Pre-requisits to install Linux operating system

This document will guide you through installing Hanthana Linux 17 DVD.

Hardware of your computer

- For text mode : 200 MHz Pentium Pro processor recommended
- For graphical mode : 400 MHz Pentium Pro or higher processor recommended
- For text mode : 256 MiB RAM minimum
- For graphical mode : 640 MiB RAM minimum
- For graphical mode : 1152 MiB RAM recommended
- Minimum free space on the hard disk : 15GB
- A DVD drive

Obtaining a Hanthana Linux DVD copy

You may visit http://www.hanthana.org, download the DVD iso and burn it to a DVD (make it a bootable DVD) or you may get a copy from someone who has already done so.

Data Backup

We recommend you to backup your valuable data in case you intend to install Hanthana Linux on your computer.

Configuring your computer to first boot with DVD

Enter in to the BIOS settings of your computer, set your DVD drive as the first boot device, save and exit. Or else you may use the option to select from which device to boot the computer at startup if your computer provide that feature.

Now you are ready to install Hanthana Linux

Since the installtion of Hanthana Linux is done through a DVD there may be some time delay (time required to read the DVD and depends on the hardware of the computer) in proceeding from one step to the next. Please remain patient until the next step is loaded and act according to the instructions there so to that you may continue with the installtion without any issues.



Booting the computer

Boot your computer with Hanthana Linux DVD. You will get a screen similar to the following.



Select "Start Hanthana 17 Rc12" and press Enter key.

If you do not press any key, Hanthana Linux will be booted automatically after 3 seconds.

When you select to start Hanthana Linux, you will get a screen with the progress of booting.



Installing or proceeding to the desktop of Hanthana Linux



To enter Hanthana Linux with the Live DVD, click on the option "Try Hanthana Linux".

Then you can use Hanthana Linux without installing it in your computer. We recommend you to use Hanthana Linux in that way if you are new to Linux based operating systems.

To install click on the option "Install to Hard Drive".

Let's proceed to the desktop with "**Try Hanthana Linux**" option. You will get the following screen.



This screen will show you the "Install to Hard Drive" icon that should be used in the desktop to install Hanthana Linux. Closing this window will enable you to enter Hanthana Linux desktop.

Entering Hanthana Linux desktop

After you enter Hanthana Linux desktop, you may use the computer as usual if you wish.

If you want to install afterwards, click on "Activities" and use "Install to Hard Drive" icon. Refer the following screen shot.



Installing Hanthana Linux

Click on "Install to Hard Drive" icon as illustrated in the above screen shot and let's proceed with he installation.

Selecting the keyboard layout

The next window will let you select your keyboard layout. The default is "U.S. English". If your keyboard layout differs from the default you may select yours from the list. If you have no idea about this, you may keep it as it is.





Selecting devices to install

This window queries about the type of device you wish to use for the installation. Since you are installing to a hard disk, keep the default option "Basic Storage Devices" as it is.

Since special devices are not used in domestic or school environment, proceeding with the "Basic Storage Devices" is sufficient. If you are not sure whether this kind of special devices are used in your office, please contact the IT personal of your company.



Click on "Next" button. You will get the following window, be patient.

Hostname

In this window you can enter a name for your computer so that it can be easily identified in a network. If your computer is not connected to a network you may use the default, "localhost.localdomain". If you are installing in a school computer lab, using a short name for the school along with an index number as the host name will be easy for you. Ex: dc01, dc02. If the school or company has an internet domain that also can be added to the host name. Ex: if the domain of the school is dc.schnet.lk and the identification number of the computer is dc01, you may use "dc01.dc.schnet.lk" as the hostname.

Click "Next" button.



Selecting the time zone

Select your time zone. You may either click on your country in the map or select the time zone from the drop down menu. For Sri Lankan, this is "Asia/Colombo".



Click "Next" button.

root user

You will need special permission to perform certain tasks using your computer. This special root account will be needed for tasks such as adding, editing or deleting a user, configuring network settings.

This window will let you enter a password for this special user account, root. Please enter the same password in both the text boxes provided. Don't forget the password that you provide here.



Click "Next" button.

If the password you entered is weak, you will get a message as the following.

Ex: when you provide simple passwords such as abc123, kamal123, hanthana123



You may enter another password by pressing "Cancel" or you may proceed with the entered password by pressing "Use Anyway".

Selecting the type of installation

This window will list the available installation options. You may select an option as you wish but before you do so please read the description below each option and be cautious about your selection.

For example, if you select "Use All Space" all data in your hard disk will be erased.

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8	Hanthana Installer	_ = ×
Which typ	e of installation would you like?	
0	Use All Space Removes all partitions on the selected device(s). This includes partitions created by other operating systems.	
	Tip: This option will remove data from the selected device(s). Make sure you have backups.	
•	Replace Existing Linux System(s) Removes all Linux partitions on the selected device(s). This does not remove other partitions you may have on your storage device(s) (such as VFAT or FAT32).	
	Tip: This option will remove data from the selected device(s). Make sure you have backups.	
0	Shrink Current System Shrinks existing partitions to create free space for the default layout.	
0	Use Free Space Retains your current data and partitions and uses only the unpartitioned space on the selected device(s), assuming you have enough free space available.	
0 ?	Create Custom Layout Manually create your own custom layout on the selected device(s) using our partitioning tool.	
☑ Use LV	M	
Encryp	t system	
	/ and modify partitioning layout	
	Back	Next

Use All Space

This is automatically use all the space in your hard disk to install Hanthana Linux. With this option your current operating system and all data will be erased and the hard disk will be formatted. Please make sure that your data is secure (backed up) before you proceed with this option.

Replace Existing Linux System(s)

If your computer is installed with a Linux based operating system already, that system will be replaced and the space that was allocated for the current linux based operating system will be utilized for Hanthana Linux. Space on other file systems such as VFAT/FAT32/NTFS, used for other operating systems like Microsoft Windows will not be utilized here. If you already have a linux based operating system installed in your computer and if you find it difficult to partition your hard disk, this option may be helpful.

Shrink Current System

Current partitions with data will be shrinked and the free space will be formatted with a pre defined format layout.

Please note : If you resize the partition that holds your current operating system, the current operating system may not work properly. In general, some free space is needed in the disk for the

operating system to function properly. Therefore pay attention to the free space required before shrinking the partitions having operating systems. However with this option, there will not be any data loss.

For example, if your hard disk capacity is 100GB and let's assume you want to allocate 30GB for Hanthana Linux. Select "Shrink Current System" option and click "Next" button. In the window that appear, enter 70000 (approximate to 7GB in MB) as "Shrink Partition to size (in MB)". Then your hard disk will be rearranged in such a way that 30GB will be allocated for Hanthana Linux installation and the rest 70GB will be your data.

Use Free Space

With this option your current partitions and data will not be affected and the free space will be used to install Hanthana Linux. Before selecting this option please make sure that sufficient space to install Hanthana Linux is available in your hard disk.

Create Custom Layout



This option can be used to install the system the way we wish.

Let's consider the installation using "Create Custom Layout" option. This option provides you with the best opportunity to decide by yourself on how the installation should be done.

Click "Next" button.



Partitioning

Next window will show your hard disks and their partitions. You may resize, delete and create partitions as you wish.

		Hant	hana Install:	er			_ 🗆 ×
Please Select A Device							
Device	Size (MB)	Mount Point/ RAID/Volume	e Format				
▼ sda (/dev/sda)							
sdal	86	vfat					
sda2	2048	ntfs					
sda3	120451	ntfs					
⊽ sda4	30001	Exten	nded				
sda5	30000	vfat	\checkmark				
∽ sdb (/dev/sdb)							
sdb1	15303	vfat					
				Create	Edit	Delete	Reset
						Back	Next
					,	Back	Next

The window that appear at your computer may not be the same as above. Data in the table may differ from one computer to another.

In the above screen shot vfat partitions are FAT32 partitions while ntfs partitions are NTFS partitions.

Let's consider creating new partitions to install Hanthana Linux in your computer. Select a partition with free space in your hard disk and press "Create" button. You will get a window as the following.

Create Stora	ge
Create Partition	
Standard Partition	
General purpose partition creat	
Create Software RAID	Information
O RAID Partition	
Create a RAID formatted partit	
O RAID Device	
Requires at least 2 free RAID fo	rmatted partitions
Create LVM	Information
O LVM Volume Group	
Requires at least 1 free LVM for	rmatted partition
O LVM Logical Volume	
Create a logical volume on selec	ted volume group
O LVM Physical Volume	
Create an LVM formatted partit	
Cance	Create
Curre	

Under "Create partition", select "Standard Partition" and press"Create" button. You will get a window as the following.

As illustrated in the image below, you may select desired mount points from the drop down menu.

Mount Point:					1
File System Type:	1				
	/boot				
	/home				
Allowable Drives:	/tmp			*	
	/var				
	/usr/local				
Size (MB):	/opt				
Additional Size O	ptions	_	_	_	
O Fixed size					
○ Fill all space u	p to (MB):	1	5		
Fill to maximu	m allowable size				
Force to be a p	rimary partition				
Encrypt					
				_	

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Similarly you may select the file system from the File System Type drop down menu.

	ext2						
Mount Point:	ext3						
File System Type:	ext4						
	physical volume (LVM)						
	software RAID						
Allowable Drives:	swap						
	vfat						
Size (MB):	xfs						
Additional Size O	ptions						
Fixed size							
○ Fill all space u	○ Fill all space up to (MB):						
○ Fill to maximum allowable size							
Force to be a primary partition							
Encrypt							
	Cancel						

You can specify the Mount point, File System Type, partition size etc. and create the partition. It is suitable to create partitions as the follows to install Hanthana Linux. Reapply the above steps to create those partitions.

<u>M</u> ount Point:	/ 🗸							
File System <u>T</u> ype:	ext4 🗘							
	O Drive Size Model							
Allowable Drives:	🗹 sda 152588 MB ATA ST3160318AS							
<u>S</u> ize (MB):	16000							
Additional Size O	ptions							
<u> <u> </u> </u>								
○ Fill all space <u>u</u>	p to (MB):							
○ Fill to maximum <u>a</u> llowable size								
□ Force to be a primary partition								
□ <u>E</u> ncrypt								
	<u>C</u> ancel <u>O</u> K							

Partitions to be created in installing Hanthana Linux and the use of those partitions.

Mount point	File System Type	Size	Description
/	ext4	About 15GE	This partition is compulsory. Although a small space like 6GB is sufficient you may get issues due to lack of free space later when you are installing additional applications. Therefore allocating a minimum of 15GB is suitable. But it is recommended to allocate a disk space of more than 16GB.
/boot	ext4	500MB	This partition is not compulsory. This will actually use only 30M, but in the case of system upgrade having more space in this partition will make sure that the system is upgraded with no issues. However allocating a space more than 500MB is not necessary. The remaining space on this partition cannot be used for your personal use.
Not applic able	swap	1GB	This partition allows you to use a part of your hard disk as the RAM in cases where your RAM is not sufficient. If your RAM is less than 1GB, it is customery to allocate a twice the capacity of your RAM to this partition. Any space on this partition cannot be used for your personal use. But if your RAM is 2GB, create a swap partition of 2GB.
/home	ext4	As much as required	This partition is not compulsory. This is used to store user data. Therefore a space that you wish can be allocated for this. Advantages of creating a separate partition as /home is that you can keep your user data when you change the system to another or in an upgrade and the user preferences can be used as they are (most of the time). If you have many files such as documents, mp3 files, movies, allocate space that is sufficient to store them.

If you do not create the above mentioned /boot and /home partitions explicitly, they will be created automatically in / partition. Further, if your computer has an already installed operating systems, file systems created by that operating system will also be visible. Ex: file systems used for Microsoft Windows will be displayed as vfat.

The first hard disk of your computer will be displayed as /dev/sda or /dev/hda. If you have two hard disks, the other will be displayed as /dev/sdb or /dev/hdb. If the fist disk has three 3 partitions, they will be displayed as /dev/sda1, /dev/sda2, /dev/sda3 or /dev/hda1, /dev/hda2, /dev/hda3 respectively. hda or sda means; "h" for IDE devices and "s" for SATA/SCSI devices.

Proper partitioning will get you a window similar to the one below.

			Hanthan	a Install	er				_	□ ×
Please Select A Device										
Device	Size (MB)	Mount Point/ RAID/Volume	Туре	Format						
∀ Hard Drives										
▼ sda (/dev/sda)										
sdal	86		vfat							
sda2	2048		ntfs							
sda3	120451		ntfs							
⊽ sda4	30001		Extended							
sda5	16000	/	ext4	\checkmark						
sdaб	2000		swap	\checkmark						
sda7	11998		ext4	\checkmark						
L										
					Create	Edit		Delete	R	eset
							_		_	
								Back	1	Vext 🔖

The partitions with a tick under format column will be formatted in the next step and any data there will be erased. Therefore please make sure whether any partition that you dis not intend to format is marked for formatting by mistake.

Click "Next" button. You will get a warning as follows. This will show you the devices marked for formatting. If there is any issue you can click "Cancel" and return to the previous window.

If the information displayed is correct, press "Format" button. You will be asked for confirmation as follows.

The partitioning options you have selected will now be written to disk. Any data on deleted or reformatted partitions will be lost.						
Go Back	Write Changes to Disk					

This allows you to reconsider your partitions that were marked for modification. If there is any problem correct it by clicking "Go Back" button. If not click "Write Changes to disk" button.

Please note that from this point onwards, any changes that you marked to be done to your partition table, cannot be undone.

Then you will get a window showing the status of you preparation of your partitions suitable to install Hanthana Linux.



Booting operating system

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From this window you can specify which operating system to boot by default when your computer is turned on. This is not applicable if your computer doesn't have any operating system installed already. But if you have an operating system already installed, it will be identified here and will allow you to select the operating system that the computer should boot by default. You can specify the display name of the operating system by selecting it and pressing "Edit" button.

For example if your computer is already installed with Windows XP operating system, Hanthana Linux installer will identify it. But it will be labelled as "Other". If you want to rename it with Windows XP (or any other label) select the row, click "Edit" button and enter the desired name.

Operating system under "Default" will the one that the computer will boot with automatically.

Activities Activities Activities	rive	Thu 20:19	•	•0	모	B	🖾 Hanthana System User
		Hanthana Installer					×
☑ Install boot loader on /dev/sda	Change device						
□ Use a boot loader password 〔	Change password						
k							
							Back Next

Now you will be presented with a window displaying the progress of Hanthana Linux installation. This may take some time (that time depends on the hardware specification of your computer). Therefore remain patient. In general this time will be 30 minutes or less.



After that the Filesystem will be created as illustrated in the image below,

Activities	Mustall to Hard Drive		Thu 20:40		0	•0	모	ß	🖾 Hanthana System User
			Hanthana Installer						×
		Pr	Checking filesystem on /dev/sda1	s.					

the bootloader will be installed as in the next screen shot. This will take some time.



After this a window with the message that the installation was successful will be displayed.

Click on "Reboot" and reboot the computer.



Congratulations! You have successfully completed installing Hanthana Linux operating system in your computer.

Rebooting the computer

Remove the live disk used for the installation and reboot the computer. A window like the one below will appear.

Welcome License Information Create User Date and Time Hardware Profile	Welcome There are a few more steps to take before your system is ready to use. The Setup Agent will now guide you through some basic configuration. Please click the "Forward" button in the lower right corner to continue
	Back

Click "Forward" button.



License information

Next the window containing the license information will be displayed.

Welcome	License Information	
Information Create User Date and Time Hardware Profile	Thank you for installing Hanthana. Hanthana is based on Hanthana Linux which is a Fedora remix and a compilation of software packages, each under its own license. The compilation is made available under the GNU General Public License version 2. There are no restrictions on using, copying, or modifying this code. However, there are restrictions and obligations that apply to the redistribution of the code, either in its original or a modified form. Among other things, those restrictionspiblications pertain to the licensing of the redistribution, trademark rights, and export control.	
*	If you would like to understand what those restrictions are, please visit http:// fedoraproject.org/wiki/Legal/Licenses/LicenseAgreement.	
	Understood, please proceed.	
		Back Forward

Click "Forward" button.

Creating a new user

Create a new user here.

		_
Welcome License Information	Create User	
 Create User Date and Time Hardware Profile 	You must create a 'username' for regular (non-administrative) use of your system. To create a system 'username', please provide the information requested below.	
	Full Name: Hanthana	
	Username: hanthana 🗆 Add to Administrators group	
	Password: Very weak	
	Confirm Password: ••••••	
k	If you need to use network authentication, such as Kerberos or NIS, please click the Use Network Login button.	
	Use Network Login	
	If you need more control when creating the user (specifying home directory, and/or UID), please click the Advanced button.	
	Advanced	
	Back Forward	

This allows you to create a new user account. It will be easy not to use capital letters for username. Please note to enter the same password in both the text boxes provided. Don't forget the password you provided.



Refer the following example in creating a new user account:

Username: sirimal Full Name: Sirimal Ahinsaka Password: don't use your username as the password in public places such as a company.

After you enter correct information click "Forward" button.

Date and time

Adjust the date and time here.

Welcome License Information Create User > Date and Time Hardware Profile	Date and Ti	ime	
	Synchronize date and time of	9 Aug 2012 09:22:03 PM 151 over the network	
	Manually set the date and tim	ie of your system:	
	Date	Time	
	< August > <	2012 > Hour : 21 🗘	
	Sun Mon Tue Wed Thu F	ri Sat Minute : 19 🗘	
	5 6 7 8 9 1	3 4 10 11 Second : 36 🗘	
	12 13 14 15 16 1	17 18	
	26 27 28 29 30 3	14 20 31 1	
	2 3 4 5 6 7		
			Dark Count
			Back Forward

Click "Forward" button.



Hardware profile

Here the hardware profile of your computer will be displayed. You will be requested whether you wish to send this information as an aid for the future development of the operating system. You need an internet connection to send these information. You can choose an option you wish, "Send profile" or "Do not send profile".

Considering the facts that providing this information will allow the Hanthana Linux developers to get an idea about its usage and those can be used for the further development of the operating system, the developers of Hanthana Linux believes that you will contribute to the future development of the operating system be sending those information. Therefore if you have an internet connection when you are installing please be kind to select "Send profile" option.

te and Time rdware Profile	Smolt is a hardware profiler for The Fedora Project. Submitting your profile is a great way to give back to the community as this information is used to help focus our efforts on popular hardware and platforms. Submissions are anonymous. Sending your profile will enable a monthly check-in.			
	General UUD: 7.6ed66F5-f842-4790-aba8-93fce5dBb3bc OS:Hanthana release 17 (Sithia) Default run level: Unknown Language: en_US.UTF-8 Platform: i686 BogoMIPS: 4025.96 CPU Vendor: GenuineIntel CPU Model: Intel(R) Core(TM)2 Duo CPUT6570 @ 2.10GHz CPU Stepping: 10 CPU Family: 6 CPU Model Num: 23 Number of CPUs: 1 CPU Speed: 2012 System Memory: 960 System Swap: 999 Vendor: innotek GmbH System: VirtualBox 1.2 Form facto:: Unknown Karmel: 3.4.5.2,fc17,i686 SELinux Endorce: Enforcing MythTV Rente:: Unknown MythTV Rente:: Unknown MythTV Therme: Unknown MythTV Therme: Unknown			
	Send Profile			

Select "Send profile" and click "Finish" button.

Here not your personal information, but the system information will be sent to the smolt server on a monthly. This will have no harm on you and when the computer is connected to internet, informations such as CPU and RAM will be obtained automatically. Those information will be displayed on your computer as illustrated in the screen shot above. The sole purpose is to get an idea for the developers on the hardware that the users use and that will help for the further development of the operating system.



If you do not contribute to this, click "No, do not send." button.

Create User Date and Time > Hardware Profile	Smolt is a hardware profiler for The Fedora Project. Submitting your profile is a great way to give back to the community as this information is used to help focus our efforts on popular hardware and platforms. Submissions are anonymous. Sending your profile will enable a monthly check-in.	
	General UDD: 7.6ed.66f5-f842-4790-aba8-93fce5d8b3bc OS: Hanthana release 17 (Sithija) Default run level: Unknown Language: en_US2-9.06 CPU Vendor: Genuineintel CPU CPU CPU CPU CPU CPU CPU CPU	
	MýthTV Tunër: -1 O Send Profile Do not send profile	

Next you will be allowed to enter to Hanthana Linux system that you installed.

Provide your password and enter the system.

Feel the freedom.....



Welcome to Hanthana Linux !

Please be kind enough to forward your comments and suggestions on Hanthana Linux to info@hanthana.org

Solutions for frequently asked questions can be obtained by reading the H17-FAQ-English document in Desktop-Guide-and-FAQ directory and a guide on using Gnome desktop environment in documented in Gnome3-Desktop-Guide file. Further, keyboard layouts for Sayura, Wijesekara and Tamil are also included.

You will be able to resolve any issues with by joining **Hanthana Linux User Group**, http://groups.google.com/group/hanthana-community. Before you send emails to the group, please join the group. Use hanthana-community@googlegroups.com email address to send emails to the group.