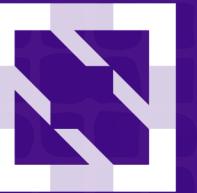




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Auto Operation of Hundreds of K8s Clusters in Yahoo Japan Corporation

Hiroki Katsuta / 勝田広樹: Yahoo Japan Corporation
Cheng Chen / 成臣





Agenda

- About Yahoo Japan Corporation
- Kubernetes as a Service
 - How to manage clusters
 - Features
 - Planned functions
- Summary

About us

- Hiroki Katsuta / 勝田広樹
 - Site Reliability Engineer, Yahoo Japan Corporation
 - CKA, CKAD

- Cheng Chen / 成臣
 - K8s Engineer, Interesting in Cloud Native Tech
 - CKA, CKAD



About Yahoo Japan Corporation

One of the Largest User Base in the Japanese Internet Market





Cluster Management Team



- Managing All Yahoo Japan Corporation's K8s Clusters
- Hold Cloud Native Lessons
- Supports Development Teams of Yahoo Japan Corporation
- Deploy Products which Connect with Yahoo Japan Intra-office Systems



Our mission

- Provide safe services by stable systems
 - Automatic system management
 - High availability
 - Support the newest K8s

Why Kubernetes as a Service



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Kubernetes as a Service



Requirement

- Easy to manage K8s cluster
- Automatic machine recover
- Single tenant

About Kubernetes as a Service

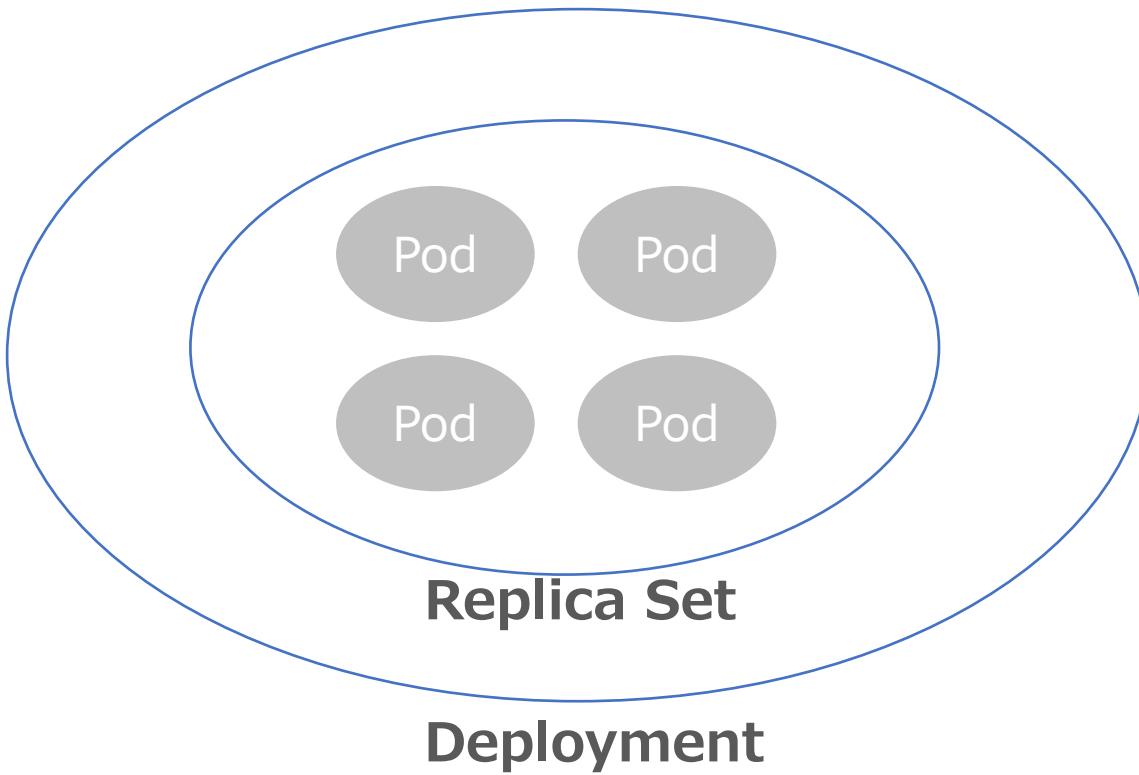


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About Kubernetes as a Service



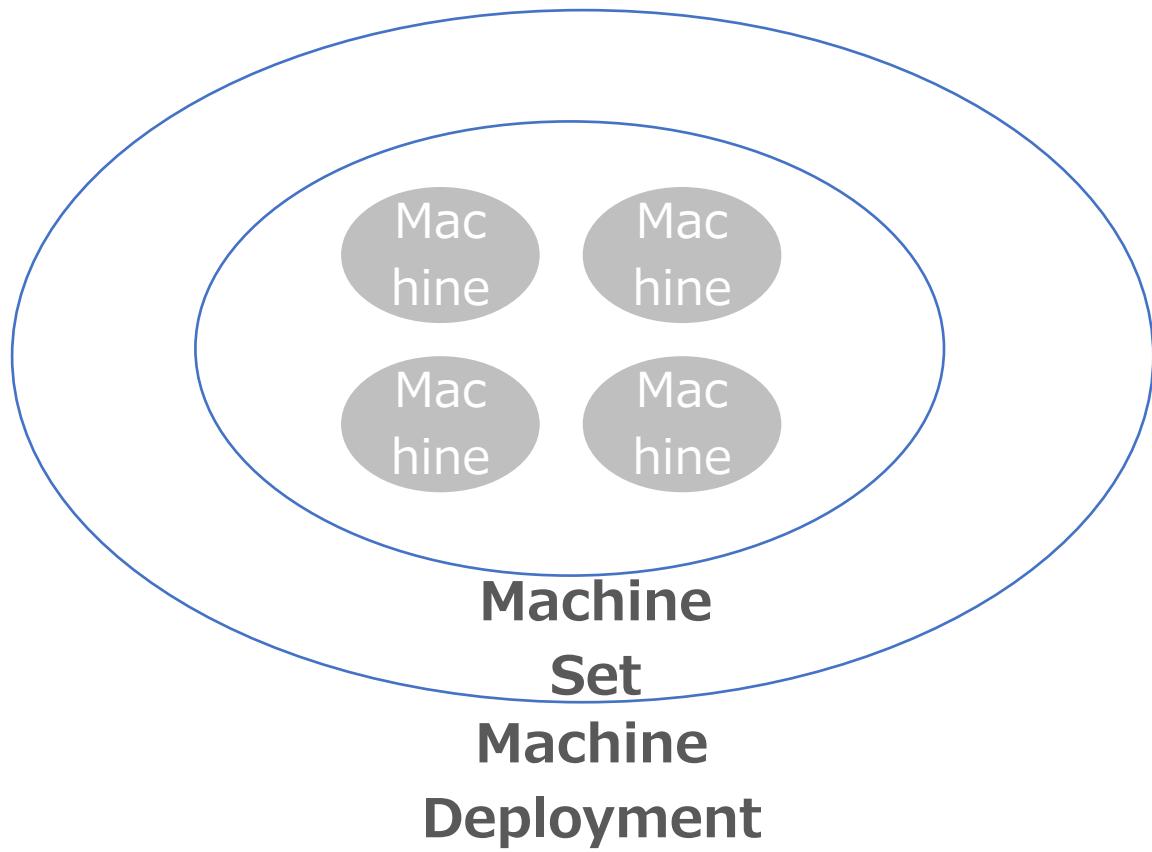
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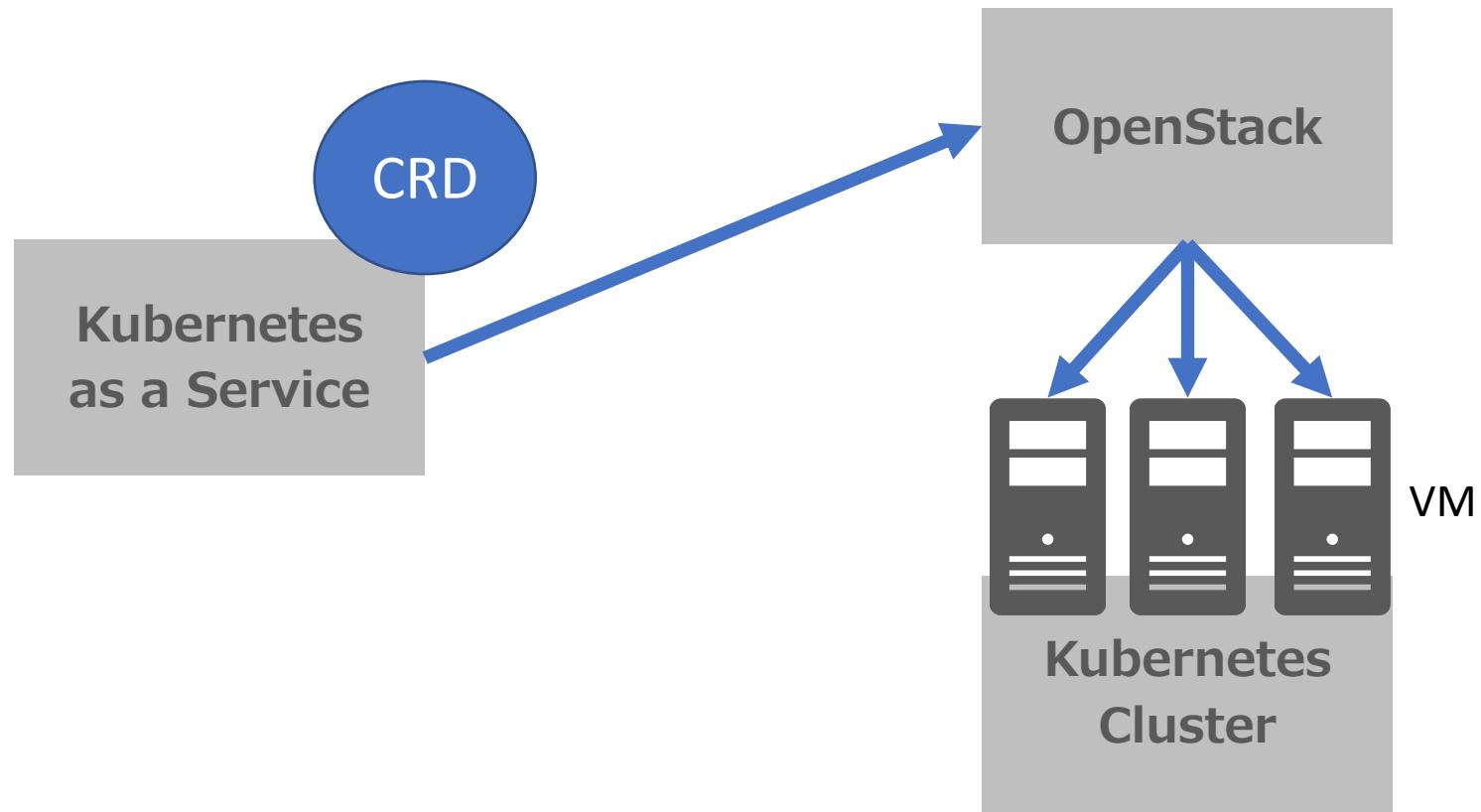
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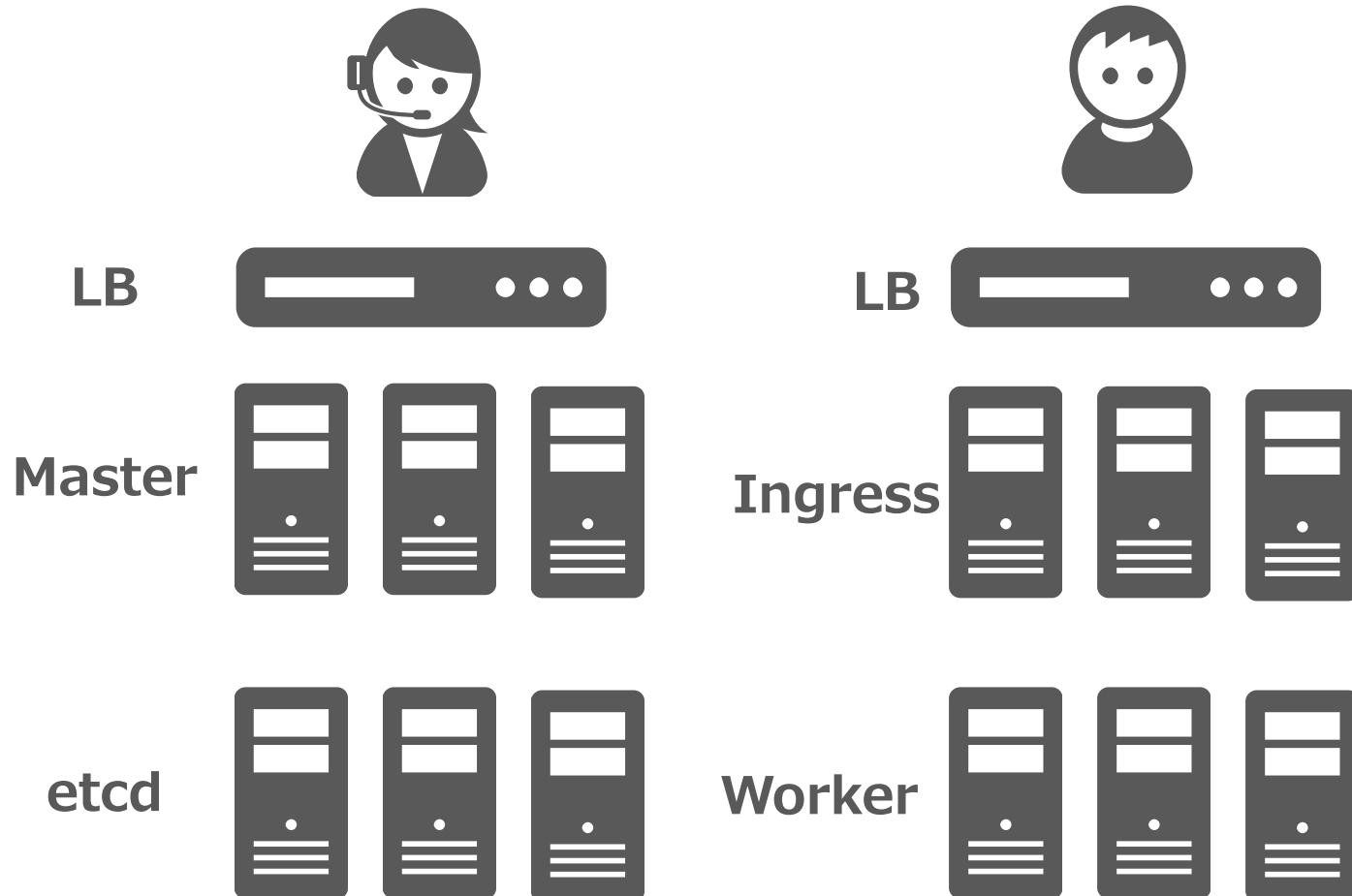
Kubernetes
as a Service



About Kubernetes as a Service



Cluster configuration

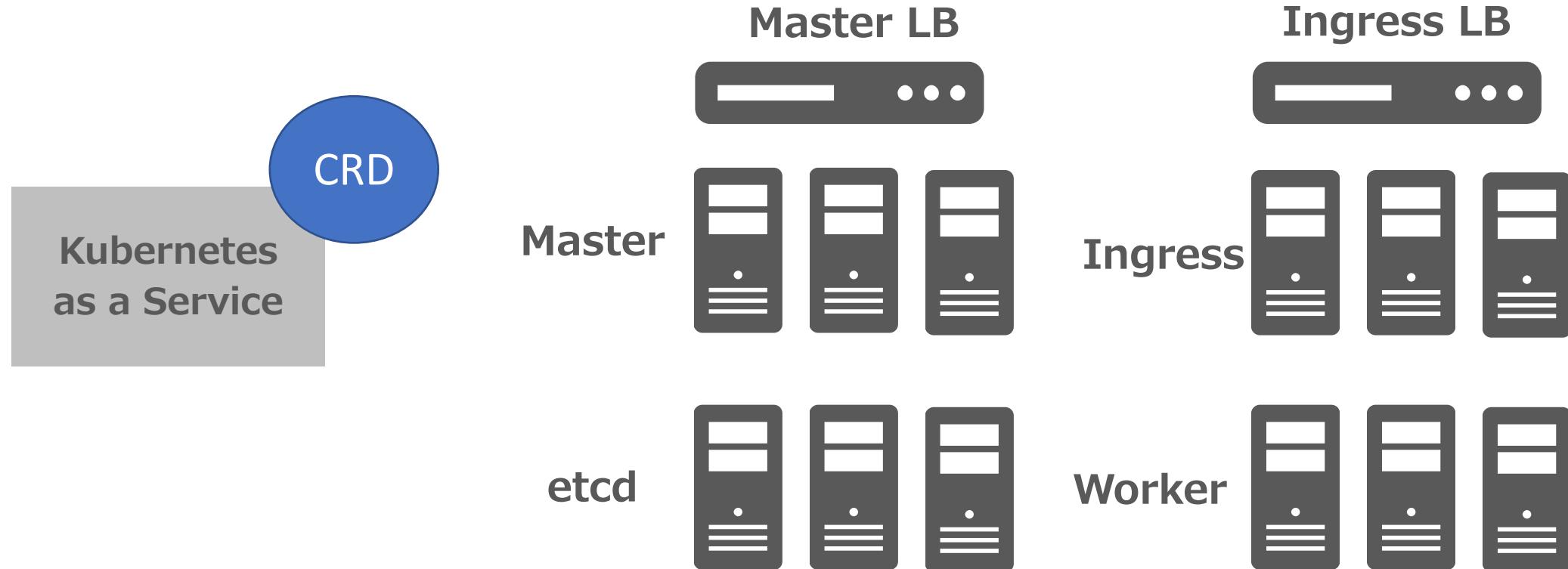




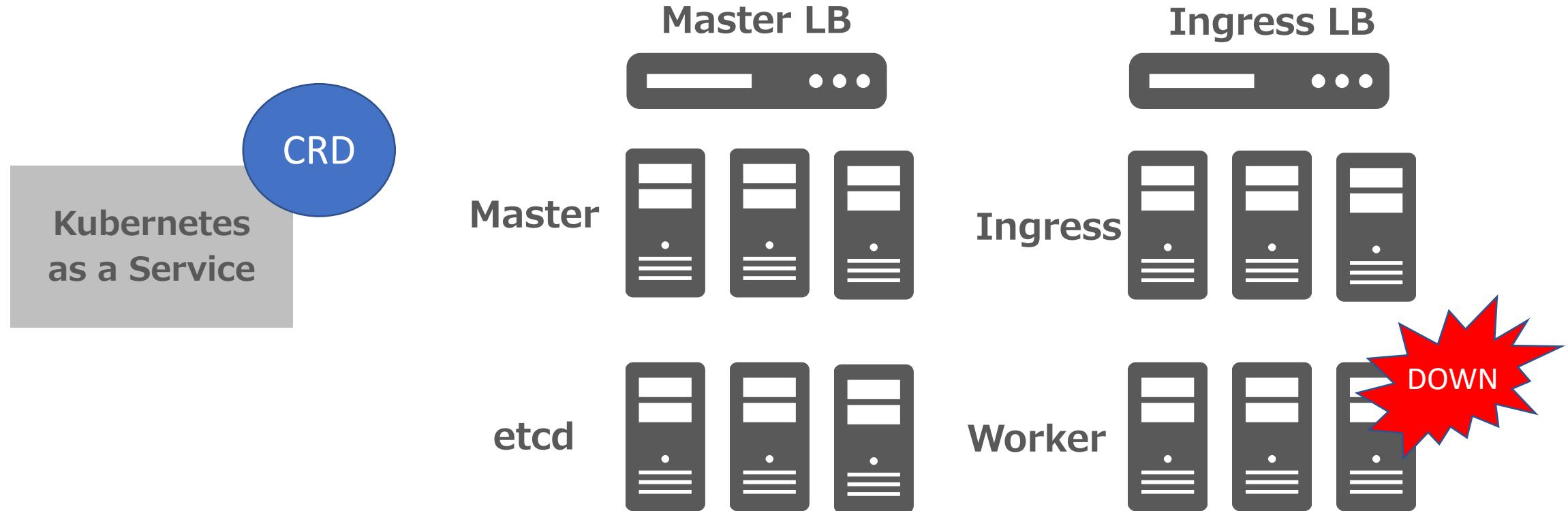
Features

- Automatic recovery from machine down
- Easy to update for vulnerability
(Host OS, Kubernetes, around Runtimes)
- 400 clusters / 10 management members
- Scalable by User operation
- Pure and the newest Kubernetes

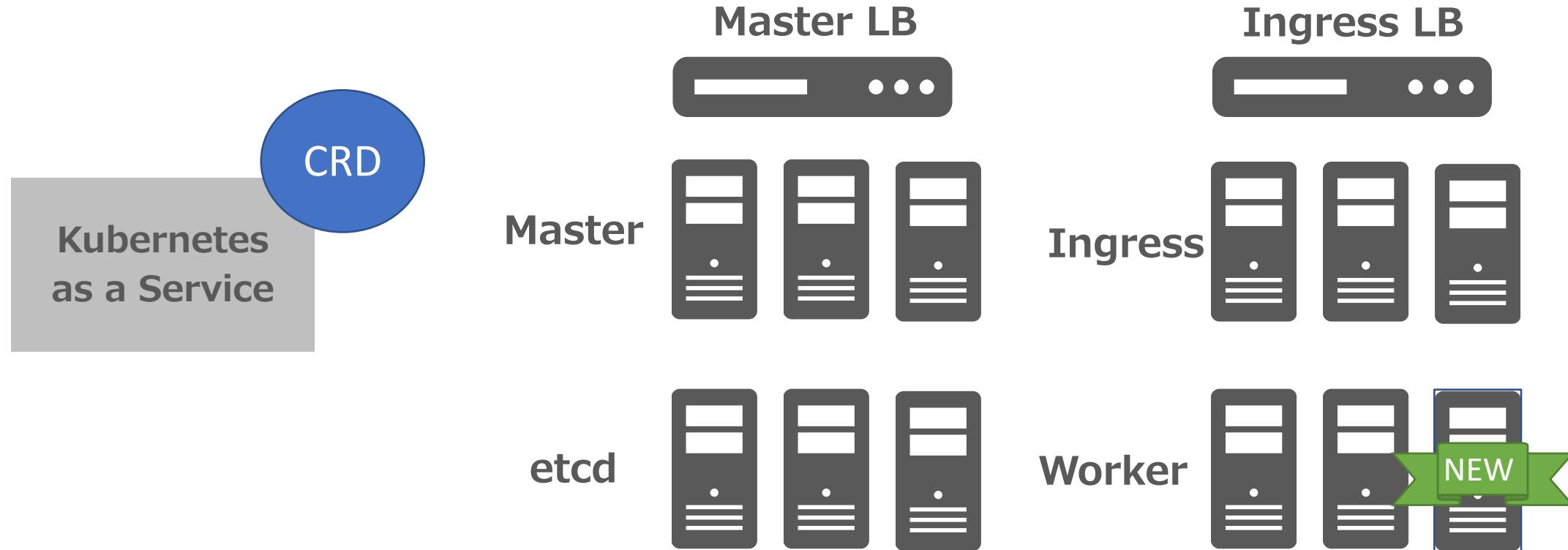
Automatic recovery from HV down



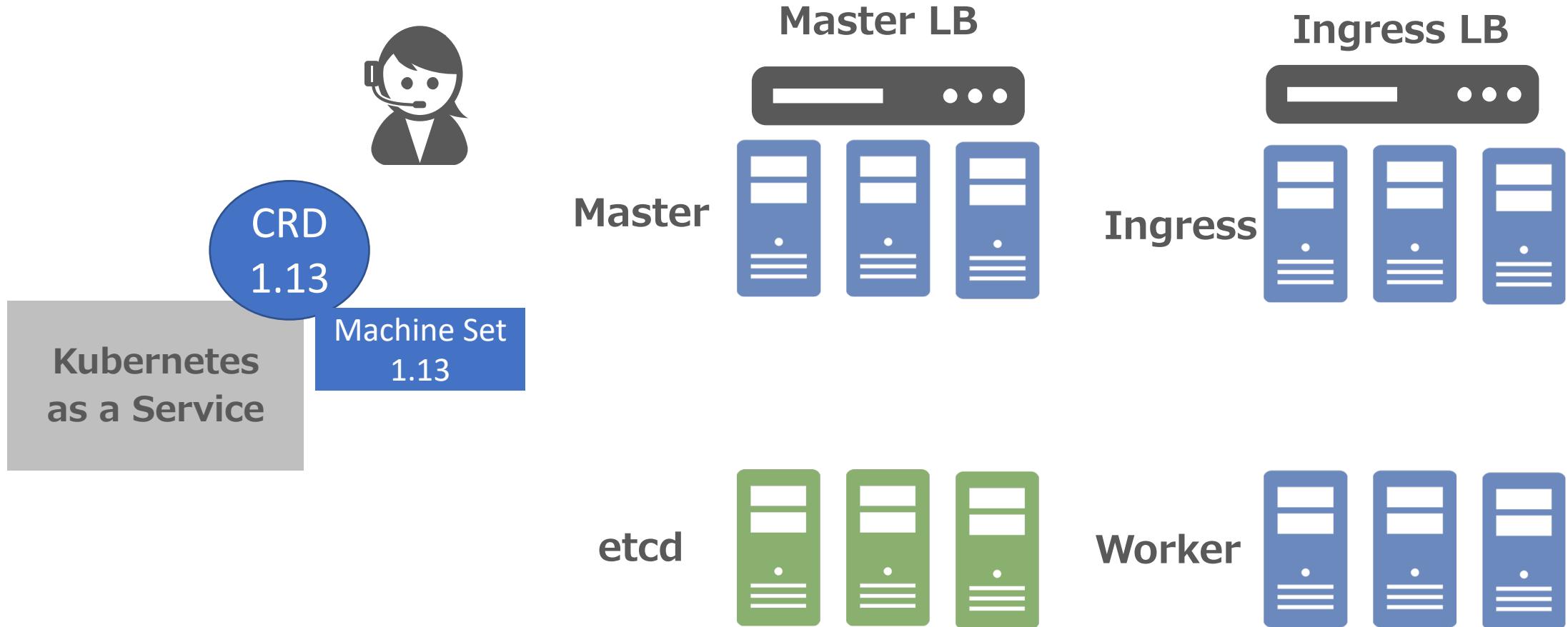
Automatic recovery from HV down



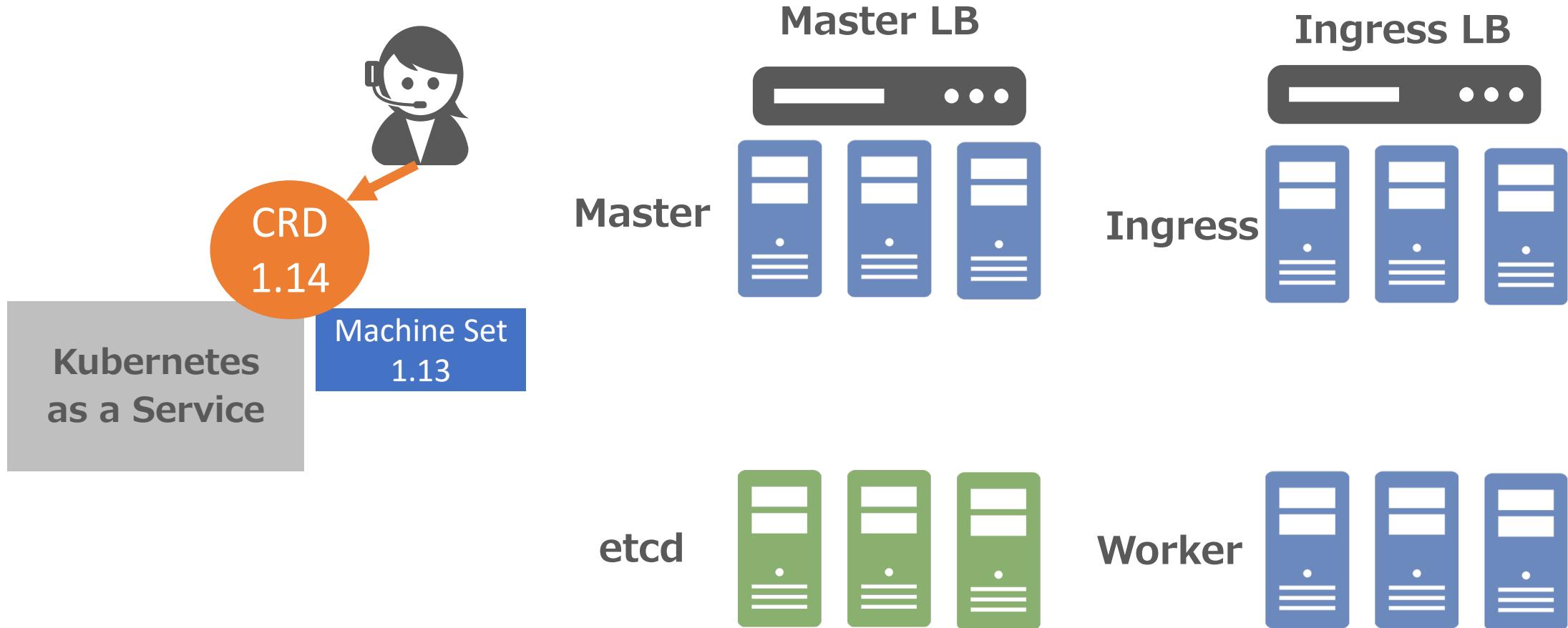
Automatic recovery from HV down



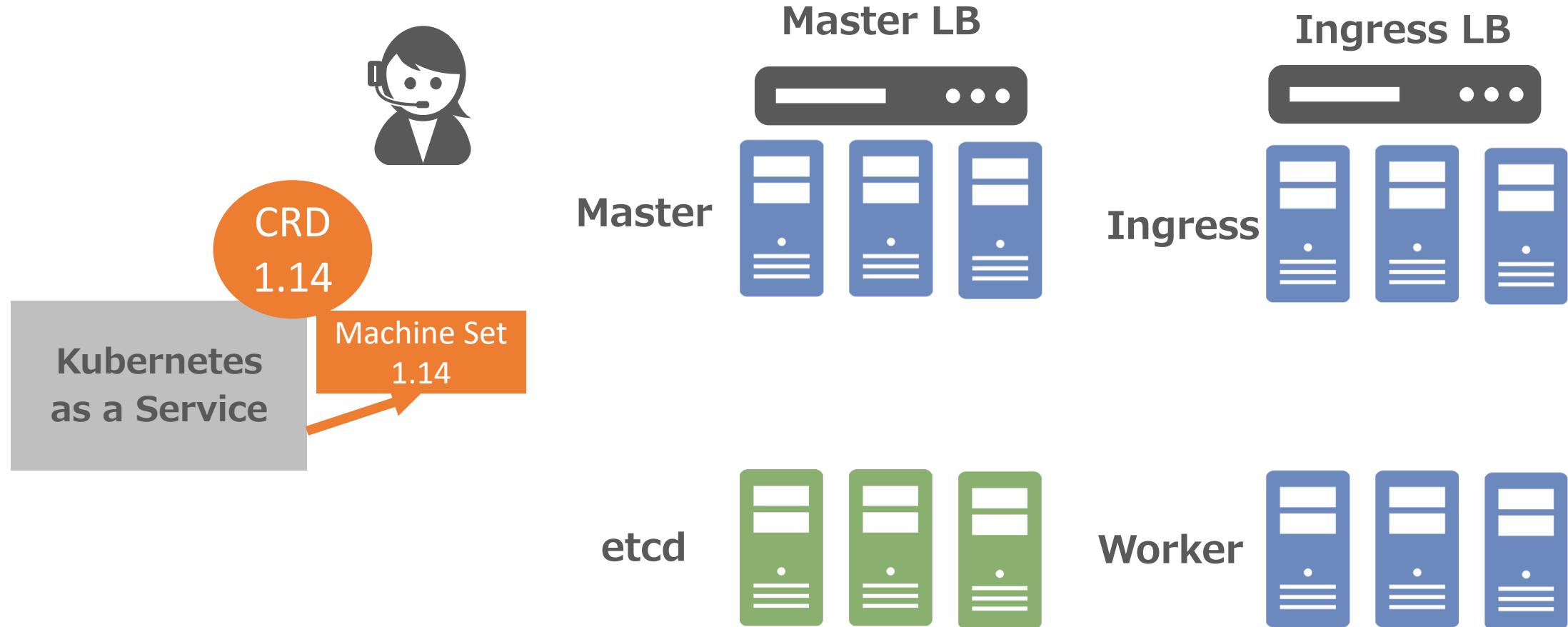
Easy to update



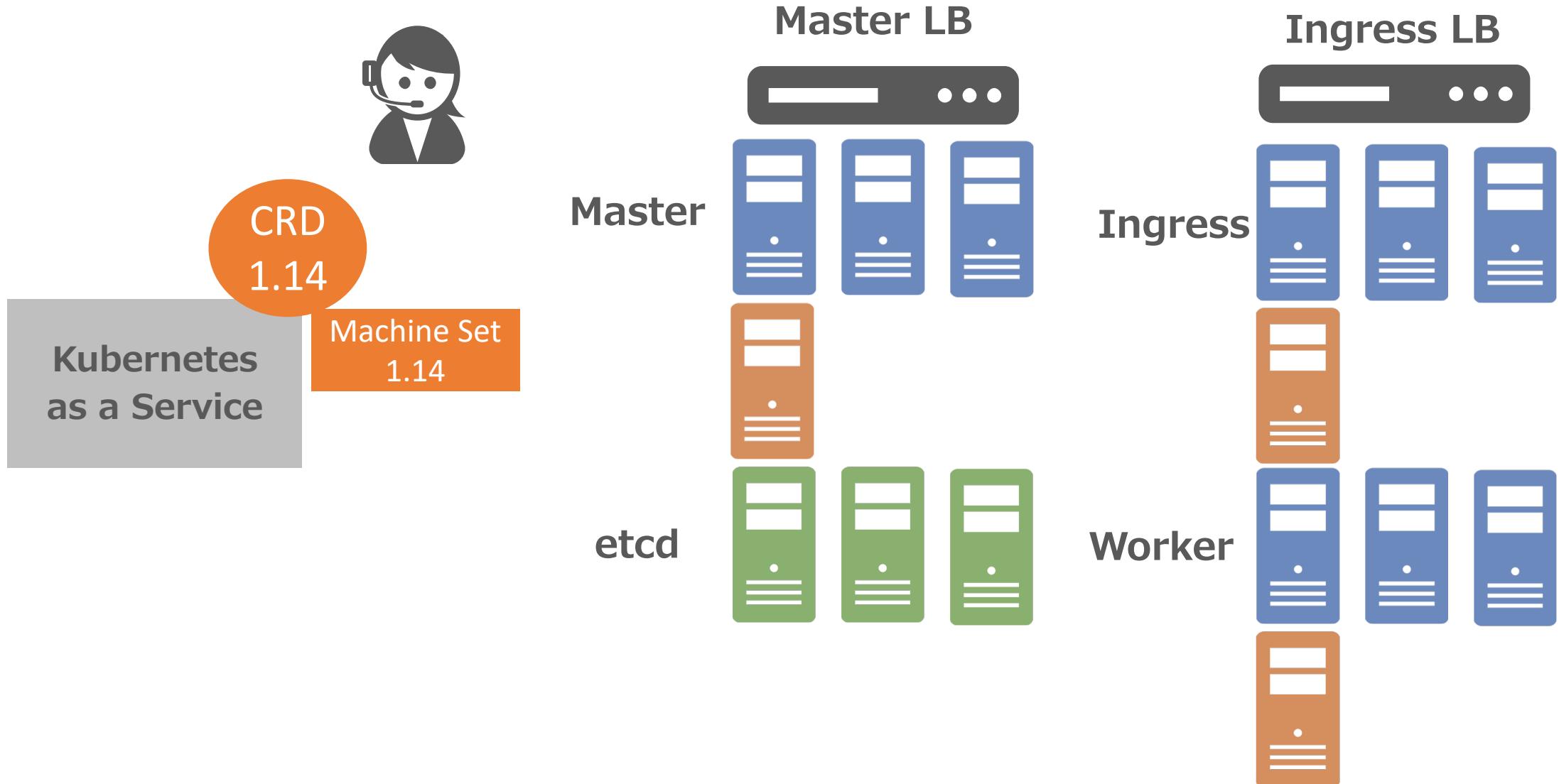
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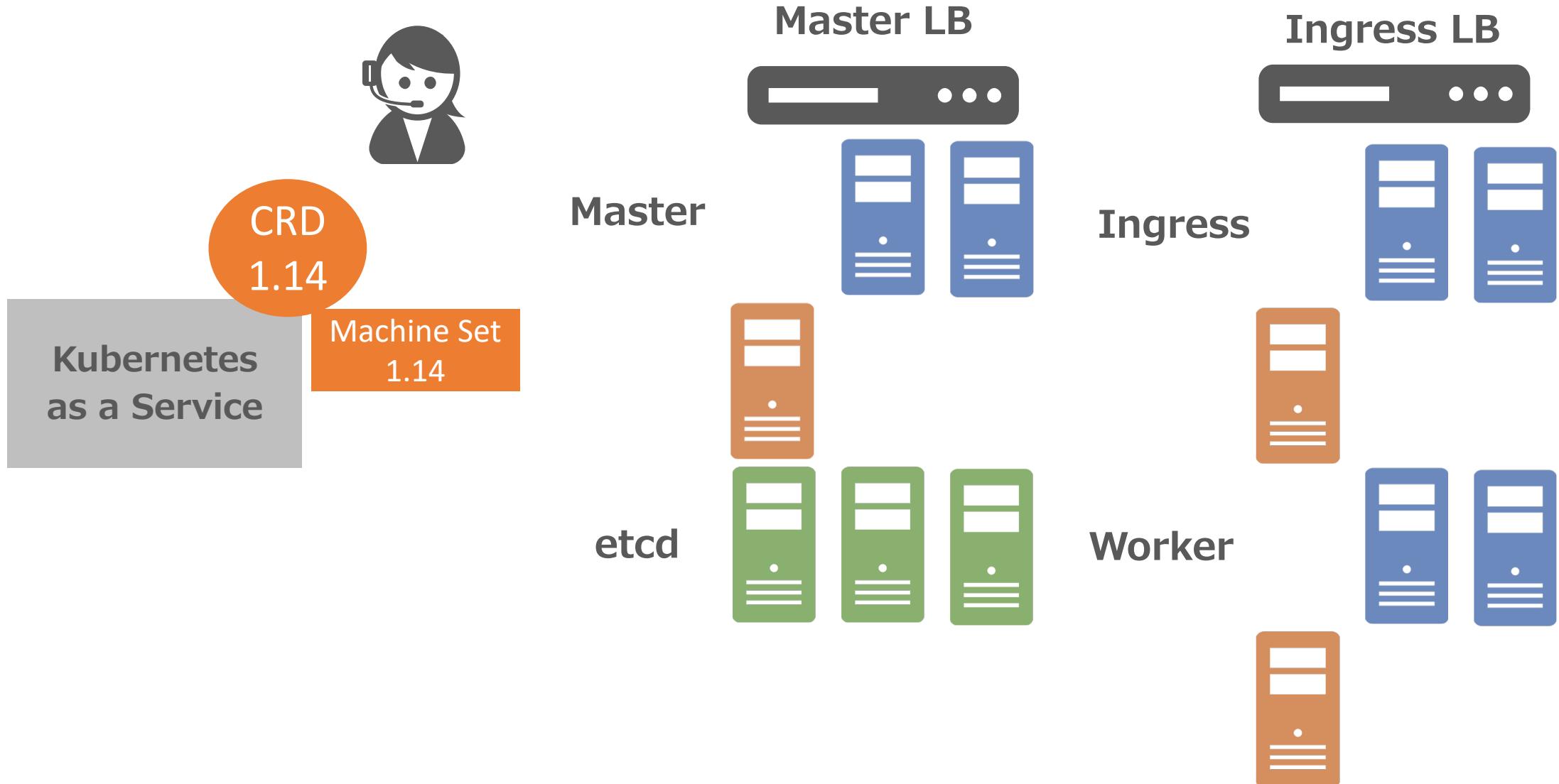
Easy to update



Easy to update



Easy to update



Easy to update

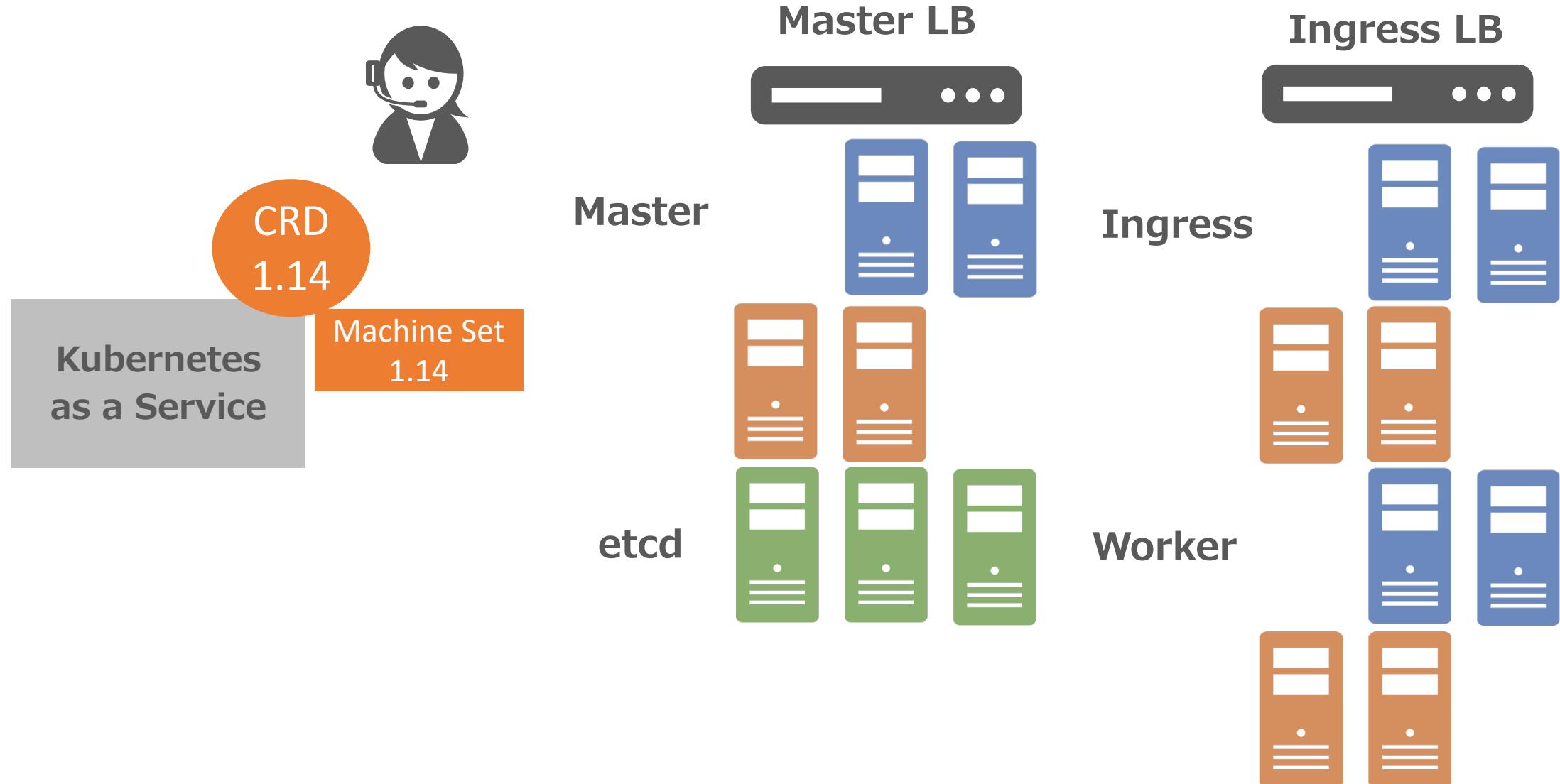


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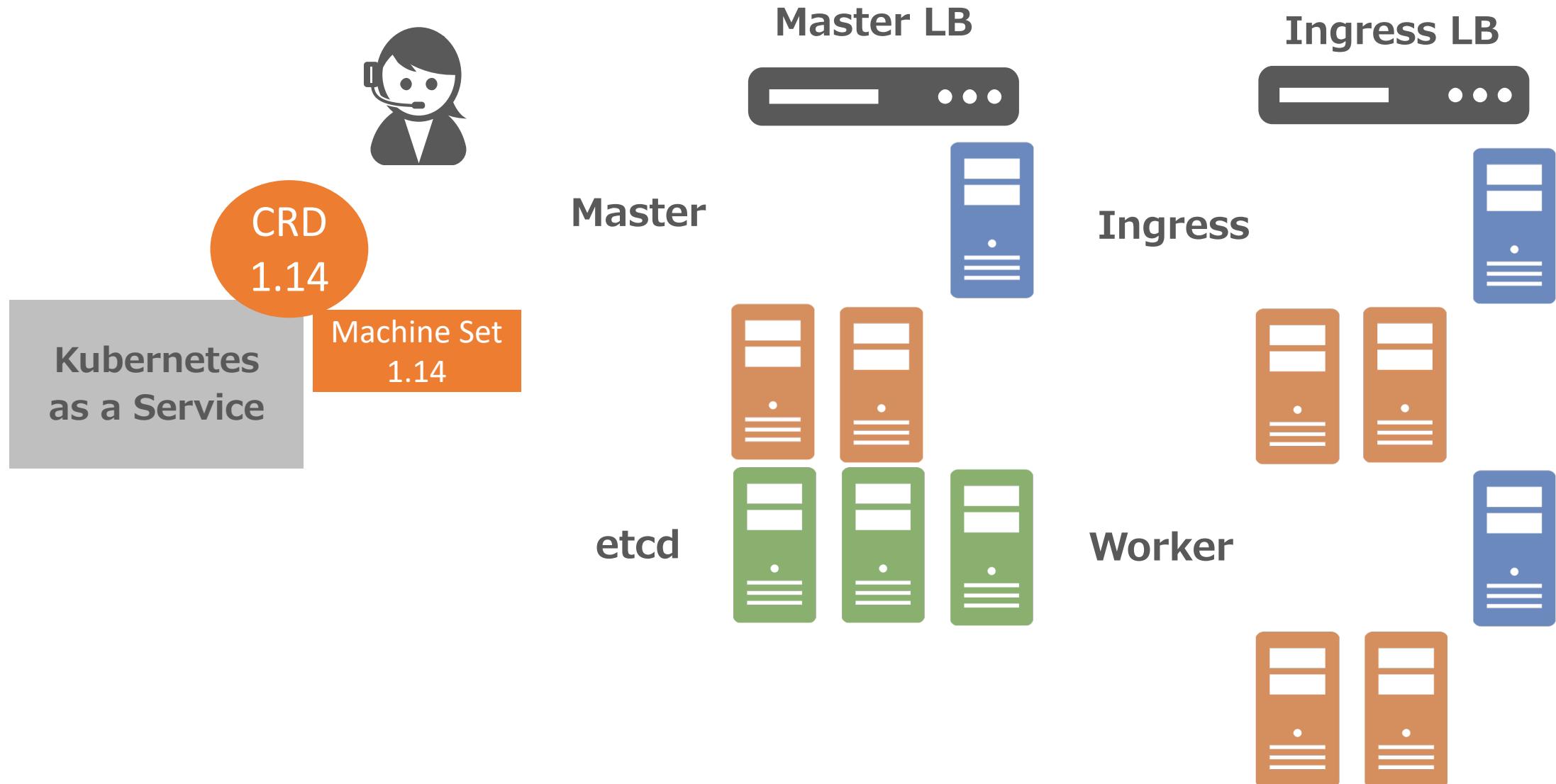
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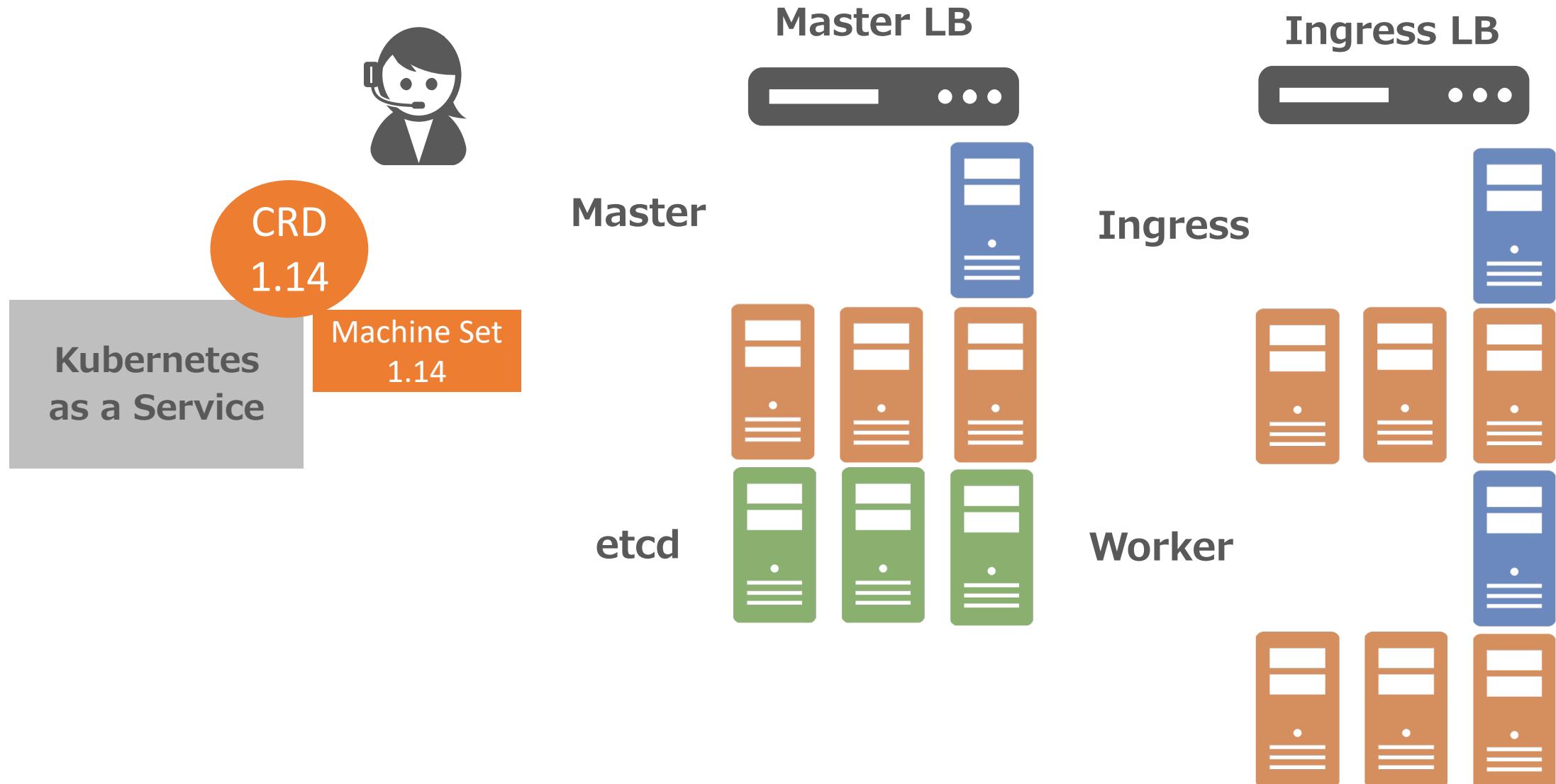
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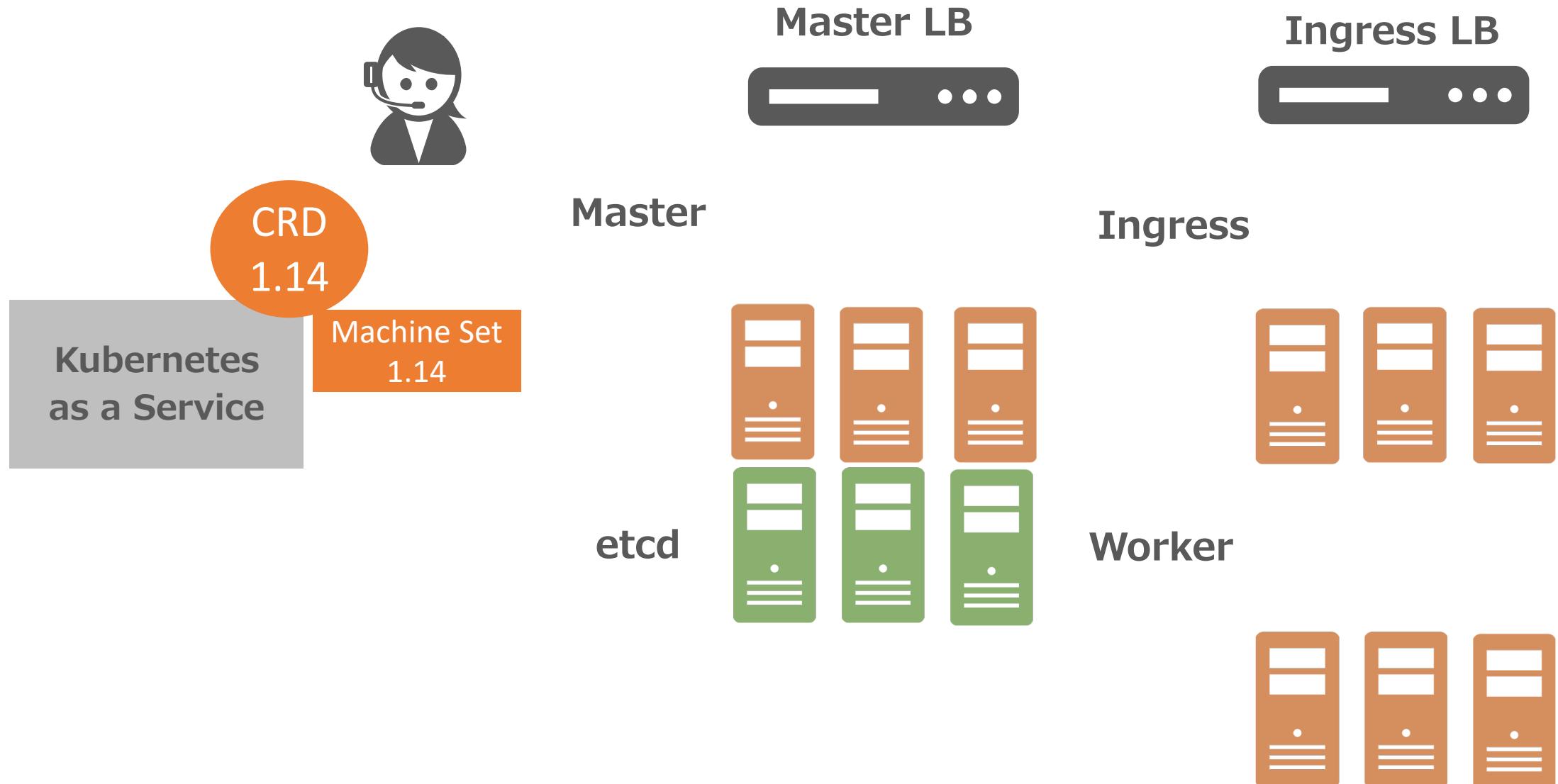
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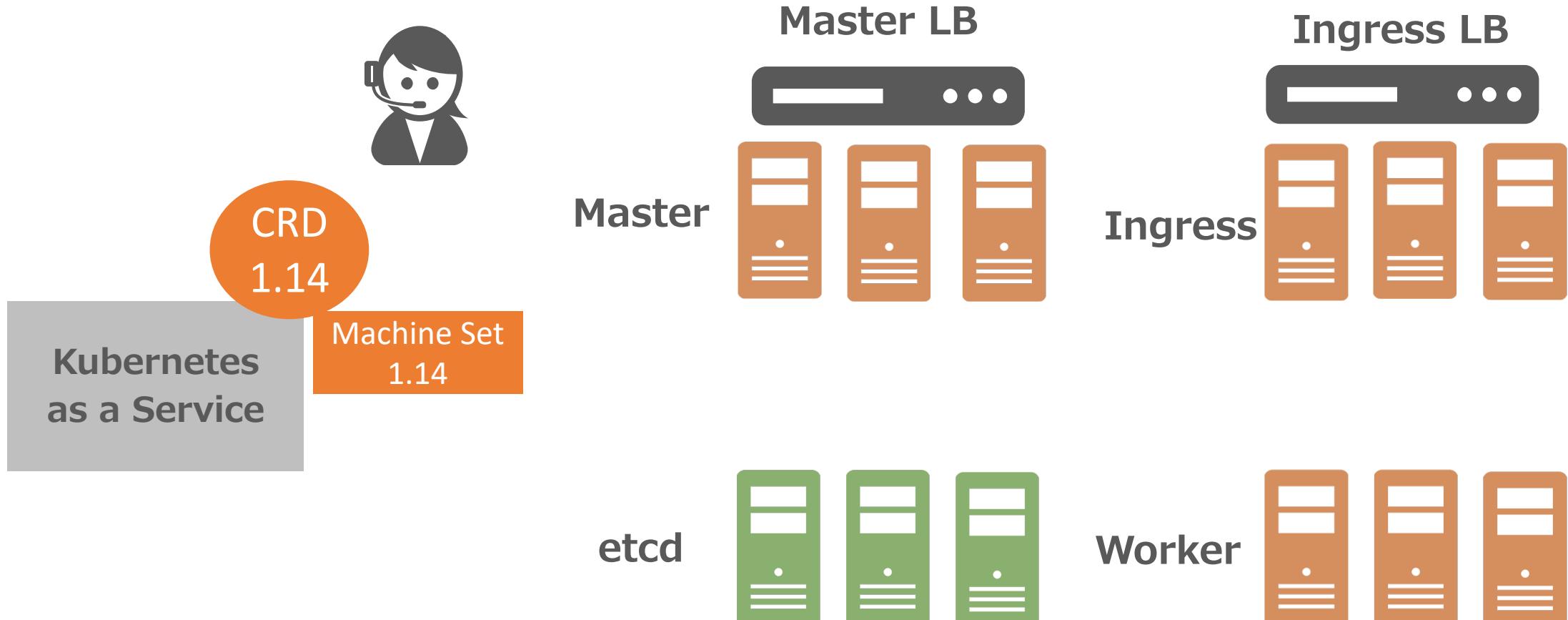
Easy to update



Easy to update



Easy to update



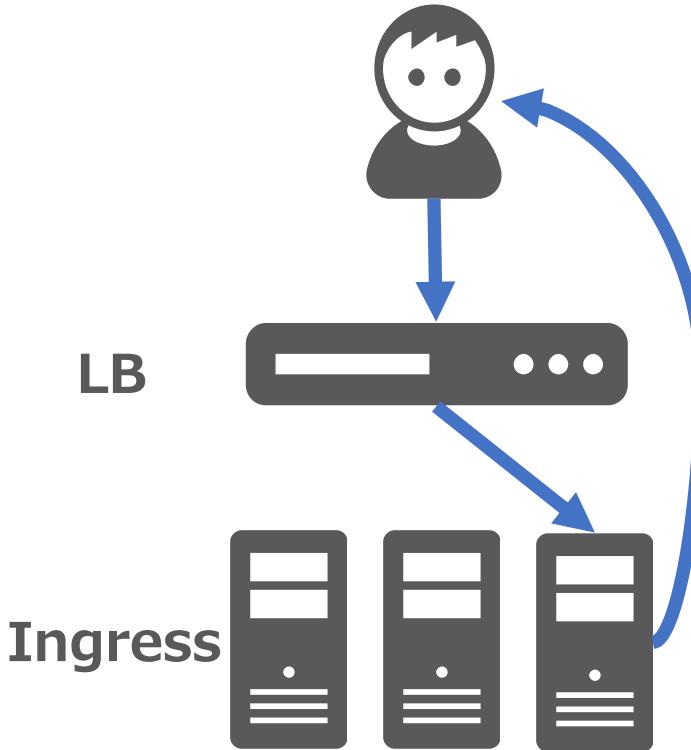
0 downtime update

400 clusters/10 management members

- Managing so many clusters
 - 100 Services
 - 400 clusters
 - 4000 nodes
- by about 10 management members
 - Kubernetes as a Service
 - default addons (Prometheus, Alert rules, Log DB ...)
 - check vulnerability

Planned functions

- More useful
 - Support stateful
 - Direct Server Return
 - CPU Pinning
- More secure
 - automatic image check
 - automatic audit check





Summary

- Management 400 clusters
- Easy to update
- Auto recovery
- Secure

by Yahoo Japan Corporation's
Kubernetes as a Service



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Thank You



Q & A



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