

Beyond SDI

Becoming cloud native ?



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About me

Google's Geospatial Technologist since 2007

Director of the Open Geospatial Consortium, past co-chair of W3C Geospatial Data Working Group, member of the UK Government Open Standards Board, and Visiting Professor at University College London.

Chief Technology Officer of Ordnance Survey (GB)

EMEA Applications Manager, Autodesk

Senior Lecturer, Kingston Polytechnic



Overview

About
Google

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About Google..

A photograph of a modern Google office building. The building features a glass facade with the word "Google" in white letters. In the foreground, there is a large tree with yellow leaves, a green lawn, and a paved walkway. The sky is clear and blue.

“organise the world’s
information and make it
universally accessible and
useful”

Google

Google



Geography



Google Search

I'm Feeling Lucky

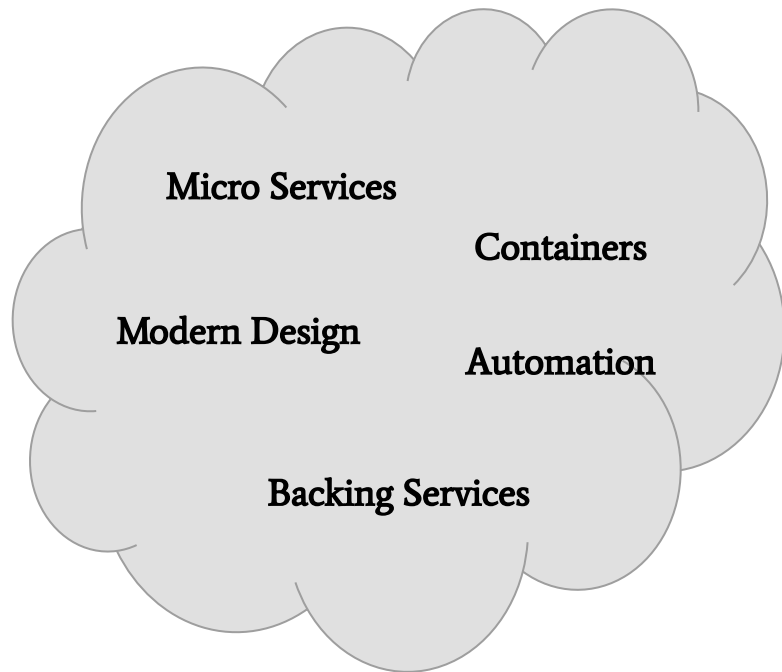
“everything is related to everything else, but near things are more related than distant things.”

Waldo Tobler, 1970

Cloud Native ?

Cloud Native SDI ?

Upgrading the infrastructure..



A young woman with long dark hair and glasses is sitting at a desk in a computer lab or classroom. She is smiling and looking at a computer monitor. Her hands are on a keyboard. The desk has a mouse, a smartphone, and a blue folder. In the background, there are other computer workstations, a whiteboard, and a world map on the wall.

Developer focused..



Speed, agility and chaos ?

**Cloud Native what does it
mean for data?**

Access and Usability

The 2 pillars of successful spatial data publishing..

- Move beyond the SDI paradigm, metadata harvesting not enough
- Data must be discoverable by automated systems **AND**
- Data must itself be directly accessible and linkable on the Internet
- Volumes of spatial data especially EO data requires streamable data formats.

Dataset search

a starting point..

Step 1



Update the code that generates your dataset pages to add markup to those pages ([Markup Helper](#))

Step 2



Verify your markup using the [rich results test](#)

Step 3



[Optional] Submit a sitemap that lists all the dataset pages to [Search Console](#).
Learn more about sitemaps [here](#).

Step 4



Wait a few days for your page to get re-crawled and indexed

Data discovery by browsing..

Landsat on AWS / L8 / 022 / 034



LC08_L1TP_022034_20170908_20170908_01_RT

Endpoint: s3://landsat-pds/c1/L8/022/034/LC08_L1TP_022034_20170908_20170908_01_RT/

True Color Preview



Field	Value
Image Acquisition (start)	Fri Sep 08 2017, 16:30:13 UTC
Cloud Cover	0.08%
Off Nadir Angle	-0.001
Sun Azimuth	145.52091018
Sun Elevation	53.16836239
Earth Sun Distance	1.0141560
License	PDDL-1.0
Provider	U.S. Geological Survey

Files

GeoTIFFs

[LC08_L1TP_022034_20170908_20170908_01_RT_B1.TIF](#)
[LC08_L1TP_022034_20170908_20170908_01_RT_B10.TIF](#)
[LC08_L1TP_022034_20170908_20170908_01_RT_B11.TIF](#)
[LC08_L1TP_022034_20170908_20170908_01_RT_B2.TIF](#)
[LC08_L1TP_022034_20170908_20170908_01_RT_B3.TIF](#)
[LC08_L1TP_022034_20170908_20170908_01_RT_B4.TIF](#)

Streamable Data



COG

In Conclusion

Spatial is not special, except when it is !

Thank You !



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Google

