riverbed®
Think fast.™

DATA SHEET

Central Management Console – Virtual Edition (CMC-VE)

OVERVIEW

The Central Management Console-Virtual Edition (CMC-VE) is a software-only version of the Riverbed® central management platform specifically built for managed service providers (MSPs). With CMC-VE, MSPs have a multi-tenant solution to manage Steelhead® appliance deployments centrally across multiple customers, without having to deploy dedicated CMC appliances per customer.

MSPs can deploy multiple CMC-VE instances on one server, or on existing servers that have capacity. This enables MSPs to:

- Reduce operational costs and improve service margins by leveraging existing IT infrastructure
- Improve visibility across customer networks and provide valuable performance information
- Easily scale central management capabilities for Steelhead appliances across multiple customers
- Flexibly allocate licenses among customers as business needs change

Flexible and Scalable Multi-tenant Central Management Platform for Managed Service Providers.

The Riverbed CMC simplifies the process of deploying, configuring, and managing Steelhead appliances. With just a few clicks, administrators are in full control of a Steelhead appliance deployment. The CMC also provides visibility into how applications are performing across a WAN. Reporting metrics include WAN traffic levels, application throughput performance, and TCP session flow characteristics.

The CMC-VE for managed service providers is a virtualized version of the CMC that provides all the benefits of central management without requiring dedicated hardware. MSPs can manage thousands of Steelhead appliances across multiple customer sites – all from one physical server in their data center – and provide customers with valuable information and reports about the performance of their applications across the network. In addition, MSPs can install CMC-VE on any server that has enough room to run the application, so they can leverage their existing hardware infrastructure and keep operational costs low.

CMC-VE runs on VMware ESX and can be downloaded from the Riverbed support site.

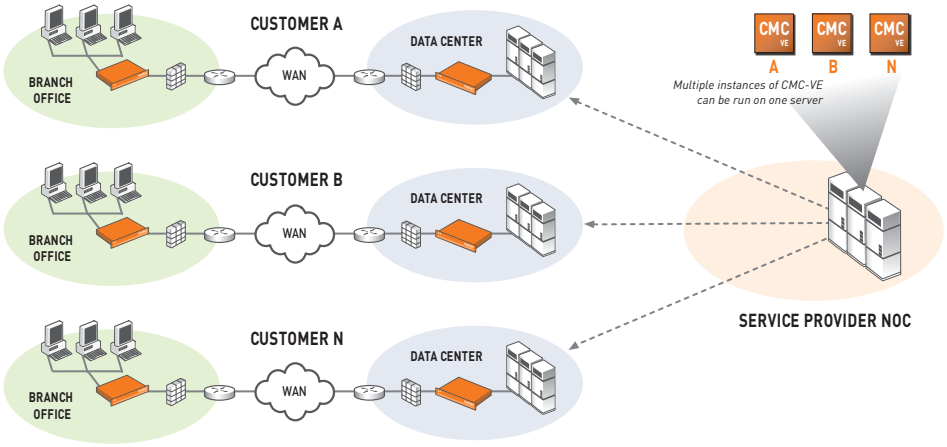

Figure 1. CMC-VE is a software-only version of the Riverbed central management platform that enables multi-tenancy for MSPs.

Feature Details – CMC-VE

Multi-tenancy. With CMC-VE, MSPs can manage multiple Steelhead appliance customers without having to deploy dedicated hardware for each customer. Because CMC-VE is a software-only product running on VMware, MSPs can run multiple instances of CMC-VE and manage thousands of Steelhead appliances from one physical server. In addition, CMC-VE can be deployed almost instantly when an MSP brings on a new customer – without having to deploy additional hardware. The aggregate number of Steelhead appliances that can be managed on a single server will vary depending on the hardware being used and the number of CMC-VE instances. For example, in Riverbed tests, one server was able to run 50 CMC-VE instances, each of which was managing 50 Steelhead appliances. In another scenario, one server hosted six CMC-VE instances, each managing 500 Steelhead appliances (3,000 appliances being managed from one physical server).[1] The number of CMC-VE instances and Steelhead appliances that can be managed on a single physical server will depend on the MSP's specific environment.

Flexible licensing. Flexible licensing enables MSPs to purchase additional management licenses for Steelhead appliance "endpoints" as needed, and move existing license keys across CMC-VE instances. This gives MSPs a license pool that they can grow and allocate across customers as their needs change. For example, licenses originally purchased with one customer in mind can be re-allocated to a different customer whose needs have grown faster than anticipated. This gives MSPs the flexibility to allocate licenses as it best suits their business. Management licenses are available in increments of ten managed Steelhead appliances per license.

Automatic resource checks. CMC-VE constantly performs resource checks to determine if the right amount of resources (such as disk space and memory) are allocated for each CMC-VE image based on the number of appliances managed. If the allocation is insufficient, there will be an alarm, and the CMC-VE status will be shown as "critical." Automatic resource checks will also occur each time an MSP adds management licenses for new endpoints.

Scalable disk allocation. CMC-VE allocates disk space flexibly for the virtual image based on the number of endpoint Steelhead appliances that are managed. This means that one instance of CMC-VE can scale from just a few Steelhead appliances requiring a few gigabytes of disk space up to hundreds of Steelhead appliances requiring significant amounts of disk space. This "grow as you go" capability allows MSPs to conserve resources by keeping the initial image small, while providing the flexibility to grow resources later if needed.

Historical visibility. Each CMC-VE instance can store up to one year of reporting information, giving MSPs powerful information about their customers' networks.

Leveraging the Power of the VMware Platform

With CMC-VE, MSPs also have the capabilities of the VMware platform on which the software runs, including:

Flexible migration of virtual machines between hardware platforms. MSPs can leverage VMware VMotion to move virtual machines from one server to another in either a scheduled or pro-active manner, with no impact to end users. This gives MSPs the flexibility and availability to meet the changing needs of their business. To learn more about VMware VMotion, please refer to http://www.vmware.com/products/vi/vc/vmotion.html

[1] Based on Riverbed tests performed on a Dell server with 32 GB RAM, two Quad Core Xeon E5430 processors (each with 2.66 GHz), and a NetApp SAN. Customer results will vary depending on a customer's specific server, VMware implementation, and storage capacity.

High availability features for increased fault-tolerance. MSPs can also leverage the high availability features of the VMware platform, which provide cost-effective high availability for any application running in a virtual machine, regardless of its operating system or underlying hardware configuration. VMware HA continually monitors servers within a resource pool and can restart virtual machines instantly on a different physical server if required. To learn more about VMware HA, please refer to http://www.vmware.com/products/vi/vc/ha_overview.html

Additional CMC features

Riverbed is continually refining the CMC to improve its scalability and flexibility for MSP customers. As functionality is added to the CMC appliance, it will also be available on CMC-VE. Some of the more notable features that benefit MSPs include:

Touchless Steelhead configuration. With the CMC, a new Steelhead appliance can be deployed with minimal administration. Steelhead appliances will automatically contact the CMC for configuration and operation information, and start accelerating applications immediately.

Aggregated performance reports. The CMC provides the ability to view centrally performance statistics for all Steelhead appliances network-wide, or from a specific group of Steelhead appliances. Global statistics also can be represented by QoS classes or applications (optimized and pass-through). View a sortable list of all appliances/groups and their individual performance statistics, or view graphed representations of all appliances or a group's aggregate performance.

Dynamic report generation. With a few clicks of a mouse, select ports/applications/appliances and generate performance reports spanning a configurable window of time up to 12 months in the past. Want to quickly see throughput performance for FTP and HTTP for the first week of last June? Select these two ports and the time interval to see the report almost instantaneously. Customized reports can be emailed regularly to one or more recipients, further simplifying management of large numbers of Steelhead appliances.

Backup and restore capabilities. With CMC version 5.5, statistics and configurations can be backed up to an external source, so that MSPs have additional protection for their customers' information. Backups can be run on a pre-determined schedule or performed manually.

For a full listing of these features, please refer to the CMC Data Sheet and Feature Briefs.

SPECIFICATIONS

Software requirements	**VMware ESX version 3.5 or 4.0**		
Hardware requirements:			
Number of Steelhead appliances per CMC instance	**Disk space per CMC**	**CPU per CMC**	**RAM per CMC**
Up to 10	30 GB	1 GHz	512 MB
Up to 50	50 GB	1 GHz	1 GB
Up to 100	75 GB	1 GHz	1 GB
Up to 250	125 GB	2 GHz	1 GB
Up to 500	250 GB	2 GHz	2 GB

riverbed®

Think fast.™

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

InfoWorld 2009 TECHNOLOGY OF THE YEAR AWARDS

2005, 2006, 2007, 2008, 2009

NETWORKWORLD BEST OF THE TESTS '08

2006 Network Computing WELL-CONNECTED AWARDS WINNER

Riverbed Technology
199 Fremont Street
San Francisco, CA 94105
Tel: +1 415 247 8800
Fax: +1 415 247 8801
www.riverbed.com

Riverbed Technology Ltd.
Farley Hall, London Road
Binfield
Bracknell
Berks RG42 4EU
Tel: +44 (0) 1344 401900

Riverbed Technology Pte. Ltd.
391A Orchard Road #22-06/10
Ngee Ann City Tower A
Singapore 238873
Tel: +65 6508-7400

Riverbed Technology K.K.
Shiba-Koen Plaza Building 9F
3-6-9, Shiba, Minato-ku
Tokyo, Japan 105-0014
Tel: +81 3 5419 1990

© 2009 Riverbed Technology. All rights reserved. Portions of Riverbed's products are protected under Riverbed patents, as well as patents pending. Riverbed Technology, Riverbed, Steelhead, RiOS, Interceptor, Think Fast, the Riverbed logo, Mazu, Profiler, Atlas and Cascade are trademarks or registered trademarks of Riverbed Technology. All other trademarks used or mentioned herein belong to their respective owners.

DS-CMCVE080309