Content

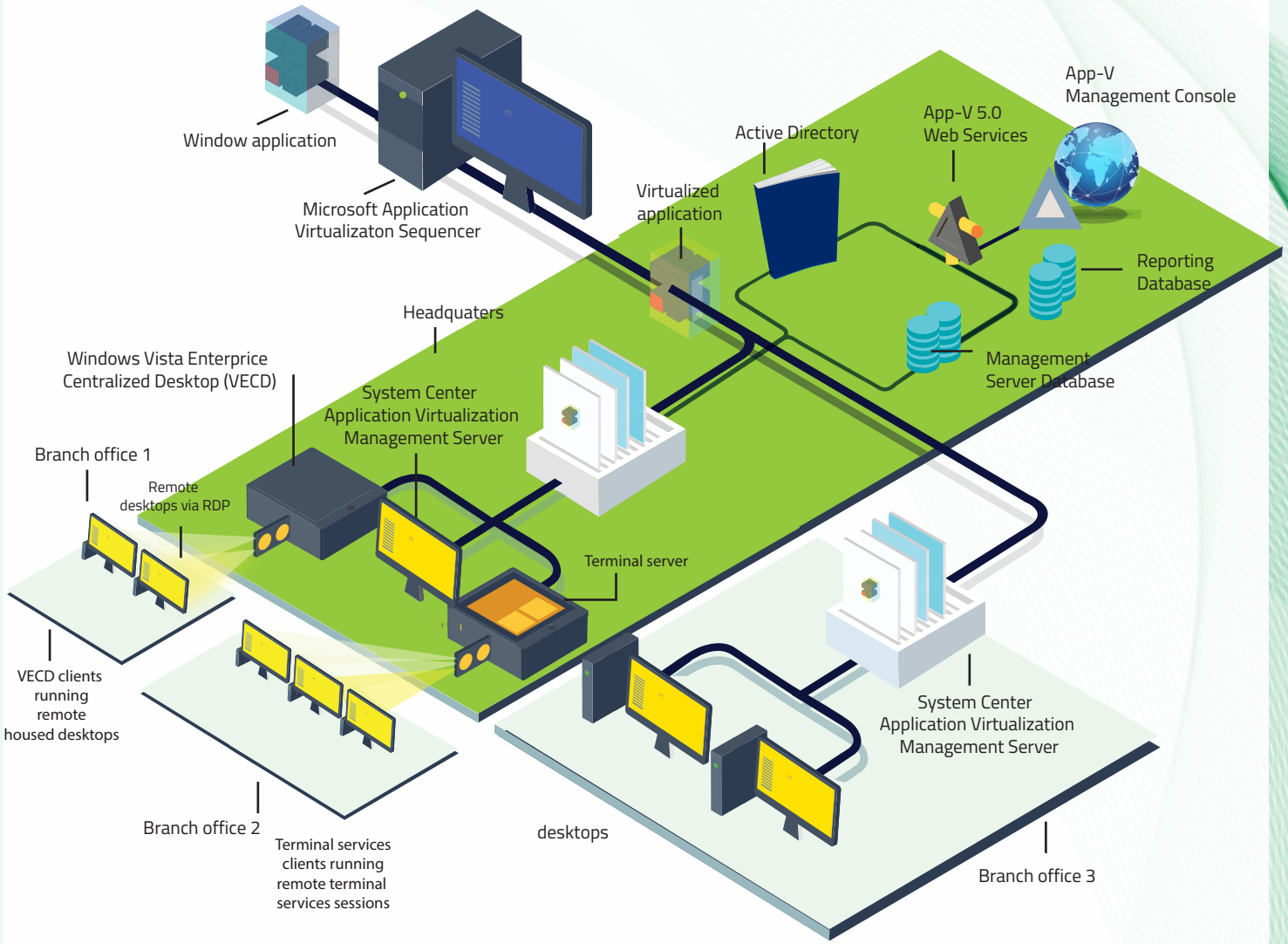
Abstract

Applications can run without installation through a technology called Microsoft Virtualization (App-V). Microsoft App-V Software delivery uses a process called, Application Push that enables the users to PULL or STREAM applications as and when they need them. App-V eliminates the challenge associated with application conflicts by isolating into the virtual environment and reduces the cost of application delivery.

What is App-V?

Microsoft Application Virtualization or App-V is a packaged delivery mechanism for software with a unique runtime environment. Streaming applications to desktop or laptop so that they can run without being installed locally. By doing this there are certain dynamics of the software that is never installed and thus creates no conflicts, which overall reduces the time associated with the application compatibility testing.

In present Infrastructure development, neither the application infrastructure are Machine-Specific nor the end user devices are user specific. Microsoft Virtualization (App-V) is a tool which converts executable source file into virtual applications which can be streamed based on the demands of the user machines for application usage. The App-V Applications are chosen based on business and infrastructure need over the distributed tools and are shared either by the App-V management tool or through the system center configuration manager.



Features of Microsoft Virtualization (App-V)

- Streamed on Demand
- Never Installed
- Never Conflicts
- Test Minimizing
- Image Reducing
- Centrally managed
- Available by User ID vs by PC
- App-V used for application License compliance and auditing
- Lockdown enabled

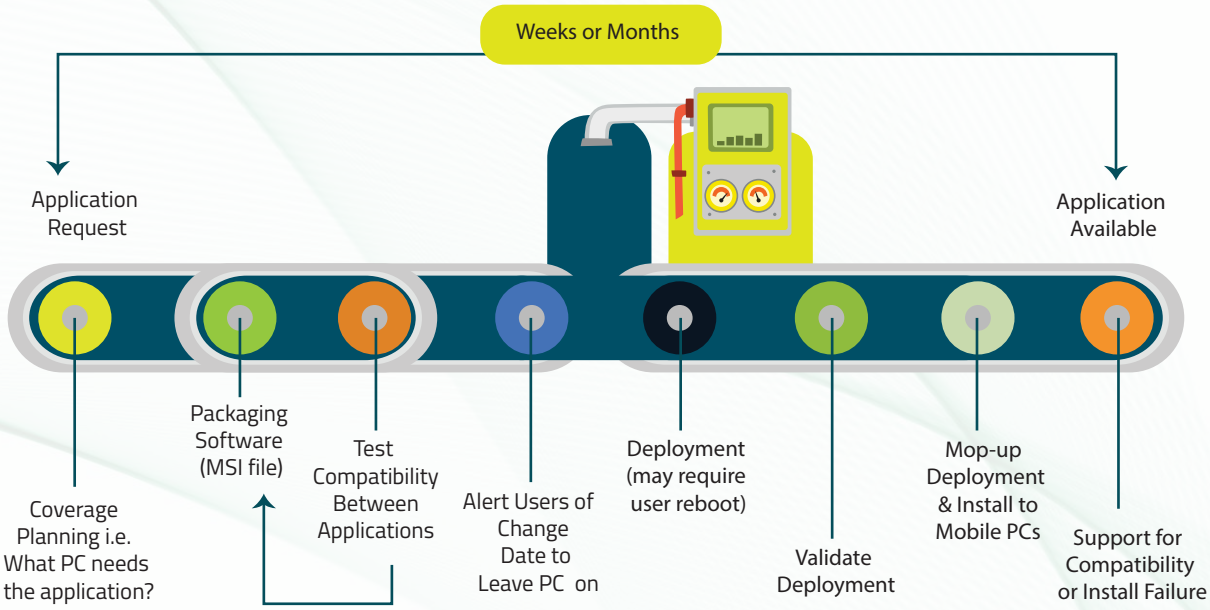
Why Application Virtualization?

App-V is an Object oriented program where it converts executable source to virtual format and connects to all the infrastructure layers for application interaction and works as a single application task without affecting other components of the infrastructure.

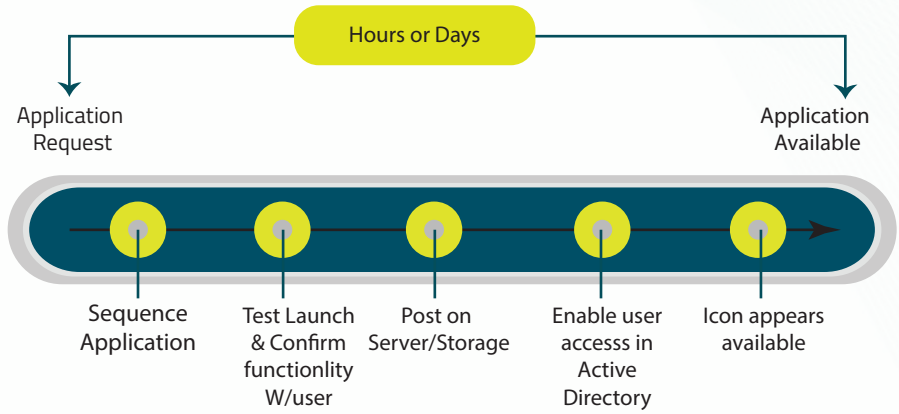
In desktop optimization, App-V delivery process is cost effective as compare to the traditional method of physical application distribution.

Deployment Process Flow Comparison

Automated Deployment



App -V Provisioning



From the delivery point of view, creating a Microsoft installer application for complex application took 30-40 hours on an average. This timeline was dramatically reduced to only a few hours of Application sequencing. It was even possible to package and deliver an application overnight.

App-V Sequencing Process

The process of application virtualization comprises of a few steps like source analysis, application hardware dependence, application run time files/registries, OS support etc. App-V applications require a virtual layer called as 'bubble' or 'sandbox'. These virtual layers run on an operating system and also prevent it from changing at any point in time of the process. It utilizes the hardware or software available inside the operating system to update, modify or do some patch work on the virtualized application so that this application can be delivered to the end user instantaneously.

This virtualization of application through App-V removes any kind of conflict and allows a different version of applications to run on the same end user device, which is usually not possible with traditional physical applications. This provides a great advantage to the Software development team during the development and testing of any application. Using App-V virtualized applications, the developers can avoid the process of launching a program locally every time they want to use it or make some changes to it. This also allows the users to determine when they are ready to upgrade and support the backward compatibility needs.

Some companies still use the traditional method of application distribution where the success rate is less than 70%, while App-V applications have more than 90% of success distribution rate. The application distribution can also be made secure either through profile management or security group in active directory.

Troubleshooting the installation and uninstallation of an App-v application on an end user's machine can be fixed instantly without depending on other infrastructure components like server reboot and tools for analysis. Thus, giving good ROI to customers for overall maintenance of the application.

Installing, updating and removal of App-V applications from end user's device can be done invisibly and in no time. For example - Helpdesk person can remotely flush and reload/upgrade the application from the cache memory in a minute.

App-V enables upgrades of virtual applications without downtime and disruption.

Following are the advantages of App-V with respect to infrastructure support:

- **App-V applications are managed centrally, which gives control on application access and usage**
- **App-V simplifies application integration with other layers and makes it easy for application up gradation and testing**
- **App-V application can be delivered to lockdown environment where virtual applications do not require administrative rights to install and run**

Cloud adoptability

Cloud's basic principle is application anywhere, at any time, on any device without owning the infrastructure. The features of App-V fits into cloud environment like plug and play process. Application virtualization decouples application from infrastructure layer and it can integrate into cloud environments as application service.

Therefore, during an application migration process, App-V is usually the first policy considering the overall infrastructure lifecycle of the application.

Centennial – Windows Roadmap for application integration

Microsoft with Centennial technology is moved towards WINDOWS Universal App Model and Microsoft App Portal to simplify the cloud migration and integration process. Centennial requires application source code to make changes to the inbuilt Windows Universal Application. In some cases, the existing application may not meet the demand of WUA and may have to build from the beginning.
However, Applications which are already in App-V OR which can be migrated to App-V will always have an advantage during the migration to the centennial environment.

Conclusion:

Microsoft with Centennial technology is moved towards WINDOWS Universal App Model and Microsoft App Portal to simplify the cloud migration and integration process. Centennial requires application source code to make changes to the inbuilt Windows Universal Application. In some cases, the existing application may not meet the demand of WUA and may have to build from the beginning.
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