Cisco Open Network Environment (ONE)

Bringing the Network Closer To Applications

- Hardware + Software + ASICs
- Physical + Virtual
- Network + Compute

Controllers and Agents
Platform APIs
Integrated Network Overlays

Pervasive Security

www.cisco.com/go/one
Open Source: New Horizons

Industry Perspectives: Cisco, IBM, Linux Foundation

Open Source Spotlight: OpenDaylight

Q&A
An Introduction to the Speakers

Michael Enescu
CTO, Open Source Initiative

Daniel Frye
VP, Open Systems Development

Jim Zemlin
Executive Director
Open Source: New Horizons
Defining Open Source

In production and development, open source promotes universal

- Access via free license to a product's design or blueprint
- Redistribution of that design or blueprint, including subsequent improvements to it by anyone
Defining Open Source vs. Open Standard

Open Source

In production and development, open source promotes universal access via free license to a product's design or blueprint and redistribution of that design or blueprint.

Open Standard

Specifications for API’s, protocols, data, and file formats that are openly documented and published.

Both are Key Elements of an Open Ecosystem
Collaborative Development

- Communities of companies, organizations and individuals come together to solve common problem, build and maintain common, open source infrastructure
- Accelerates technology innovation
- Results in better software
- Uses open source governance best practices
- Linux is primary example of success
Industry Perspectives: Cisco, IBM, Linux Foundation
Video: How Linux is Built

http://www.youtube.com/watch?v=yVpbFMhOAwE
Linux Foundation

Founded in 2000

More Than 200 Members

Protects, Promotes, and Advances Linux and Collaborative Software Development

Neutral Forum for Collaboration on Linux Kernel Development and Collaborative Projects

Hosts Linux Conferences and Linux Training Curriculum

Generates Original Research That Advances the Understanding of Linux and Collaborative Software

PROTECT

ADVANCE

PROMOTE
“Open at Cisco”

Long-Standing Participant in Open Communities

Based on Our Culture of Collaboration and Giveback

Community Support and Sponsorship

Collaboration/Innovation

- Open Source
- Open Standards
- Open Extensibility
Cisco Participation in Open Source

Contributions to ~ 100 Projects
- SDN OpenDaylight
- Linux Kernel
- Network Protocol Implementation
- Apache Spamassassin
- Eclipse Tigerstripe
- FSF gcc
- Mozilla Ikran

Sponsorships and Grants
- Linux Foundation

Community Participation
- Eclipse
- Apache
- Free Software Foundation
- FreeBSD
- Mozilla
As Part of Our Products

- Most of our core products are delivered on Linux, some on FreeBSD
- Routers, switches, voice products, video, collaboration, consumer, etc.

As Part of Our Services

- Health service offerings
- Government
- WebEx

As Infrastructure

- Linux
- Apache tools
- Language and compilers

How Much Open Source Do We Have at Cisco?

- Over 30K open source components in multiple products and services
Video: OpenDaylight Overview

http://www.opendaylight.org/news/videos
What is OpenDaylight?

OpenDaylight is an open source project under the Linux Foundation with the mutual goal of furthering the adoption and innovation of Software Defined Networking (SDN) through the creation of a common market-supported framework.
Project Daylight Framework

Network Applications, Orchestration, and Services

User Interfaces

Network Applications, Orchestration, and Services

OpenDaylight APIs (REST)

Controller Platform

Network Service Functions

Platform Services

Extensions

Southbound Interfaces and Protocols

Service Abstraction Layer (SAL)

OpenFlow

Other Standard Protocols (ONF, IETF, ...)

Vendor-Specific Interfaces

Data Plane Elements

(Virtual Switches, Physical Device Interfaces)
Conclusion
Previous Webcasts

Introduction to OpenStack

Introduction to OpenFlow

Introduction to Cisco’s onePK

www.cisco.com/go/onenewebcasts
For More Information

Cisco Open Network Environment  www.cisco.com/go/one

OpenDaylight  www.opendaylight.org

Linux Foundation  www.linuxfoundation.org

IBM  www.ibm.com/opensource
Thank you.