Total Cost of Ownership

Linux

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TCO of Linux

- What do people usually think it is?
- What is the definition of TCO
- What parameters are used to define TCO?
- Examples
  - Unix to SUSE Linux
  - SUSE Linux on the Desktop
- Innovations to challenge TCO
- Q&A
Total Cost of Ownership

License + Maintenance = TCO
Subscription maybe Maintenance = TCO
Free + Maintenance = TCO
Direct cost + indirect cost = TCO
CapX + Cap Ops = TCO
Total Cost of Ownership

TCO analysis was popularized for the Gartner Group in 1987[1] but its roots are considerably older, dating at least to the first quarter of the twentieth century.[2] It has since been developed in a number of different methodologies and software tools. TCO tries to offer a statement on the financial impact of deploying information technology during its whole life-cycle.
Depending on the IT deployment the following elements can be included in the Total Cost of Ownership TCO:

- End-user computer Hardware purchase costs
- Software license purchase costs
- Hardware and Software Implementation / deployment costs
- Hardware warranties and maintenance costs
- Software license tracking costs
- Operations Infrastructure Costs
- Infrastructure (floor space)

- Cost to upgrade or scalability
- IT Personnel costs
- "C" Level Management Time costs
- Backup and Recovery Process costs
- Costs associated with failure or outage
- Diminished performance incidents (i.e. users having to wait)
- Costs of security breaches (in loss of reputation and recovery costs)
- Technology training costs of users and IT staff.
- Audit costs
- Insurance costs
- Replacement costs
- Migration costs
- Decommissioning costs
UNIX to Linux Migration

- Lower total cost of ownership by 25 to 50 percent
- Achieve outstanding performance and reliability
- Gain flexibility and choice
- Benefit from proven migration services

Five-Year Total Cost of Ownership Comparison

- Direct Costs: 66% Lower
- Indirect (Downtime) Costs: 41% Lower
- Total Costs: 47% Lower

Source: Alinean Research TCO Calculator, 2008
Lower Costs: SUSE Linux Enterprise Server vs. Solaris

Total Cost of Ownership over 5 Years (Typical Scenario)

Total Costs: 47% Lower

Sun Solaris

Indirect (Downtime) Costs: 41% Lower

Direct Costs: 66% Lower

SUSE Linux Enterprise Server
# National Bank

## Mainframe Linux, UNIX to Linux Migration

<table>
<thead>
<tr>
<th>Workloads</th>
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<tr>
<td>• Mission-critical Web applications for online customer banking, call centers and branch automation services</td>
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<table>
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<tr>
<th>Business Issues</th>
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<tr>
<td>• Handle increasing volumes of electronic data</td>
<td></td>
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<tr>
<td>• Reduce costs of managing 600 servers, including 40 Sun servers</td>
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<tr>
<td>• Manage costs by eliminating the need to add servers at the rate of 30 percent each year</td>
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<table>
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<tr>
<th>Novell Solution</th>
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<tbody>
<tr>
<td>• SUSE® Linux Enterprise Server for System z</td>
<td></td>
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<tr>
<td>• IBM System z</td>
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<table>
<thead>
<tr>
<th>Results</th>
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<tr>
<td>• Consolidated 40 Sun Solaris servers to five virtual Linux servers on an IBM mainframe</td>
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<tr>
<td>• Reduced administrative costs by nearly 70 percent and software licensing costs by more than 90 percent</td>
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<tr>
<td>• Realized $1.8 million in savings in first year</td>
<td></td>
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<tr>
<td>• Estimates savings of $9.6 million through 2011</td>
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Lower Your Costs

Hardware Purchase

- UNIX loads typically run on Linux using industry standard servers that cost up to 75% LESS than comparable RISC systems for UNIX

Hardware Maintenance

- The move to commodity hardware drives a reduction in annual hardware maintenance costs of up to 90%

Software License Costs

- Commercial Linux subscription fees are typically up to 60% LESS than the license costs for the UNIX systems they replace
TCO

TCO calculator comparing SLES and Solaris, available at

https://roianalyst.alinean.com/calculators/novell/ROI_Calculator.html
SUSE Linux Enterprise Desktop

Value Proposition

- **Lower Costs in Your Current Environment**
- **Interoperability with Existing Systems**
- **Ease of Use**
- **Strengthened Desktop Security**
- **Ease of Management and Flexibility**

TCO impact areas
SUSE Linux Enterprise Desktop
65% Less than Windows and Office With Support

- Windows = Street price (Enterprise Agreement for license and software assurance, no technical support)
- SUSE Linux Enterprise Desktop = List price (Maintenance and 12x5 technical support)

Price difference would be even greater if based on Novell street prices.
# SUSE Linux Enterprise Desktop

Bundled Applications at No Extra Charge

<table>
<thead>
<tr>
<th>Category</th>
<th>Application</th>
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<tbody>
<tr>
<td>Office Productivity Suite</td>
<td>OpenOffice.org Novell® Edition</td>
</tr>
<tr>
<td>Email &amp; Calendaring</td>
<td>Novell Evolution™</td>
</tr>
<tr>
<td>Integrated Desktop Search</td>
<td>Beagle™</td>
</tr>
<tr>
<td>Application Security</td>
<td>AppArmor</td>
</tr>
<tr>
<td>Multimedia Player</td>
<td>Banshee</td>
</tr>
<tr>
<td>Photo Management</td>
<td>F-Spot</td>
</tr>
<tr>
<td>Note-taking Application</td>
<td>Tomboy</td>
</tr>
<tr>
<td>Web Browser</td>
<td>Mozilla Firefox</td>
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</table>
SUSE Linux Enterprise Desktop
Green IT Capabilities

- Lower system requirements versus Windows
  - As little as 512 MB RAM and 2.5GB HDD (vs. 1 GB RAM and 15 GB HDD for Vista)
  - Easily leverage / repurpose existing machines with SUSE Linux Enterprise Desktop

- Encourages cost-effective, server-based deployments
  - Easily leverage into thin client Linux deployments
SUSE Linux Enterprise Desktop
Minimizes Retraining by Interoperating With Your IT

• **Multimedia (audio / video)**
  - Adobe Acrobat
  - Macromedia Flash
  - Several multimedia formats

• **OpenOffice.org Novell Edition**
  - MS Office compatibility, incl. OfficeOpen XML
  - OpenDocument Format support

• **Collaboration / networking support**
  - Microsoft Exchange, Novell GroupWise
  - Microsoft Active Directory, Novell eDirectory™
  - Wired and wireless networking

• **Plug & play for thousands of devices**
SUSE Linux Enterprise Desktop
Cut Desktop TCO By Strengthening Security

- Modular architecture (vs. monolithic for Windows)
- Built-in application security via AppArmor
- Integrated VPN, firewall and anti-virus protection
- Certificate management
- Easiest security configuration and management

Fact:
SUSE® Linux Enterprise offers the most comprehensive security capabilities for Linux

Result:
Ensure data integrity while reducing emergency patching across Linux systems

2004 Gartner report cities Windows security vulnerabilities increasing desktop TCO by $200 / user / year*

TCO with new innovation

Cloud Computing

Appliances
JeOS

Virtualization
TCO Summary

• Understand what method you want to use to review and validate your TCO
• With new innovation TCO will be a challenge
• Look to innovate to reduce your TCO
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