Moving to Linux with CLA

Alistair Cloughley
CNI Program Manager - EMEA
Novell, Inc.
acloughley@novell.com

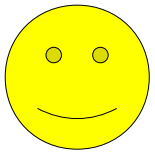
Novell®

Why get involved in Linux ?

Personal observations...

A little history...

- I came to Netware from a Unix/VMS background
- I worked with Netware from 2.15 till present
- in 1993 I discovered Linux (and loved it!)

so – I'm biased 

Novell and Linux

- Linux is now our primary Operating System platform
  - SLES 10
  - SLED 10
  - SLERT 10
  - Linux Appliances
  - OES2 hosted on SLES10SP1
  - Point of Sale, Thin Client etc...
- If you want to secure your future training Novell products as a CNI – get into Linux
  - we are Linux focused, and our customers, your customers, are following

Move now ?

- Some comments from CNIs
  - There is plenty of Netware based work for me in the market
    - perhaps right now – but that will end, so best to be ready
  - I don't have time right now to start learning Linux – perhaps in 6 months
    - start now – you will be ready to teach in 6 months
  - Linux is too difficult to learn
    - it's certainly different, but not really harder. We hope that the new CLA certification and the ability for CNIs to teach courses based on CLA certification will make it easier to start with Linux
  - I'm really glad that I started to learn Linux, it took a while but now I love it
    - hopefully that will be the 'normal' feedback from CNIs soon

(All of the above are from real conversations at Brainshare 2008)

Certified Linux Administrator (CLA)

The CLA Certification – A CNI view

Novell Certified Linux Administrator

-
- A standard 'form' based test (full details later in the presentation)
  - not adaptive at present
- based on 2 existing SLES10 courses from CLP track
  - 3071 (Fundamentals of SLES10) & 3072 (SLES10 Administration)
- Authorization to teach 3071+3072 is possible via CLA certification
  - removes the need to achieve CLP10 to start teaching Linux courses

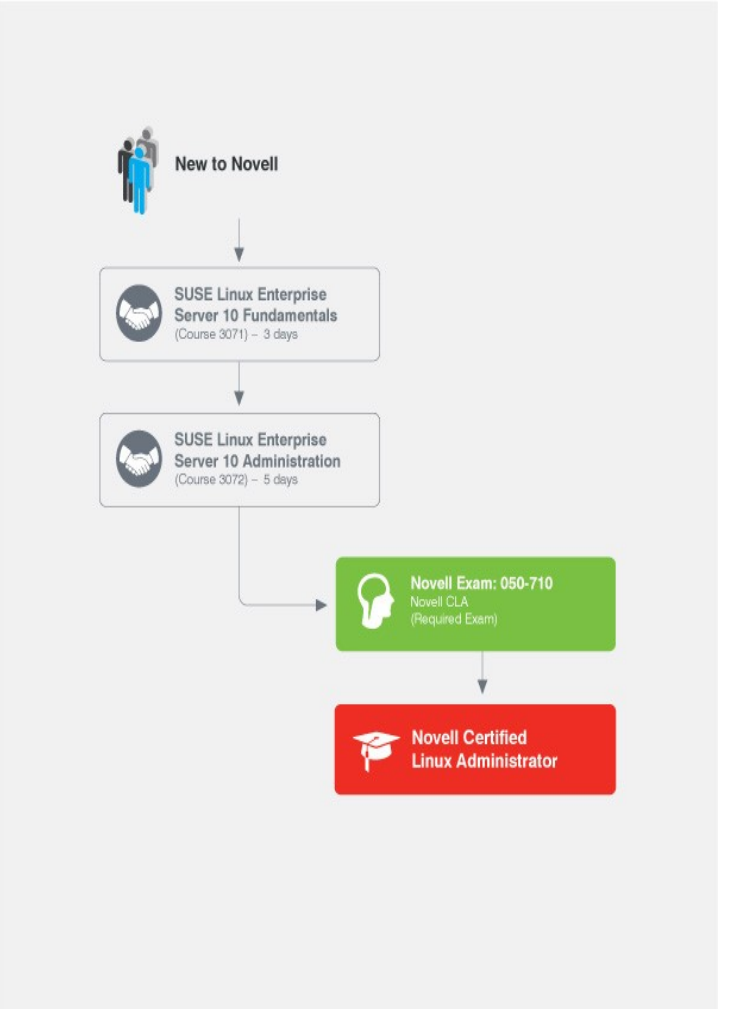
Course Contents and Track

Course 3071 – SLES10 Fundamentals (3 Days)

- Understanding the Linux Story
- The History of Linux
- Installing SUSE Linux Enterprise Server 10
- Using the Linux Desktop
- Administering Linux with YaST
- Locating and Using Help Resources
- Managing Directories and Files
- Working With the Linux Shell and Command Line
- Using Linux Text Editors
- Managing User, Groups, and Permissions

Course 3072 – SLES10 Administration (5 Days)

- Performing and Troubleshooting SUSE Linux Enterprise Server 10 Installation
- Administering the Linux File System
- Administering User Access and Security
- Configuring the Network Manually
- Administering Linux Processes and Services
- Monitoring SUSE Linux Enterprise Server 10
- Configuring System Initialization
- Managing Software for SUSE Linux Enterprise Server 10
- Managing Backup and Recovery
- Managing Printing on Linux
- Configuring Remote Access



What if I am already a CNI with CLP10 ?

Easy !

You are already able to teach the SLES10 CLP courses (3071, 3072, 3073) and you will be awarded a CLA certification

What if I'm a Netware CNI today ?

- We believe that the difficulty of the CLP exam has been a stumbling block for our customers – which is why we introduced the CLA certification to provide a lower entry point into Linux certification
- We also believe that this is true for our CNI community – many instructors with years of Netware and teaching experience have not made the jump to the Linux based products – including OES (1 & 2) on Linux
- CLA certification allows CNIs to begin teaching Linux courses and building valuable experience before having to sit the CLP practicum exam

Netware CNI skills

- Solid teaching experience
  - most Netware CNIs have years of good classroom experience
- Excellent technical skills
  - teaching Netware and related products requires understanding of the issues and problems encountered in real life data centre and MIT departments
- Good problem solving skills
  - anyone teaching Netware is used to solving the issues that students bring from their real world situations into the classroom

These skills will be invaluable in teaching Linux courses

So – where do I start ?

Netware to Linux is easier than most people think...

- mainly text based command lines...
  - just like Netware server
- optional GUI interface
  - just like Netware server – X-Windows based
- Multiple administration options
  - just like Netware...
- Multiple filesystem choices
  - just like Netware
- primarily a Data Centre option (but Desktop is gaining ground!)
  - just like Netware (except for the Desktop part!)

Getting Basic Linux Skills (1)

CNI Resources

- Course material is on the CNI website for all SLES and SLED courses
  - includes ISO of product installs and files for VM machines
- CNI Support forums
  - there are active support forums for all of the Novell Linux courses
- Product Support forums
  - for technical issues you may encounter whilst using the software

Getting Basic Linux skills (2)

External Resources

- The Linux Documentation Project (TLDP)
  - TLDP.org has collected a huge range of documents relating to the use of Linux and Linux hosted software, including many guides at levels from beginner to advanced.
    - http://tldp.org/guides.html
  - Introduction to Linux - A Hands on Guide
    - http://tldp.org/LDP/intro-linux/html/index.html
  - BASH Guide for Beginners
    - http://tldp.org/LDP/Bash-Beginners-Guide/html/index.html
  - These are not SLES10 specific, but are excellent documentation
- Commercial magazines
  - many of which have excellent online reference sections
    - http://www.linuxjournal.com/ , http://www.linuxformat.co.uk/

Getting Basic Linux Skills (2a)

- External Resources continued
  - http://linuxcommand.org
    - a whole website devoted to helping you learn command line Linux
  - http://www.linuxnewbieguide.org/
    - information for anyone starting with Linux

Getting Basic Linux Skills (3)

Firstly get familiar with Linux :

- Install SLES10 and use it
  - perhaps install in VMWare on your existing workstation
- Spend time to work through some introductory material
  - 3071, the TLDP material for example
- Become familiar with:
  - the shell and the command line
    - learn some basic commands first – don't run before you can walk. Remember that you do not need to memorize every command line tool and option, use online help when you need detail.
  - the YaST administration tool
    - learn both modes – GUI and text, and how to launch specific modules
  - startup and shutdown
    - learn about the file structure behind the startup and service startup process
  - users and security
    - this is an area where many delegates really struggle on courses so be very familiar with the files for users/passwords and the PAM configuration

Getting Basic Linux Skills (3a)

- Explore the filesystem
  - it's good to know where each main configuration file is located and the purpose of each directory
  - the man command has information on configuration files (man 5)
- When you are comfortable with Linux, consider switching from a Windows desktop to eithe SLED10 or OpenSuse 10.x for daily use.
  - If you need to retain some Windows only applications
    - check if WINE (a Windows compatibility layer for Linux) will run you application (see www.winehq.org)
    - use a commercial derivative of WINE (www.codeweavers.com)
    - Host Windows in a Virtual session (XEN, VMWare etc)
  - moving to Linux for daily use will really help you become familiar with the interface and commands
  - as you use Linux on a daily basis this will greatly increase the depth of knowledge which you can demonstrate in the classroom

Getting Basic Linux Skills (3b)

- Configure printing and become familiar with the CUPS system
  - printing is still one of the 'weak' points in Linux
    - especially regarding drivers etc
    - students will come to class either having experienced printing issues, or having heard about issues of printer compatibility
    - http://www.linux-foundation.org/en/OpenPrinting
- Hardware compatibility is still a general issue
  - typically with older, or consumer hardware
    - sound cards, some wireless LAN hardware etc
    - not typically a problem for enterprise level server hardware
    - http://en.opensuse.org/Hardware , www.linux-drivers.org
- Use GRUB (the boot loader installed with SLES/SLED)
  - to configure dual boot if you still need Windows
  - to boot with different startup options
    - either as a 'one off', or to create boot menus

Getting Basic Linux Skills (4)

Leverage your existing skills and knowledge:

- you probably use a Windows desktop today
  - SLES and SLED desktops behave very similarly to Windows, explore the options as you would in Windows to become familiar with the desktop
- you have extensive Netware server experience
  - find Linux equivalents to common Netware server commands
    - Course 3089 (Implementing Novell OES2 for Linux) has several tables which provide possible Linux equivalent commands for commonly used Netware commands (Chapter 7, tables 7.1 to 7.5)

Finding help in Linux

Online help in Linux is available from various sources:

- man
- info
- HOWTO Documents

The CLA Exam

Exam Details...

- Standard 'form' exam
- 90 minutes
- 69 questions
- Pass score – 512 (CLA), 542 (CNI)
- Exam content taken from courses 3071 (40%) and 3072 (60%)
- Should be available 23rd April

CLA Exam Objectives

Get to Know YaST
Manage the Network Configuration Information from YaST
Access and Use man Pages
Use info Pages
Understand the File System Hierarchy Standard (FHS)
Change Directories and List Directory Content
Create and View Files
Work with Files and Directories
Find Files on Linux
Search File Content
Get to Know the Command Shells
Execute Commands at the Command line
Get to Know Common Command line Tasks
Understand Command Syntax and Special Characters
Use Piping and Redirection
Use the Editor vi to Edit Files
Manage User and Group Accounts with YaST
Describe Basic Linux User Security Features
Manage User and Group Accounts from the Command Line
Manage File Permissions and Ownership
Ensure File System Security
Perform a SLES 10 Installation
Configure a SLES 10 Installation
Troubleshoot the Installation Process
Select a Linux File System
Configure a Linux File System Partition
Manage Linux File Systems
Configure Logical Volume Manager (LVM) and Software RAID
Set Up and Configure Disk Quotas
Configure User Authentication with PAM

Manage and Secure the Linux User Environment
Use Access Control Lists (ACLs) for Advanced Access Control
Understand Linux Network Terms
Set Up Network Interfaces with the ip Tool
Set Up Routing with the ip Tool
Test the Network Connection with Command Line Tools
Configure Host Name and Name Resolution
Configure the Network with NetworkManager
View and Manage Processes
Schedule Jobs
Monitor a SUSE Linux Enterprise Server 10 System
Use System Logging Services
Monitor Login Activity
Describe the Linux Load Procedure
GRUB (Grand Unified Bootloader)
Manage Runlevels
Manage RPM Software Packages
Verify and Update Software Library Access
Develop a Backup Strategy
Create Backups with tar
Work with Magnetic Tapes
Copy Data with dd
Mirror Directories with rsync
Automate Data Backups with cron
Configure Local Printing
Manage Print Jobs and Queues
Understand How CUPS Works
Configure and Manage a Print Server
Provide Secure Remote Access with OpenSSH

This will be available at :
http://www.novell.com/training/testinfo/objectives/index.html

CLA Exam Objectives

- So basically:
  - Installation
  - File System
  - File Management and editing
  - User Management
  - File system security
  - Startup and shutdown
  - Backup
  - Printing
  - Remote Management
- Similar to the typical content of the legacy Netware courses

So – what about CLP ?

- CLA is an excellent 'check point' on the way to CLP
  - No need to complete 3 courses before you can test your knowledge
  - for CNIs and Training partners – there is a quicker return on investment. Prepare to teach 2 courses, take the test and you can begin to teach.
- The CLP Practicum has 'scared' many people
  - it is a difficult exam
  - CLA provides proof that you are getting ready
  - one more course (3073 – SLES10 Advanced Administration)
  - the CLP Practicum will test content from all three courses

CLA - CLP

- Requires knowledge of 3071, 3072,3073
- so CLA + :
  - XEN Virtualization
  - Apache and Tomcat Web Services
  - Samba for Windows integration
  - Shell scripting
  - Health Check processes
  - Performance tuning
- take the CLP Practicum exam
  - remember – the Practicum will potentially test content from all three courses.

Questions

More Information

www.novell.com/linux

http://www.novell.com/training/certinfo/cla/

www.opensuse.org

http://www.novell.com/community/cert/instructor/index.html


Novell®