The case statement for why Software Vendors should support Microsoft App-V

Dear Software Vendor,

With App-V "In the Box" on Windows 10, you no longer have an excuse to not support me.

Sincerely,
Your Customer

Tim Mangan
TMurgent Technologies, LLP
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Purpose

With Microsoft at long last adding the App-V client to the base operating system build, they have signaled that Application Virtualization is no longer a specialty thing, and that it makes sense for their enterprise customers to run traditional "Win32", .Net, and Java software applications inside of virtual containers.

The purpose of this paper is to help employees at software vendors make the case for an internal project to start supporting their customers that choose to use App-V.

What is App-V?

Microsoft Application Virtualization, or App-V for short, is both a packaged delivery mechanism for software and a unique runtime environment. For customers, one or the other capabilities is the overriding reason that they use App-V. Another aspect of App-V that they find compelling is that App-V also helps them overcome certain kinds of issues with older software not developed for the more modern versions of the operating system.

App-V for Delivery

App-V provides a way for the customer to package up the application one time, in a way that includes all of the customizations that need in their environments. This may include things like turning on or off features, initializing settings to things other than the vendor supplied defaults, and adding settings to aid integration with other components in their environment (such as back-end databases, or other applications).

This is primarily accomplished by simply installing the software and configuring it in a special environment (called the Sequencer) which monitors and captures all of the relevant changes while ignoring background noise on the system.

The captured components are then rendered in a machine and user neutral format, making the package suitable for delivery to any user on any system.

- App-V has its own delivery system (the App-V Server), but customers are free to use other mechanisms to deliver the software, include System Center Configuration Manager, third party Electronic Delivery Systems, as well as GPO and other scripting techniques.

App-V for Isolation

When the application runs, it runs in an isolated container. Doing this provides a wealth of benefits for even the best written software:

- Software is rendered properly for the target environment. Delivering the same preconfigured package to both 32-bit desktops and 64-bit servers is common.
- Unwanted interference by other applications is prevented. This can include "DLL Hell", where one software package changes the version of a shared dll component, or COM, Assembly, and Registry hijacking equivalents.
- Different versions of the same application may be run simultaneously, eliminating the need for "flash cutover and rollback" situations.
- Application assets are protected from the outside by isolation.

- Application settings are managed, allowing for help desk reset of just the settings for one application for one user at the click of a button.

The isolation environment also provides benefits for other software:

- Software becomes multi-user and multi-tenant capable, even if not designed to be.
- Older software that writes to places that are now protected by ACLs, such as the program folder or Machine Registry Hive, can now usually be run without Administrative rights for the user.

While the isolation runtime is not an anti-malware or anti-virus product, it does provide significant benefits as a portion of the overall protection schemes that enterprises put in place.

App-V for Licensing/Auditing

Customers sometimes also use App-V for license compliance and auditing. When enabled, they gain the ability to know about every single launch of the application by every user. This is far more thorough monitoring than is provided by Configuration/Ops manager, which reports via periodic sampling of active applications.

App-V Also Breaks Apps

Unfortunately, not all apps work under App-V, and some require special remediation actions in order to work. The primary culprits include:

- Proprietary licensing schemes.
- File Path lengths
- Hard coded paths
- Apps that step outside of Microsoft supported APIs

Over the years, App-V has developed a great online community where customers help each other develop "recipes" to overcome many of these application specific issues.

How does the Customer use App-V?

Customers that use Virtual Desktops, Remote Desktop Services (including Citrix), are more likely to use App-V because these environments demand immediate delivery of applications when the user logs on, rather than the pre-provisioning techniques traditionally used on desktops. But desktop use in environments with migrating users, such as is often the case in medical facilities or for temporary office support for telecommuters and multi-shift desks is also high.

Additionally, today, customers are thinking about "The Cloud" and what it means to them. They want their users to be more mobile and that means software deliver needs to be more dynamic. Even if the apps are not rewritten for the cloud, they need the instant-on capabilities of App-V.

The larger enterprise will have a team of people that exist just to get applications delivered and the team never has enough resources to keep up. A simple, consistent, process is essential for them.

For all these reasons, the customer usually want an App-V first policy; try to sequence every application and deliver in App-V and only use other means when there is an issue. Others use it when traditional methods fail.

What does it cost the vendor not to Support App-V

In making the case to support App-V, you must consider what it already costs you while you are not supporting customers using App-V.

- **More unresolved help desk issues**. Your help desk is blind to the actual cause of some of the support calls coming in. The customer is not going to volunteer the information that they use App-V unless they know that you will support them.
- **Longer support cases.** Your help desk is not prepared to ask the right questions. It takes longer to isolate problems.
- **Customer Frustration.** You only have so much good will from the customer. Don't abuse it.
- **Revenue.** A lack of support may reduce deployment size, or in some cases lead to non-renewal for upgrades.
- **Hidden Bugs.** Every software package with multiple developers and more than 3 years history has a lot of garbage in the software that nobody is aware of. It causes problems for the customer, resulting in the issues above. Whenever I work with a software vendor on preparing their package for App-V delivery, we usually find several things that we can recommend fixing in the source code in the future. These are normally things that affect all uses of the software, not just under App-V; things that affect the long term stability of the software in customer deployments.

What does it take to support your customers?

A simple project to add App-V support would include the following:

- Sequence the package yourself.
- Document the Recipe and put it on your website.
- Talk to your help desk support staff. Explain them what App-V is, how to detect if it is in use, and train them to ask one simple question: Did you use the recipe.

Your customers to this all the time for every vendor out there. It isn't that hard. Well, most of the time!

But what about this Project Centennial thing I also heard about? Isn't that App-V?

Not quite. App-V is a deployment technology to make applications work. Microsoft is leveraging some of that technology in Centennial, but the purpose is quite different.

Centennial is intended as a bridge to help you migrate your existing application into the Windows Universal App model and the Microsoft App Store. Centennial requires making source code and build changes to your app. You might not be ready for this transition, that not enough enterprises are on Windows 10 yet, or you may have determined that it does not make sense to migrate bases on the current limitations of WUA. But even if you intend to leverage Centennial, the bulk of your app would be running in an App-V like virtual environment. So any work to support App-V today will pay off when you move to Centennial.

For more support

While you can probably do this on your own, TMurgent Technologies can help software vendors with their project, providing both sequencing services and software analysis. Just email tim@tmurgent.onmicrosoft.com