Great Learning Notes- WK1 (Cloud Foundations)

Cloud Computing is helping smaller, newer firms compete

Notes:

- Benefits across industries or organization types (startup or traditional)
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Key Takeaways:

- Low cost of entry due to usage based pricing
  - startups mostly leveraging to become profitable, but also legacy/traditional to reduce operating costs and become more nimble
- Agility, being immediately able to create applications and become productive (day 1)
  - here again, startups can quickly launch services and compete, but also legacy/traditional enterprises must become more nimble to compete with startups!
  - being able to build an app in a few hours to days (depending) or launch a product in even 20 days (depending)

References:

- Monzo (UK bank), finacial services
  - 8 engineers manage infrastructure for 4+ million customers
  - real-time statements instead of typical 48 hours or more
  - also migrated to multi-account setup in less than a day
- Robinhood (US financial services)
  - 2 DevOps engineers

Cloud Computing Management Changes

Notes:

- Shift to "product" centric thinking which combines business units (and customers!) to jointly develop customer services, and plan for the entire product lifecycle and ongoing financing
  - a "project" based thinking approach uses defined timeperiod for launches, and features, defined or separate teams (""throw-over the wall" to operations), and struggles with IT financing
- Agile, or incremental approach to services and updates (low-impact and shortened feedback loop approach to testing)
- Cloud first and cloud native thinking
  - Microservices (one example) for reduced blast radius, and incremental changes
  - Shorter feedback loop

Key Takeaways:

- Focus on product and service, not just single aspect or business unit
- IT as value enabler, not cost center
- Data driven approach to features and changes
- Smaller, more rapid incremental changes
- Shifting to ""cloud native", which is using cloud services first (reduce and eliminate non-differentiated activites allowing focus on core business).

References:

- 3M Health and Information Systems (healthcare) went all in on AWS.
    - not an IT company, allowed focus of R&D on healthcare analytics
    - apps are glue between patients, healthcare providers, and payers
    - benefits?
        - reduced provisioning time from 10+ weeks to minutes allowing focus on other areas
        - allow massive scale to support spike in customer demands for large data processing requests
        - faster innovation, with deployments down to weekly instead of 6 weeks

The Everywhere Enterprise

Notes:

- cloud and DC difference is about delivery, the how (including financing going from CapEx to OpEx)
- enterprises are moving to a hybrid approach, where it makes sense
- having deployment options (cloud or DC, edge/pop, regions) is "everywhere enterprise"

* *Key takeaways:*

- multiple options for enterprises such as regional expansions, and growth, DC or cloud
- cloud enabled scale and focus on value add activities
- cloud also has its own challenges and cautions!
    - the usual: security, latency, networking, configurations
    - people, processes and procedures are the most common challenges. Need to think different and make some changes!

References:

- HBA Max global rollout across 30 markets using event-driven architecture
    - services 70+ million global customers
- Comcast

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