

Open Source Software

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Lecture #8

Objectives:-

- Software Packaging
- The Release Management Group
- Alpha release
- Beta Release
- Differences between Alpha and Beta Testing
- installation

Software Packaging Management?

- ✓ A software package is a collection of system resources that are packaged together. These packages enable the end-user to perform some types of tasks when the software package gets installed on their device.
- ✓ software packaging is the process of creating a software package installer for your application.
- ✓ The goal of packaging management is to ensure that products are packaged in a way that is safe for use , attractive, and easy to use and meets all relevant regulations.
- ✓ A software package could come in multiple formats like EXE, MSI, etc .

- ✓ there are scenarios where you don't want to use the software package provided by the vendor and, therefore, you need to repackage that into another format. Earlier, we said that enterprises are not very keen on distributing applications on the client computers as EXE due to the disadvantages this format brings.
- ✓ Therefore, they need to convert that into either an MSI, App-V or MSIX packaging format. That's what it's called software repackaging and they can use Repackages for that.
- ✓ Software packaging brings multiple benefits for enterprises, the most important ones being:
 - ❖ - Ensuring a stable, standard environment
 - ❖ - Reducing costs
 - ❖ - Allows for global testing.
 - ❖ -Saves time

H.W

- What is the Difference between .EXE format and .MSI format , which one the best ?

- ✓ Users give preference to a product that is well packaged. In an open source software, the core item of a package is the source code. A standard package includes an installation guide, a user manual, read me file, help, and other information. All of these elements are put together within a single directory and compressed into a single file.
- ✓ The format of the compressed file depends on the operating system on which the software is meant to run. On Linux packages are presented in formats (like .tar, etc.) which are created using compression utilities (like tar, gzip,). On Windows®, the distribution package is zip.
- ✓ Once the package is prepared, it goes through all small test by a few developers to ensure the final version of the product can be decompressed, installed, and works correctly. Then it is published in one or more internet Websites for download.

Software Release:- Release Management Group

- A release is a fully functional software version resulting from the software development and engineering processes: most organizations release alpha and beta versions before a release.
- a release most often describes the software's final version. In addition.
- It means making a completely new or upgraded version of a software available to the users. A new release introduces a product into the market and upgraded version provides fixes for errors found in a previous released version and optionally adds new features.

- Most organizations identify releases with software versioning, a naming process incorporating a unique set of numbers or letters that update sequentially (e.g., Windows 11).
- To distinguish the versions from each other, each OSS community follows its own convention of using unique numbers for every release..

Alpha Release :-

- The alpha stage is when the product is first created and is usually only available to a small group of people, such as the product's developers and testers.
- This is the release when the feature which you are developing is incomplete or partially complete. Suppose in a Ticket booking system you have developed the seat selection but the payment implementation is remaining. In this case you can release it to testers to test the initial phase of the feature. Lots of open source products have Alpha releases.
- only a limited number of customers are willing to accept an alpha version of the product and assume the associated risk.

- ✓ Alpha software may contain serious errors, and any resulting instability could cause crashes or data loss.
- ✓ Alpha software may not contain all of the features that are planned for the final version. In general, external availability of alpha software is uncommon in [proprietary software](#), while [open source software](#) often has publicly available alpha versions.

- **Beta Release -**

- This release is done when the product feature is complete and all the development is done but there are possibilities that it could contain some bugs and performance issues. This release is mostly distributed to users who test the product and who can report the bugs.
- During the beta release, enough of the system should be working to convince the customer that soon the beta application will be a real product. The beta release is more mature and is given to a much larger customer base.
- The terms "alpha" and "beta" can also be used to describe different versions of a product. For example, a product in alpha stage is usually considered to be early in development, while a product in beta stage is considered to be closer to completion

- ✓ A beta phase generally begins when the software is feature complete
- ✓ The process of delivering a beta version to the users is called *beta release* and is typically the first time that the software is available outside of the organization that developed it.
- ✓ Software beta releases can be either public or private, depending on whether they are openly available or only available to a limited audience.
- ✓ *Beta testers* are people who actively report issues of beta software. They are usually customers or representatives of prospective customers of the organization that develops the software.

- There are a few key differences between alpha and beta Testing:
 - ✓ 1. Alpha is typically only available to a small group of people, while beta is available to a larger group.
 - ✓ 3. Alpha is usually less stable than beta.
 - ✓ 5. Alpha is typically released before beta.
 - ✓ Alpha Testing is performed by internal employees of the organization and Beta Testing is done by users.
 - ✓ Alpha Testing is done within the organization, while Beta Testing is done in the user's environment.
 - ✓ During Alpha Testing only functionality and usability are tested, while during Beta Testing usability, functionality, security, and reliability are tested to the same depth.
 - ✓ Long execution cycles may be needed for Alpha Testing while just a few weeks of execution make Beta Testing possible

Software Release

With sufficient testing and debugging through alpha and beta cycles, the software finally becomes ready to be officially shipped. At this conclusive stage, the community announces “ General Availability (GA) ” of their product. After a successful release, the developers’ group work is divided in two:

- ✧ The **first one** is the maintain & support the already released version.
- ✧ The **second one** is to further improve the product with new functionalities to be included in the next version.

Installation

Before the user can install the software in his system, he needs to extract it by decompressing the package. Many users often attempt to install the software without reading the instruction. It is recommended to at least review the REAME or INSTALL files. Typically installation steps for open source software are :

- ☐ Understanding the system configuration.
- ☐ Compiling the source code.
- ☐ Executing the installation file.

Thanks for Listening