

## Riverbed Optimizes Microsoft App-V

### Microsoft App-V

Microsoft App-V transforms applications into virtualized services for simplified and rapid deployment. It is the only virtualization solution that delivers applications that are never installed and dynamically delivered, on demand. Whether deployed on desktops, laptops or, terminal servers, App-V changes application management from a series of manual tasks into an automated, streamlined process that accelerates the pace and reduces the cost of business.

### Accelerate Virtual Application Streaming

Deploying Riverbed Steelhead products with Microsoft App-V significantly accelerates the streaming of virtualized applications across the wide area network (WAN). Virtualized applications allow customers to deploy applications from central management servers without ever having to install actual software onto client machines. While this clearly provides benefits from an IT management perspective by simplifying administration, performance limitations over the WAN can impact the usability of the solution by end-users in a distributed environment.

With Riverbed organizations deploying Microsoft App-V virtual applications can dramatically reduce the amount of time it takes to stream an application from a central App-V server to users in remote offices or on the road. Steelhead products cut the amount of time it takes to load virtual applications as well as accelerating access to centralized data stores. The Riverbed Optimization System (RiOS) utilizes industry leading data streamlining, transport streamlining and application streamlining to provide data deduplication, compression, and protocol optimization at both the transport and application layers.

With, RiOS, enterprises can cut App-V traffic on the WAN by as much as 99% allowing organizations to save on bandwidth costs while still delivering real-time access to information for their employees. The end result is greater IT operational efficiency and a more productive workforce.

### Performance Improvements

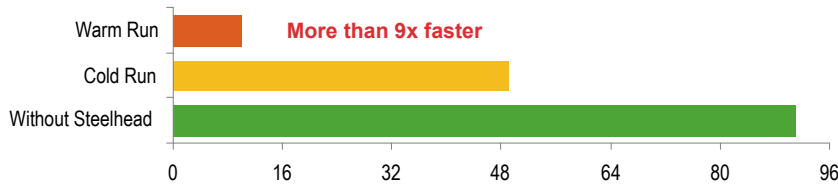
Test results show that Riverbed Steelhead products significantly accelerate App-V virtual application streaming. Accessing applications was more than 9 times faster with Steelhead appliances and bandwidth utilization was reduced by over 99%.

Although the App-V Desktop client caches the application stream, rendering the warm run (for the same user) redundant, it is important to note that for a multi-user branch office, only the first user streaming a virtual application suffers a “cold” hit, and the rest of the users in the branch office get the benefits of a “warm” run.

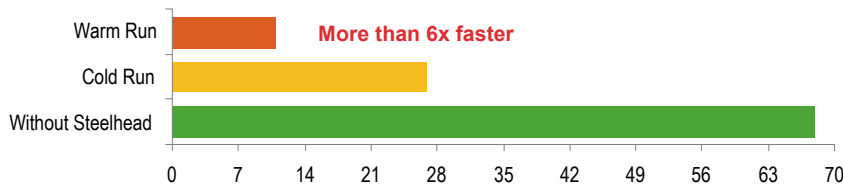
### TEST RESULTS

- Accelerates App-V virtual application streaming across the WAN by up to 9x
- Reduces bandwidth utilization by up to 99%

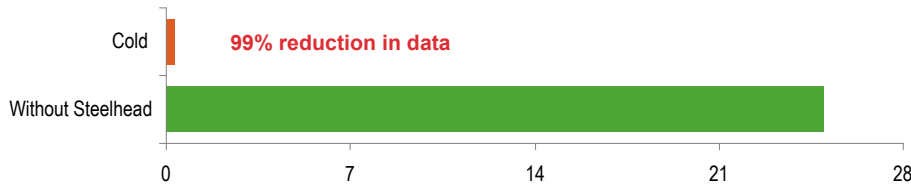
### Streaming MS Word virtualized with App-V – Time to Complete (in seconds)



### Streaming MS PowerPoint virtualized with App-V – Time to Complete (in seconds)



### Data Transferred for PowerPoint – Bandwidth Utilization (in MB)



#### DEPLOYMENT BENEFITS

Deploying Riverbed for Microsoft App-V produces significant benefits:

- Simplify IT management with virtualized applications.** IT organizations can quickly and easily deploy applications to users around the world without having to perform installations on client endpoints. The time savings for IT staff and administrative simplicity deliver significant cost-savings.
- Consolidation without the performance penalty.** The distributed and mobile workforce can now access centralized virtual applications with LAN-like access to improve productivity and end-user satisfaction. This enables companies to not only centralize data, but also limit the ability of client machines to run applications providing greater security and control over the enterprise.
- Reduce bandwidth utilization.** Steelhead products significantly reduce bandwidth utilization for remote offices and mobile workers when accessing virtualized applications.

### About Riverbed

Riverbed Technology is the IT infrastructure performance company. The Riverbed family of wide area network (WAN) optimization solutions liberates businesses from common IT constraints by increasing application performance, enabling consolidation, and providing enterprise-wide network and application visibility – all while eliminating the need to increase bandwidth, storage or servers. Thousands of companies with distributed operations use Riverbed to make their IT infrastructure faster, less expensive and more responsive. Additional information about Riverbed (NASDAQ: RVBD) is available at [www.riverbed.com](http://www.riverbed.com)



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