Office Rich Clients
Continuous Deployment

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The Successful Legacy of Office

• Since 1990 Office apps have shipped about every 2-3 years

1 release
Every ~3 years, many features at once

Windows Focused
- Windows and Mac both start in 1990
- Web Version first shipped in 2008
- iPhone and Android released in 2013

Forked Code
- Each platform treated independently
Office 2016 is different

- Microsoft 2015 earnings report indicates the change in market
  - “Windows OEM Pro revenue decreased, primarily due to benefits realized from the expiration of support for Windows XP in the prior year, and declines in the business PC market”
  - “Office Consumer revenue declined $249 million or 7%, reflecting the transition of customers to Office 365 Consumer as well as continued softness in the consumer PC market.”

- Office 2016 shipped in October 2015
  - Transformation in the way Office is delivered to consumers was already underway
Office 2016: Modernizing Office Development

Forked Code
Each platform treated independently

Shared Code
Each platform shares and works as one product
Office 2016: Modernizing Office Release

1 release every 3 years
many features at once

12 releases every year
features exposed gradually
Office 2016 Development By the Numbers

Checkins

- 3.8k active engineers checking in
- One checkin every 20-25s peak
- Nearing 1k checkins per day

Codebase

- Over 500M total lines across
  - Product code
  - Automation
  - Language proofing
  - Tools and eng systems

Test Suite

- Over 20k Jobs per day testing
  - Tens of thousands scenarios
  - 100k+ configurations
How do users get Office build releases and features?

1. Build candidate is ready and verified
2. Build is released to increasing audience sizes
3. Features release by % within the build

Channels split customers into more groups:
- Semi-Annual (Enterprise)
- Semi-Annual (Early Release)
- Monthly (Consumer)
Huge Opportunities for Improvement and Optimization

- **Basics of CI/CD are missing – code base is older than the devs working on it**
  - *Fast Build and Release*: Builds and releases take a long time
  - *Micro Releases*: All apps ship as a suite
  - *Test Coverage*: Lack unit test coverage to catch regressions
  - *Big Data*: Missing instrumentation in code/lack of telemetry
  - *Dev Ops*: Slow adoption of new builds leaves hundreds of builds out in the wild

- **Lots of differences due to historical organizational structure**
  - Different platforms chose different technologies (i.e. instrumentation)
  - Different platforms have different philosophies
The Future for Office Development

- **Market pressures continue to push the speed of development**
  - Strong competitor in the Google Suite
  - Business pressures in Collaboration, Mobile, Web, Networks, ML/AI
  - GDPR, security, and privacy continues to be a focus area across Microsoft

- **New ways of developing Office experiences**
  - JavaScript Add-Ins as new way to develop and deploy
  - Service-based Experiences delivered in the clients
Thank you!