



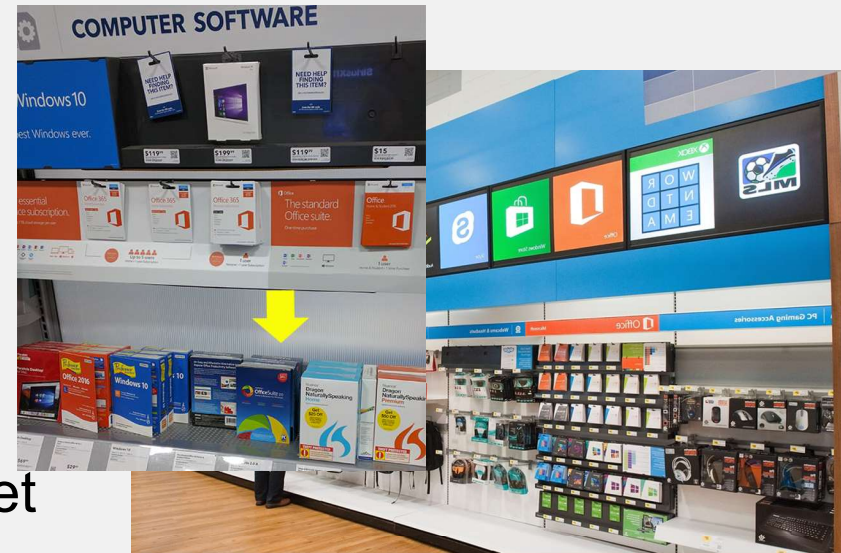
CLOUD COMPUTING APPLICATIONS

Software as a Service

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Software Distribution

- Once upon a time, retail was the main method of getting access to software
- With the advent of Cloud Computing, that model is now dated
- Then came software purchase over internet as downloads
 - Mobile App Store
 - Steam
 - Etc.
- Third wave is SaaS, which mainly rely on Browser capability and broadband internet
 - Browser is the new Operating System
 - Marc Andresen, 1995



Software as a Service

- Bring a complete software solution to the consumer with zero setup in a browser
- Examples:
 - Web-based email (gmail, Yahoo! Mail)
 - Internet Search Portals (Google, Yahoo!, Bing)
 - Project Management (Atlassian JIRA)
 - Office Productivity (MS Office 365, Google Docs)
 - Document Signing (DocuSign)
 - Customer Relations Management (Salesforce)
 - Tax Services (TurboTax, H&R Block, TaxAct)
 - Remote education (Coursera ☺)

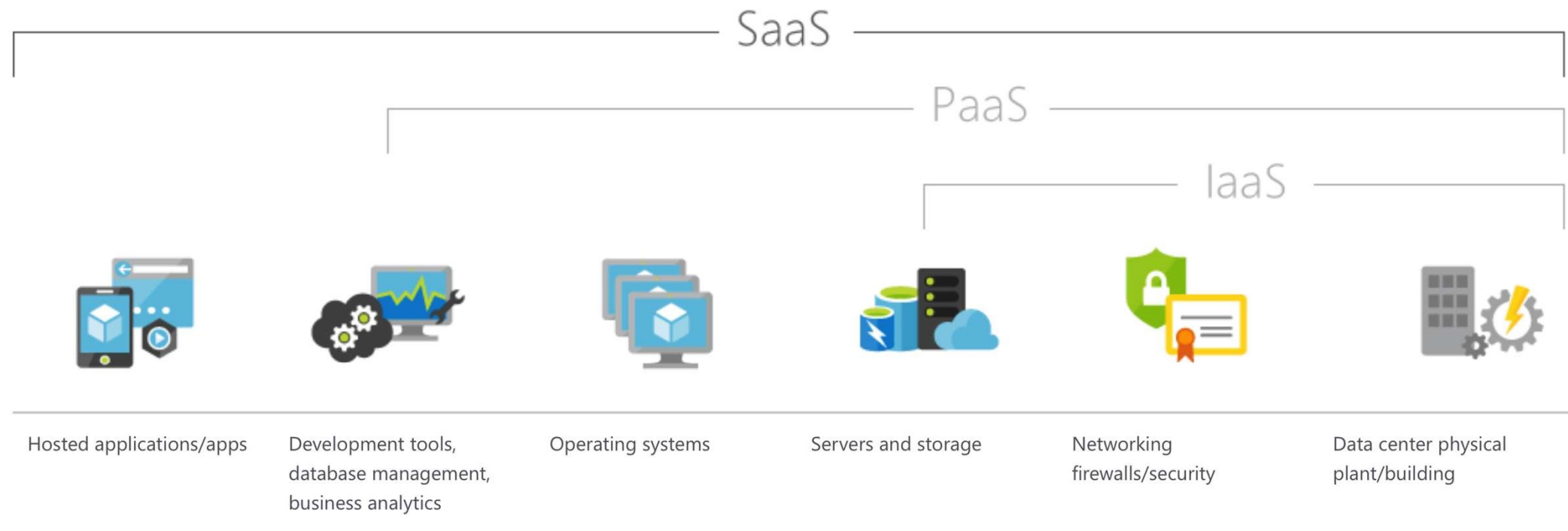
Software as a Service

- Multitenant Architecture
 - Same Software for all customers
 - Data is specific for individual user
- Client-side software runs in users' browser
- Server-side software runs in the cloud
 - Many SaaS solutions themselves build on IaaS and PaaS services
- Customer's data may be stored locally, in the cloud or both locally and in the cloud
- Because SaaS applications cannot access a company's internal systems, many SaaS solutions allow API access to further customize their offerings
 - HTTP, REST, SOAP

Advantages and Disadvantages

- Advantages:
 - No need to install software, licensing, maintenance and support
 - Flexible Payments
 - Scalable Usage
 - Automatic Updates
 - Access anywhere
- Disadvantages
 - You lose control
 - Might not be such a bad thing, see above advantages
 - No access to source code (as opposed to Open Source)
 - Provider service disruptions will impact you

SaaS in Perspective



** Image courtesy of Microsoft Azure*