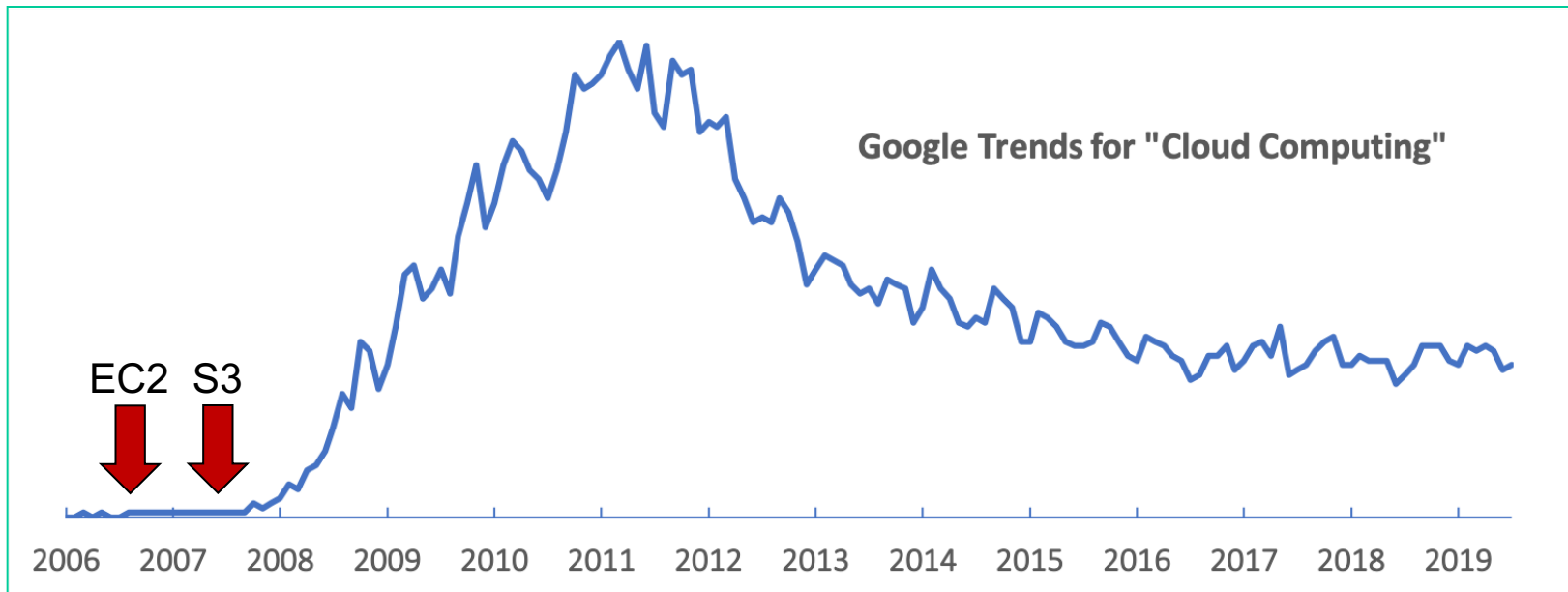




IaaS Providers & Distributions

Dr. Charles (Cal) LOOMIS



Amazon Web Services

AWS deploys new services frequently and are continually reducing the prices of their resources.

Amazon Web Services

- The first modern cloud service
- Initially intended to sell their excess computing power
- Quickly became a profit center for Amazon, with dedicated computing resources

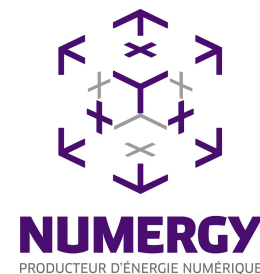
Users

- Companies
 - SMEs: CapEx vs. OpEx
 - Large Enterprises: scalability and minimum latency
- Engineers & Researchers
 - Resources for occasional computing needs
 - Customized environments
 - Deployment of long-lived services
 - No management of physical hardware

Worries

- Quality of services
 - Reliable, accessible, etc.
 - Loss of control over platform access
 - Increased security concerns
- Data
 - Who owns the data in the cloud?
 - What are the guarantees concerning data protection?
 - What laws are applicable to the data?

Commercial Services



Consolidation

- We are already seeing a centralization of data centers at sites run by large companies
 - Questions concerning the protection of data, reliability of services, etc. continue to be relevant.
- Still a large marketplace of smaller providers
 - How to they compete? Price, custom SLAs, location, etc.

Private Cloud Distributions

cloudstack



vmware®



Private Cloud Motivations

- Control security aspects of cloud, particularly worries related to data protection
- Take better advantage of existing hardware and personnel

Conclusions

- Many commercial IaaS providers exist that provide reliable services at reasonable prices.
- APIs and service details often vary significantly between providers, largely because of competitive pressures.
- Private clouds can be deployed and maintained with either Open Source or commercial solutions.