

Predictive Auto-scaling in the Kubernetes Cluster Manager

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 - Specific
- 2 Cluster Managers and Kubernetes
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 - Overview of Cluster Managers
 - Kubernetes
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 - Theoretical
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Outline II

- Current State
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General

Contribute to distributed system's ability to reliably and resourcefully perform large, varying amounts of computational work.

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Specific

We seek to maximize the sum of two metrics: Efficient Resource Utilization and Quality of Service.

Efficient Resource Utilization (ERU)

A measure of whether an application is efficiently using the resources it is given.

Quality of Service (QOS)

A measure of whether the application is accomplishing its stated purpose.

Balancing ERU and QOS

Our goal is to maximize the summation of ERU and QOS. We want one of the following:

- ERU to increase and QOS to stay constant.
- ERU to stay constant and QOS to increase.
- Both!

Accomplishing these goals can have substantial real world impacts.

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Citations

Check out the k8s website.[1].

Citations I

 *Kubernetes Website.* <http://kubernetes.io>.