

A Road Map to the Future of Linux in the Enterprise

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Open Source Development Lab

Agenda

- Introduction
- Why Linux
- Current Linux Uses
- Roadmap for the Future
- Process

Open Source Development Lab™



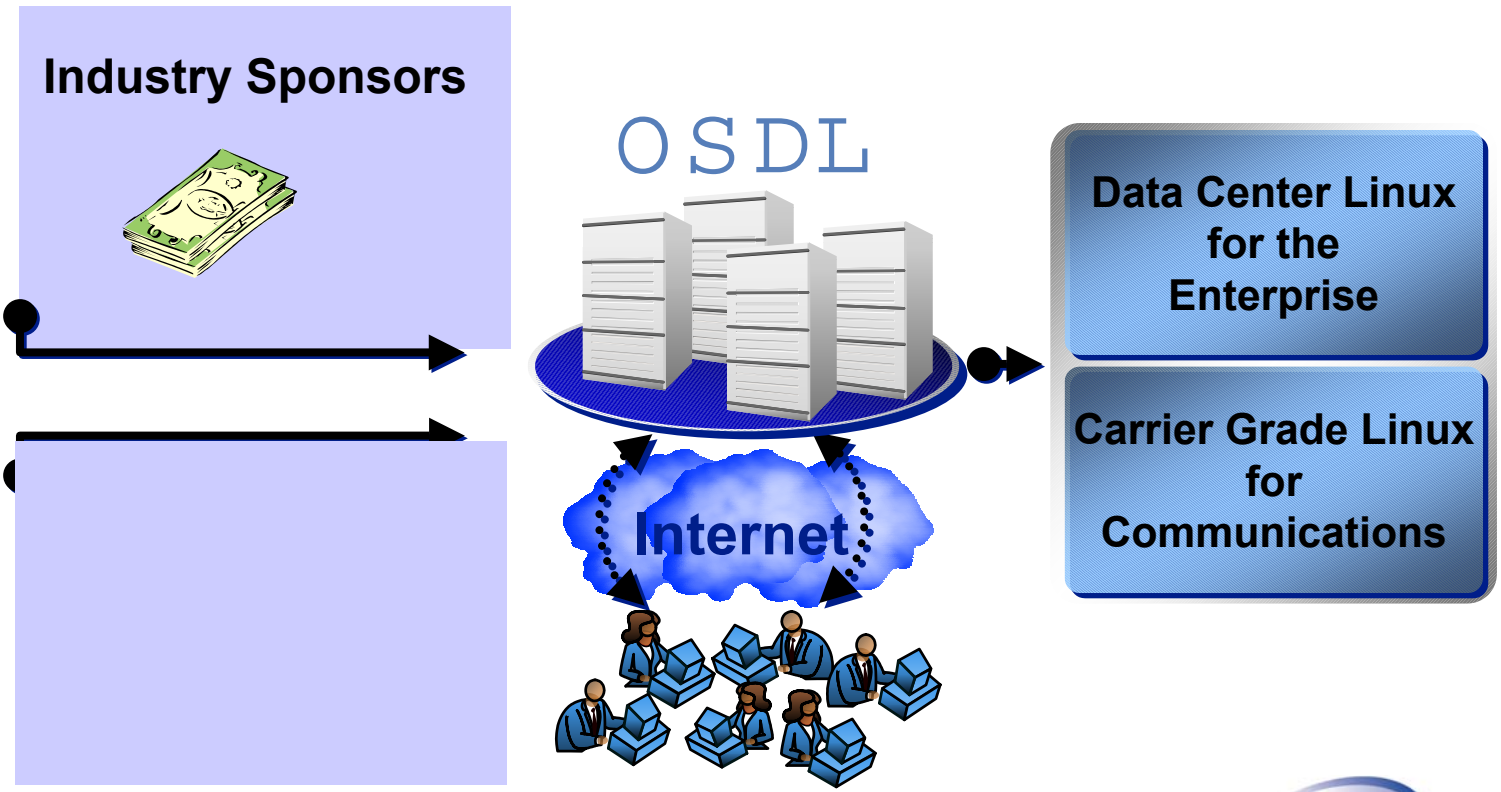
Providing Open Source developers with resources and guidance to build data center and carrier grade enhancements into Linux and its Open Source software stack, enabling it to become the leading UNIX-like Operating System for e-Business deployment and development

OSDL Sponsors

- Alcatel
- Caldera
- Computer Associates
- Cisco
- Dell
- Fujitsu
- Hitachi
- HP
- IBM
- Intel
- Linuxcare
- Miracle Linux
- Mitsubishi Electric
- MontaVista
- NEC
- Nokia
- Red Hat
- SuSE
- Toshiba
- VA Software

Open Source Development Lab™

Guidance and resources to enable Open Source development of enterprise and telco capability for Linux



OSDL is Not...

- A Distribution vendor
 - We work with the distributions
 - Our work benefits the distributions
- An ISV
 - We produce software, but not software products

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Enterprise Linux Motivation

- Open standards reduce development cost and risk
- Linux* is the fastest growing general purpose server operating system
- Most data centers are familiar with UNIX*
- And... for most users and developers, Linux and UNIX are interchangeable

Data Center Needs

- A true uniform operating environment
 - One common operating system base
 - One set of development and administrative skills
 - A common development environment
 - A common deployment environment
 - A choice of platforms and platform vendors
 - Including hardware you already have

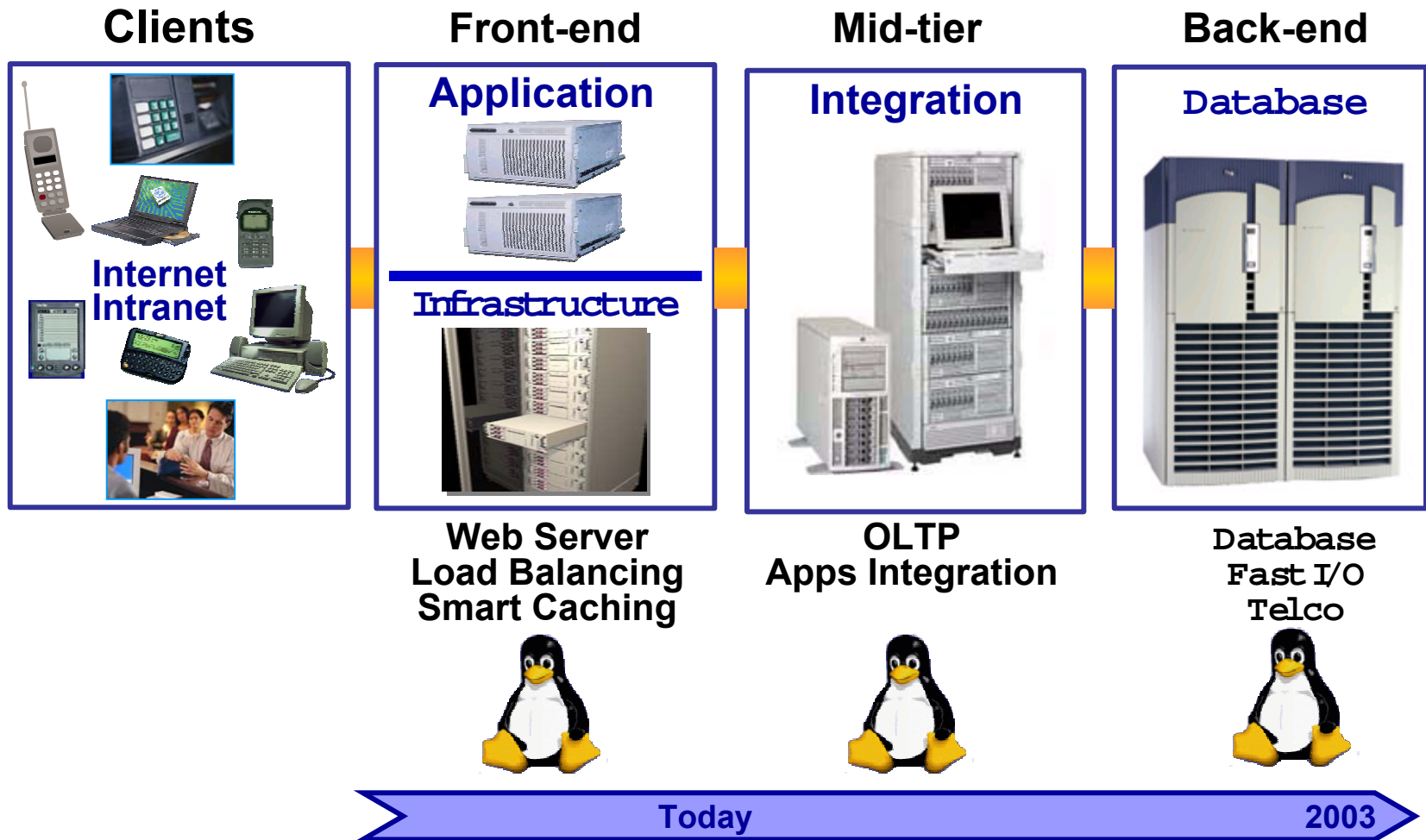
Linux = Business Control

- Open Source Linux*
 - Returns business control to the IT shop
 - Ensures compatibility with UNIX systems
 - Enables customization to meet unique requirements
- Choice of hardware and software
 - Enable use of low cost, high volume servers
 - Workstations and servers on a common OS
- Well-known development environment
 - Large pool of developers

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Linux* in the Enterprise



Linux Acceptance Today

- Linux is a leading OS for web services
- Linux is penetrating the mid-tier
- Linux needs enhancement to fully meet back end data center requirements

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Developing the Roadmap

- Identify target industry segments
- Determine user requirements
- Establish architecture
- Develop and publish roadmap (features, timeline)
- Develop Data Center Linux Specification
- Identify projects needed to support roadmap
 - Initiate or support projects as needed
- Define compliance with specification
 - Create validation suite
 - Create reference implementation(s)
- Distributors release DCL compliant Linux

Industry Segments

- Financial Services is the first target
 - Aggressive new technology adopters
 - Leading edge firms already committed to Linux
 - Understand that IT is a business advantage
 - High risk, large scale workloads
 - Large capacity required
 - Direct opportunity loss if down

Financial Services Workload

- High end, large scale OLTP
 - Large I/O, both disk and network
 - Many CPUs
 - Large memory (big database caches)
- Time critical by nature
- OLTP brings strict reliability, availability, and manageability
- RASUM requirements

Example Requirements

- Manageable Clustering
- IO and File System Enhancements
- Data base optimized virtual memory
- New IO Architectures (InfiniBand*)
- Fine Grain Locking
- RDBMS Performance Optimization
- Fail Fast, Fail Correct, Fast Boot
- 16+ Way SMP
- Enhanced and hardened drivers
- ...

OSDL will support or establish projects to meet these requirements

Example Projects

- Cluster membership API
 - Clustering infrastructure
 - <http://osdlcluster.sourceforge.net>
- Logical volume manager improvements
 - Clustering
 - Shared Storage
- Scaling algorithms
 - Linux Scalability Effort
 - <http://lse.sourceforge.net>
- Hardened driver specification
 - developer.osdl.org/architecture
- Database workloads for testing
 - www.osdl.org/projects/performance
 - OSDL-DBT-1 (TPC-W based)
 - OSDL-DBT-2 (based on TPC-C)

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OSDL's Role

- The process surrounding Data Center Linux
 - Organization, structure, support, and advocacy.
- Dedicated to getting Linux into the data center by leading its enhancement.
 - Organizing feature roadmaps with our members, key IT organizations and community developers
 - Providing the means to accomplish the feature roadmaps
 - Support and provide resources for open source projects

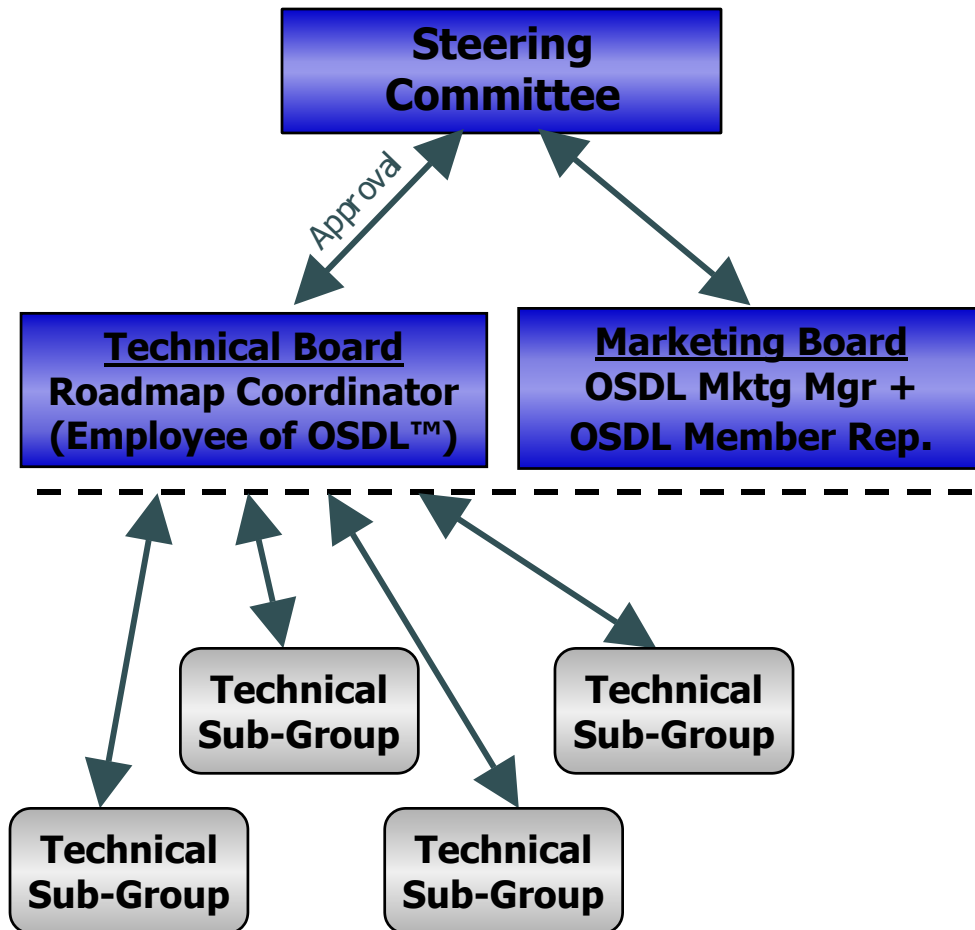
Data Center Linux Working Group

An active working forum of industry leaders to support and accelerate the development of Linux functionality for mission critical data center applications for targeted market segments

Members

- Computer Associates
- Fujitsu
- Hitachi
- HP
- IBM
- Intel
- Linuxcare
- Miracle Linux
- NEC
- Red Hat

Working Group Structure



Committee and board members must either:

- Represent an OSDL member company
- Represent an OSDL affiliated organization directly involved with the technology
- Be an OSDL employee

- Chairperson must represent an OSDL member company
- Team members must either:
 - Represent an OSDL member company
 - Represent an OSDL affiliated organization directly involved with the technology
 - Be an OSDL employee
 - Act as an individual with no employer recognition

Important Dates

Publish Tech Scope White Paper	August 2002
Release Requirements Definition	August 2002
Release Architecture Specification	October 2002
Publish Roadmap	November 2002
Establish validation process	1 st Quarter 2003
First DCL compliant distribution	2 nd Quarter 2003

Summary

- Why Linux
 - Business Control
- Current Linux Uses
 - Widely accepted for many applications
- Roadmap for the Future
 - Data center enhancements are being identified
- Process
 - OSDL is the process
 - You can contribute

How to find out more

- Visit the OSDL site: <http://www.osdl.org>
- Look at the Data Center Linux page
 - www.osdl.org/projects/dcl
 - It has contact information, mailing lists, and how to get involved.
- Getting Involved
 - Technical sub-groups
 - Sign up for the mailing lists
 - OSDL Sponsorship
 - Contact Tim Witham (wookie@osdl.org) or Doug Kolb (doug@osdl.org)

