



# Journey to AWS

*Edward Dingels, Director of Architecture*

# EarthNetworks Circa 2010

- Data center focused. Multiple installed locations with multiple cages.
- We were fighting the software and hardware battle
- Middle of the night calls



# Amazon Web Services

Three types of cloud services

- IaaS: Infrastructure as a Service
- PaaS: Platform as a Service
- SaaS: Software as a Service



# Infrastructure

- I need some servers ...

EC2 – Instances

<http://www.ec2instances.info/>

Around 50 different types

CPU

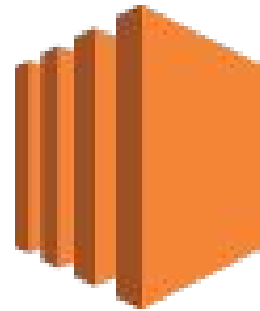
Memory

Networking

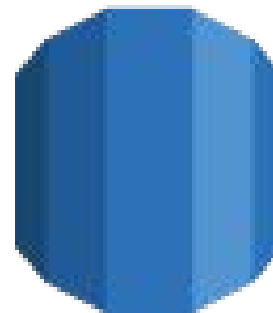
Disk

Clustering

GPU



**EC2**



**RDS**

# Platform

- I need some compute ...

Lambda

<https://aws.amazon.com/lambda/>

Configure

RAM

Timeout

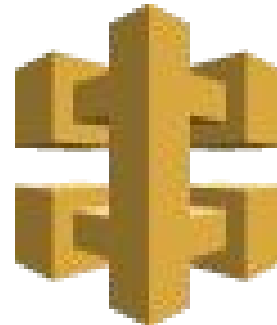
Other examples

API Gateway

Elastic Beanstalk



**Lambda**



**API Gateway**

# Software

- I need some applications ...

AWS Partner Network

<https://aws.amazon.com/workspaces/>

Other examples

Identity Management

WorkDocs

WorkMail



**Workspaces**



**WorkDocs**

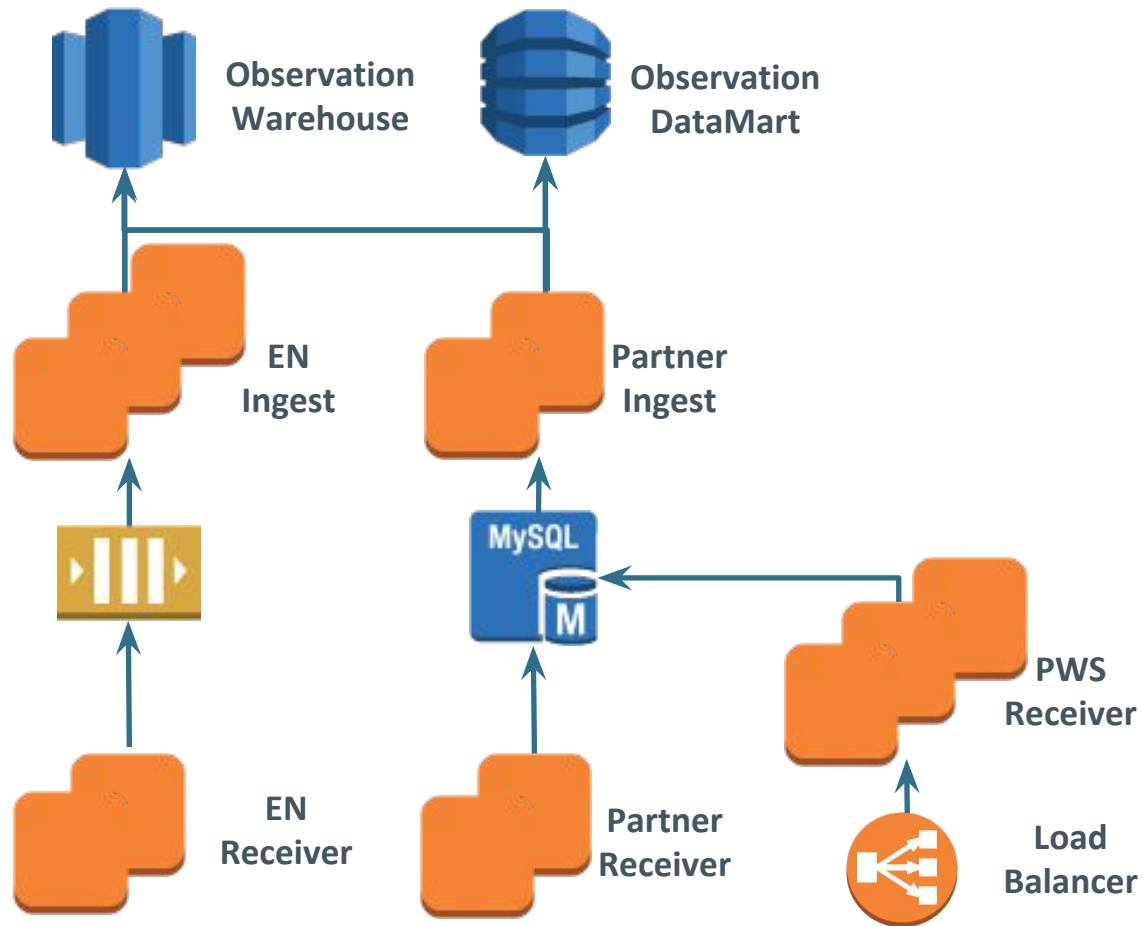
# Weather Stations

- Real time observation network
- Thousands of professional weather stations deployed inside our network
- Bring in partner networks from NOAA, state, local, personal
- Automated and manual quality control system



# Weather Stations

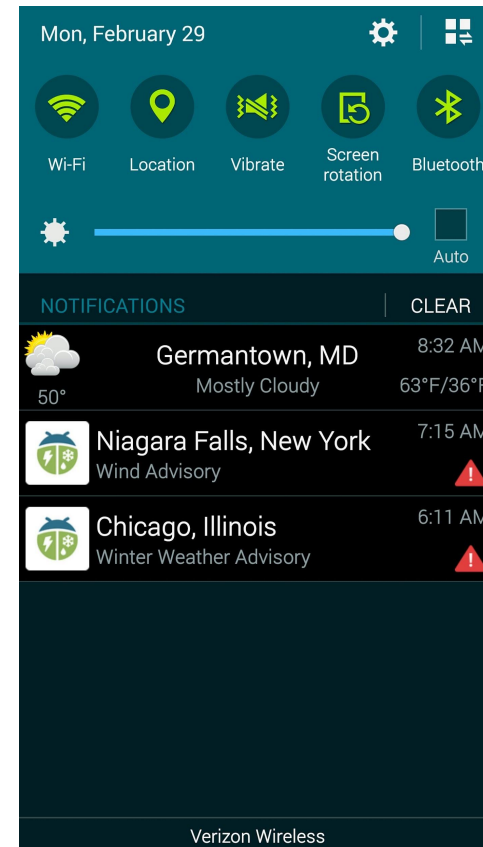
- Different ways of handling HA for IaaS
- Splitting content between DataMart and Warehouse supported by PaaS



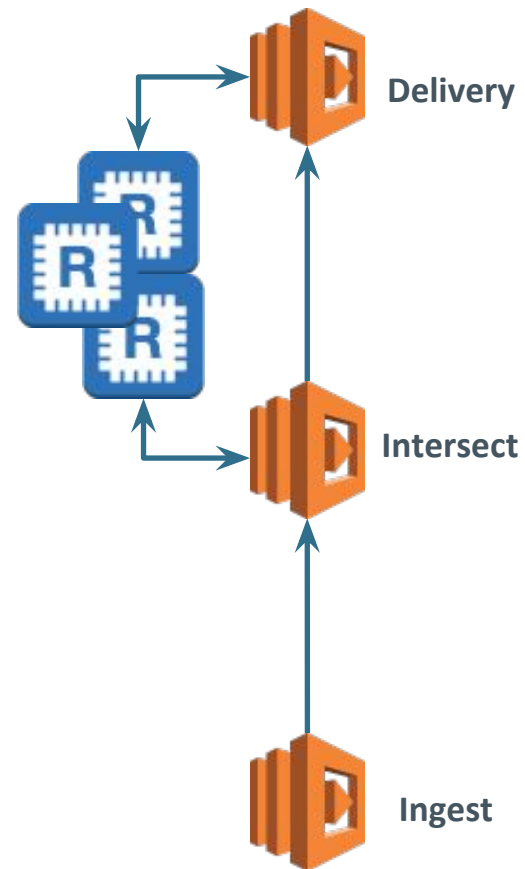
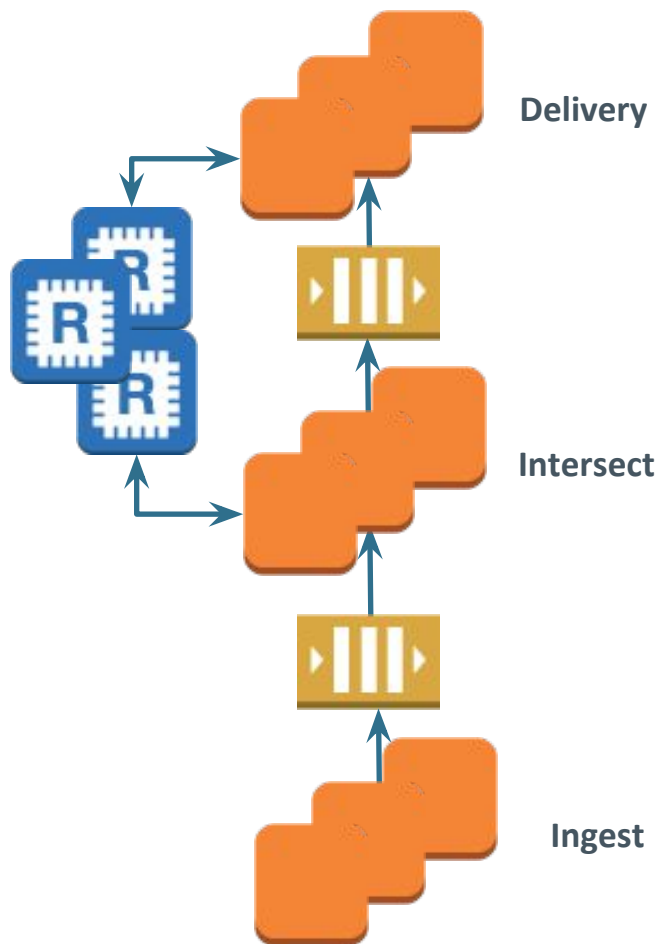


# Push Alerting

- Real time notifications
- 10 million mobile devices, constantly changing locations
- Deliver published NWS and EN DTAs
- Protect product – customized notifications for enterprise

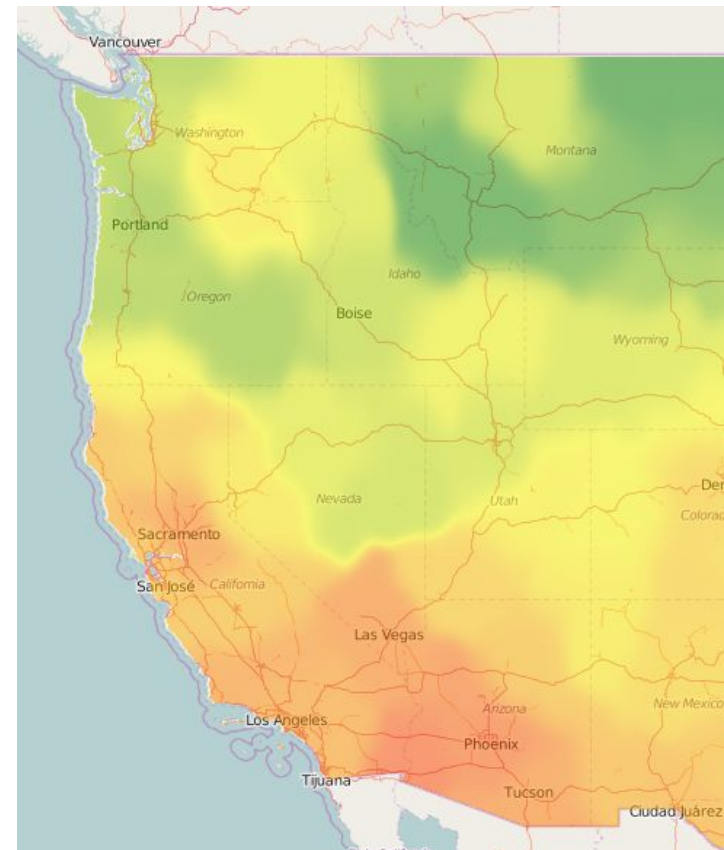


# Push Alerting

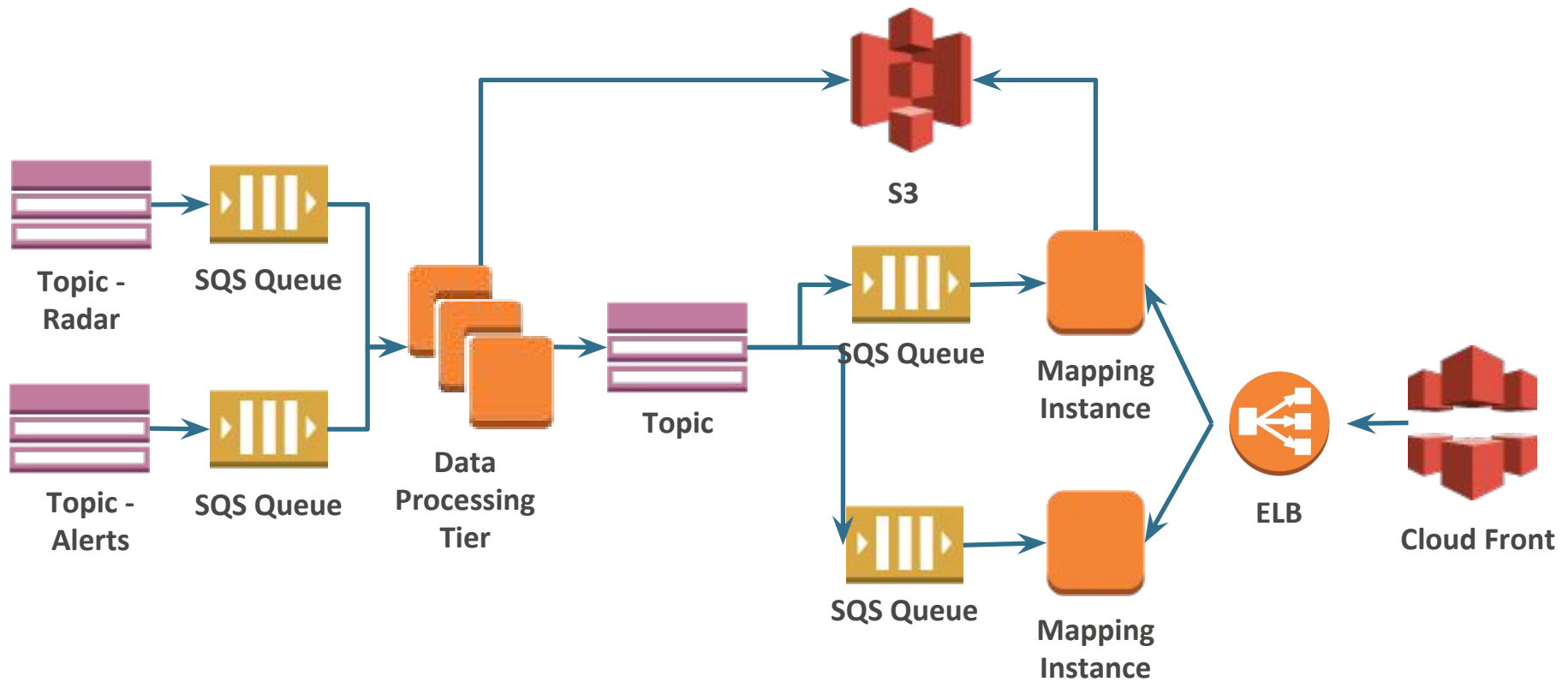


# Mapping

- Weather over an area
- Near real time (1-5 minutes)
- Radar, Satellite, Temperature
- Lightning, Station Observations
- Alert Polygons, Fire Boundaries

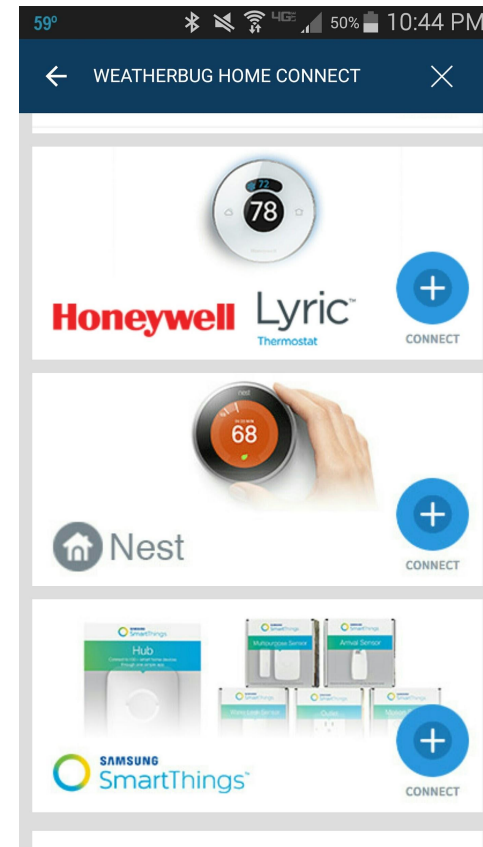


# Mapping



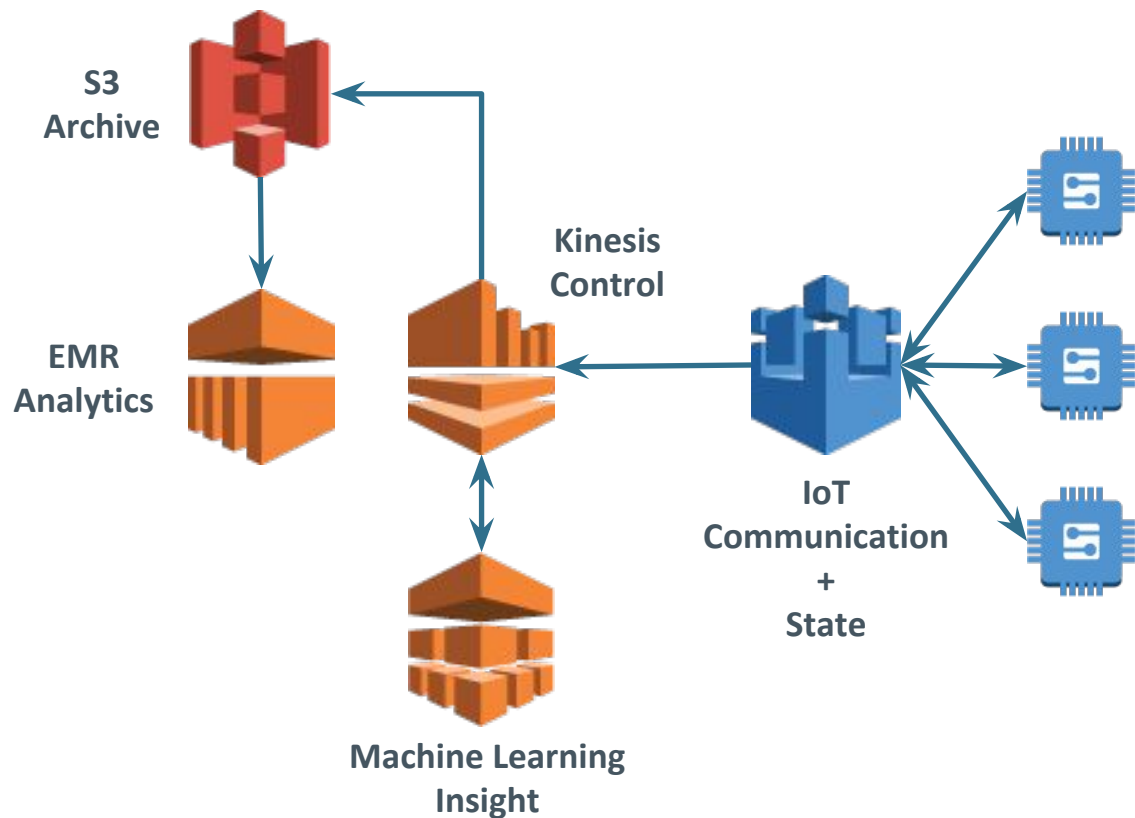
# Internet of Things

- Everything is becoming connected
- Everything is a sensor
- Energy space: weather impacts 50 percent of your home energy usage
- Demand Response
- Energy Efficiency
- Analytics



# Internet of Things

- 1 GB per user per month
- Growth rate is exponential
- Standard instances are hard to scale fast enough



# You + AWS

- All of this infrastructure, platforms, and software are available for you
- Just a click away to start your own AWS account

<https://aws.amazon.com/>

- Good luck!