Progress of Linux Distro in Indonesia

I Wayan Simri Wicaksana
Gunadarma University
Jl. Margonda Raya 100 Depok
Indonesia
iwayan@staff.gunadarma.ac.id

Adityo Mahardito & Julius Bernhard
Gunadarma University
Faculty of Industrial Technology
Indonesia
{HighQualityJomblo89,sch_bern}@student.gunadarma.ac.id

Abstract

Open source wave provides different model in operating system developing. Refer to era before the open source, the number of operating system is very limited and developed by big groups or companies. Now, number of operating system increase very dramatically, the main contribution is Linux Distribution which called Distro.

There are many reason in developing a distro, the reason can be purpose, size of hardware, user group etc. Currently, there are more than an hundred distro around the world. The approach to develop distro can differ from one distro to the other. Many number of distro can rise new issues in how to choose an appropriate distro.

Indonesia is a developing country, so the budget of IT is very limited. Based on this condition, Indonesia should find economic solution for IT especially for the software. However, piracy software or illegal software is still high in Indonesia. Since two years ago, government of Republic Indonesia has been very serious to consider the Linux or open source as a solution. In the paper, we are interested to look at the relation between number of distro including the sustaining and Linux implementation in desktop and server in Indonesia.

First section talk about background of distro. Methodology of survey will discuss in section two. Section three look at the result of distro survey in Indonesia to look at relation of distro and Linux implementation. Result of the research can enhance point of view at manager level in considering implementation of Linux.

Keywords: Distro, Linux, Open source, Operating system.

1. Introduction

Linux, at the first time, was made by Finn college student, Linus Torvalds. At that time, Linux was a project which is based on a hobby, inspired by MINIX - a small UNIX system which was developed by Andrew Tanenbaum. Linux 0.01 was already done in August, 1991. On October 5th, 1991, Linus Torvalds had exposed Linux 0.02 in newsgroup comp.os.minix. He also announced that Linux source code has been available and asked for help to other programmers to join Linux development [4].

At that time, Linux was still half done and could be run out little command on UNIX, as BASE, GCC (GNU C Compiler), GNU-make, and has some variants specially bases of system : Debian-based, Gentoo-based, Slackware-based, and RPM-based. Now, LINUX is a very complete UNIX system, can be used for network, software development, and even for doing daily tasks. Linux is now an alternative operating system which is cheaper than commercial operating system, such as Windows 9.x/ NT/ 2000/ ME [3]. Development of Linux does not depend on a company which defrays Linux development. In order that Linux developer can communicate rapidly and efficiently, Internet can be the exact choice. In 1996, community of Linux developer, wherever they are, started giving a result with making Linux for some hardware versions from Atari to Macintosh. A factor which impacts Linux rapid growth is there are some Linux distributors, such as RedHat and Caldera compete for winning the market. Because of that, a community, Linux Standard Base, was established to ensure that all launched Linux distribution can still run same applications and interact to each other.

1.1. Distribution of Linux

Linux which can be used in office activities; for spreadsheet, word processor, database, and graphic editor can be gotten in every distribution, sometimes called as distro. Distro is a bundle of Linux kernel, therewith Linux basic system, installation programs, basic tools, and other useful programs based on purpose of distro making. Actually, there are a lot of Linux distros:

- RedHat, the most popular distro. RedHat was the first
distro whose installation and operation is easy. Number of this distro is too low in Indonesia.

**Excellence** : has cluster management, is added some features from Kernel 2.6, such as scalability for Native POSIX Thread Library.

**Deficiency** : bad support for multimedia.

**Software Management** : .rpm

- Debian, a distribution that majors stability and reliability. Debian used .deb in its program installation package.

**Excellence** : easy to install software (with apt-get).

**Deficiency** : stability of release is out of date.

**Software Management** : .deb

- Slackware, a distribution which has been rampant Linux world. Two important things from Slackware are all its stuffs; kernel, library, or even applications had been proved. Thus, they make Slackware stable. The second thing is Slackware suggests to install all applications from their sources so all programs that we installed are optimal with the system. Slackware uses libc5 not glibc2 just like other distros.

**Excellence** : free of bugs, stable, and devoted to UNIX methods

**Deficiency** : manual configurations and limitation of hardware auto detect.

**Software Management** : .tgz

- SuSE, a distribution which is famous with its YaST (Yet another Setup Tools) for configuring the system. SuSE was launched in 1992.

**Excellence** : has configuration tool, YaSt.

**Deficiency** : stability of release is out of date.

**Software Management** : .rpm

Actually, there are still so many distros which are already available and going to be launched in the world.

1.2. Linux Growth in Indonesia

Linux started entering Indonesia in the beginning 1992, the first person who announced Linux to the public from pau-mikro maillist was Paulus Suryono Adisoemarta from Texas, USA. In 1992, he introduced SoftLanding System (SLS) distro which in some floppy disks. Linux kernel in that version was 0.9X revision, Alpha testing, with limited ability especially in network.

1992 until 1994 was the vacuum era of Linux in Indonesia. Linux kernel 1.0 was launched in 1994. At that time, Slackware was the one of distro that entered Indonesia. The distro was stable enough so it stimulated growth of a Linux community at University of Indonesia. Slackware became popular among University of Indonesia student because it was the first and the only one available Linux distro.

At the 1994 was a blessed year, because three internet service providers - IPTEKnet, INDOMnet, and RADnet - played the roles. This condition made some institutions used Linux as production system. With attendance of internet in Indonesia stimulated growth new industries which are motorized by young entrepreneur. This condition could be the determining factor of Linux growth in Indonesia. In 1995 until 1997, Linux broadened its reach to whole Indonesia even though there was economic crisis.

Linux growth stimulated the programmers to develop distribution of Linux. In the beginning of developing distro in Indonesia, the main reason is to use local language as the interface to avoid usage problem. Since end of 90’s era, some distros, that started to utilize Bahasa. Number of Linux distro in Indonesia is hard to count, based on our survey; there are 34 Indonesian distros [2]. One of them was Trustix Merdeka, the first Indonesian distro which was developed in 1999 and ended in March 2003.

1.3. Relations between Number of Distro and Linux Users

As we look at the statements above, Indonesia has potency in developing Linux. Number of illegal software is still very high in Indonesia, in other site as developing country Indonesia has no big budget to buy expensive operating system.

Refer to above condition, we are interested to know is there a relation between number of distro in Indonesia and number of Linux user. In our hypothesis, if number of distro is high that the number of person who uses Linux is high as well. Therefore, they will encourage other people to use Linux.

The paper introduces the background history of distro in general in worldwide and Indonesia will be talked in the first section. Next section explains the methodology to do the survey. Third section addresses the result and discussion of survey. Last chapter is closed by conclusion.

2. Approach/ Methodology

This paper purpose is to evaluate the relation between number of distro and Linux users by capturing data about Linux progress in Indonesia especially for implementation of open source system usage among people, companies, and governance. To get this purpose, we need some methods to do and research so that the result that is gotten can be depicted the real situation.

The first step, we collected data about distros in Indonesia to know their history and development. After that, we had some surveys to know which distros have much users
or big community. These surveys also looked for which distros upgrade its capability at least once in three months. The second step, we survey the user of Linux in desktop and server level at Indonesia. The survey of desktop user based on simple random sampling based on interview to around 100 correspondents. For the server user, we implement the same method of sampling based on Internet by using www.netcraft.com.

3. Progress and Role of Linux Distro in Indonesia

3.1. Based Distro in Indonesia

Before we know the relation between number of distro and Linux users in Indonesia, we have to know types of distro beforehand. Born of distros in Indonesia do not get out of former distros which become bases of all distros which exist in the world. Following is the name of based distro along with name of distro from Indonesia:

- Ubuntu Family:
  1. BlankOn 2.0
     * BlankOn 2.0 which is sometimes called Konde is Linux distro which is developed by Activator Of Linux Indonesia Institution (YPLI) and Community of Ubuntu Indonesia for producing Linux distro which is suitable with computer users’ need in Indonesia. Konde was produced after Blankon version 1.0 which was Fedora core-based.
  2. Dewalinux
     * Dewalinus is a Linux distro that was produced from Ubuntu distro, tidier and more friendly so that facilitates migration of process for new consumer of Linux which has accustomed to Windows.

- Knoppix Family:
  1. ROSe
     * ROSe was Knoppix variant which was added some special applications and rebuilt by Indonesian RAB. Beside for cashier edition, ROSe was also developed to game edition whose base was Knoppix distro.
  2. LinuxSehat
     * LinuxSehat was a communication program for campaigning Linux to the new users. This distro was repackaged distro from Koppix which was given freely to welcome prevailing of copyrights law in 2003.

- Debian Family:
  1. De2(DebianDepok)

- Slackware Family:
  1. Target Linux
     * This distro is Slackware 11 generation which was made with using script, the same script that is used in Backtrack distro, from linux-live.org. With GPL licence everyone is free to use this distro.
  2. LiGOS AWALi
     * LiGOS AWALi is Slackware generation that is customized in such a manner so even new users will not feel difficult in installing this distro.
  3. ZenCafe
     * ZenCafe is continuation from LiGOS and sub-project from ZenWalk. Not so difference from its parents, ZenCafe is suggested to be used in low level computer.

- SLAMPP
  * SLAMPP is Linux distro which uses live-CD to install its system for building a server. Wit having catchphrase "Simple Solution for Home Server", its base is SLAX.

- PCLinuxOS Family:
1. **CHIPLux**
   * CHIPLux is PC Linux OS-based distro which is distributed by CHIP magazine.

2. **PC Linux Fiesta**
   * PC Linux Fiesta is a solution of desktop application which is PC Linux-based distro to afford the new users’ need, user friendly.

- RedHat Family:
  1. **Pinux**
     * Pinux is RedHat 9-based Linux distro which was developed by *Warnet Pointer Semarang* to change operating system at some internet cafés (*Warnet*) after having confiscation some piracy operating system.

- Trustix Family:
  1. **Trustix Merdeka**
     * Trustix Merdeka was a Linux distro which was build in 1999. It was the first Linux distro from Indonesia. With accentuation in security, application packages which were figured in *Trustix Merdeka* were chosen package. A distro that was made in Indonesia purposed to be better than other distros. However, this distro’s development was ended in March, 2003.

  2. **WinBi**
     * WinBi was an operating system contained common application with using Bahasa. This distro was purposed for studying foreign language in computer technology.

  3. **Bijax**
     * Bijax was a Linux distro which was developed based on *linuxfromscratch*. This distro purposed to make new users, who did not want to install Linux, know Linux. This distro did not support networking [2].

### 3.2. Implementation of Linux Distro

Refer to above paragraphs that discussed about distro in Indonesia, the next section presents result of survey about number of Linux user in Indonesia.

Based on our research, which is shown by figure 1, for almost 256 people, distro Linux usage in Indonesia is predominated by Ubuntu distro. Over 50 percents of users use Ubuntu as their operating system (OS) on their computers. They use Ubuntu because amenity in using Ubuntu. Beside that reason, Ubuntu gives its users some default packages for helping the users to do their tasks and makes its users able to install another package easily.

Based on our research too, we got a contrast comparison between commercial OS usage and open source OS usage.

This contrast is shown in figure 2. In usage for desktop personal computer (PC) most people still use commercial OS for their computers.

![Figure 1. Distro Linux Usage in Indonesia](image1)

![Figure 2. Operating System Comparison](image2)

Besides that, we can see the OS usage comparison for web server. We researched 70 websites in Indonesia using [www.netcraft.com](http://www.netcraft.com) and got the fact that most web servers in Indonesia use Linux for their OS. This condition is inversed for OS in desktop PCs in Indonesia. Most people who use commercial OS think that commercial OS is more secured than open source OS. Since, there is no legal body who will be responsible on open source OS that they use. However, most web servers use Linux for their OS because it is more stable.

In the following graph shows us percentage of OS usage for web server from some institutions in Indonesia.

![Figure 3. Comparison of Web Server in Indonesia](image3)
From table 1 as part of our survey, we get that most institutions use Linux for their OS except banking institution. Most banking institutions use commercial OS for their web server. This condition facilitates the customers to access e-banking because similarity of OS which is used by public.

<table>
<thead>
<tr>
<th>No.</th>
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4. Conclusion

Based on result of research that authors got and data analysis, the authors conclude some things, those are:

1. Relation between number of Linux distro users in Indonesia and number of Linux user is still difficult to conclude because lack of appropriate number of data.
2. Implementation Linux as operating system for web server in Indonesia is very dominant compare to other operating system.
3. Linux user in desktop level is still very low in Indonesia.

References