IBM’s Journey with Open Source
Open for Business Conference – Draft 25Sep15

Adam Jollans, Program Director, Linux Strategy, IBM
adam_jollans@uk.ibm.com
Apache – 1998

Background

- IBM had developed its own HTTP server
- Market share of IBM HTTP server was very low
- WebSphere Application Server provided Java application support and needed an HTTP server
- Increasing interest in open source in IBM Research, IBM Development Labs, and IBM customers

IBM initiatives

- Integration of Apache HTTP server into IBM products
- Collaboration with Apache developers to offer future upgrades
Community Participation

How do you successfully participate in an open source community?

Internal IBM Open Source study

- Why did open source communities work?
- What was the quality of open source code like?
- When and how should IBM participate in open source communities?

“Code is King”

- Participation in open source source communities means writing code
- Linux Technology Center as hub for open source projects
- IBM programmers and engineers working on open source projects as part of the open source community, but funded by IBM
- Benefits are knowledge, influence, and inclusion of function
Linux – 2000

Background

- IT market dominated by proprietary operating systems
- Growing adoption of Linux for backroom IT tasks
- Opportunity for Linux to become an enterprise operating system
- Multiple IBM server families – Mainframe, Power, AS/400, x86
- Opportunity for Linux to provide a unified operating system across IBM servers

IBM initiatives

- Support for Linux across IBM Systems, Software, and Services
- Creation of Linux Technology Center including Linux kernel programmers
- Investment of $1B in Linux announced by Lou Gerstner
- Co-formation of OSDL (predecessor of Linux Foundation) with other IT leaders
Business Models

How do you make money from free software?

Wide variety of open source business models

- Distribution
- Service and Support
- Base plus enhanced versions
- Competitive displacement
- Halo effect
- Shared development costs
- Inclusion in products
- Cuddly toys
Eclipse – 2001

Background

- IT developer market dominated by Windows
- Java developer market fragmented with multiple offerings
- IBM had acquired and further developed a good Java IDE
- Market share of IBM Java IDE was low

IBM initiatives

- Open sourcing of IBM Java IDE code as Eclipse
- Development of ecosystem of Eclipse plug-ins by partners
- Co-formation of independent Eclipse Foundation
- Leveraging of Eclipse Rich Client Platform
Code Contributions to Open Source

How do you successfully open source a product?

Key Considerations

- Ownership of code
- Quality of code
- Market opportunity
- Differentiated function
- Open source license
- Community of contributors
- Governance and independent Foundation
- Business model
OpenStack – 2012

Background

- Cloud IaaS dominated by Amazon, VMware and Microsoft
- Growing interest in open source IaaS
  - OpenStack, CloudStack and Eucalyptus
- OpenStack developed and led by Rackspace and NASA

IBM initiatives

- Addition of OpenStack programmers to Linux Technology Center
- Co-formation of independent OpenStack Foundation
- IBM announces intention to make its cloud software open source-based
How do you successfully build a new open source community?

Key Considerations

- Level playing field
- Broad community and vendor participation
- Strong technical leadership
- Governance and independent Foundation
- Conferences and education
- Market adoption and customer references
- Marketing
OpenPOWER – 2013

Background

- Enterprise microprocessor market dominated by Intel / x86
- IBM’s POWER processor significantly more powerful
- POWER processor only for IBM servers with low market share

IBM initiatives

- Discussions with hyperscale data centers on their requirements
- Addition of little-endian support to POWER8
- Open licensing of microprocessor technology to partners
- Open sourcing of firmware and systems software
- Co-formation of independent OpenPOWER Foundation
  – Initially Google, Tyan, Nvidia, Mellanox and IBM
  – Now well over 100 members
Open Source beyond software

Can the principles of open source deliver value beyond software?

Potential Areas

- Open hardware
- Open knowledge
- Open education
- Open data
- Open collaboration
- Open government
More Open Source Projects - 2015

Background

- Open Innovation increasingly important
  - Cloud – CloudFoundry, node.js,…
  - Big Data – Hadoop, Spark,…
  - Virtualization – KVM, Docker,…

- Innovative companies use open source
  - Google, Facebook, Twitter,…

IBM initiatives

- Over 500 IBM programmers and engineers working on open source projects
- Active IBM participation in over 100 open source projects
- Support to Linux and open source conferences and events
- Co-formation of independent Foundations
- Co-formation of Linux Foundation Collaborative Projects
Open Source Governance

How does a big organization like IBM manage its open source activities?

Open Source Project Office

- Use of open source software
- Access to open source code
- Participation in open source development
- Open source education

Linux Technology Center

- Programmers and engineers working on open source projects

Strategy

- Open source market opportunities and business investments
Standing on the Shoulders of Giants…