



# From Zero to Hero

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## Containers, Kubernetes and the AI revolution

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Nordic CTO

Google Cloud



**From:** Rohit Seth <rohitseth@google.com>  
**To:** Andrew Morton <akpm@osdl.org>  
**Subject:** [patch 0/5]-Containers: Introduction  
**Date:** Thu, 14 Sep 2006 18:37:44 -0700  
**Cc:** devel@openvz.org, CKRM-Tech <ckrm-tech@lists.sourceforge.net>, linux-

Containers:

Commodity HW is becoming more powerful. This is giving opportunity to run different workloads on the same platform for better HW resource utilization. To run different workloads efficiently on the same platform, it is critical that we have a notion of limits for each workload in Linux kernel. Current cpuset feature in Linux kernel provides grouping of CPU and memory support to some extent (for NUMA machines).

We use the term **container** to indicate a structure against which we track and charge utilization of system resources like memory, tasks etc for a



In **2006** Google  
developed  
**cggroups**

Today **everything** at  
Google runs in a  
**container**

Google launch  
**billions of containers**  
every week



In the mid 2000s Google developed **Borg**

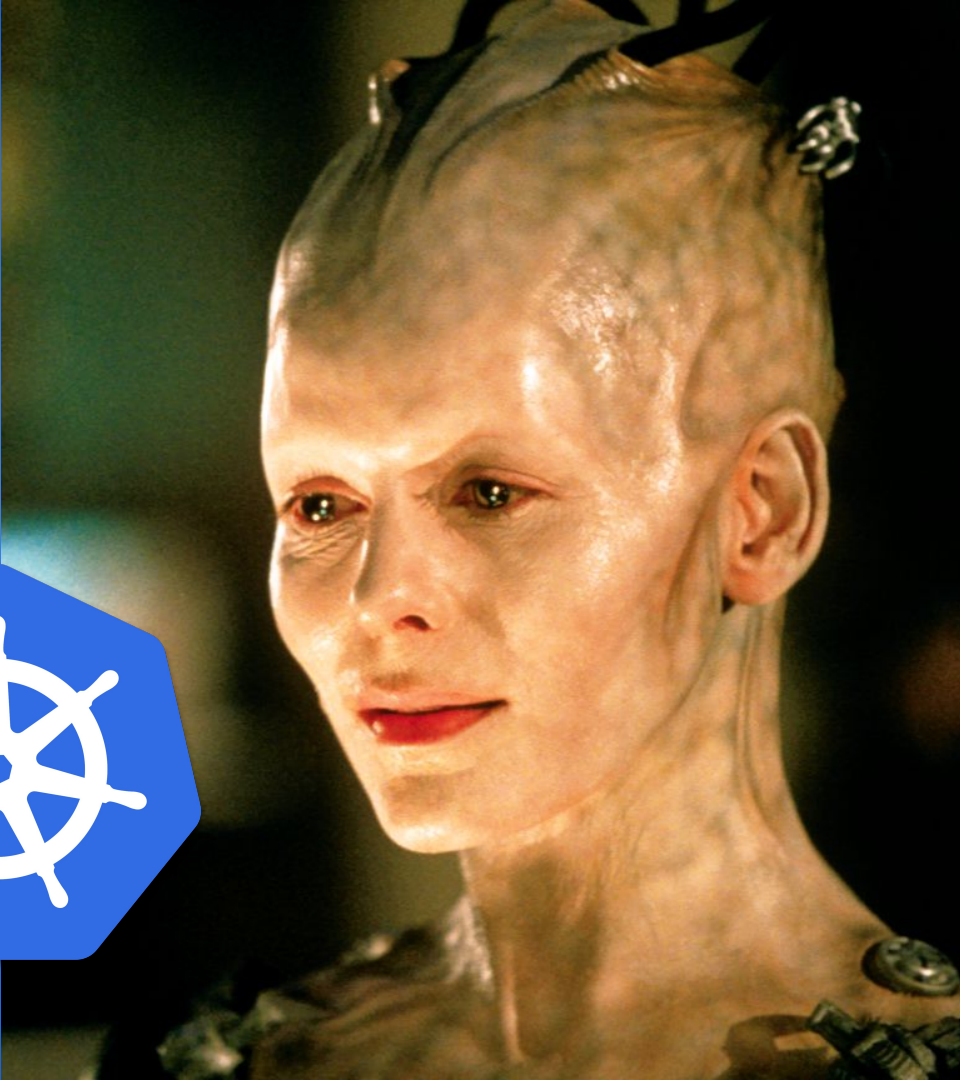
In 2014 Google developed and open sourced **Kubernetes (K8s)**

**+90 000** contributors have made **+4 500 000** contributions to date

**7 million** developers work with K8s every week

**100%** of Fortune 500 companies use K8s

Google is still **#1 contributor**



*“The Linux of the cloud age, a **safe bet** for the next 20 years.”*

Urs Hölzle  
Google SVP of Infrastructure



and many more!

*“Built, managed, maintained  
and supported by the people  
who invented Kubernetes.”*

*CTR IT, January 2015*

*“GKE is cheaper, faster and better  
in almost every single measurable  
way than the competition.”*

*www.kubedex.com, December 2021*



**Google Kubernetes Engine**  
launched in 2015



*"We chose GKE for its ability to orchestrate container clusters at planetary-scale."*

Da Xing, Lead SW Engineer, Niantic, 2016

**Pokemon GO**  
made GKE  
famous in  
2016

**236M**  
concurrent  
users in July  
2016



**+150 000 nodes**  
**+5000 databases**

## GKE Standard

Automated cluster life cycle management with pod and cluster autoscaling

## GKE Enterprise

Fleet management, multi-cluster control, enforcement and enhanced security

policy

## GKE Autopilot

Full hands-off automated serverless like Kubernetes experience



**10 years**  
In production

**100 000**  
clusters managed

**65 000**  
nodes per cluster

**+30 000**  
node cluster in Sweden

# WRITE ONCE - RUN ANYWHERE

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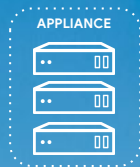
# PRIVATE. HYBRID. PUBLIC.



# K8s

POWERED BY

One platform  
One console  
Unified operations  
All sovereign levels  
All use-cases  
Globally



Google  
**Distributed Cloud**  
Air-gapped

**PRIVATE**  
Cloud



Google  
**Distributed Cloud**  
Software

**HYBRID**  
Cloud



Google  
**Distributed Cloud**  
Connected



Google Cloud

**PUBLIC**  
Cloud

**2025**  
**Containers & K8s**  
the foundation for AI

Containers  
powered by

**ARM**



Massive  
cluster sizes

**65 000**



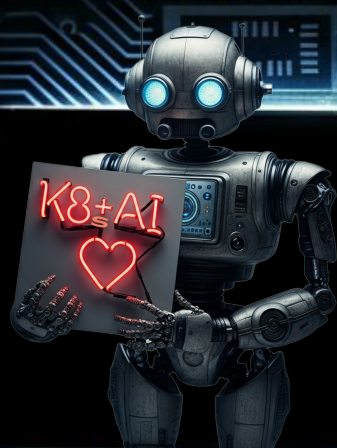
Containers  
connected to

**TPUs**



Containers  
running native

**LLMs**



COST EFFICIENCY

PERFORMANCE

AUTOMATION

SCALABILITY

FLEXIBILITY

**Google**  
**Veo 2**



Up to 2 min  
Up to 4k resolution  
Ultra realistic incl. physics  
Clear benchmark leader



# Veo 2

Our state-of-the-art video generation model

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POWERED BY GKE



 Google Cloud

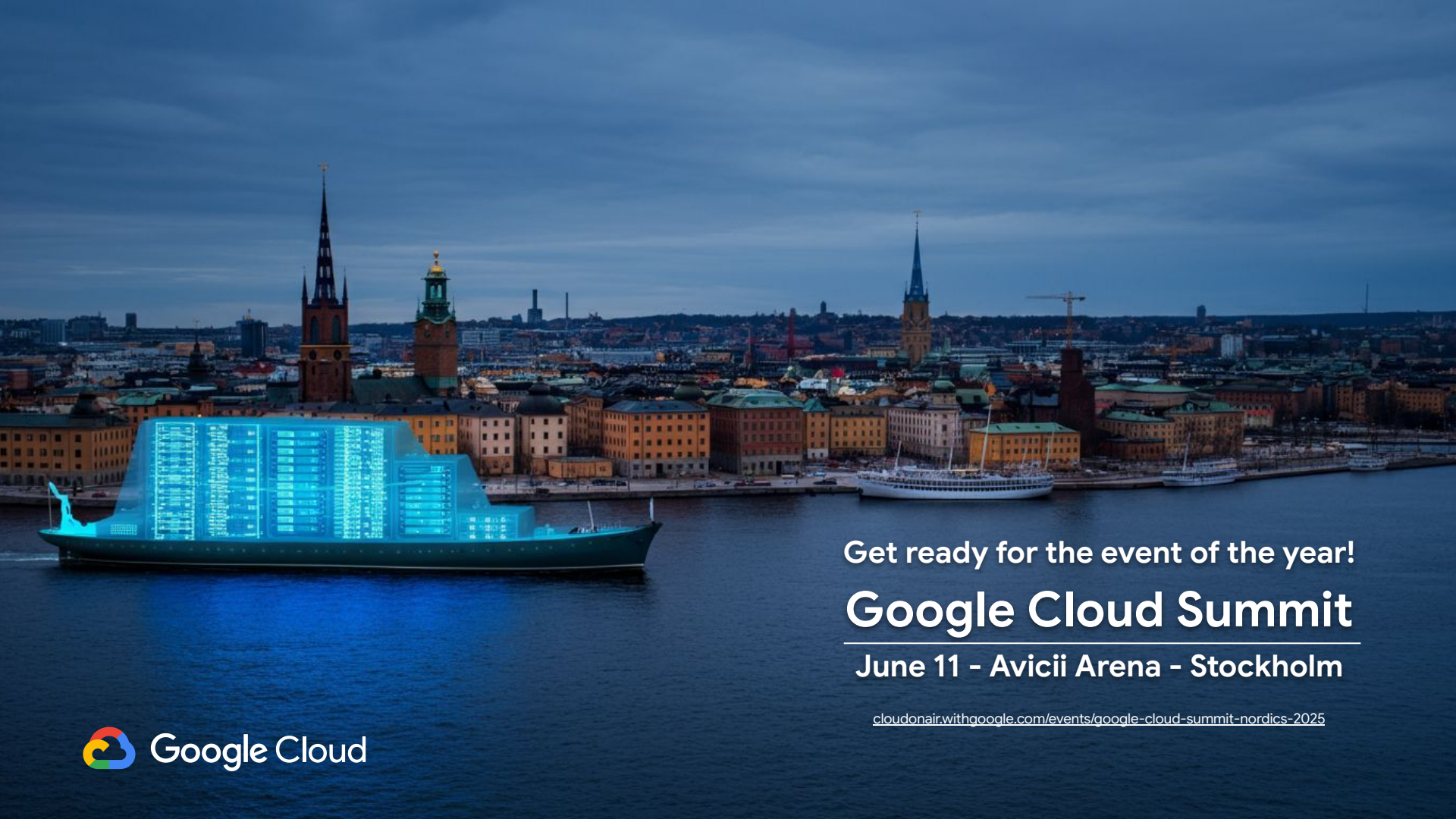


Hands of Steel

March 6  
2025

Google Cloud  
Region Stockholm





Get ready for the event of the year!

# Google Cloud Summit

June 11 - Avicii Arena - Stockholm

[cloudonair.withgoogle.com/events/google-cloud-summit-nordics-2025](https://cloudonair.withgoogle.com/events/google-cloud-summit-nordics-2025)







Thank you!

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