance profile in your cluster.

To add a node pool to your cluster, you can first create a `NodePool` object with `New-GkeNodePool` cmdlet. You can then call `Add-GkeNodePool` cmdlet to add the `NodePool` object to a cluster.

You can list all the node pools in a cluster with `Get-GkeNodePool` cmdlet.

You can remove a node pool from a cluster with `Remove-GkeCluster` cmdlet.