Efika OpenSuSE 10.3 Installation Guide
Genesi USA, Inc.

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Initial Requirements

You will need:

- An Efika 5200B, with a hard disk installed
- Installer kernel (*suse-installer.tar.gz*) extracted to a bootable location, such as a USB flash drive.
- SuSE Image (*suse-image-20080101.tar.gz*) in an easily accessible location, such as on the same USB flash drive. This ~700MB archive will be extracted to the hard disk and comprises the basic Efika system with Xfce 4.
- SuSE kernel (*suse-kernel-2.6.19.2-genesi.tar.gz*) in an easily accessible location, as above. This ~6MB archive will be extracted to the hard disk and comprises of the boot kernel and modules for the installed system.

Boot Installer

Boot the Installer kernel from a USB drive or your prefered method. You can find the boot-device of the USB key using "devalias" - correct device examples are highlighted in **bold**:

```
ok devalias
Alias                Device Path
--------------------------------------------------
ide                  /builtin@F0000000/ata@F0003A00/disk@0,0
hd                   /builtin@F0000000/ata@F0003A00/disk@0,0
scsi                 /builtin@F0000000/usb@F0001000/scsi@1/disk@0,0
hd0                  /builtin@F0000000/usb@F0001000/scsi@1/disk@0,0
eth                  /builtin/ethernet
screen               /pci@80000000/display@10
```

Using the correct boot-device name, from the firmware prompt:

```
ok boot hd0:0 INST32 rescue=1 install=hd:/?device=sdb1
insmod=pata_mpc52xx insmod=usb-storage insecure=1 language=en_US
```

This will launch a Linux kernel and a minimal "Rescue" environment. Included are tools like GNU Parted and PartImage to aid in configuring the system. Login as "root" - there is no password.

- Note that depending on the filesystem on the USB drive the boot-file filename may be case-sensitive – a standard FAT formatted drive will make DOS "8.3" filenames into upper case, hence "INST32" instead of "inst32".
- In Linux, "**sdb1**" is the expected mapping of the USB drive. Depending on attached devices this may change. Be prepared to boot a few times to find out exactly which name it is mapped as if you have more than one USB mass storage device connected.
- You may load other modules using **insmod=** arguments, but the order of the two provided are important; it will make sure the internal IDE disk is mapped as "**sda**".
- To use a serial console, add **console=ttyPSC0** to the arguments.

Partitioning the Disk

Partition your disk using Parted. You will need a swap partition, and a place to install the SuSE Image. Detailed instructions on using Parted are available on the OpenSuSE website;

http://en.opensuse.org/PegasosQuickStart#parted

You can get started with:

```
Rescue:~ # parted /dev/sda
```

Once you have committed the changes to disk ("**quit**" command), make sure you remember the order of the partitions you created, and which ones you wish to use. For convenience here, we assume you created two partitions; a system/boot device as partition 1, and a swap device as partition 2. If this is not the configuration you used, replace the "sda2" and "sda1" parts with your own preferred locations. You will need them for the next step!

Format Filesystems

Format and activate the swap partition to make sure it works:

```
Rescue:~ # mkswap /dev/sda2 && swapon /dev/sda2 && cat /proc/swaps

Setting up swapspace version 1, size = 1242009 kB
no label, UUID=1dae0558-52de-49d5-8089-9adb10eef6f5
Filename                Type            Size    Used    Priority
/dev/sda2               partition       1212896 0       -2
```

Format the SuSE Image target as ext2 or ext3 as this is easiest to boot from the firmware:

```
Rescue:~ # mke2fs -j /dev/sda1

mke2fs 1.40.2 (12-Jul-2007)
Filesystem label=
OS type: Linux
Block size=1024 (log=0)
Fragment size=1024 (log=0)
60480 inodes, 240972 blocks
12048 blocks (5.00%) reserved for the super user
First data block=1
Maximum filesystem blocks=67371008
30 block groups
8192 blocks per group, 8192 fragments per group
2016 inodes per group
Superblock backups stored on blocks:
        8193, 24577, 40961, 57345, 73729, 204801, 221185

Writing inode tables: done
Creating journal (4096 blocks): done
Writing superblocks and filesystem accounting information: done

This filesystem will be automatically checked every 34 mounts or
180 days, whichever comes first.  Use tune2fs -c or -i to override.
```

Mount and Extract Image

Once the partitions and filesystems are created, you will need to mount the filesystems for the target (usually the hard disk you just partitioned) and if you are using a USB drive to hold the SuSE Image, to mount that so you can get to it and extract the image.

The SuSE Installer kernel has mount points for **/media/cdrom** and **/media/floppy.** You may use these as you see fit to mount the source medium. For a USB drive this may be:

        Rescue:~ # **mount /dev/sdb1 /media/floppy**

It is recommended you use the standard Linux **/mnt** mount point for the target medium for simplicity's sake:

        Rescue:~ # **mount /dev/sda1 /mnt/**

Then extract the SuSE Image:

        Rescue:~ # **tar -xzpf suse-image-20080101.tar.gz -C /mnt**

Then extract the Kernel:

        Rescue:~ # **tar -xzpf suse-kernel-2.6.19.2-genesi.tar.gz -C /mnt**