Software Piracy Protection System

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Abstract: Software piracy has been major issue for software industries. They have to pay a very large amount to protect their applications. According to Business Software Alliance (BSA), the global software piracy rate in 2013 was 43 percent and the commercial value of unlicensed software installations was $62.7 billion, which resulted in millions of revenues and jobs lost in software companies. This paper will demonstrate as "software piracy protection system" is mainly used to protect the piracy of the system. Now a day's more number of users download the software without have the permission for the owner of the software, however the software have the product key the unknown person also find the key and it's used that software. Our approach will use "MAC based authentication" and generate product key, It checks the product key is corresponded MAC address which is unique on every machine. If it is correct the software is installing, else the software is not installed to the system. In this system only allows the authorized person.

Keyword: Software privacy, Software protection, Software security, MAC authentication.

1. INTRODUCTION

An objective of the system is used to overcome this problem, it is used to protect the piracy of the software. It is used for online process. In this system only allows the authorized person, because it checks the MAC address. The MAC address is the unique address of the system, so the MAC address is not used for other user. It is more useful for owner of the software or product. Worldwide revenue losses due to software piracy were $48 billion that same year, an increase of 20% from the preceding year. Software piracy, also known as copyright infringement of software, is the unauthorized duplication or distribution of copyrighted computer software. Although most computer users today are aware that unauthorized use and duplication of software is illegal, many show a general disregard for the importance of treating software as valuable Intellectual Property.

2. SOFTWARE PIRACY

Software piracy is the illegal copying, distribution, or use of software. It is such a profitable "business" that it has caught the attention of organized crime groups in a number of countries. Software piracy causes significant lost revenue for publishers, which in turn results in higher prices for the consumer. When you purchase a commercial software package, an end user license agreement (EULA) is included to protect that software program from copyright infringement.

Typically, the license states that you can install the original copy of software you bought on one computer and that you can make a backup copy in case the original is lost or damaged. You agree to the licensing agreement when you open the software package (this is called a shrink wrap license), when you open the envelope that contains the software disks, or when you install the software. Software piracy applies mainly to full-function commercial software. The time-limited or function-restricted versions of commercial software called shareware are less likely to be pirated since they are freely available. Similarly, freeware, a type of software that is copyrighted but freely distributed at no charge, also offers little incentive for piracy.

2.1 TYPES OF SOFTWARE PIRACY

1.2.1 Soft lifting: Purchasing a single licensed copy of software and loading it onto several computers in violation of license terms. An example of this would be sharing software with friends, co-workers and others.

1.2.2 Uploading and Downloading: Making unauthorized copies of copyrighted software available to end users connected to online service providers and/or peer-to-peer networks via the Internet.

1.2.3 Unrestricted Client Access Infringement: Allowing clients of an organization to freely access software on the organization's network server in violation of the terms of the license agreement.

1.2.4 Hard Disk Loading: Installing unauthorized copies of software onto the hard disks of personal computers, often as an incentive for the end user to buy the hardware from that particular hardware dealer.

1.2.5 Commercial Use of Non-Commercial Software: Using educational or other commercial-use-restricted software in violation of the software license

2.2 HOW PIRACY AFFECTS

Pirated software hurts everyone — from software developers to retail store owners, and ultimately to all software users. The illegal duplication and distribution of software has a significant impact on the economy, costing the United States billions of dollars a year in job losses, retail dollar losses, and governmental tax losses — money that would have gone back into local communities. In addition, companies facing loss of revenue due to piracy must pull resources from the development of new technology, and devote it to protecting both their software, and its legitimate users. In the end, software piracy is unfair to everyone.

2.3 RISK FACTORS USING PIRATED SOFTWARE

1.4.1 Quality - It often lacks key elements and documentation, and comes with no warranty protection or upgrade options

1.4.2 Viruses - Untested, counterfeit discs may be infected with viruses that will damage your hard drive or cripple your network, without the benefit of technical support

1.4.3 At Work - copying or using illegally copied software at work puts the entire company at risk for copyright infringement. Pirated software that is either dysfunctional or that contains viruses wastes company resources and drives up IT costs.

3. PROBLEM STATEMENT

In the Existing system, are used to only check the software product key it does not checks the authorized user, so the unauthorized users are download and it's used. There are few drawbacks in existing methods.

1. It is less security for the software's.
2. It allows accessing unauthorized person, when the authorized user share the product key and also find product key.
3. It only checks for the product key, does not check the MAC address of the system.

3. PROPOSED APPROACHES

An objective of the system is used to overcome this problem, it is used to protect the piracy of the software. The MAC address is the unique address of the system, so the MAC address is not used for other user. Our proposed approach using online process and read the MAC address of the system when the user download the software. It generates the product key for correspondent MAC Address. To check the MAC address and Product key when the user install the application.

4. IMPLEMENTATION

4.1 User Module
The owner of the software generates the product key of the corresponding downloaded software and it's send to the user. After receive the key, when the user installs the software to the system it asks the product key, the user type that product key. It checks the product key is corresponded MAC address. If it is correct the software is installing, else the software is not installed to the system. In the user module have the three sub modules they are following

4.2 Enrollment module
An Enrollment module, the client first registers the all information (like name, address, username, and password) to the web server. After complete the registration process the client can be login to the system with the correct authentication.

4.3 Pay and Download Module
In this module is used the user view the software and choose the software, then pay the amount of the software. The user download the software after the complete the buy and pay the software. During the download the admin read the MAC address of the user system, and then generate the product key of the particular MAC address. The admin send the product key to the correspondent user.

4.4 Installation Module
In this module is used to the user install the software to the system that requires t he product key, after user enter the product key it checks the MAC address and product key if it is matched it allows to install the system, else does not allow the install the software to the system.

4.5 Admin Module:

4.5.1   Read MAC address In this module, is used to read the user MAC (Media Access Control) address when the user downloads the software for the security purpose.

4.5.2   Generate & Send Product key:
In this module, the admin generate the product key for correspondent MAC (Media Access Control) address, and then send the product key to the particular user.

4.5.3   Verification Module
In this module is used to identify the authorized user. It is used to verify the MAC address and product key during the installation. The user enter product key is correspondent MAC address it allows to installation. If it is mismatch, it does not allow the software install to the system.

5. LIMITATION

There are few limitations, it can be enhancing in future. Since it uses MAC address for validation, single user license type. So current simulation does not provide multi user license.

CONCLUSION

This paper we presented techniques involved protection of software piracy, Which leads to access software only authorized person and prevent unauthorized access, This system provides more security of the software, It checks software product key is correct for the corresponded MAC address of the system.

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