

**OVERVIEW**

Thousands of organizations worldwide rely on Riverbed to extract more value from existing storage, application, and network investments.

**Key Whitewater Benefits**

- » Elimination of cumbersome and inefficient tape backup
- » 30-50% cost savings relative to tape alternatives
- » Drop-in, simple DR
- » Cloud flexibility, scalability, reliability, and availability
- » No infrastructure change

Whitewater cloud storage gateways unlock the benefits of public cloud storage while overcoming the challenges of deploying it as a storage tier. Whitewater dramatically optimizes and accelerates backup and archiving to the cloud, slashing costs, simplifying management, and enabling unlimited scalability, all while preserving data security. Whitewater integrates seamlessly with existing backup infrastructure and with the leading cloud storage providers, avoiding complex changes or rip-and-replace approaches to storage optimization.

# Riverbed Whitewater

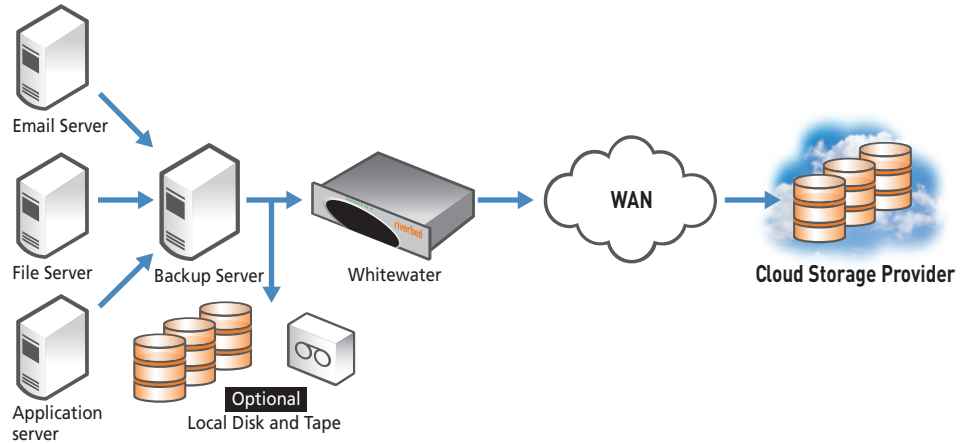
**Revolutionizing Cloud Storage through Optimization**

The Riverbed® Whitewater® cloud storage gateway for data protection provides high-performance LAN-like access to public cloud storage in a pre-configured, drop-in appliance. By leveraging industry-proven acceleration and deduplication technology that simultaneously delivers network (data-in-flight) and storage (data-at-rest) encryption, Whitewater appliances enable organizations to instantly transform their backup and archiving process into a highly-efficient cloud-ready infrastructure, reducing costs 30-50% compared to tape alternatives.

For decades, organizations have struggled with the shortcomings of tape or local disk for their data protection needs. As accelerating data growth and strict SLAs further reduce the appeal of these solutions, some organizations have turned to private clouds to consolidate and reduce storage costs. But private clouds still require extensive storage management and cost. Public cloud storage accessed by Whitewater gateways provides a compelling alternative.

Whitewater gateways enable organizations to enhance their data management and protection strategies by:

- Eliminating the headaches and cost of tape backup, with one appliance replacing over 1 PB of tape
- Providing cost reductions of 30-50% compared to tape alternatives
- Creating drop-in DR without investing in a 2nd data center
- Enabling LAN-like access to, and rapid recovery of, stored data
- Providing flexibility and scalability in storage provisioning



The Whitewater appliance integrates seamlessly with applications representing 85% of the backup tool market, ensuring that organizations can utilize cloud storage without any changes to their fine-tuned backup software and processes. The appliances also have built-in support for the APIs from all major public cloud storage providers.

Front End		Back End
<ul style="list-style-type: none"> <li>• CA ArcServe</li> <li>• CommVault Simpana</li> <li>• EMC NetWorker</li> <li>• IBM Tivoli Storage Manager</li> <li>• Microsoft SQL Server Backup</li> </ul>	<ul style="list-style-type: none"> <li>• Quest vRanger</li> <li>• Oracle RMAN</li> <li>• Symantec Backup Exec</li> <li>• Symantec NetBackup</li> <li>• Veeam</li> </ul>	<ul style="list-style-type: none"> <li>• Amazon S3</li> <li>• AT&amp;T Synaptic Storage as a Service (EMC Atmos)</li> <li>• EMC Atmos</li> <li>• Microsoft Windows Azure</li> <li>• Nirvanix Cloud Storage Network</li> <li>• OpenStack (Swift) object storage</li> <li>• Rackspace Cloud Files</li> </ul>

## Key Benefits of Whitewater

### Reduce Backup Costs

The Whitewater gateway's industry-leading in-line network and storage deduplication reduces data size by 10-30x, on average, and cuts the cost of data protection by 30-50% compared to tape alternatives by reducing both bandwidth requirements for moving backup data into the cloud and the amount of cloud storage consumed. Organizations can also eliminate the capital costs of current data protection strategies by reducing the dependence on disk-to-disk backup and tape archiving and using a pay-as-you-grow cloud storage model.

### Simply and Easily Replace the Pain of Tape or Disk Backup

Whitewater gateways give a direct and secure interface from one's existing backup software straight to the cloud. This provides reliable, off-site data protection without the need to invest in a new backup infrastructure, a secondary data center, or underutilized storage capacity. No more installing, data loading, uninstalling, shipping, and offsite storing of tape media or forward provisioning and managing backup storage disk arrays. A single Whitewater can replace over 1 PB of tape storage. And as a single-ended solution, Whitewater gateways do not need to be paired with another gateway in the cloud.

### Simplify and Accelerate Recovery and DR

Recovering from a disaster typically spans many days or weeks to request tape retrieval, wait for delivery, search for data that needs restoration, load tapes, and recover data. With Whitewater gateways, all restores from the cloud leverage industry-leading network and storage deduplication and WAN optimization techniques to dramatically accelerate recovery of anything from a file to a volume or more to any location, reducing recovery time from days to hours. And unlike tape or disk, Whitewater gateways provide drop-in DR capability leveraging the cloud instead of maintaining a backup datacenter, which allows restoration to take place anywhere that has an Internet connection or even in the cloud itself.

### Maximize Flexibility and Scalability

Public clouds provide access-anywhere capacity of near unlimited scale that can be adjusted real time to meet an organization's current needs. Whitewater appliances unlock this flexible, scalable tier of storage, dramatically reducing financial and operational risk while enabling users to respond nimbly to shifting IT requirements.

### Secure Off-Site Data More Effectively

Whitewater gateways encrypt data in-flight to the cloud with SSL v3, and at rest using 256-bit AES encryption. This dual-layer encryption ensures that any data moved into cloud storage is not compromised and creates complete end-to-end security, complementing data security measures deployed by cloud service providers. Whitewater appliances leverage an innovative key management system that allows organizations to carefully manage data security and at the same time gives them the flexibility to restore to any location.

### Avoid Cloud Vendor Lock-in

Whitewater appliances give organizations the flexibility to work with multiple cloud vendors. Unlike alternatives that are tied to a specific cloud (or backup tool), Whitewater appliances act as a broker and can seamlessly accelerate access to multiple cloud providers. This enables off-siting of data to multiple locations or transition to a different cloud provider as needed.

## System Specifications

Whitewater series specifications	Virtual WWA	WWA-510	WWA-710	WWA-2010
Raw cache capacity <sup>1</sup>	N/A	3.5TB	7TB	11TB
RAID protection level <sup>2</sup>	Customer provisioned <sup>3</sup>	RAID-6	RAID-6	RAID-6
Usable cache capacity	Up to 2TB	2TB	4TB	8TB
Cloud storage capacity <sup>4</sup>	Unlimited	Unlimited	Unlimited	Unlimited
Average Deduplication	10-30x	10-30x	10-30x	10-30x
Maximum LAN throughput, aggregate	250 GB/hr	400 GB/hr	600 GB/hr	>1 TB/hr

1. All capacity values are calculated using Base 10 (i.e. TB = 1,000,000,000,000 bytes)  
 2. Local storage with the Whitewater appliance only. (Excludes cloud storage).  
 3. Any customer provisioned RAID level that is valid and supported by VMWare ESXi 4.x  
 4. Cloud storage is provisioned by the Cloud Storage Provider

## About Riverbed

Riverbed delivers performance for the globally connected enterprise. With Riverbed, enterprises can successfully and intelligently implement strategic initiatives such as virtualization, consolidation, cloud computing, and disaster recovery without fear of compromising performance. By giving enterprises the platform they need to understand, optimize and consolidate their IT, Riverbed helps enterprises to build a fast, fluid and dynamic IT architecture that aligns with the business needs of the organization. Additional information about Riverbed (NASDAQ: RVBD) is available at [www.riverbed.com](http://www.riverbed.com).



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