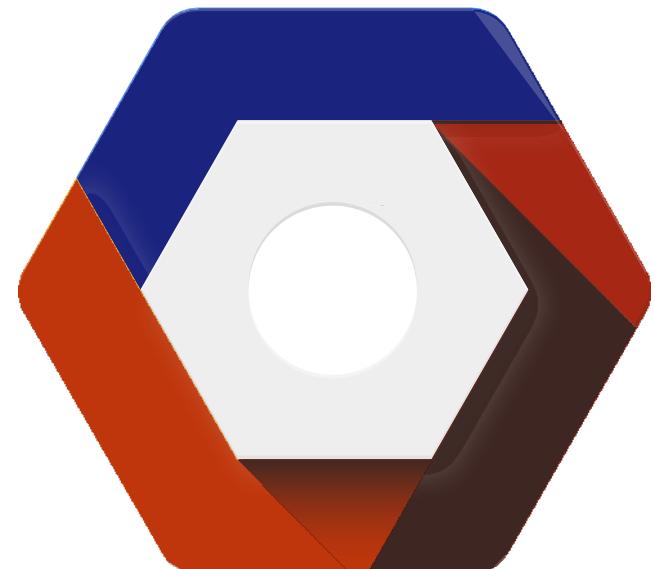




# Introduction to Google Cloud Platform

October 25, 2016  
GDG Central Virginia  
DevFest

Sadayappan “Chida”  
Chidambaram



@schida

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# Code of Conduct – GDG Central Veirginia

GDG Central Virginia prides itself on being an open, respectful, and inclusive community. That means jerky behavior isn't allowed at GDG meetings. Because we know that it's not obvious to everyone, here's a reminder of the things we don't allow: jokes or offensive comments about sex/sexuality/race/religion/nationality/body size, showing porn in public, touching people uninvited, or continuing to interact with someone after they've asked you to stop. Continuous jerky behavior may result in getting expelled from the meeting or GDG Chapter.

If someone is bothering you, please tell GDG Organizers immediately and they will take care of it. We want to maintain GDG DevFest's awesomeness.



# Who are you?

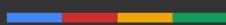
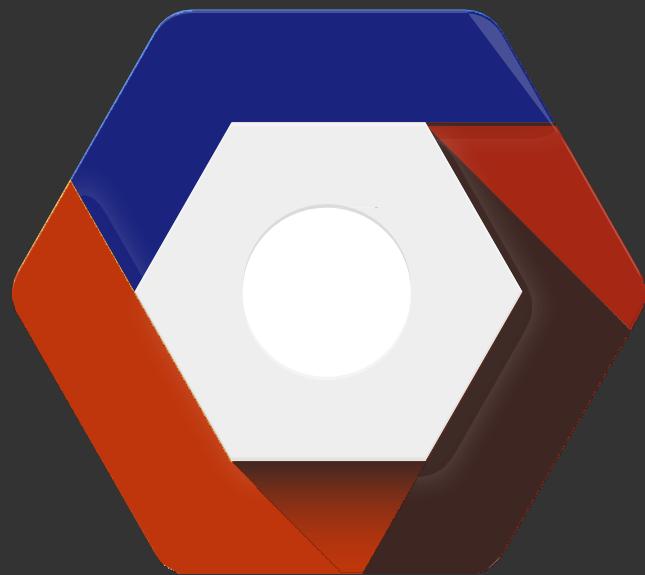


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# 01 Introduction

What is Google Cloud Platform



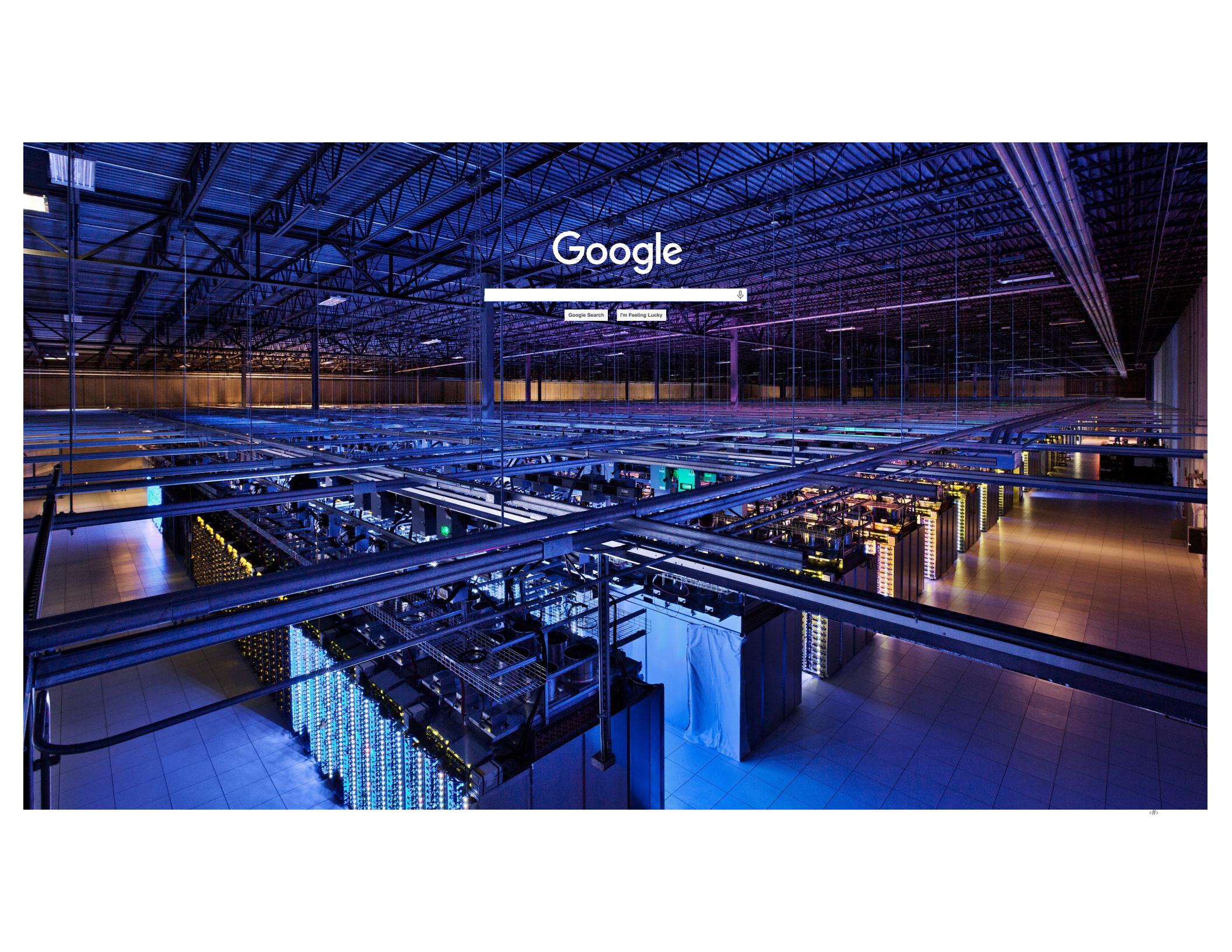
Google Cloud Platform

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Google Search

I'm Feeling Lucky

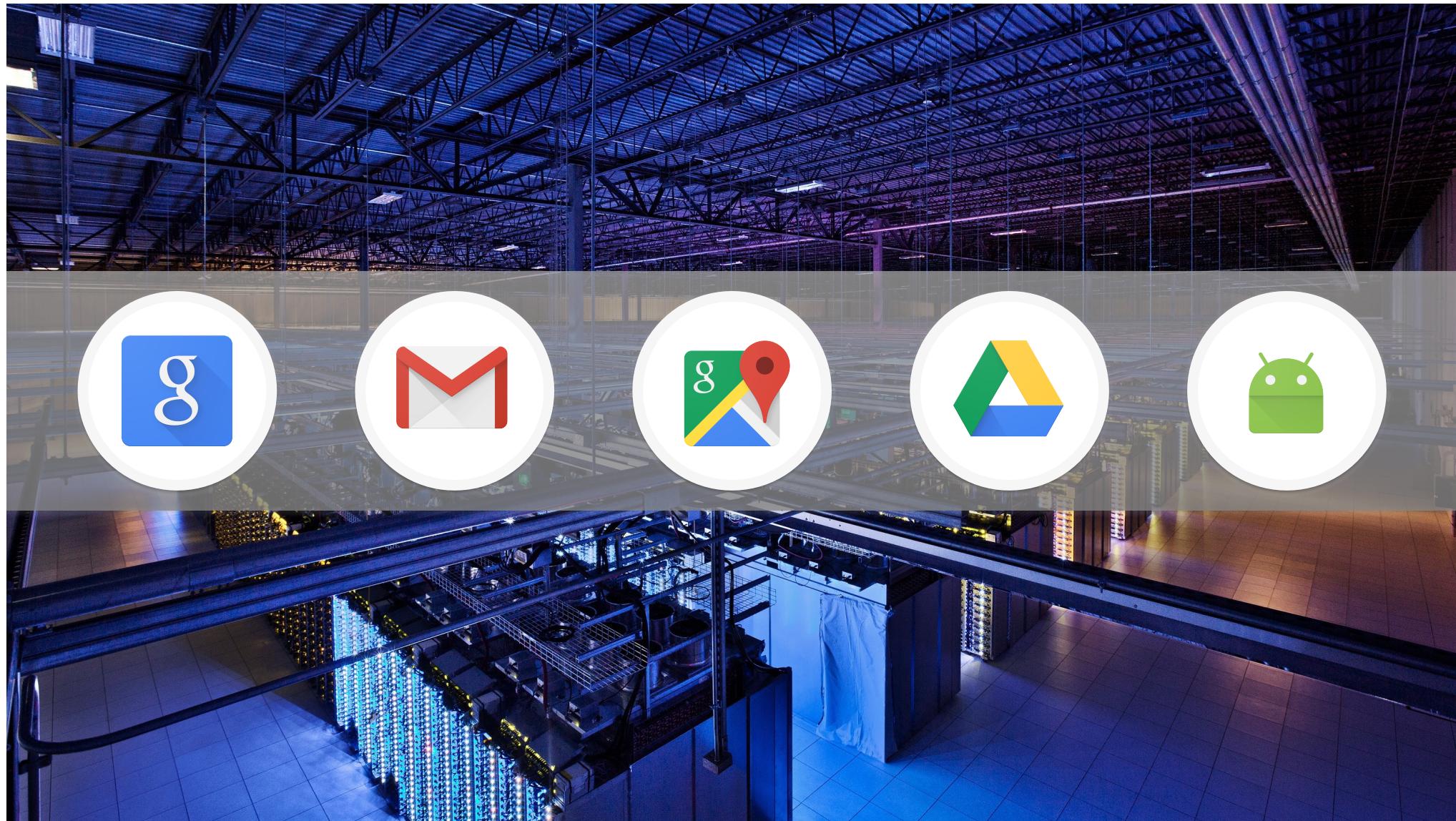


The image depicts a vast, multi-story server room with a complex network of raised floors, overhead walkways, and structural steel beams. The floor is illuminated by numerous glowing blue lights from server racks, creating a futuristic and powerful visual metaphor. A large, semi-transparent white rectangle is superimposed on the upper portion of the image, containing the word "Google" in its signature font. Below "Google" is a simplified representation of the Google search interface, featuring a search bar with "Google Search" and "I'm Feeling Lucky" buttons, and a small "0" icon.

Google

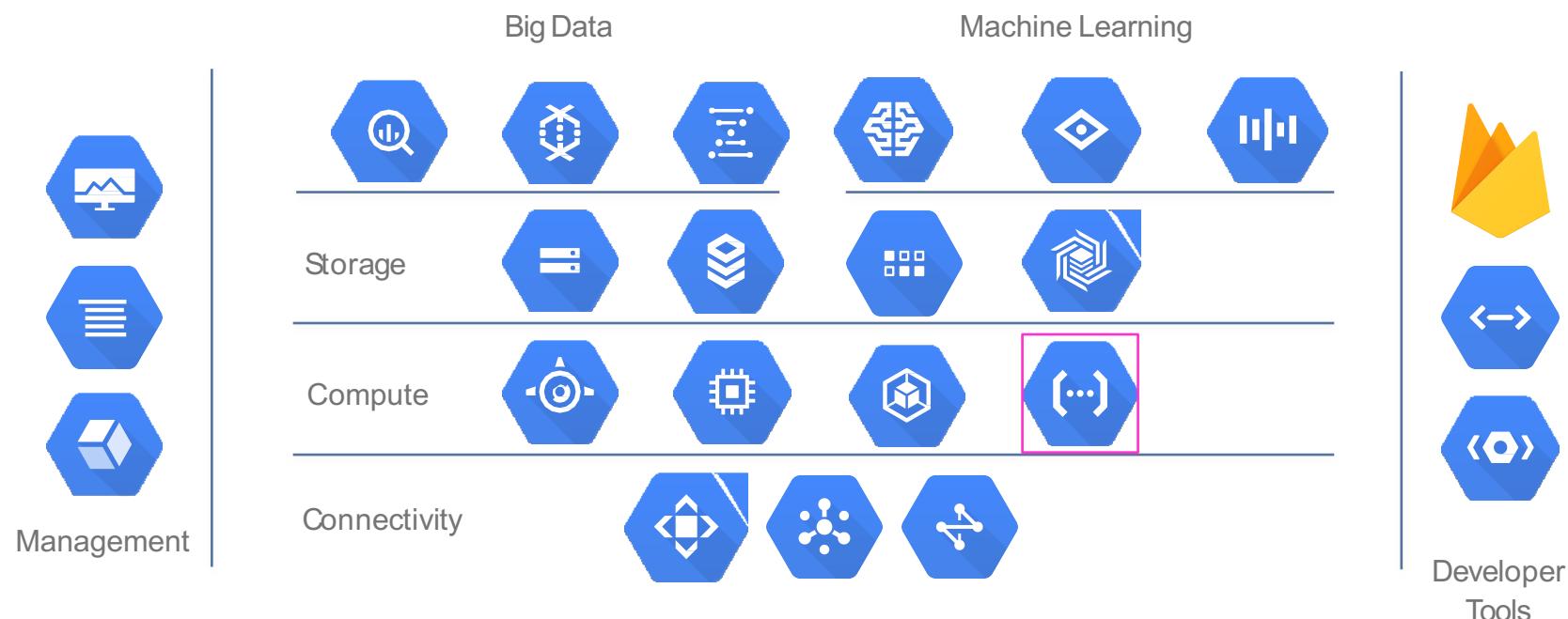
Google Search I'm Feeling Lucky







# Google Cloud Platform



# Cloud Bingo

- Did we hit all of the buzzwords?
- Did we say “Cloud” Enough?



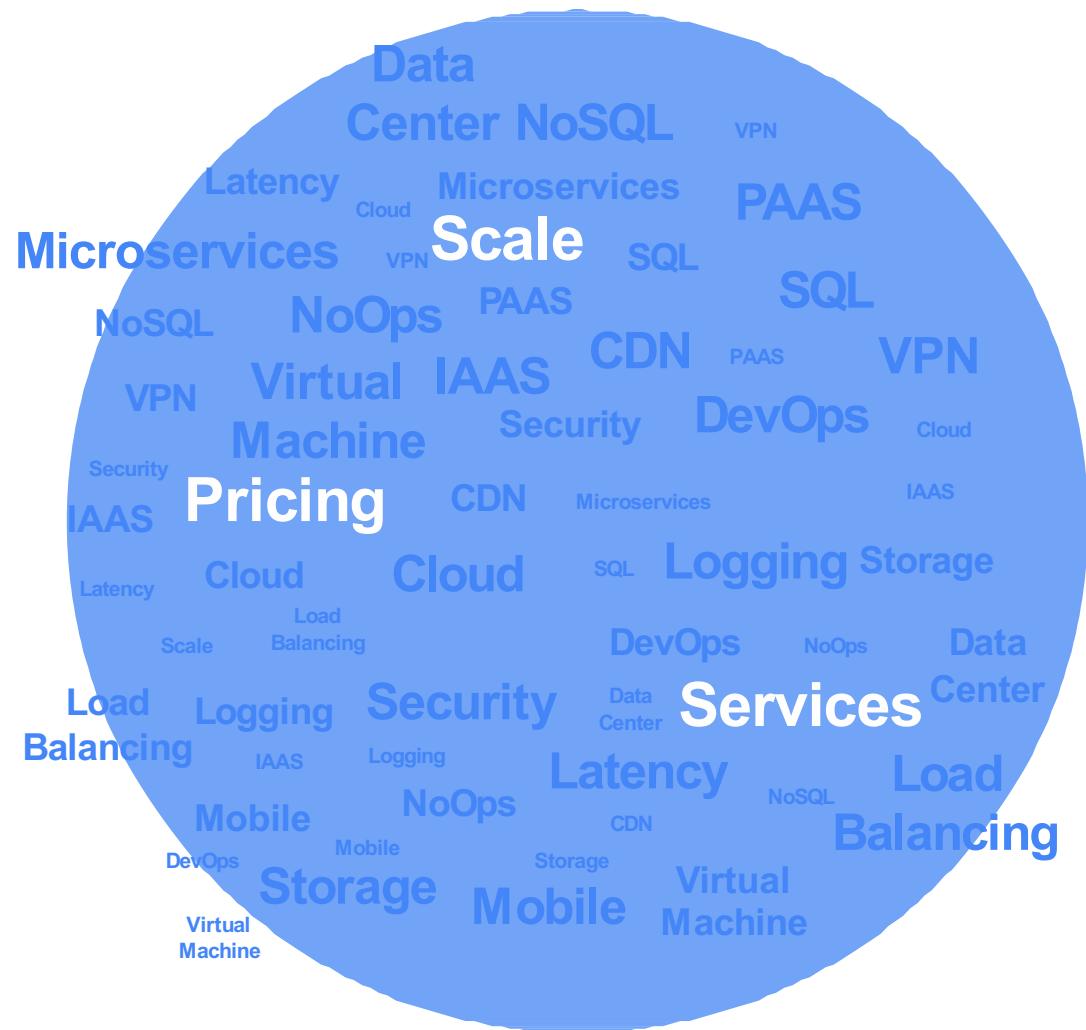
# What's the difference?



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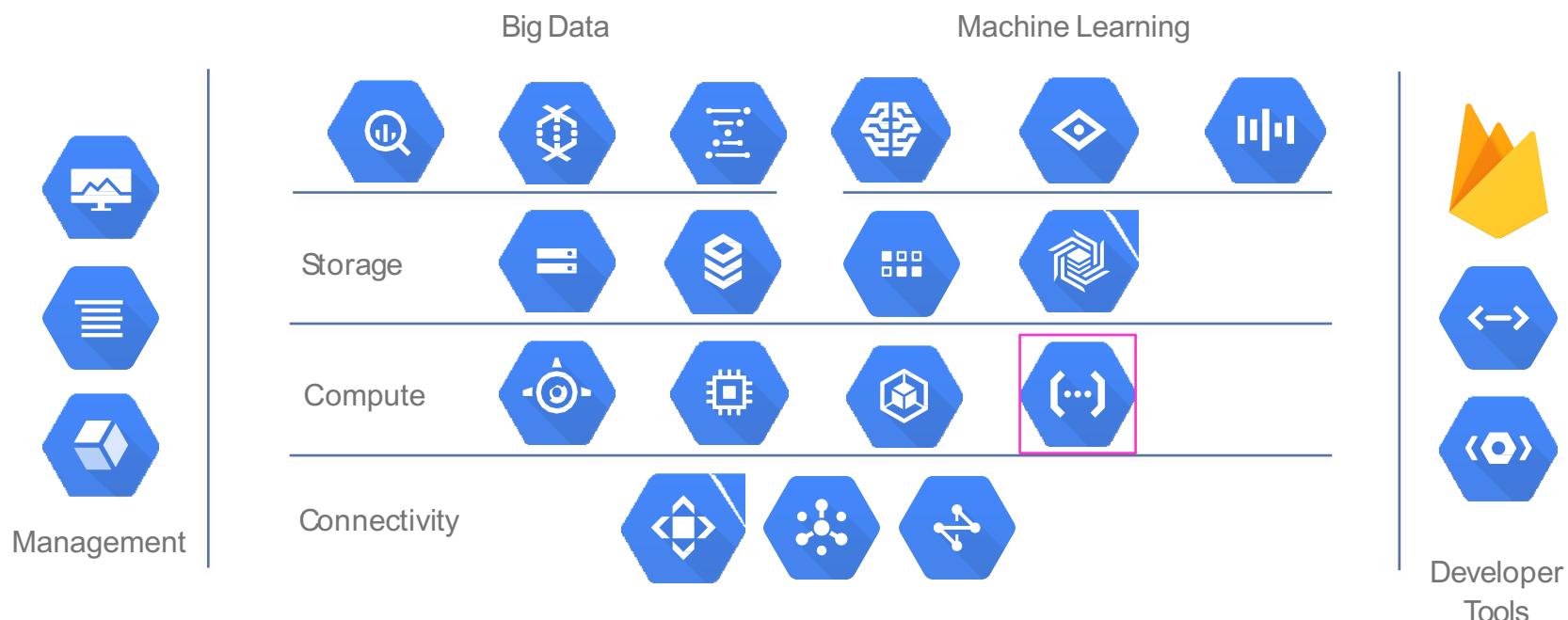
# Difference



Google Cloud Platform

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# Google Cloud Platform



# Highlight



App Engine



Compute  
Engine



BigQuery













# Highlight



App Engine



Compute  
Engine

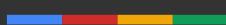
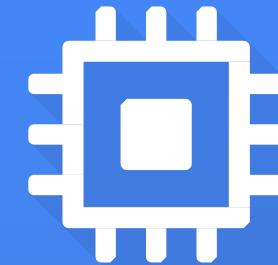


BigQuery



# 02 Compute Engine

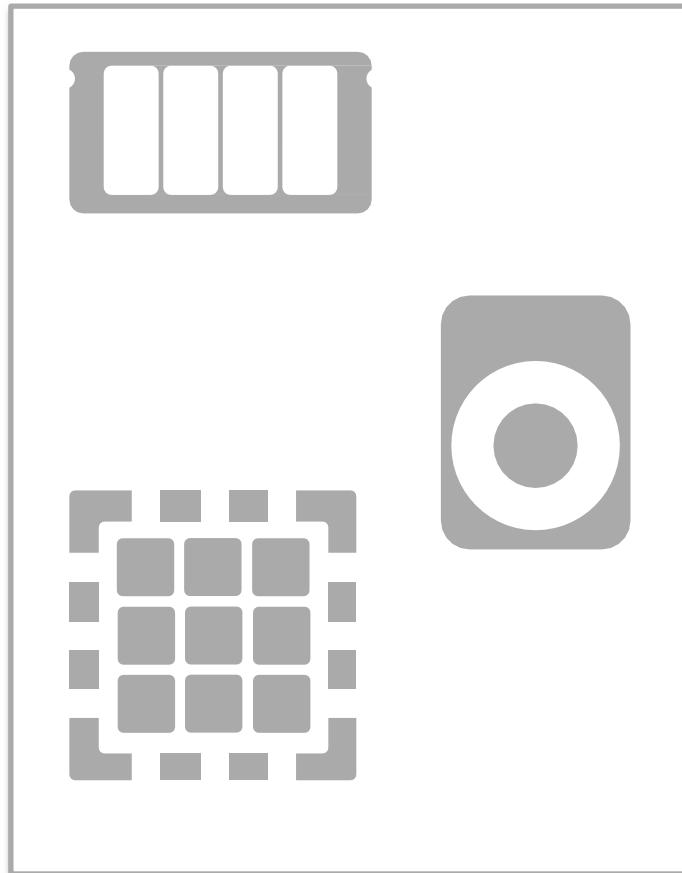
Infrastructure as a Service



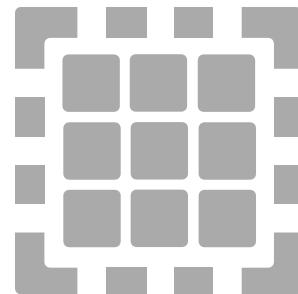
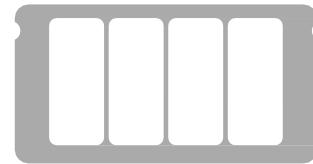
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# What is a computer?



# What is a Virtual Machine?



# GCE instances are better VMs



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# GCE Instance are better

- Google Network
- Fast Spin up
- High Bandwidth
- Consistent
- Storage Options
  - Standard
  - SSD
  - Attached SSD



# Billing

- Per minute billing
- Sustained use discounts
- Preemptible VMs

Machine type	Virtual CPUs	Memory	GCEU <sup>1</sup>	Lowest price <sup>2</sup> (USD) per hour with full sustained usage	Typical price <sup>3</sup> (USD) per hour	Full price <sup>4</sup> (USD) per hour without sustained use	Preemptible price <sup>5</sup> (USD) per hour
n1-standard-1	1	3.75GB	2.75	\$0.035	\$0.038	\$0.050	\$0.015
n1-standard-2	2	7.5GB	5.50	\$0.070	\$0.076	\$0.100	\$0.030



# ML based usage alerts

Resolved: Overutilized VM instance

briandorsey-k8s

Improve performance by changing the type of your virtual machine instance that needs more resources. [Learn more](#)  
May 29, 2016 at 11:00:18 PM UTC+9

Modify the instance type

```
$ gcloud compute instances stop ${instance_name} --zone ${zone} --project briandorsey-k8s
```

```
$ gcloud beta compute instances set-machine-type ${instance_name} --machine-type ${new_machine_type_name} --zone ${zone} --project briandorsey-k8s
```

```
$ gcloud compute instances start ${instance_name} --zone ${zone} --project briandorsey-k8s
```

Overutilized instance

Name	Zone	Current limits	Recommended machine type	Estimated additional costs per month
kube-relay	us-central1-f	f1-micro (1 vCPU, 614 MB)	g1-small (1 vCPU, 1.699 GB)	\$13.66



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Markus Persson

@notch

Follow

Not only does everything just WORK, Google Cloud also tries to make you save money. 5/5, would Cloud again.

Instance "webserver-1" is underutilized. You can save an estimated \$66 per month by switching to the machine type: custom (2 vCPUs, 5 GB memory). [Learn more](#)

[Dismiss](#)

RETWEETS

131

LIKES

706



6:24 AM - 12 Sep 2016



131

706

...

<https://twitter.com/notch/status/775324325855518720>



Markus Persson @notch · 14h

Of course, I'm not going to fall for this attempt to make me spend less money on them.



17

316

...

c#

(@scnida)



# Google Cloud Signup



Google Cloud Platform

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<#>

## **Sign Up for the Free Trial and Create a Project**

<https://codelabs.developers.google.com/codelabs/cp100-free-trial/#0>

## **Getting Started with Google Cloud Platform**

<https://codelabs.developers.google.com/codelabs/cp100-cloud-launcher/#0>





## Demo: Compute Engine - Wordpress



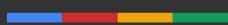
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# Workshop: Google Compute Engine - Wordpress



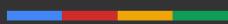
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## Demo: Compute Engine - Drupal



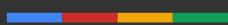
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# Workshop: Google Compute Engine - Drupal



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# Content Delivery Network

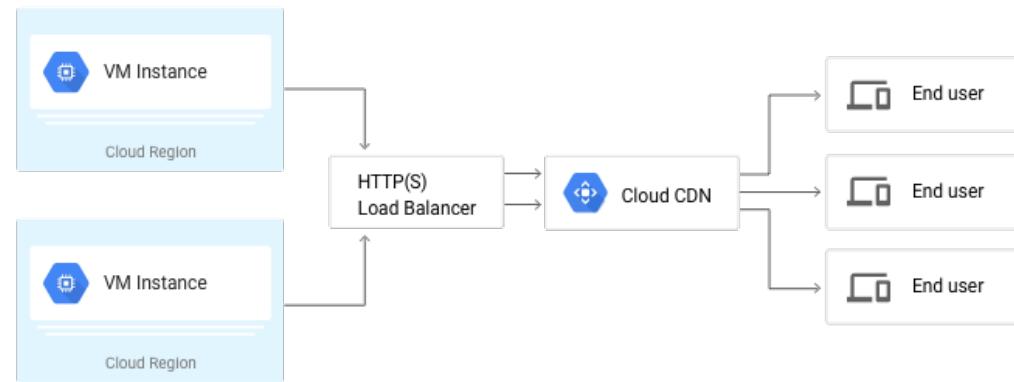


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# Google Content Delivery Network (CDN)

- Console or gcloud
- Automatically configured
- HTTPS and HTTPS/2
- Need Load Balancing of VMs Setups
- Caches 70+ locations Globally
- From GCE VMs
- From Google Cloud Storage is in Alpha





# Workshop Instance Deletion

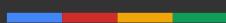


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# 03 BigQuery

BigData as a Service



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# Big Query

- Scan Terabytes in seconds
- Use SQLish Queries
- REST, Web UI, ODBC

The screenshot shows the Google BigQuery web interface. On the left, there's a sidebar with 'COMPOSE QUERY' and links to 'Query History', 'Job History', and 'BigQuery Playground'. The playground section lists datasets like 'freebase', 'showdown', 'wikipedia', etc. In the main area, a query is being run:

```
1 SELECT Sum(requests) as requests, title
2 FROM [wikipedia.usage2015]
3 WHERE source = 'en'
4 AND length(title) > 2
5
6
7 GROUP EACH BY title
8 ORDER BY requests desc
9 LIMIT 100;
```

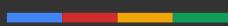
Below the query editor are buttons for 'RUN QUERY', 'Save Query', 'Save View', 'Format Query', and 'Show Options'. A message 'Query complete (36.3s elapsed, 1.13 TB processed)' is displayed. The results table shows the top 7 rows:|  |  |  |
| --- | --- | --- |
| 1 | 1842008162 | Main\_Page |
| 2 | 58968979 | Academy\_Awards |
| 3 | 48653503 | Special:Search |
| 4 | 28763595 | File:Squeeze\_down\_in\_the\_valley.jpg |
| 5 | 18607213 | Malware |
| 6 | 14461002 | Special:HideBanners |
| 7 | 8929399 | Liberland |

At the bottom, there are navigation links: 'First', '< Prev', 'Rows 1-7 of 100', 'Next >', and 'Last'.





Demo: BigQuery



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# 03 Conclusions

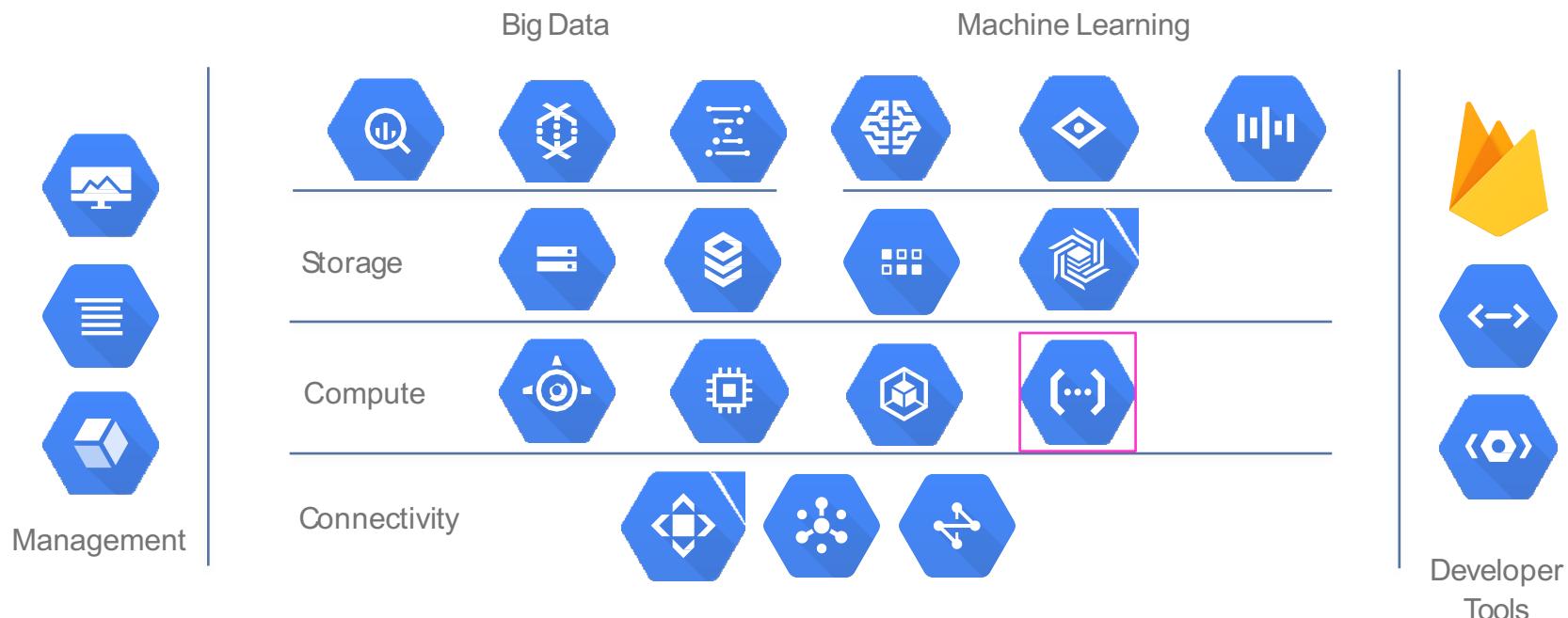
Bringing it home



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# Google Cloud Platform



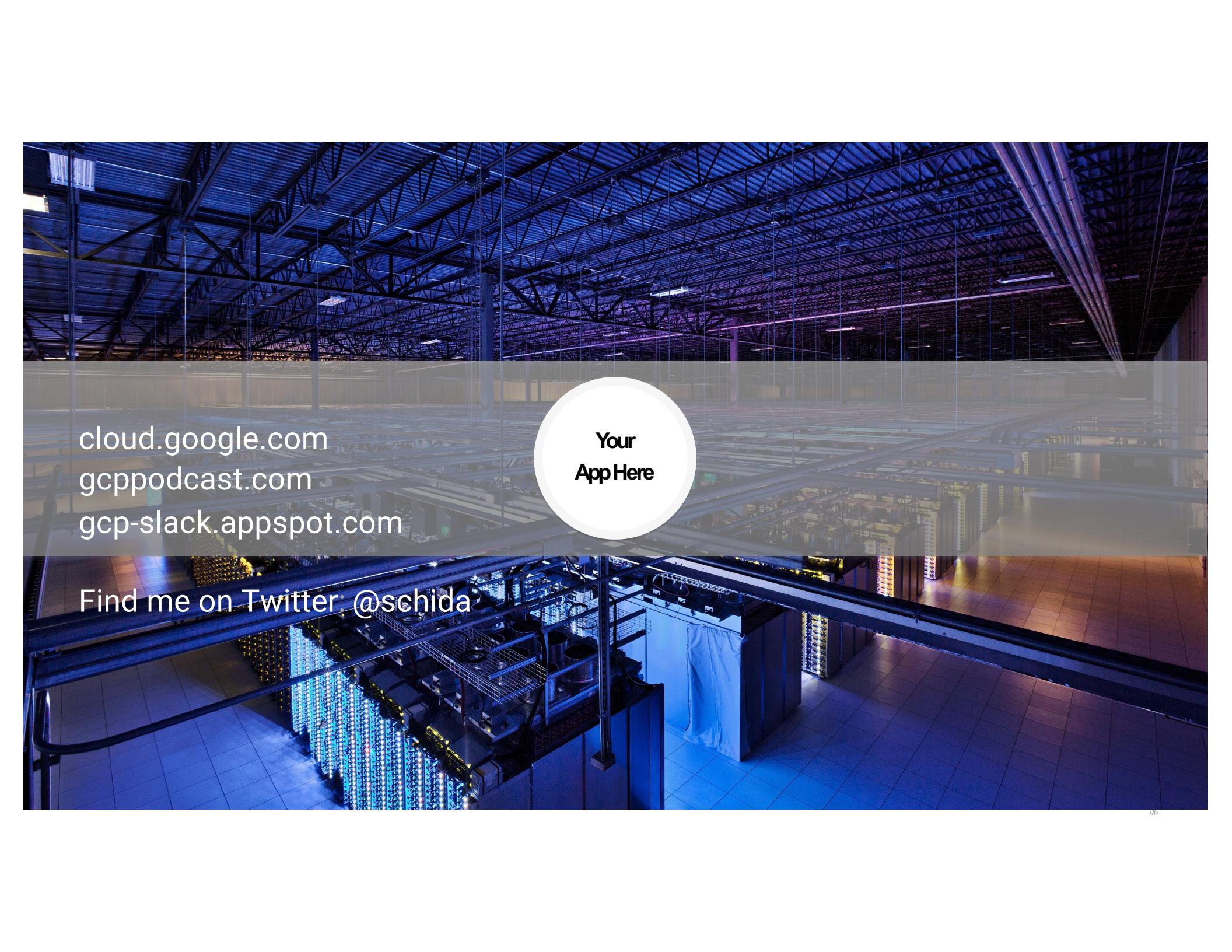
# Many Clouds



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cloud.google.com  
gcppodcast.com  
gcp-slack.appspot.com

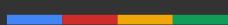
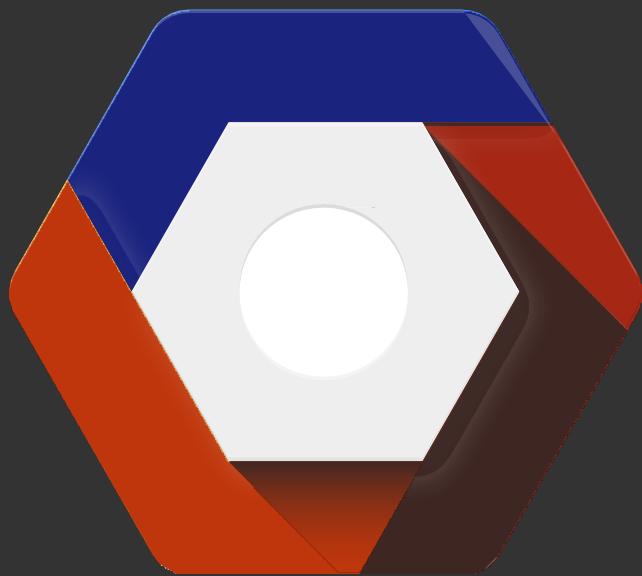
Your  
App Here

Find me on Twitter: @schida

# Next Steps

[cloud.google.com](https://cloud.google.com)

Twitter: @schida



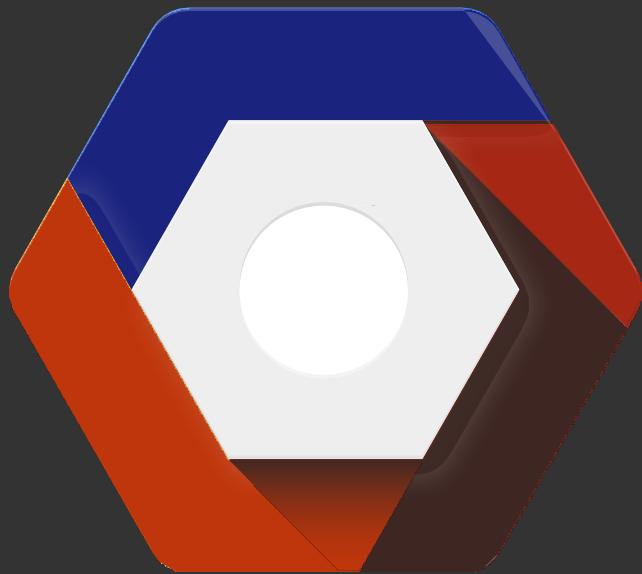
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# Thank You

Chida Chidambaram  
@schida  
[Linkedin.com/in/schida](https://www.linkedin.com/in/schida)



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(#)