

Linux Invention

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Title of the Invention

Method for Installing Only Those Application Features That Are Actually Used

Description of the Invention

Large software applications have many features, some of which are regularly used, others that are never used. Installing applications of this size, and possibly downloading them, takes a considerable amount of time and resources. Linux inventories the current state of a computer and the user's processing behavior, and stores this information in a user preference profile. Using information from this user preference profile, Linux only installs features from large software applications that the user will most likely use, and doesn't install the remaining features that past user behavior has shown are never used. Linux periodically updates the user preference profile with the current state of the computer so that this information is readily available for future installations.

Problem or Opportunity

Software application offer both custom and easy installation options—for both initial installations and upgrades. Most users choose the 'Easy' option simply because that option is quickest. Choosing the 'Custom' install option requires users to make decisions about the software features to install. Oftentimes, users simply do not know enough about the application to make intelligent decisions regarding the features to install, and which not to install. Rather than risk making an incorrect decision, users resort to the 'Easy' install option. As a result, features are installed that the user has never used or, most likely, will never use.

Examples of seldom used features include script writing (to automate some processes) and numerous templates. In addition, features sometimes are not related to the application itself, but rather to how the application operates. Examples include numerous languages (such as English, French, German, Italian, Swahili, Mandarin, and others) and numerous printer descriptions.

Installing these extra features causes two problems, some immediate and some long-term:

- ◆ The immediate problems: downloading an entire update, because of its size, takes extra bandwidth; takes more time; and requires more hard disk space to store the upgrade prior to installation.
- ◆ The long-term problems: installing the entire update takes longer, storing the code for unused features installed on the user's hard disk take up space that would otherwise remain available, booting the application takes longer, and running the application requires increased processing overhead.

All of these problems could be alleviated if a software application only loads those features that are actually used.

Detailed Description of the Invention

Whenever a user selects the 'Easy' install option for an initial application installation or upgrade, Linux gets involved in the process. Linux makes intelligent decisions about which application features to install based on its own operating system software, the current state of the user's computer, and a historical archive of the user's processing behavior. Linux stores all this information in a *user preference profile*.

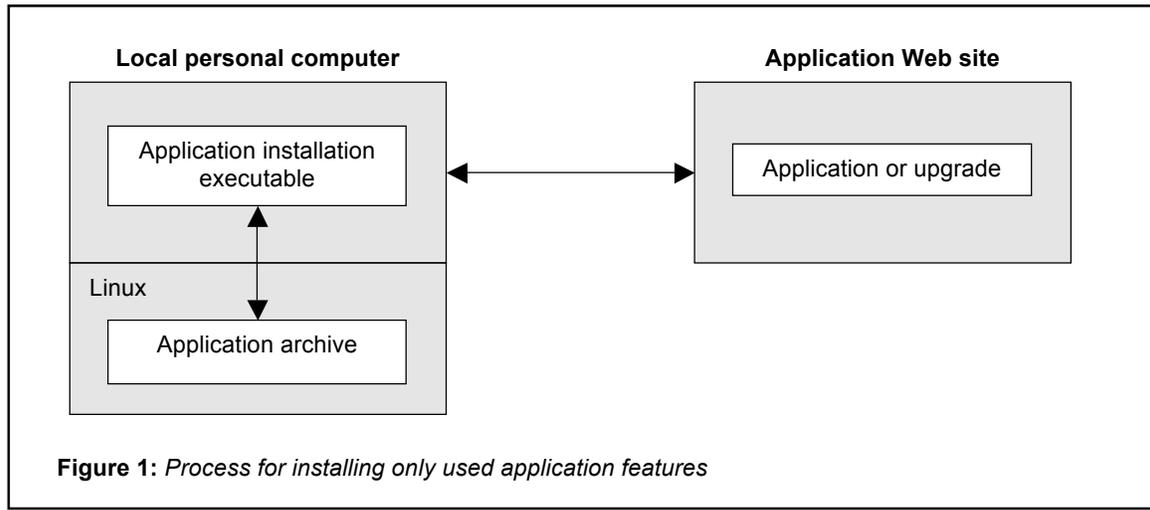
Linux creates this user preference profile with historical data about the user's computer system, and periodically recreates it with any new information (all while running in the background). Since this user preference profile is accurate, it is readily available for installations rather than having Linux create this profile on the fly.

Using information in the user preference profile, Linux essentially creates a customized installation of the application without the user getting involved. Linux can customize an installation regardless of the media or method used (such as installing from a CD or downloading from the Internet).

For example, consider languages. Linux can determine which languages have been installed into its own code and which languages have been implemented during the user's own processing. Once this determination has been made, Linux only allows these languages to be installed; the remaining languages are not installed.

When an application is initially installed, Linux relies solely on system information from the user preference profile to make decisions of what the user would need installed. After an application has been installed, Linux knows exactly which features have been installed and which have been omitted, and adds this information to the user preference profile. When the application is upgraded, Linux uses this more robust application-specific information to only allow those installed features to be downloaded and re-installed.

Figure 1 depicts an overview for installing only those application features that are actually used.



The method for installing only those application features that are actually used starts when Linux inventories the computer system.

In step 1, Linux gathers information about the current used features of its operating system, the current state of the user's application features, and the user's processing behavior.

In step 2, Linux creates a user preference profile for future software downloads based on the current used features of its operating system, the current state of the user's application features, and the user's processing behavior.

In step 3, the user initiates a software installation (either an initial installation or an upgrade).

In decision step 4, Linux determines, based on the user preference profile, if the installation executable must be downloaded from an Internet site. If yes, the method continues with step 5; if not, the method proceeds to step 6.

In step 5, Linux polls the user preference profile and only downloads those application features that the user and the computer system actually use.

In step 6, the user runs the installation executable and selects the easy install option.

In step 7, Linux polls the user preference profile to determine which features to install.

In step 8, Linux customizes the installation by only installing those features that are actually used.

In step 9, Linux updates the user preference profile with new information from this installation.

The method ends.

Figure 2 depicts the flowchart for installing only those application features that are actually used.

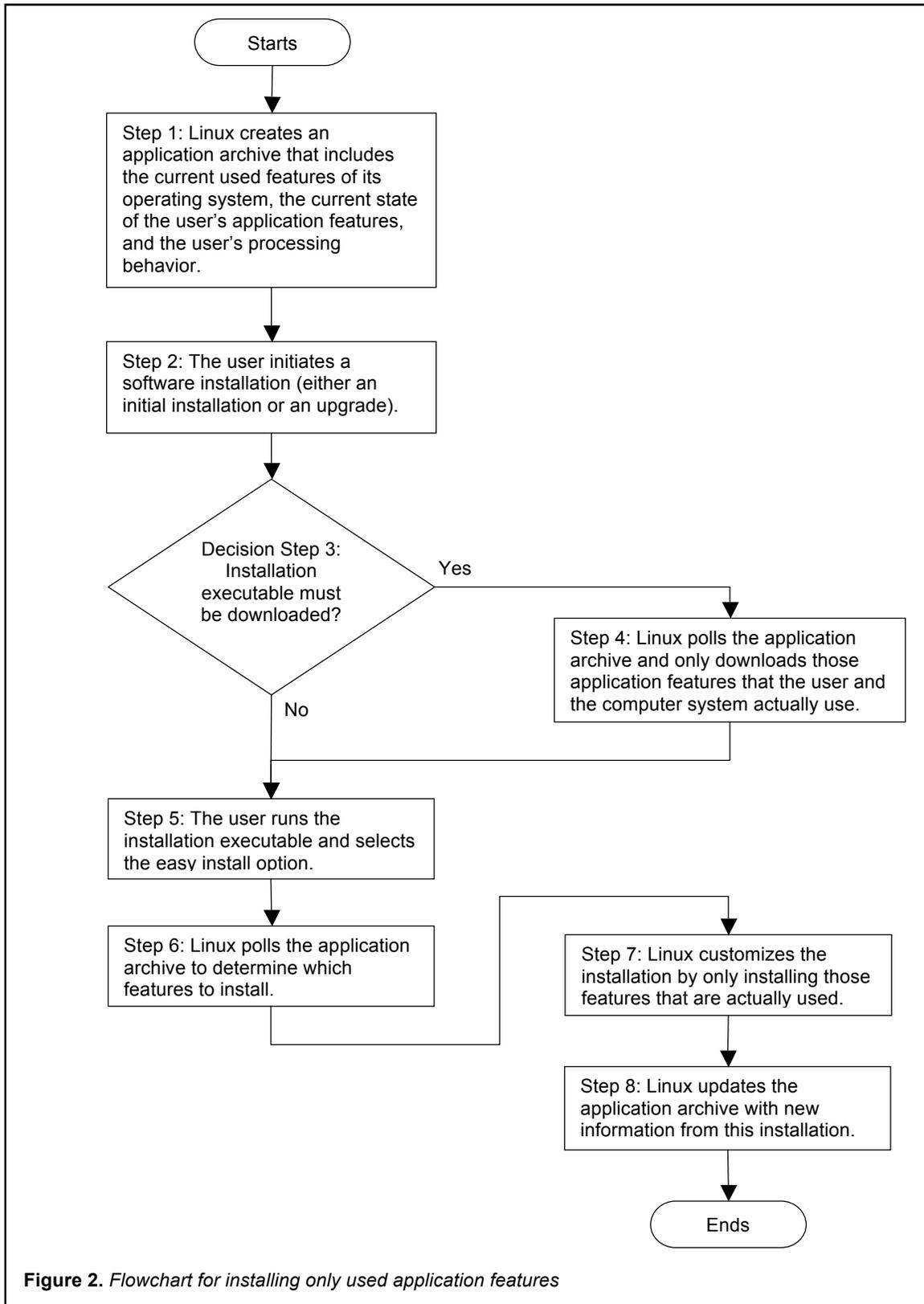


Figure 2. Flowchart for installing only used application features