Libre Platform Genesis Process

Supported Distributions: GNU/Debian, Ububtu, Maemo

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Chapter 1

Intorduction

This document applies to the Genesis process for Libre Platform.

1.1 General Process Overview

The main steps involved in building a libre platform are the following:

1.1.1 Steps and Procedures Overview

1. Base Distribution Installation. e.g. Lenny Debian GNU/Linux
2. LSIP Genesis Installation.
3. Developer Assignment. Optional. usually lsipusr noedit
4. ByStar Host Assignment. e.g. BACS, BISP, BUE – Needs a reboot and BACS should be made secured
5. ByStar Platform Configuration and Preparation (Sets default params for nexts)
6. ByStar Account Creation/ReCreation
7. ByStar User Environment (BUE/LUE) Setup
8. ByStar Seal

There are several different ways of executing the procedures in this document.
Defaults assume that the host to go through Libre Genesis is on a lan where optimum speed is in place.
Defaults assume that the machine first takes a genesis identity where all base packages are rapidly loaded.
Then we configure for the real identity.

1.1.2 Supported Distributions Overview

Debian: Deprecated: SARGE

LP-Current: LENNY

LP-Supported: LENNY

Ubuntu:

MAEMO: LP-Current: Maemo4, OS2008 – Maemo 5

1.1.3 Platform Types Overview

Platform/Inter/BACS: - ByStar Server Platform [INTERNET] (BACS) (ByStar Account Container Server bacs0001.by-star.net)

Platform/Inter/BSSP: - Bystar Service Specific Platforms (BSSP) (DNS Servers, Mail Recepient Servers, ...)

Platform/Intra/BISP: - Bystar Intra Server Platform (BISP) (bisp0001.intra)

Platform/Intra/BUE: - ByStar User Environment [INTRA] (BUE) bue.intra – Desktop

Platform/Intra/BFUE: - ByStar Full User Environment [INTRA] (BUE) BACS capabilities as well

Platform/Intra/BCCE: - ByStar Conscious Carry user Environment [INTRA] (BCCE) bmue.intra – PDAs, Netbooks, NoteBooks

Platform/Intra/BUCE: - ByStar Unconscious Carry User Environment [INTRA] (BUCE) bmue.intra – PDAs, Netbooks, NoteBooks

1.2 Debian/Ubuntu BACS Overview

Base OS Installation: See Section 2.

- Answer "intra" for everything

(Make ready for remote access. apt-get -y install ssh + sudo su - passwd) apt-get -y install openssh-server on sparc.

LSIP Genesis Installation: See Sectoin 3.

```
Service Side Note: Make sure that on bysource locks are up-to-date
  at bysource.org
  lcaCvsHosts.sh -n showRun -e "Lock Files -- Fixes Permissions" -i cvsLockDirUpdate
```

ssh root@ipAddr

Summary:

```
apt-get -y install emacs
```

(Use — emacs -q — buffer to capture results)

```
wget http://www.bysource.org/lsip/lpGenesis.sh

bash ./lpGenesis.sh atNeda
```

Developer Assignment (Optional): - Exit the root shell

- Log back in as "root" again. – ssh root@192.168.x.x

- emacs -nw

- passwd lsipusr – follow site policy

READ MODE: `lpSysDevelopers.sh -h -v -n showRun -p cvsMode=READ -p developer=lsipusr -i fullUpdate`

EDIT MODE (Optional): `lpSysDevelopers.sh -h -v -n showRun -p cvsMode=EDIT -p developer=lsipusr -i f`
(enter lsipusr passwd for cvsServer when prompted)
At this point lsipusr is also added sudoers

ByStar Host Assignment: ===== bystarHostAdmin.sh (BACS, BISP, BUE, ...) ===

- Exit the uid=root shell
- log back in as lsipusr
- eoeStart.sh – Now you can edit and cvs.
- ctl-u-3 F7 – su root

```
bystarHostAdmin.sh -h -v -n showRun -p siteName=nedaPlus -p hostType=bacs -i BystarHostFullUpdate

bystarHostAdmin.sh -h -v -n showRun -p siteName=nedaPlus -p hostType=bisp -i BystarHostFullUpdate

bystarHostAdmin.sh -h -v -n showRun -p siteName=nedaPlus -p hostType=bue -i BystarHostFullUpdate
```

cvs-update in /libre/ByStar and /opt/public/osmt

ByStar Platform Configuration. - uname -a # Verify the new identity

- Password Adjust for the new identity
- init 0
- Network Adjustement – Move cablesm move the box ...
- boot with the proper identity
- Become Root
- Choose between “WEB”, “TEST”, ...

```
bystarPlatformAdmin.sh -h -v -n showRun -p platformUsageDevelMode="TEST" -i paramsUsageDefaults

bystarPlatformAdmin.sh -h -v -n showRun -i paramsUsageShow \# to verify params
```

— ByStar Platform Preparations:

```
- bystarServiceAdmin.sh -h -v -n showRun -i platformVerifyPre

- bystarServiceAdmin.sh -h -v -n showRun -i platformPrep

- bystarServiceAdmin.sh -h -v -n showRun -i platformPrepDeveloper

- bystarServiceAdmin.sh -h -v -n showRun -i platformPrepInterim

- bystarServiceAdmin.sh -h -v -n showRun -i platformVerifyPost
```

ByStar Account Assignment: Decide on the account type BySMB, ByName, ByMemeory

For example:

```
bystarBarcStart.sh -h -v -n showRun -p serviceType="BYSMB" -p supportType="TRIAL" -p Domain2="mydoma
```

If controlled accounts are needed, then go to the master account cd ea-590xx Edit acctAdmin.sh there and run -i acctCreate ...

If it is to be used with a ByStar User Environment

- Prepare the CVS environment.

- To Recreate An Account: NOTYET ...

ByStar User Environment Setup (BUE/LUE): - Associate bystar/lsipusr with a given account ...

ByStar Seal:

1.3 Debian/Ubuntu BISP/BUE/BMUE Overview

Same as BACS up until ByStar Acct Creation
bystarDevelopers.sh – basePrep followed by mirror setup.
After Bystaracctadmin.sh before lueBystar also bystarDevelopers.sh
bystarDevelopers.sh – on Container
bystarDeveloper.sh – on dev platform
lueBystarAdmin.sh
lueBystarUser.sh

1.4 MAEMO Overview

This document applies to the Genesis process for Libre Platform on Maemo.
The main steps involved in building a libre platform are the following:

1.4.1 Base OS Installation

Follow instructions in /opt/public/osmt/bin/maemoAdmin.sh

1.4.2 Gain WiFi Access

Usual common procedure.

1.4.3 Install Catalogs

Verified

Web http://repository.maemo.org/ Then Diablo.
Web Devel http://repository.maemo.org/ Then Diablo.
On Nokia Accept Everything

In The Works

Web Interactive http://gronmayer.com/it Select All – Install Selected.
On Nokia Accept Everything

1.4.4 Become Root

Get an XTerm
Various programs are available.
1) Select Easyroot Then just type “root”
1) Select rootsh Then just type “root” or “sudo gainroot”

1.4.5 Install SSH

passwd user – site policy
apt-get install openssh-client openssh-server
ifconfig -a – to discover the ipAddr

1.4.6 Maemo LSIP Genesis Installation

See Sectoin 3.
Get a terminal or emacs session so that the output can be captured.
ssh user@ipAddr
root
apt-get -y install bash – Followed by bash-setup for both root and user apt-get -y install wget
wget http://www.bysource.org/lsip/lpGenesis.sh
bash ./lpGenesis.sh
- /etc/apt/source.d - gnufindutils - diffutils
Turn the Nokia off. Make sure the .bashrc problem is fixed.

1.4.7 Emacs23 Installation

/opt/public/osmt/bin/lcaEmacsBinsPrep.sh

In The Works

Where is xauth, which repositories to get. Needed for use with ssh -X
- xauth – Followed by X forwarding, Works except for mouse and needs pre run when running X-client– Not done yet

1.4.8 ByStar Acct and Developer Assignment

- lpSysDevelopers.sh user fullUpdate
- lueBystarUser edit user fullUpdate

1.4.9 Desktop and Keyboard Configurations

- /opt/public/osmt/bin/maemoDesktopAdmin.sh

1.4.10 Maemo Select Applications

-) Sonata
-) mpd – has problems -) Needs libmpd0 but sound quality sucks – No solution yet
-) mplayer -) kmplayer
-) camera -) voice recording – NOTYET
-) EOE - emacs
-) VNC – Perhaps NOT

-) Claws-mail -) wifi2way
- wget - bash3 – followed by bash-setup
=== Bluetooth phone dialing and sms sending === -) libgnokii -) gnokii -) gnokii-gconf -) phonelink -) contact-infos -) blues-utils-dist – To run (hcitool scan) to get the MAC id
Establish bluetooth connection – use phonelink to make phonecalls ===

1.4.11 Special Features

Software RAID

Swap partition also raid. – If one disk fails, no matter what, the host keeps running.
Below we assume 2 80 gig drives – 2gig partition sda1 for swap and 78 gig sda2 for /

Partition Disk

```
Choose Manual
Choose Create New Empty Space
2.0 GB
Use as physical volume for RAID
rest Use as physical volume for RAID

Then ``Configure Software Raid'' appears on top
```

Configure Software Raid

```
Create MD
Choose RAID 1
# of RAID devices: 2
Choose /dev/sda1 and /dev/sdb1

Create MD
Choose RAID 1
# of RAID devices: 2
Choose /dev/sda2 and /dev/sdb2
```

Back to Partition Disk

```
For RAID1 2GB use as swap

For RAID1 78GB use as ext3 filesystem mount as "/"
```

DM RAID – dmraid

DEBIAN/LENNY: GNU/Debian LENNY – 5.0 – /etc/issue reads:

- Choose Help – at boot: say "install dmraid=true"

1.4.12 Supported Distributions

See lpDistInfo.sh for most current details.

Debian

Sarge: GNU/Debian Sarge – 3.1 – /etc/issue reads:

Etch: GNU/Debian Etch – 4.0 – /etc/issue reads:

LENNY: GNU/Debian LENNY – 5.0 – /etc/issue reads:

SID: GNU/Debian SID – /etc/issue reads:

Ubuntu

EDGY: GNU/Debian Ubuntu/Kubuntu Edgy – /etc/issue reads:

Feisty: GNU/Debian Ubuntu/Kubuntu Feisty – /etc/issue reads:

Maemo

OS2008: – /etc/issue reads:

1.4.13 Supported CPU Architectures

i386: See distribtion release notes for supported hosts.

armel: For Maemo.

sparc: sun4m and sun4u Voyager not supported.

On Sun Sparc 4 and Sparc 5 run Debian Sarge.

On Sun Sparc Ultra run Ubuntu 7.04 (Feisty) Server (keyboard PC-104).

1.4.14 Installation and Configuration States

These are also the tags that appear in /etc/osmtState.

baseOsLoaded: OS loaded from CDs or network just to the point where a minimum set of packages allowing SSH access to the box is permitted.

```
IP Addr:          DHCP Intra
Host Name:        boxName
Passwd Policy:    root  -- passwd: boxName
```

LpGenesisObatined:

OsmtEnabled:
```
IP Addr:          DHCP Intra
Host Name:        boxName
Passwd Policy:    root  -- passwd: boxName
```

LpBasSoftwareUpdate:

IdentitySelected:
```
IP Addr:          DHCP Intra
Host Name:        realOsmtId
Passwd Policy:    root  -- passwd: nedaPolicy
```

SpecificSoftwareUpdate:

IdentitySet:
```
IP Addr:          realStaticIP Address
Host Name:        realOsmtId
Passwd Policy:    root  -- passwd: nedaPolicy
```

SpecificServiceUpdate:

Audited:

Sealed:

Unsealed:

DeveloperSetup:

1.4.15 Related Scripts and Documents

New Versions of Boot CD: See /opt/public/osmt/bin/debInstaller.sh and also /opt/public/debian/cd/3.1_r0a/ PINNEKE: How about 3.1_r0a also in addition to X86, we need SPARC.

Debia Packages Server: See /opt/public/osmt/bin/debCntntPkgsServers.sh and also /opt/public/osmt/bin/debPkgsHosts.sh PINNEKE: What is the status and describe.

1.4.16 Default Server

Private DHCP Servers: None essential – Intra Lan specific.

Private Network Boot Server: None essential – Intra Lan specific. NOTYET.

Public WEB Genesis Server: http://www.bysource.org

Public CVS Server: cvs.bysource.org

Public Debian Package Server: nlp.bybinary.org

Public NTP Server: NOTYET

Public DNS Resolver: 64.xxx 198.XX 70.XX

Public/Libre SMTP Submit Server: NOTYET

1.4.17 TODO

DHCP for Genesis Machines

Need to setup. Defaults to generic unless mac address is in OSMT database.

Fully Automated Installation

Look into existing servers. Merge with OSMT databases.

1.5 Ways of Building the Platform

1.5.1 Base OS Loading

Expected to happen behind a firewall with a DHCP server in place.
No secret passwords used.

```
User Name: intra
User Passwd: intra
BoxName: Either assigned or ``UnAssigned''
Host Name: intra
Root Passwd: intra
```

1.5.2 OSMT Genesis1 Install

Expected to happen behind a firewall with a DHCP server in place.
No secret passwords used.

```
User Name: lsipusr
User Passwd: intra
BoxName: Either assigned or ``UnAssigned''
Host Name: genesis1
Root Passwd: intra
Anon CVS
```

1.5.3 OSMT Specific Host Install

Expected to happen with Internet visibility (not firewalled).
Static IP Address.
Developer Managed.
All Generic accounts have strong passwd assigned.

1.6 Libre Platform States and Evolution

The state descriptions below is generated from:

```
lpSysMgmtSteps.sh  -i describeAllStates
```

Chapter 2

Base OS Installation Layer

2.1 Ubuntu 8.04.1 Base OS Install From CD

2.1.1 Pre-Installation Verifications

hostname = Box Name If Box Name is not assigned yet, then hostname = intra

Make sure cable is plugged as Intra LAN.

Verify correctness of Machine Profile opMachines.sh -p opSiteName=nedaPlus -s mach_kashan -a summaryBoxName

2.1.2 Obtaining CD and Boot

```
You should locate and use CD marked:
     Ubuntu 8.04.1 alternate i386
```

2.1.3 Installation Step-By-Step

Now it will take you through the installation.

```
-- Click Install Ubuntu
-- Choose language: English
-- Choose country or region: US
-- Detect Keyboard Layout? No
     Origin of Keyboard: USA
     Keyboard layout: USA
-- Now there schould be some progress bars that go through
        "Detect and mount CD-ROM
        "Load installer components from CD"

-- Detect network hardware
     ****For networks with DHCP:
        Configure the network
        Network autoconfiguration should suceed.
        Configure the network
        Hostname: intra (or the box name)
```

```
        Domain name: intra

     ****For networks without DHCP:
        "From here you can choose to retry DHCP network"
        Network configuration method: Configure network manually

        Configure the network
        IP address: 192.168.0.16x (the last digit 'x' will change depending on the machine)
        Netmask: 255.255.255.0
        Gateway: 192.168.0.220
        Name server address: 64.8.192.9
        Hostname: *the name of the computer*

        Detect Hardware (progress bars)

-- Time Zone: Pacific
-- Partition Disk
     Partitioning method: Use entire disk
     Select disk partition: <may list more than one disks>
     Finish partitioning and writes changes to disk
     Write changes to disk? <yes>

-- New user: intra
-- Passwd: intra
-- HTTP Proxy: just leave it blank, Continue
-- Is the system clock set to UTC? Yes
-- Finish the installation
     eject CD and hit <continue>
     REBOOT (automatic)
```

2.1.4 Finish Ubuntu Installation

```
Login as intra
Passwd: <intra>

sudo apt-get install ssh

sudo passwd root
-- use site policy for root passwd

Figure the IP address from ifconfig -a
for the next step

echo ``baseOsLoaded'' > /etc/lsipState
```

2.1.5 Login (ssh) at the baseOsLoaded System

```
ssh -X root@*IPaddr*
password: <intra> or use site policy for root passwd
```

2.1.6 Begin LSIP Genesis

Now continue with the instructions in 3

2.2 Ubuntu Base OS Install From CD (Feisty)

NOTYET: intra to genesis passwd=boxName always hostname=boxName US international Keyboard

2.2.1 Pre-Installation Verifications

Make sure the Box is named. If Box is unnames and you must, use the genesis names.

Make sure cable is plugged as Intra LAN.

Verify correctness of Machine Profile opMachines.sh -p opSiteName=nedaPlus -s mach_kashan -a summaryBoxName

2.2.2 Obtaining Ubuntu CD and the Boot Process

```
Here are the directions for installing Ubuntu/Kubuntu 6.10:

You should locate and use CD marked:

Kubuntu 7.04
```

2.2.3 Ubuntu/Kubuntu Installation

```
If the screen size is too small,
right mouse click on ``install'' screen in the tray,
then maximize.

1 of 6 -- Choose:
   English

2 of 6 -- Choose:
   Los Angeles time zone

3 of 6 -- Choose:
   U.S. English

4 of 6 -- Choose:
   respond ``intra'' to everything
   except for hostname.
   For hostname use the boxname.

5 of 6 -- Choose:
   erase entire disk

6 of 6 -- Choose:
   install
```

2.2.4 Finish Ububtu/Kubuntu Install

```
takeout the CD and reboot the system.

Login -- intra and intra

sudo apt-get install ssh
passwd: intra
```

Figure the IP address (*IPaddress*) from ifconfig -a.
The rest can be done remotely.

2.2.5 Login (ssh) at the baseOsLoaded System

```
if remote
   ssh -X intra@*IPaddress*
   passwd intra
endif

sudo passwd root
-- use site policy for root passwd

sudo su

or

*computer host name* login: root
                  password: *password you set up, normally name of computer*



NOTYET:
  echo ``baseOsLoaded'' > /etc/osmtState
```

2.2.6 Ubuntu-Feisty: Begin LSIP Genesis

Now continue with the instructions in 3

2.3 Etch Base OS Install From CD

2.3.1 Pre-Installation Verifications

hostname = Box Name If Box Name is not assigned yet, then hostname = intra

Make sure cable is plugged as Intra LAN.

Verify correctness of Machine Profile opMachines.sh -p opSiteName=nedaPlus -s mach_kashan -a summaryBoxName

2.3.2 Obtaining CD and Boot

```
You should locate and use CD marked:
     Debian Etch 40r3-i386-netinst

For x86: press Enter at the boot prompt.
```

2.3.3 Installation Step-By-Step

Now it will take you through the installation.

```
-- Choose language: English
-- Choose country or region: US
-- Select keyboard layout: American English

-- Now there schould be some progress bars that go through
        "Detect and mount CD-ROM
        "Load installer components from CD"

-- Detect network hardware
     ****For networks with DHCP:
        Configure the network
        Network autoconfiguration should suceed.
        Configure the network
        Hostname: intra (or the box name)
        Domain name: intra

     ****For networks without DHCP:
        "From here you can choose to retry DHCP network"
        Network configuration method: Configure network manually

        Configure the network
        IP address: 192.168.0.16x (the last digit 'x' will change depending on the machine)
        Netmask: 255.255.255.0
        Gateway: 192.168.0.220
        Name server address: 64.8.192.9
        Hostname: *the name of the computer*

        Detect Hardware (progress bars)

-- Partition Disk
     Partitioning method: Use entire disk
     Partition scheme: All files in one partition (recommended for new users)
     Finish partitioning and writes changes to disk
     Write changes to disk? <yes>

-- Time Zone: Pacific
-- Root passwd: <intra>
-- New user: just leave it blank, Continue
-- Use network mirror? Yes
-- Archive mirror country: US
```

```
-- Debian archive mirror: ftp.us.debian.org
-- HTTP Proxy: just leave it blank, Continue
-- Participate in package usage survey? No
-- Software selection: leave everything uncheck except
       [*] Standard System

-- Install the GRUB boot loader on a hard disk
   Install the GRUB boot loarder to master boot record: <yes>

-- Finish the installation
     eject CD and hit <continue>
     REBOOT (automatic)
```

2.3.4 Finish Etch Installation

```
Login as root
Passwd: <intra>

apt-get install ssh

echo ``baseOsLoaded'' > lsipState
```

2.3.5 Login (ssh) at the baseOsLoaded System

```
Figure the IP address from ifconfig -a.

ssh -X root@*IPaddr*
password: <intra>
```

2.4 Sarge Base OS Install From CD

2.4.1 Pre-Installation Verifications

Make sure the Box is named. If Box is unnames and you must, use the genesis names.

Make sure cable is plugged as Intra LAN.

Verify correctness of Machine Profile opMachines.sh -p opSiteName=nedaPlus -s mach_kashan -a summaryBox-Name

2.4.2 Obtaining CD and Boot

```
Here are the directions to installing Debian Sarge 3.1

You should locate and use CD marked:

Debian Sarge 3.1 R2 (x86) or Debian Sarge-SPARC 3.1 R2 (SPARC)

****For x86

You should start with a screen with a large Debian logo and text saying:
```

```
"Press F1 for help or Enter to Boot:_"

At the blinking line after the 'boot' you should type "linux26"

****For SPARC

When you start the SUN machine it will go through a basic boot. Hit 'STOP-a' during the
'Initializing Memory' screen.

It will prompt you with "ok:"

#boot cdrom   [ only if bootnet fails. ]

When it restarts it will initialize memory and go through the SILO version 1.4.9, indicating that the CD ha

In addition, some SUN machines will only boot to Debian from a cold boot.
```

2.4.3 Locale and Language

```
Now it will take you through the installation.

[!] Choose language: English
[!] Choose country or region: US
[!] Select keyboard layout: American English

Now there schould be some progress bars that go through
"Detect and mount CD-ROM
"Load installer components from CD"
and "Detect network hardware"
```

2.4.4 Configure the Network – With DHCP

```
****For networks with DHCP:

[!!] Configure the network
     Network autoconfiguration should suceed.
[!!] Configure the network
           -- Delete current hostname which is ``debian''
              replace with:
     Hostname: genesis (or name of computer)
[!!] Configure the netowrk
     Domain name: intra

NOTYET: what is this note?
[*1] mirror country: US [*2]

\subsection{Configure the Network -- MANUALLY}
****For networks without DHCP:
"From here you can choose to retry DHCP network"
```

```
Network configuration method: Configure network manually

[!!] Configure the netowrk
     IP address: 192.168.0.16x (the last digit 'x' will change depending on the machine)
[!!] Configure the network
     Netmask: 255.255.255.0
[!!] Configure the network
     Gateway: 192.168.0.220
[!!] Configure the network
     Name server address: 64.8.192.9
[!!] Configure the network
     Hostname: *the name of the computer*

Detect Hardware (progress bars)
```

2.4.5 Partition Disks

General Partitioning Method

```
****For x86 machines

[!!] Partition disks
     Partitioning method: Erase entire disk: SCSI1 (0,0,0) (sda)-80.0 GB ATA
[!!] Partition disks
     Partition scheme: All files in one partition (recommended for new users)
[!!] Partition disks
     Finish partitioning and writes changes to disk
[!!] Partition disks
     Write changes to disk? <yes>
```

Package installations proceeds right after that, continue with the next section.

Specific SPARC Disk Partitioning

```
****For SPARC Machines

[!!] Partition disks
     Partitioning method: Erase entire disk: SCSI1 (0,0,0) (sda) -9.1 GB

progress bars

[!!] Partition disks
     Partitioning scheme: All files in one partition
[!!] Partition disks
     Write a new partition table?: <yes>

progress bars

NOTE: Sometimes the SPARC version of Debian has trouble seeing all of the hard drive.
If this is the case, use parted instead of Debian's partition manager to do the job.

Press Alt-F2 to activate another console.
```

```
enter to start the applictation

type#: parted
-to start partition program

(parted): mklabel

newdisk label type [sun]?: enter

(parted): mkpart

partition type [primary]?: enter

file system type [ext2]?: enter

start?: 0

end?: 200

(parted): print
-take note of how big hard drive is

(parted): mkpart

partition type [primary]?: enter

file system type [ext2]?: enter

start?: 200

end?: ######(hard drive size, number from earlier 'print' command)

(parted): print
-chech that all is in order

(parted): quit

#alt-F1 to return to original screen

NOTES:
#print (to see partitions)

#mklabel (to make new partition tables)

You want two partitions on the hard disk.
  One is the boot partition (mounted as /boot) and can be roughly 200MB.
  The other partition is the root partition and should fill up the rest
  of the hard drive (mounted as /)

#mkpart (to make partitions)
```

Once you have returned to the '[!!]Partition Disks' menu verify that you have at
qleast 200 mb, if not: '<go back>', do the application over again to make sure
that it is big enough.

#1 partition: select
use as: do not use
-enter
ext3 journaling system
-enter
mount point: none
-enter
/boot static filing of the boot folder
-enter
bootable flag: off
-enter
- set to on ??? -- note says - NOTYET, verify.

The above commands corrects the details of the #1 partition

done setting up partition
-enter
return to '[!!]Partition Disks' menu

#2 partition: select
use as: do not use
-enter
ext3 journaling system
-enter
mount point: none
-enter
/-the root file system
-enter

done setting up the partition
-enter

finish partition and write changes to disk
-enter

[!!]Partition Disks
write changes to disk?: <yes>

Configure with Software RAID

NOTE: in order to use RAID1, we need at least 2 identical hard drives.

1. At the Partitioning method, choose ”Manually edit partition table”
2. Highlight the first disk (e.g. SCSI1). When prompted to ”Create new empty partition table on this device?”, answer YES. Do the same thing for the second disk.
3. Highlight SCSI1 - FREE SPACE, then

   ```
   Create new partition.
   New partition size: 1 GB, Primary, Beginning
   Use as: swap area
   Done setting up the partition
   ```

   Highlight the other SCSI1 FREE SPACE, then

   ```
   Create new partition.
   New partition size: 39 GB <automatically detected>, Primary, Beginning
   Use as: physical volume for RAID
   Done setting up the partition
   ```

   Do the same thing for SCSI2
4. Choose Configure software RAID
5. The system will automatically setup the RAID configuration.

   ```
   Write changes to the storage devices and configure RAID? -- YES --
   Create MD devices
   RAID1
   Number of active devices for the RAID array: 2
   Number of spare devices for the RAID array: 0
   Active devices for the RAID1 multidisk device: choose all
   Finish
   ```

6. Highlight the RAID1 partition (#1)

   ```
   Use as: ReiserFS journaling file system
          NOTYET: Is it the case that when for booting ext3 file
          system is what we get?
   Format the partition: yes, format it
   Mount point: / - the root file system
   Write changes? --YES--
   ```

2.4.6 Base System and GRUB Boot Loader

```
[?] Debian installer main menu
    Select "Install the base system"

Installing the Debian base system (progress bar)

[?] Install the base system
    Kernel to install: kernel-image-2.6.8-2-386

progress bars

[!] Install the GRUB boot loader on a hard disk
    Install the GRUB boot loarder to master boot record: <yes>

progress bars
```

[!!] Finish the installation
eject CD and hit ¡continue¿
REBOOT (automatic)

2.4.7 System Reboot

Make sure that the CD is out at the time of reboot. But you need to insert it again, after the reboot.

2.4.8 Base Sytem Configuration

```
[] Debian base system configuration
   "Welcome to your new Debian system!": <Ok>
[] Time zone configuration
   Clock set to GMT?: <no>
[] Time zone configuration
   Select your time zone: Pacific
[] Configuring passwd
   root password: *name of computer* -- BoxName
[] re-enter password to verify
[] Configuring passwd
   Enter a full name for the new user: <cancel>
[] Debian base system configuration menu
   Select "Set the hostname"
[] Debian base system configuration
   System hostname: *name of computer*
```

2.4.9 APT Configuration

```
[] Debian base system configuration menu
   Select "Configure apt"
[] Apt configuration
   Archive access method for apt: cdrom
[] Apt configuration
   re-insert CD
   CD-ROM device file: /dev/cdrom
```

```
[] Apt configuration
   Scan another CD?: <no>
[] Apt configuration
   Add another apt source?: <no>
[] Apt configuration
   Use security updates from security.debian.org?: <yes>
```

2.4.10 Package Selection and Secutity Shell

```
[] Debian base system configuration menu
   Select "Select and install packages"
[] Debian software selection
   choose software to install: manual
[] Configuring ssh
   Allow SSH protocal 2 only: <yes>
[] Configuring ssh
   Do you want /usr/lib/ssh-keysign to be installed SUID root?: <yes>
[] Configuring ssh
   Do you want to run the sshd server?: <yes>
```

2.4.11 Finish Debian Install

```
[] Debian base system configuration menu
   Skip "Configure the Mail Transfer Agent"
   Select "Finish configuring the base system"
[] Debian base system configuration
   "Thank you for choosing Debian!"
   <Ok>


If for any reason ssh access to the box does not work,
rerun:

   base-config
```

Figure the IP address from ifconfig -a.

2.4.12 Login (ssh) at the baseOsLoaded System

```
ssh -X root@*IPaddr*

*computer host name* login: root
                  password: *password you set up, normally name of computer*


****On a SUN station you'll need to set the default boot disk.

First find the default boot disk by:
#probe-scsi
and then run
```

```
#setenv boot-device disk?
where ? is the target # of the drive you saw in probe-scsi.

NOTYET:
  echo ``baseOsLoaded'' > /etc/osmtState
```

2.5 Windows XP and Ubuntu / Debian Dual Boot

2.5.1 Windows Preparations

Before starting the dual boot, first make sure the Windows disk is FULLY BACKED UP.

It is necessary to defragment the Windows disk. Use "Creating a Dual-Boot Windows Xp and Ubuntu Laptop" by Kevin Farnham in O'Reilly Linuxdevcenter.com.

Briefly:

```
Go to Start>All Programs>Accessories>System Tols>Disk Defragmenter
```

2.5.2 Ubuntu 8.04.1/Hardy Installation

Ubuntu installer now include support for resizing NTFS partitions. This installation steps are intended to use for system with an existing windows XP in place. This might also work for Windows Vista but we have not tested this yet.

```
1. Run the Windows defragmentation tool on C:
   (My Computer, Right click on drive, Properties, Tools, Defragment Now)
   You might want to run defragmentation several times until.
   This Windows defragmenter will move all the files to the ``front'' of
   the disk.  If this is a fresh install windows, you can skip this step.

2. Insert the Ubuntu disk installation and reboot the machine.  Follow
   the installation guide within this documentation for Ubuntu Hardy.

3. Follow the prompts until you are asked this question:
   "How do you want to partition the disk ?".
    Choose the First Option ("Resize IDE1 master, partition #1 (hda1) and use freed space").

4. Specify the size of the new partition
   You can specify as a percentage of your entire hard disk or size in bytes.
   This wil resize your NTFS partition, i.e. if you want 40 GB partition for
   your Windows, enter as 40 GB.
   Click on "Forward" and continue finishing Ubuntu installation.
```

If the above method does not working properly, try the following method:

```
1. Insert the CD labeled: System Rescue CD X86-1.0.4
   (or version 1.0.3)
   You can download the latest version from:
```

```
   http://sysresccd.org

2. Reboot the system and boot from CD
   Hit enter when you see the message: boot

3. At the command prompt, type:
     wizard
   Choose Xvesa-cfg
   Choose 640x480x8 (or you may choose other resolution)
   This should start the X
   Then type: gparted
   You can Resize or create new partition here

4. At this point just create 2 partition:
     NTFS partition
     ext3 partition

5. After done partitioning, reboot the system and insert Ubuntu
   installation.

6.  "How do you want to partition the disk ?".
    Choose the Manual Partitioning and use the ext3 partition
    for Ubuntu.
```

2.5.3 Ubuntu 7.04/Feisty Installation

For detailed information on Ubuntu/Windows XP dual boot, see and use “Windows with NTFS + Fiesty...”

```
Google Search:
Creating a Dual-Boot Windows XP and Ubuntu Laptop.

http://users.bigpond.net.au/hermanzone/p3.htm
http://www.linuxdevcenter.com/pub/a/linux/2006/05/08/dual-boot-laptop.html
```

Briefly:

```
Insert Ubuntu 7.04 i386 Alternate          CD and reboot computer

Override BIOS by pushing F2 (or F12?) right away

Install in text mode.

U.S. English KeyBoard.

Configure Network: wired or wireless, choose wired

Hostname: boxName

Follow instructions from ‘‘Windows with NTFS + Fiesty...’’
```

Choose Manual Partitioning.

During the partitioning stage, you need to make space for the windows, ubuntu, swap, and FAT32 partitions.

The specifics for the partitions are:

```
[Windows Partition]
Primary partition
Beginning location
Use as: ntfs
Mount point: /windows
Bootable flag: on

[Swap]
Logical partition
End location
Use as: Swap
Bootable flag: off

[FAT32]
Logical partition
End location
Use as: FAT32 file system
Mount point: /fat32

[Ubuntu]
Primary partition
Beginning location
Use as: Ext3 journaling file system
Mount point: /
Mount options: defaults
Label: none
Reserved blocks: 5%
Typical usage: Standard
Bootable flag: on
```

When these specifics match, then proceed with the rest of the installation.

Grub will give you options for Ubuntu and Windows XP.

2.5.4 In Case Of Windows XP Boot Failure

In the case of a Dell Inspiron 640m, the Windows XB boot failed after the above.

Briefly here is how the dual boot was restored.

```
- Re-Install Windows XP in the Windows Partition
  This includes deleting the windows partition and
  reformating it from Windows XP installation CD.

- Windows XP will overwrite GRUB and Windows XP
  will now boot.

- We now need to reinstall GRUB to provide dual boot.
```

```
1. Boot with any live CD (I've done it with Ubuntu Live DVD)

2. Get a root shell -> Applications / System Tools / Root Terminal

3. Check the Ubuntu partition -> fdisk -l (Mine is /dev/hda3)

4. Make a folder -> mkdir /mnt/hda3

5. Mount the root partition of Ubuntu ->
   mount -t ext3 /dev/hda3 /mnt/hda3
   (replace /dev/hda3 by your Ubuntu partition determined at the step 3)

6. Chroot the mounted partition -> chroot /mnt/hda3

7. Restore Grub / the initial MBR -> grub-install /dev/hda
   -- The previous dual boot info is kept, don't worry.

8. Exit the shell

9. Reboot
```

2.6 Maemo Installation

2.6.1 Pre-Installation Verifications

```
PC System Requirements
----------------------
Available hard disk space: 150MB
Operating system:
Windows Vista x32 and x64 editions
Windows XP Professional x64 edition
Windows XP (Professional or Home Edition) with Service Pack 2 or newer
and Microsoft .NET 2.0 framework
Windows 2000 with Service Pack 4 or newer and Microsoft .NET 2.0 framework
Connection methods: Nokia connectivity cable (USB) for connecting the
device to your computer, broadband Internet access.
```

2.6.2 Obtaining Sources

```
Nokia Internet Tablet Software Update Wizard:
Local copy: /opt/public/maemo/Nokia_Internet_Tablet_Software_Update_Wizard.exe
Web source: http://nds1.nokia.com/files/support/global/phones/software/
            Nokia_Internet_Tablet_Software_Update_Wizard.exe


Software Image:
/opt/public/maemo/RX-44_DIABLO_4.2008.23-14_PR_COMBINED_MR0_ARM.bin
Source: http://tablets-dev.nokia.com/nokia_N810.php
```

2.6.3 Installation

```
Instructions for automatic and manual update
--------------------------------------------

Make sure the battery of your N810 is fully charged.

Unplug charger and switch off the Nokia N810. Connect the tablet to
your computer via USB without turning it on


Install the Nokia Internet Tablet Software Update Wizard by running
Nokia_Internet_Tablet_Software_Update_Wizard.exe. This will install
the update wizard and the Nokia USB cable driver if needed.

Local copy: /opt/public/maemo/Nokia_Internet_Tablet_Software_Update_Wizard.exe
Web source: http://nds1.nokia.com/files/support/global/phones/software/
            Nokia_Internet_Tablet_Software_Update_Wizard.exe

To access the Nokia Internet Tablet Software Update Wizard on your
computer, open the Start menu and select Programs > Nokia > Nokia
Internet Tablet Software Update Wizard > Nokia Internet Tablet
Software Update Wizard.  Follow the instructions on screen to complete
the software update.

For manual update ONLY
======================
On the summary page of the wizard, press the
change button to select the software image from the following location:
(this is the latest version as of July 2008)
Local copy:
/opt/public/maemo/RX-44_DIABLO_4.2008.23-14_PR_COMBINED_MR0_ARM.bin
Source: http://tablets-dev.nokia.com/nokia_N810.php
```

Chapter 3

LSIP Genesis Layer

3.1 Obtain NlpGenesis Script

Once the base Debian/Ubuntu has been installed, we then obtain the Neda Libre Platform Genesis Script with which Neda Libre Platform will be installed.

Login to the box which should be in DistVirgin state/phase:

```
Verify that the box is in the baseOsLoaded:
cat /etc/lsipState

If everything's in place then continue to the next step.

ssh -X root@<boxIntraNetAddr>
```

Bring over the nlpGenesis script:

```
cd ~
wget http://www.bysource.org/lsip/lpGenesis.sh
chmod 775 ./lpGenesis.sh
```

3.2 Enable OSMT

```
bash ./lpGenesis.sh
or
bash ./lpGenesis.sh atNeda
```

and follow the instructions.

At the end of this step, you can assume full availability of all OSMT scripts.

3.3 lpSysMgmtSteps.sh

```
[] As its last step
     lpGenesis.sh
   invokes
     /opt/public/osmt/bin/lpSysMgmtSteps.sh -h -i stepByStep
```

The rest of this section matches structure of lpSysMgmtSteps.sh

3.3.1 DistVirgin Verify

3.3.2 Lp Base Software Update

Using the selected apt-sources, download all additional base software packages.

3.3.3 Identity Select

Set the OSMT Id. However the new Identity is not set

3.3.4 Lp Specific Software Update

Given the identity we now know what software packages should be loaded.

3.3.5 Identity Set

This involves a reset and potential Network change.

3.3.6 Lp Specific Service Update

Properly configure all services.

3.3.7 Audit

Run the scripts that verify we are secure and that the server can be deployed on the network.

3.3.8 Seal

Put the server in closed and Sealed mode. No updates should be made to the server until explicitly unsealed.

It is after this phase that the system is put on the real 198 network.

3.3.9 Un Seal

Updates and changes are permited and we need to cycle back into Identity Set or prior to that.

3.3.10 User Account Preparations

Initial accounts are: lsip-bot and lsip-usr Passwd is typically xxx4Boxname.

NOTYET How to use anon-cvs for profile and eoe?

3.3.11 Developer Setup

- Account Setup

- OSMT Setup

Chapter 4

Misc

4.1 Known Problems

Here are some common problems and sometimes solutions.

4.1.1 Sparc Platform eth0 disapears

```
Hardware detect MCDFG.
Loading Sun Lance Modules.
```

4.1.2 Re-Configure

Run:
base-config

4.1.3 OSMT Bugs

- “skip” does not work from within nlp-sysmgmt should be run explicitly.
- /opt/public/NewEOE is missing.
- Java Home message not set to?

Note: If there are no options specified within this document about what to do during a prompt screen, just use the default option.