

Novell's Open Source Migration - A Real Life Story

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Novell Corporate



A strong financial base

- US\$1.2 billion in Sales - 2005
- US\$1.3 billion in cash and short-term investments



Global presence

- Over 5,000 employees worldwide
- Over 100 offices in 50 countries
- 3,200 Solution Provider Partners.



Industry leadership

- Leader in Security, Identity and Access Management
- First in open source community leadership projects
- A key contributor to the Linux kernel
- Linux solutions from desktop to datacenter

The Novell Move to Linux

March 2002 Linux Project Commenced



- Investigate viability
- Potential uses

August 2003 – Novell Purchases Ximian

- Gnome desktop

November 2003 – Novell Purchases SuSE

- SLES
- SuSE Desktop

Creating an Open Source Enabled Enterprise

Why we're moving to open source – it makes business sense

- Benefit to the bottom line - approximately \$900K expense reduction per year vs prior desktop OS and office applications
- A good investment – Rapid ROI
- Security – not the current target of choice;
- Control – easy to lock down; simple software updates
- Showcase – driving how fast we migrate, not *if* we migrate

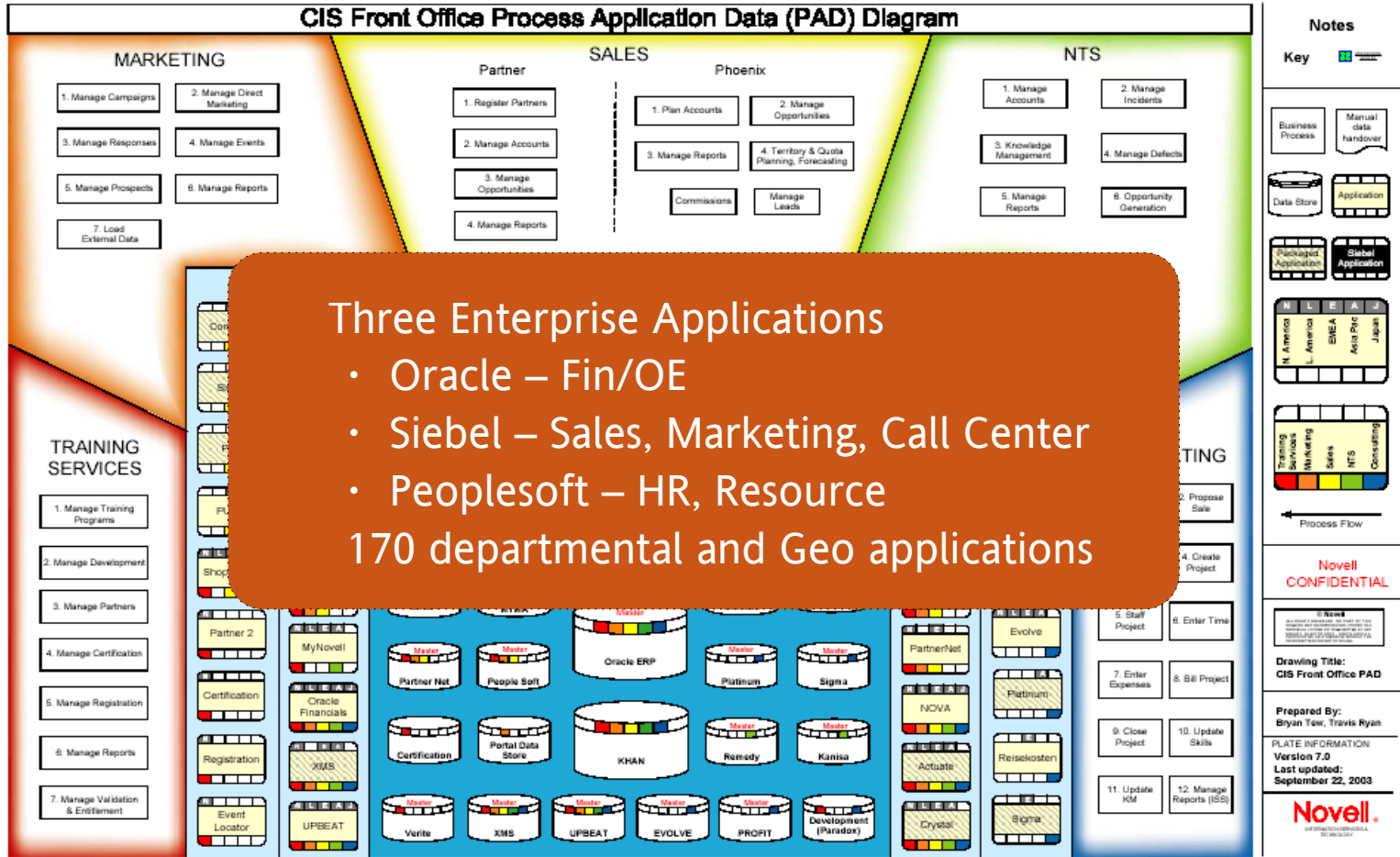
How we're moving to open source – a phased approach

- Phase One – License Management
- Phase One – migrate the workforce to OpenOffice on Windows
- Phase Two – migrate the workforce to Novell Linux Desktop

Linux in the Data Center Migration



Vital statistics - applications



Three Enterprise Applications

- Oracle – Fin/OE
- Siebel – Sales, Marketing, Call Center
- Peoplesoft – HR, Resource

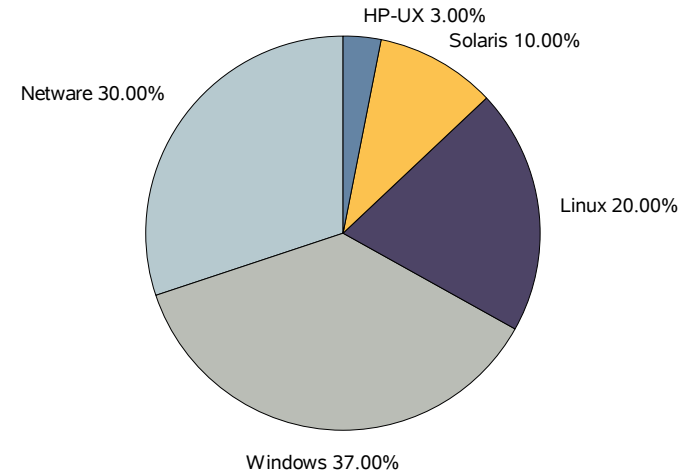
170 departmental and Geo applications

Vital statistics - data

Data centers

- Eight data centers in five countries
- 700 servers
- 20 TB data backed up on a daily basis

Distribution of OS Platforms



SUSE® Linux

140 servers in the data center (20 percent); 3rd behind NW and Windows 40 percent of web servers; 50 percent of eDirectory servers.

Data Center migration progress

Currently >200 Linux servers (25%) in the data center



Services

- **Web** – the novell.com environment (www, ftp, innerweb, support)
- **Novell products** – eDirectory, DNS, iFolder, iManager, IdentityManager
- **Other services** – DNS, backup media servers, list servers, monitoring



Applications

- **Open source** – bugzilla, CVS, subversion, forge, Highwinds Twister forum, MediaWiki,
- **Proprietary** - customer master, reporting data marts, content management
- **BIG APPLICATION SUCCESS** – ORACLE ERP – ALL LINUX

Business Value Achieved

Examples:



novell.com

- ✓ moved from proprietary H/W to SUSE Linux on Intel
- ✓ reduced server count by 30 percent
- ✓ reduced cost by 20%



media server deployment

- ✓ moved from Windows Server to SUSE Linux
- ✓ 300% throughput performance improvement
- ✓ reduced server size.

Data Center Migration: Evaluation criteria

Linux Capability

(2 Points: Mature, Highly Capable, 1 Point: Capable, 0 Points: Not Capable)

Potential Business Value

(2 Points: Substantial business value, 1 Point: Some business value,
0 Points: No Value)

Migration Effort

(2 Points: Only effort for system migration, 1 Point: Effort for system migration, no user training or individual development necessary, 0 Points: Effort very high, involves development, high training requirements, etc.)

Security Improvement

(2 Points: Strong Security Improvement, 1 Point: Some Security Improvement, 0 Points: No Security Improvements)

Performance Improvement

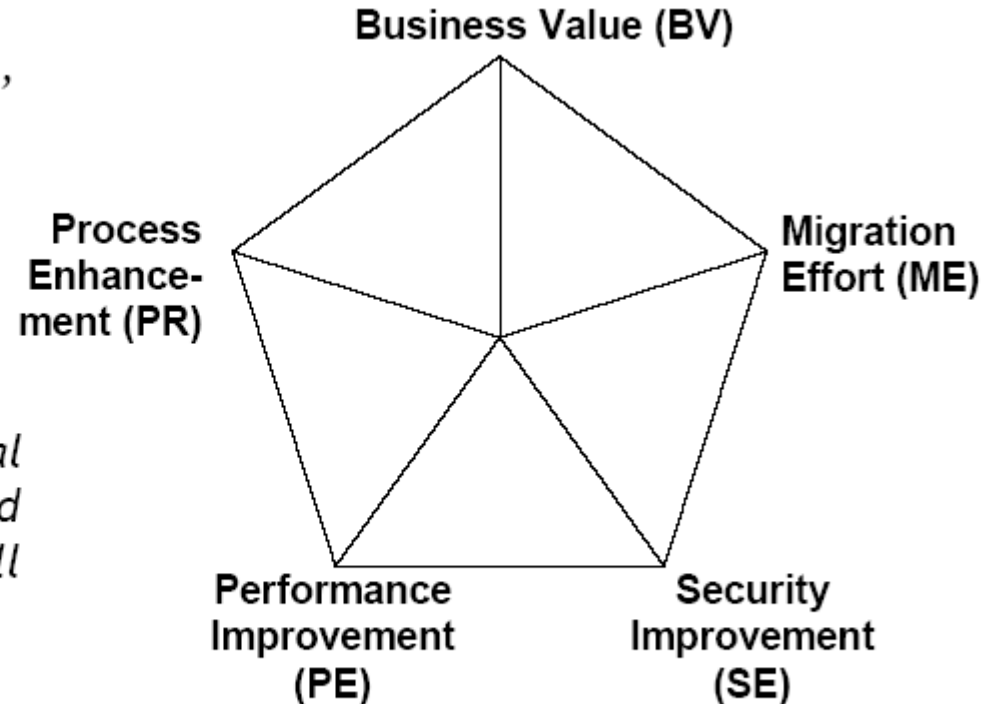
(2 Points: Strong Performance Improvement, 1 Point: Some Performance Improvement, 0 Points: No Performance Improvements)

Process Improvement

(2 Points: Strong Process Improvement, 1 Point: Some Process Improvement, 0 Points: No Process Improvements)

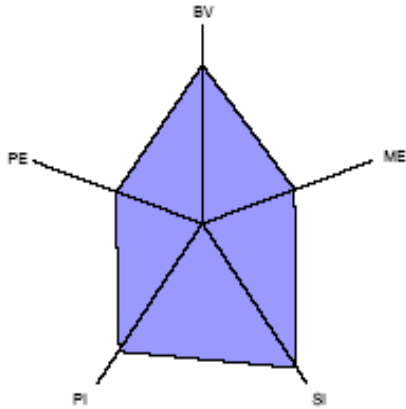
Data Center Migration: Initiative analysis

For the top ten initiatives, scored by their Linux capabilities, additional analysis is presented on the next two pages. The key, at right, illustrates the five benefit areas assessed for each potential initiative. A highly-ranked recommendation would fill the hexagon.

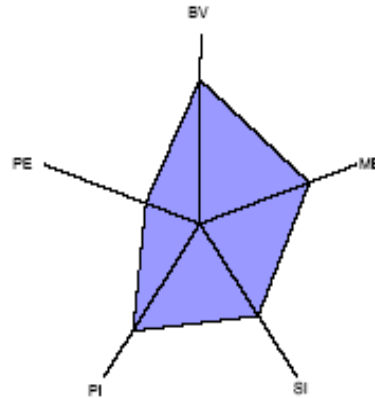


Data Center Migration: High-value initiatives

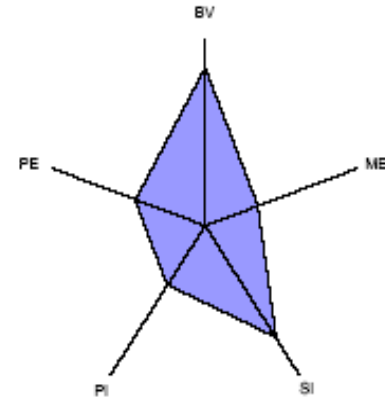
IIS Migration



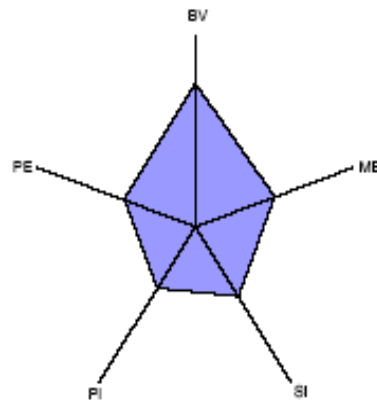
SMTP/DNS/DHCP Server Migration



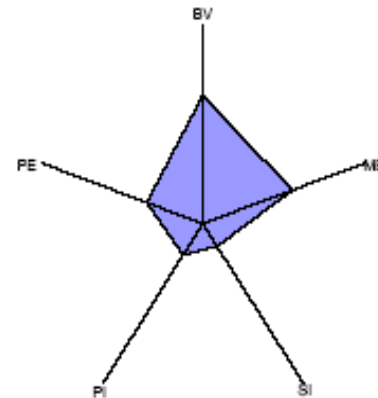
Field Office Site Servers Migration



Sun Web Server Migration



IBM Web Sphere Migration

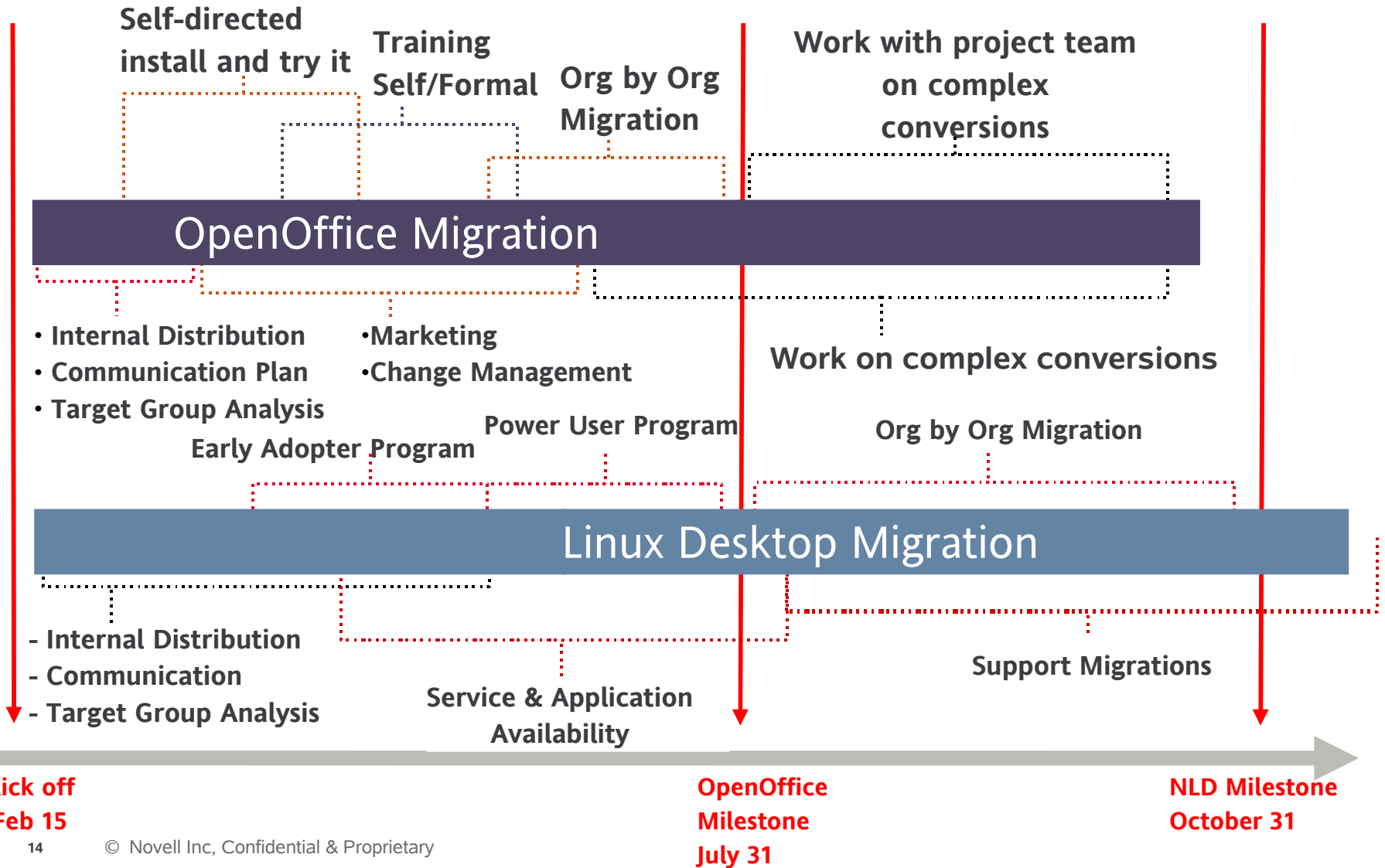


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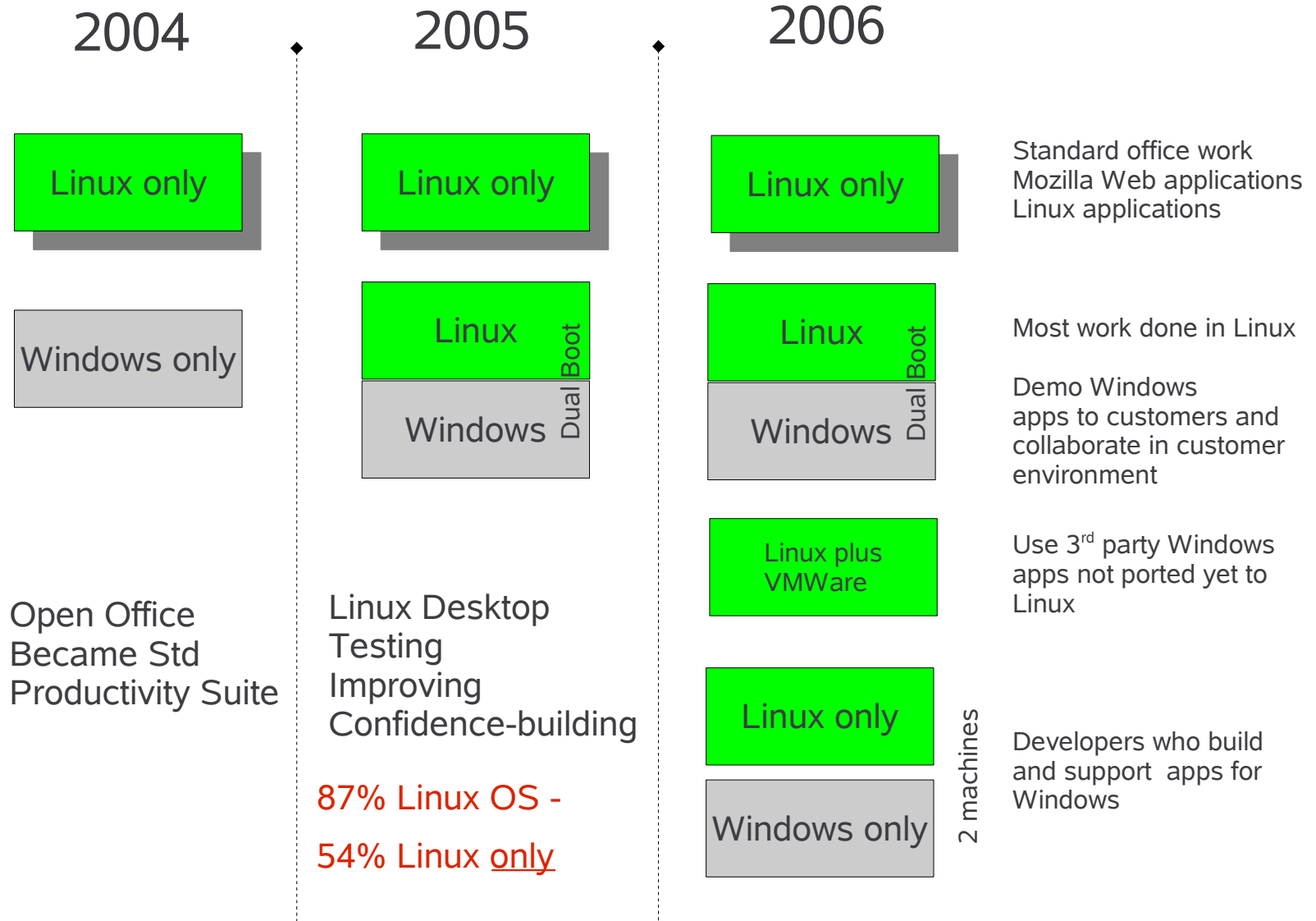
Linux in the Desktop Migration



High Level Timeline



Linux Desktop Migration Strategy



Target Migration by Segment

Segment	Segment Definition	Typical Industry Examples	Novell Roles	Single Boot Linux	Dual Boot	Single Boot +Vmware	Multiple Machines
Fixed Function	Fixed function machines run a single designated application	Examples include point of sale terminals, airline boarding pass kiosks and ATM machines.	Fitness Center Cafeteria	50 / 1%			
Transactional Workstation	Users running customized business applications	Examples include travel agents, front office personnel, bank tellers, government forms, call centers	Shipping Security Copy Center Reception Facilities Travel	300 / 6%		50 / 1%	
Technical Workstation	These users run engineering or specialized industry-specific desktop applications	Examples include engineers, CAD/CAM, movie animation, other technical functions	Software Engineer QA Engineer Test Engineer Support Engineer Category Specialist CSR	1300 / 27%		600 / 12%	500 / 10%
Basic Office	These users make extensive use of word processing, presentation and spreadsheet applications	Examples include loan officers and insurance agents Who work in connected environments.	Account Mgr Project Manager Product Mgr Admins Legal HR Purchasing Payroll Inside Sales	1250 / 26%	200 / 4%		
Advanced Office	Windows users who interact with the Windows operating system and Windows-based applications	Users who create and modify complex documents for use within and outside of their companies.	Consultants Electronic Marketing Documentation Specialists Marketing Technical Writer		300 / 6%	350 / 7%	
Totals / Percent				2900 / 60%	500 / 10%	1000 / 20%	500 / 10%

OpenOffice Migration

Phase One: OpenOffice Migration

Mission:

Move 90% of the workforce to OpenOffice by July 31, 2004

Our Strategy:

- Migrate users to OpenOffice on Windows
 - easy to install
 - Focus on user training and document conversion
- Recruit advocates from the business as change leaders for their organization
- Inventory and categorize documents for managed conversion
- Aggressively address perceived limitations in the OpenOffice tool set
- Do a controlled move by organization and role
- Determine file format standards
- Retain some copies of MS Office for compatibility and business need

OpenOffice on Windows: Lessons Learnt

- ✓ No need for mass conversion of documents to OOO
 - able to convert content of virtually all historical documents
 - documents can be converted on an as-needed basis
- ✓ Compatibility costs for document interchange with external parties are not significant
 - The vast majority of documents will convert cleanly
 - Most documents are intended for “read-only” purposes, use pdf files when sending to ensure document integrity
 - If a document is being developed collaboratively with someone outside your organization, then avoid the few features that don't convert cleanly

OpenOffice on Windows: Lessons Learnt

- ✓ Macros written in MS Office must be rewritten
 - OO brings VBA macros in as text comments, but the macro must be re-written in OO Basic
- ✓ For most knowledge workers, training requirements are minimal
 - OO mimics the functionality of other office productivity suites closely enough that most users will experience a rapid learning curve

Linux Desktop Migration

Phase Two: Linux Desktop Migration

Goals must be clearly set and driven by company leadership

IT must lead by example

- 50% on single boot Linux machine by Feb. 28
- 80% on single boot Linux machine by May 31

Remainder of Novell

- 10% on single boot Linux machine by Feb. 28
- 30% on single boot Linux machine by May 31
- 50% on single boot Linux machine by Aug. 31
- 80% on single boot Linux machine by Oct. 31
- *100% of employees to have Linux installed and experiencing it on a regular basis by May 31*

Phase Two: Linux Desktop Migration

Our Strategy:

- Recruit early adopters – technical pioneers
- Start business analysis early – identify roles and role requirements by business units
- Deliver applications in the browser where possible
- Provide options for migration (do it yourself, work with me, do it for me)
- Make it quick and easy to move – back to work the same day; back to normal in a week
- Offer dual boot as a safety net early in the migration, then move to single boot

Linux Desktop Migration: Lessons Learnt



Migration tools

- Novell's migration solution called “Migration station” addresses user fears (we hold a copy of the data for a few days)



Services

- Address email first, then file and print; understand where VPN is needed



Applications

- Web-delivered applications are easier to migrate; There are bridge technologies available ; Address browser compatibility early



Training

- Train users on the Linux desktop; not on Linux

Linux Desktop Migration: Lessons Learnt

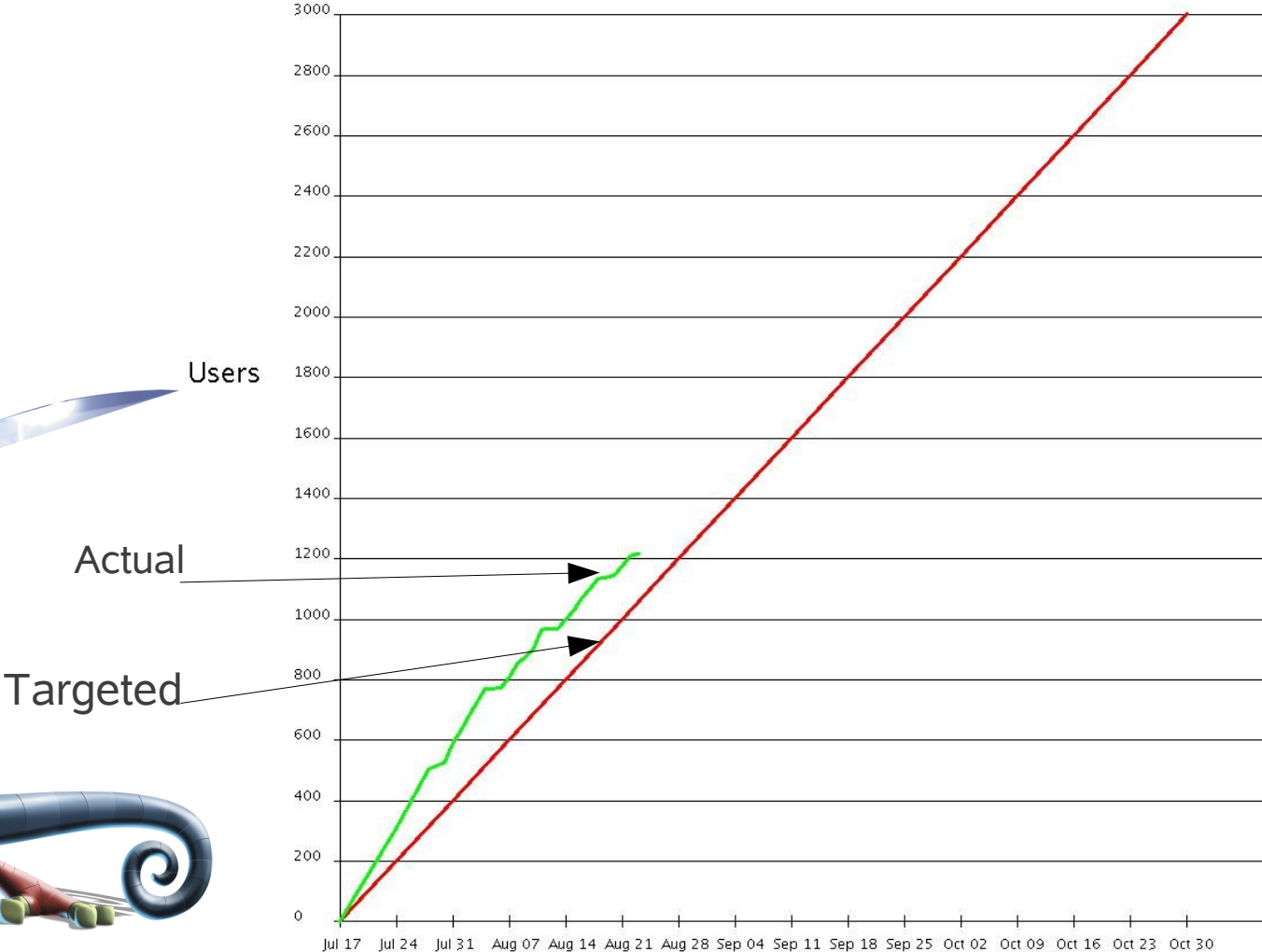
- ✓ Early adopters
 - Early adopters are effective advocates and resources during migration; Give the technical enthusiasts an outlet
- ✓ Power users
 - Pick business enthusiasts instead of technical; they'll help make it real; get change agents
- ✓ General
 - Get IT there first; Address the casual use policy early (e.g., what about my digital photo tools); Practice, practice, practice with your Customer Support organization; Align with the corporate culture and imperatives.

New 2006 Linux Migration Goals

- 👉 Adopt Open Office 2.0 quickly and help resolve issues.
- 👉 Adopt SLED10 and help resolve issues.
- 👉 Provide a Linux Desktop showcase that allows our sales force to further utilize Novell's migration experiences as a model for our customers.

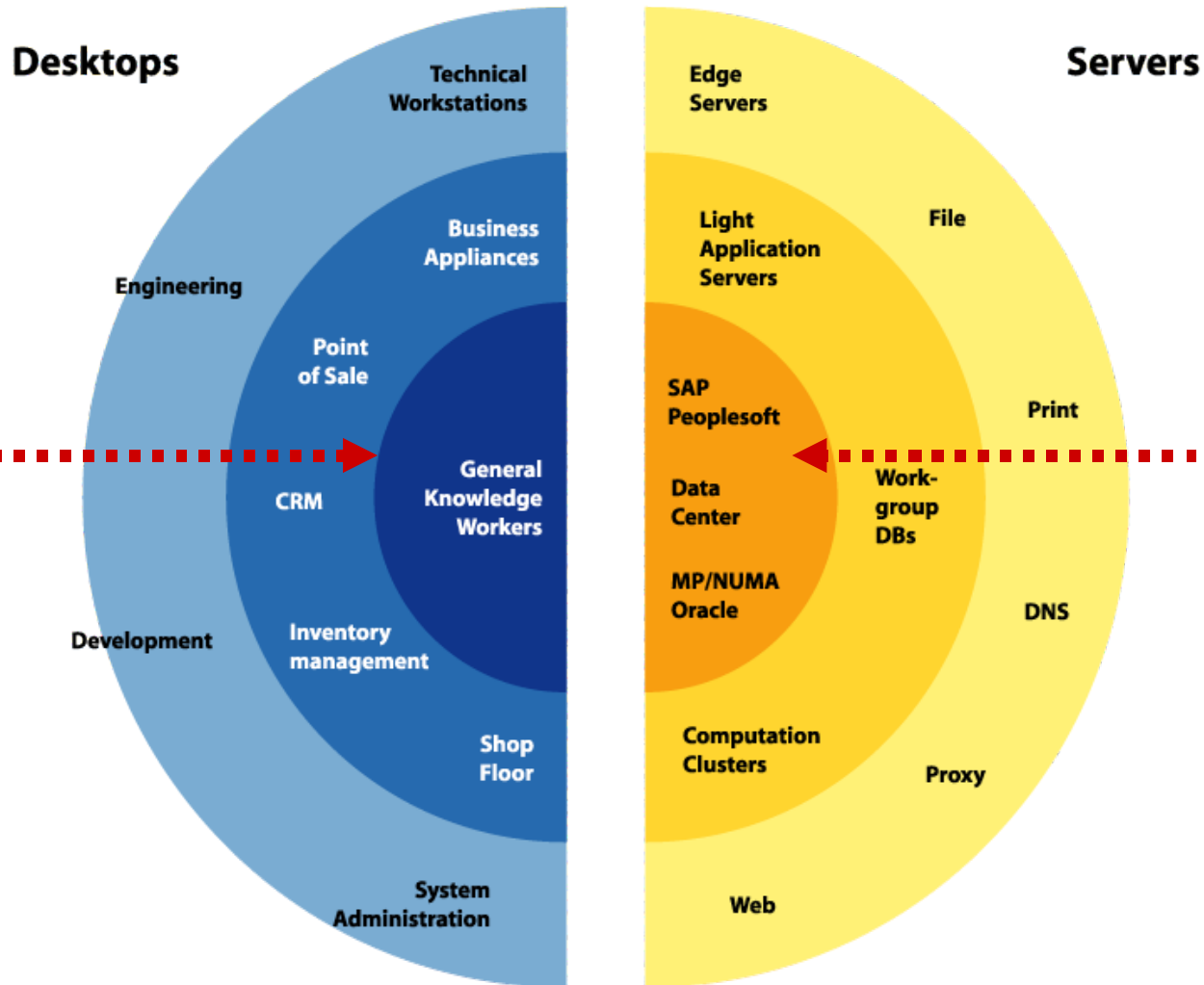
SLED10 Internal Upgrade Chart

Employees SLED10 Migration



Summary

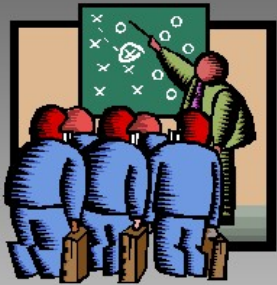
Linux Adoption Strategy



Blueprint for Linux migration

Direction Setting

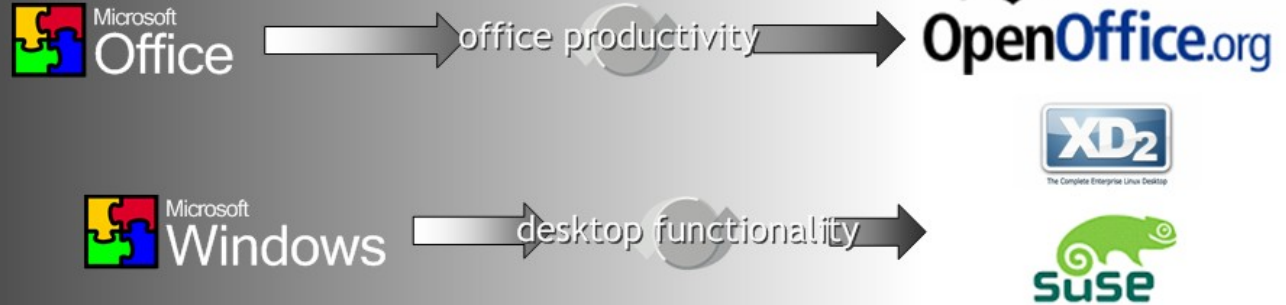
Discovery/Strategy



Roadmap
Business Case
Architecture

Implementation

Desktop



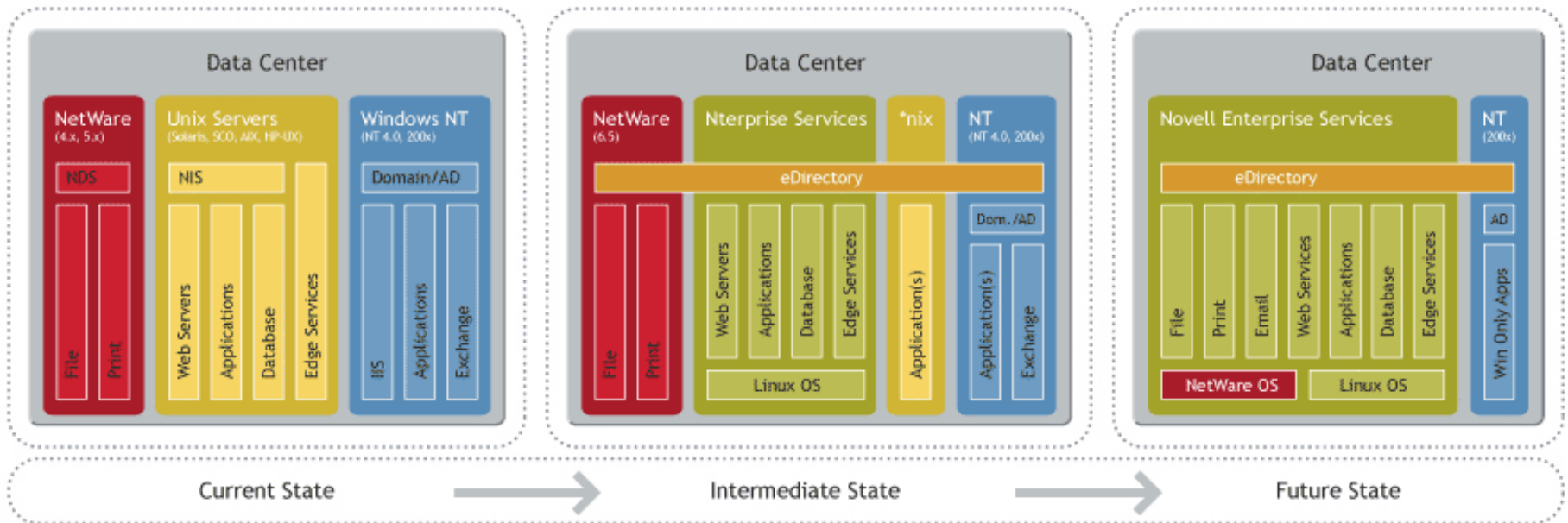
Data Center



A logical and staged approach that covers the entire migration process, from initial planning through implementation, training and support.

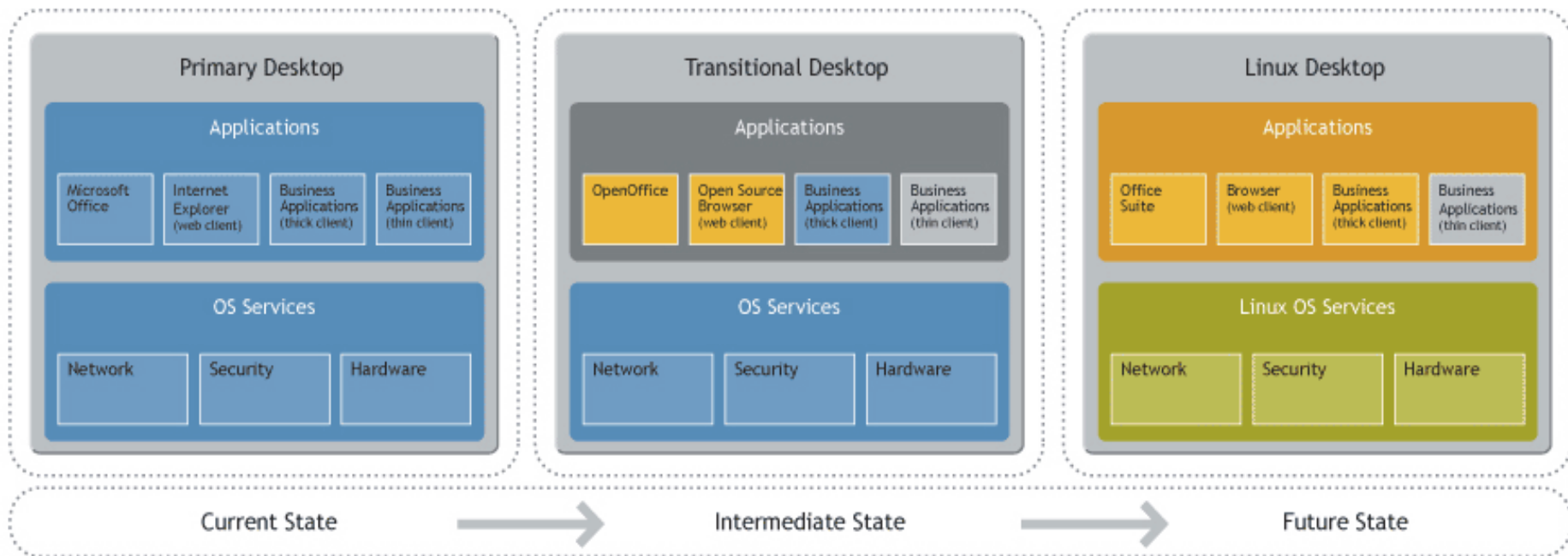
Data Center Migration: Phased Approach

A Phased Transition to Linux > Data Center



Desktop Migration: Phased Approach

A Phased Transition to Linux > Desktop



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Your Linux is READY !



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