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Run JMP as a Virtual Desktop Application – Changing How the Game Is Played

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ABSTRACT

The reign of the personal computer as the sole corporate access device is coming to a close, and by 2014, the personal cloud will replace the personal computer at the center of users' digital lives, according to Gartner, Inc. Desktop Application Virtualization is a top megatrend in this new era.

Virtualization has, to some extent, freed applications from the peculiarities of individual devices, operating systems or even processor architectures. The specifics of devices will become less important. Users will use a collection of devices, with the PC remaining one of many options. Access to the cloud and the content stored or shared in the cloud will be managed and secured. The virtual application will have no conflict with any application on your desktop, independent of languages, versions, and environment. Deployment is centralized.

Can JMP run as a virtual desktop application?

INTRODUCTION

This paper helps customers understand that JMP can be used within a virtualized environment. This paper also shows you the benefits and some limitation of running virtualized JMP.

WHAT'S THE CHANGE? - HOW CLOUD COMPUTING WORKS?

Traditionally, JMP customers install JMP on their physical machines. Running JMP uses local machine's CPU and resources. The change is to run JMP as a Virtual Desktop Application. Instead of installing JMP for each computer, you'd only have to load one JMP. That installed JMP would allow users to log into a Web-based service which hosts all the programs the user would need for his or her job.

The virtualization of desktop application belongs to the umbrella of cloud computing. Cloud computing is network delivery of computing and storage capacity as a service to a community of end recipients. In a cloud computing system, there's a significant workload shift. Local computers no longer have to do all the heavy lifting when it comes to running applications. The network of computers that make up the cloud handles them instead. Hardware and software demands on the user's side decrease. The only thing the user's computer needs to be able to run is the cloud computing system's interface software, which can be as simple as a Web browser, and the cloud's network takes care of the rest.

There's a good chance you've already used some form of cloud computing. If you have an e-mail account with a Web-based e-mail service like Hotmail, Yahoo! Mail or Gmail, then you've had some experience with cloud computing. Instead of running an e-mail program on your computer, you log in to a Web e-mail account remotely. The software and storage for your account doesn't exist on your computer -- it's on the service's computer cloud.

Using software as a service, users also rent application together with the infrastructure and platforms on which the applications run.

DESKTOP APPLICATION VIRTUALIZATION

One form of cloud computing is Desktop Application virtualization. It describes software technologies that improve portability, manageability and compatibility of applications by encapsulating them from the underlying operating system on which they are executed. As one form of cloud computing, a fully virtualized application is not installed in the traditional sense, although it is still executed as if it were. The application is fooled at runtime into believing that it is directly interfacing with the original operating system and all the resources managed by it, when in reality it is not. Examples of this technology for the Windows platform include Citrix XenApp 6.0, Microsoft Application Virtualization, VMware ThinApp, and etc.

Application virtualization requires a virtualization layer. Application virtualization layers replace part of the runtime environment normally provided by the operating system. The layer intercepts all file and Registry operations of virtualized applications and transparently redirects them to a virtualized location, often a single file. The application remains unaware that it accesses a virtual resource instead of a physical one. Since the application is now working with one file instead of many files and registry entries spread throughout the system, it becomes easy to run the application on a different computer and previously incompatible applications can be run side-by-side.

RUN JMP AS A DESKTOP VIRTUAL APPLICATION - ON CITRIX XENAPP 6.0 FUNDAMENTALS

JMP is a desktop application and also, a client for a couple of servers, such as SAS Servers and Database Servers. The window's version is developed using both .NET and Java. With a mixture of .NET and Java products, can it be virtualized and deployed to one user desktop?

I and my colleagues examined JMP 10 and JMP Pro, Version 10. They work well under XenApp 6.0 fundamentals' environment. We find that JMP 10 and JMP Pro, Version 10 can run seamlessly from Web browsers. Because of good test results, JMP 10 and JMP Pro, Version 10 were certified as Citrix Ready™.



Citrix Site also list JMP as a Partner. See the link <http://www.citrix.com/ready/partners/sas-institute/products/jmp>.

The reason JMP 10 and JMP Pro, Version 10 work well in Citrix XenApp 6.0 Fundamentals is that the JMP Window's version used compatible implementation technologies. This enables end users to correctly send requests and get response from application server on Citrix server. The nature of virtualization is to generate a bubble around client application. The bubble is called virtualization layer, which could communicate with the virtual application server. See below for a comparison between JMP in a native environment and JMP in non-native, virtual environment.

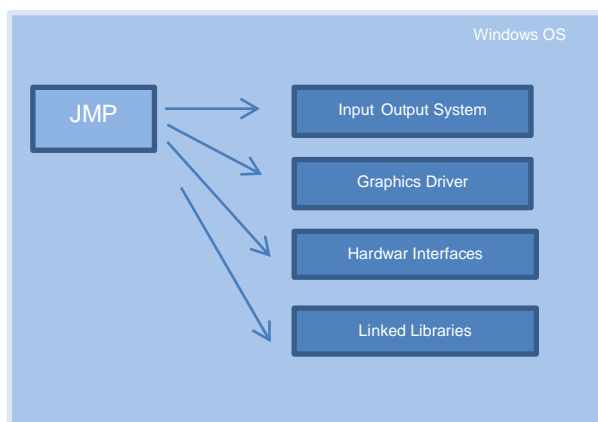


Figure 2. JMP in Native Environment

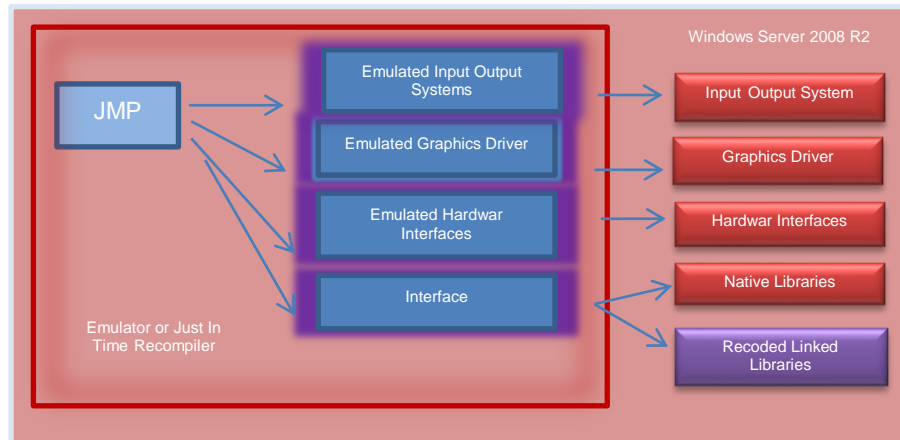


Figure 3. JMP in non-native environment

BENEFITS OF RUNNING VIRTUAL JMP

There are many benefits when running virtual JMP. They are listed but not limited to the followings:

- Citrix XenApp 6.0 Fundamentals allows JMP to run in an environment that does not suit the native application, such as Linux and mobiles. JMP becomes portable.
- Uses fewer resources than a separate virtual machine.
- Run applications that are not written correctly, for example applications that try to store user data in a read-only system-owned location.
- Run incompatible applications side-by-side, at the same time
- Reduce system integration and administration costs by maintaining a common software baseline across multiple computers in an organization.
- Simplified operating system migrations.
- Accelerated application deployment, through on-demand application streaming.
- Improved security, by isolating applications from the operating system.
- Enterprises can easily track license usage. Application usage history can then be used to save on license costs.
- Fast application provisioning to the desktop based upon user's roaming profile.
- Allows applications to be copied to portable media and then imported to client computers without need of installing them.

LIMITATION OF RUNNING VIRTUAL JMP

Certain features, such as Excel Add-In and Win Automation are not available when running JMP virtualization application. Further study are needed to see if published or streamed Excel from the Citrix server can trigger JMP to be delivered to client's desktop.

CONCLUSION

Web delivered JMP from a virtual environment (Citrix XenApp 6.0 Fundamentals) to customer's desktop from a cloud behaves like native JMP installed on the local machine. The technologies JMP Window's application used make the virtualization layer work seamlessly well with the server's CPU and OS. There are both benefits and limitation when using JMP virtualization. JMP runs in the virtual environment (Citrix XenApp 6.0 Fundamentals) without losing function or significant performance.

REFERENCES

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