Application Packaging – An Approach
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Abstract

Application packaging is a process that aid enterprises to micro-manage their extensive volume of software complexity for desktop and server systems more effectively. By configuring and deploying streamlining software, application packaging reduces application management costs and enhances operational efficiency to a great extent. The paper addresses the need for application packaging in detail, followed by the key steps to be taken for its best practices, different methodologies, enterprise challenges while adopting a model and the Happiest Minds approach for the same.

Need For application Packaging

Reducing operational overhead, minimizing software license cost, maximizing existing software investment and controlling the proliferation of the software estates are all concerns of today’s enterprise. Maintaining a stable yet flexible IT environment is also crucial in ensuring optimal user productivity and system performance. As organizations grow and change and as IT gets more sophisticated, it becomes increasingly harder to get a hold of software estates leading to significant increase in license and management costs.

Times like these, what is a better idea for enterprises to resort to is Application Packaging. It helps streamlining and configuring expansive software estates; removing under-utilized applications, identifying license compliance risks and deploying best-fit applications where needed.

It can help organizations largely control growing volumes of software for desktop and server system efficiency; the result of the same being:

- Reduced software management costs
- Increased system performance
- Minimal operational overhead
- Increased user productivity
- Reduced time of management

Key steps for application packaging

- **Discovery** – Automate vulnerability scanning with manual assessment for host, port, host finger printing and protocol discovery
- **Assessment** – Services finger printing, vulnerability determination through tools, scripts and manual assessment with false positive elimination
- **Exploitation** – Vulnerability confirmation with automated and manual testing, attach method selection, payload selection and exploit execution
- **Document and Reporting** – Documenting and reporting with risk ratings, evidence recording from reproducible results and detailed recommendations
Methods based on license types

Application license handling in an enterprise is a very critical entity which impacts both cost as well as productivity. Every software manufacturing company has its unique software license type apart from the several common license types. With our experience with different customers we have filtered below the types of licenses available from manufacturers.

- **Individual**: Single installation License type
- **OEM** (Original Equipment Manufacturers): License type for software that is already installed in the hardware
- **Named User License**: License type for a specific user
- **Volume**: License type supporting multiple users
- **Client Access License (CAL)**: License type that gives a user the rights to access the services of the server
- **Trial License**: License type for trial versions of software
- **Enterprise (Perpetual)**: License type that does not require renewal and is for life long
- **Concurrent License**: License type for software that can be accessed by a specific number of users at a time
- **Free License**: License type for freeware software
- **Enterprise Subscription**: License type that requires renewal for every specific period
- **Node Locked**: License type for workstations with specific configurations

Business problems demanding the need for application packaging

- Applications are scattered around the estates mainly due to lack of assessment which creates a lot of revenue leakage.
- There are no common standards followed because of which it is difficult for IT to have a Standard Operating Environment.
- Many remote offices having very bad network connectivity.

Our approach – application packaging

Happiest Minds follows a certain set of best practices with experience while providing Application Packaging as a service in the area of software license management. Software licensing is a very critical part of an application and it has to be managed much accurately. The respective application owners should make sure they get the correct license information from the vendors and pass them on to the packaging team. The packaging team will evaluate the information and check on which category the licenses fall in. Accordingly the package would be created. The packaging team will also help in assisting the application owners to detect the licensing information if vendor communication is not smooth. Following is the set of approaches we follow while packaging the applications for catering to different types of licensing approaches:

- **Individual**: The application will be packaged without license keys and once it is deployed the local IT has to key-in the license details.
- **OEM** (Original Equipment Manufacturers): The application will be packaged without license keys and once it is deployed the local IT has to key in the license details.
- **Named User License**: The application will be packaged without license keys and once it is deployed the local IT has to key in the license details.
- **Volume**: The application will be packaged without license keys and once it is deployed the local IT has to key in the license details.
- **Trial License**: Not applicable.
- **Enterprise (Perpetual)**: The application will be packaged without license keys and once it is deployed the local IT has to key in the license details.
- **Concurrent License**: The application will be packaged without license keys and once it is deployed the local IT has to key in the license details.
- **Free License**: The application will be packaged with the license key.
- **Enterprise Subscription**: The application will be packaged without license keys and once it is deployed the local IT has to key in the license details.
Some of the business benefits

Some of the benefits that can be achieved based on this approach:

- Quick readiness and low cost delivery for application environment based upon scalability and efficiencies provided by factory model
- Minimal ability to provide on-demand resource capacity for large workloads
- Extensive on-the-floor support to attend all the post migration user queries
- Well documented change process which was used across all the locations

Apart from the above considerations, there will also be situations where in application may require license key for installation purpose. These kinds of software approaches, if they do not fall under volume licensing model, then it will be difficult to package and manage. In this case, we strongly suggest not to package them.

The actions to be taken to address the business problems are as below:

- A detailed and rigorous application assessment is to be performed to remove the need of redundant applications
- Single hardware independent image is to be provided with the support of multiple language packs to cater regional based infrastructure
- Utilize enhanced functions like branch Cache to minimize the impact on the roll out
About the Authors

Suresh Kanniappan heads the Global Practice for Unified Communications in Happiest Minds Technologies. Suresh has about 17 plus years of IT experience and has performed various roles in solutions and platform development. Some of the platforms he has developed on open source technologies are focused towards end-user experience on unified communication.

Suresh Kanniappan

Happiest Minds

Happiest Minds is focused on helping customers build Smart Secure and Connected experience by leveraging disruptive technologies like mobility, analytics, security, cloud computing, social computing and unified communications. Enterprises are embracing these technologies to implement Omni-channel strategies, manage structured & unstructured data and make real time decisions based on actionable insights, while ensuring security for data and infrastructure. Happiest Minds also offers high degree of skills, IPs and domain expertise across a set of focused areas that include IT Services, Product Engineering Services, Infrastructure Management, Security, Testing and Consulting.

Headquartered in Bangalore, India, Happiest Minds has operations in the US, UK, Singapore and Australia. It secured a $45 million Series-A funding led by Canaan Partners, Intel Capital and Ashok Soota.