

# RCSA-W

---

Riverbed Certified Solutions Associate  
WAN Optimization

Exam 101-01 Prep/Blueprint

Version 2018-1

# Table of Contents

- Preface ..... 3
  - What's inside? ..... 3
- Certification Overview ..... 3
  - Benefits of Certification ..... 3
- RCSA-W Blueprint and Study References ..... 6
  - Riverbed Recommended Training Courses ..... 6
  - Recommended References ..... 7
  - General Knowledge ..... 7
  - SteelHead, SteelHead EX ..... 8
  - SteelCentral Controller for SteelHead (SCS) ..... 9
  - SteelHead CX (formerly SteelHead SaaS) ..... 9
- Exam Questions ..... 10
  - Types of Questions ..... 10
  - Exam Question Distribution ..... 10

# Preface

This Riverbed® certification blueprint is intended for anyone who wants to become certified in the Riverbed WAN optimization products and solutions, and Riverbed Optimization System (RiOS®).

## What's inside?

The Riverbed Certified Solutions Associate – WAN Optimization (RCSA-W) program is designed to validate the skills required of pre-sales engineers and technical professionals who work in the initial implementation of Riverbed products.

This blueprint provides a combination of theory and practical experience needed for a general understanding of the subject matter. It also provides sample questions that will help in the evaluation of personal progress and provide familiarity with the types of questions that will be encountered in the exam.

***This publication does not replace practical experience, nor is it designed to be a stand-alone guide for any subject. Instead, it is an effective tool that, when combined with education activities and experience, can be a very useful preparation guide for the exam.***

## Certification Overview

The Riverbed Certified Solutions Associate – WAN optimization certificate is granted to individuals who demonstrate entry-level knowledge and experience with the RiOS® product suite. The typical RCSA-W will have taken a Riverbed approved training class such as the **WAN200 Optimization Essentials** course in addition to having hands-on experience in performing deployment, troubleshooting, and maintenance of RiOS products in small and medium organizations. While there are no set requirements prior to taking the exam, candidates who have taken a Riverbed authorized training class and have at least three months of hands-on experience with RiOS products have a significantly higher chance of receiving the certification.

**We would like to emphasize that *solely* taking the class will not adequately prepare you for the exam.**

To obtain the RCSA-W certification, you are required to pass a computerized exam available at any Pearson VUE testing center worldwide.



## Benefits of Certification

- ***Establishes your credibility as a knowledgeable and capable individual in regard to Riverbed products and services, WAN optimization, and application acceleration***
- ***Improves your career advancement potential***
- ***Entitles you to use the RCSA-W certification logo on your business card***

# Exam Information

- **Exam Number: 101-01**
- **Exam Name: Riverbed Certified Solutions Associate – WAN Optimization**
- **Please refer to the ‘Study and Resource References’ section for detail.**
- **Number of Questions: 65**
- **Total Time: 75 minutes for exam, 15 minutes for Survey and Tutorial (90 minutes total)**
- **Exam Provider: Pearson VUE**
- **Exam Language: English only. Pearson automatically provides a 30-minute time extension for exams taken in non-English speaking countries. English speaking countries are Australia, Bermuda, Canada, Ireland, New Zealand, United Kingdom, South Africa, and the United States.**
- **Special Accommodations: Yes (must submit written request to Pearson VUE for ESL or ADA accommodations; includes time extensions and/or a reader)**
- **Offered Locations: Worldwide (over 4000 test centers in 165 countries)**
- **Prerequisites: None, although taking a Riverbed training class is highly recommended**
- **Available to: Partners, customers, and employees**
- **Passing Score: 60%**
- **Certification Expires: Every two years (must recertify every two years, with six month grace period)**
- **Recertification Criteria: Retake the 101-01 – RCSA-W current exam. If you are RCSA-W certified, passing the 199-01 – RCSP-W exam will re-certify both your RCSA-W and the RCSP-W.**
- **Wait Between Failed Attempts: 72 hours**
- **Wait Between Passed Exams: One year**
- **Number of Attempts Allowed: Unlimited**



# Certification Checklist

As the RCSA-W exam is geared towards individuals who have both the theoretical knowledge and hands on experience with the RiOS product suite, ensuring proficiency in both areas is crucial towards passing the exam. For individuals starting out with the process, we recommend the following steps to guide you along the way.

## 1. Building Theoretical Knowledge

The easiest way to become knowledgeable in deploying, maintaining, and troubleshooting the RiOS product suite is to take a Riverbed authorized training class. To ensure the greatest possibility of passing the exam, it is recommended that you review the RCSA-W Blueprint and Study References and ensure your familiarity with all topics listed, prior to any examination attempts.

## 2. Gaining Hands-on Experience

While the theoretical knowledge will get you partway there, hands-on knowledge will also help prepare you to pass the exam. Since all deployments are different, providing an exact amount of experience required is difficult. Generally, we recommend that resellers and partners perform at least five deployments in a variety of technologies prior to attempting the exam. For customers, and alternatively for resellers and partners, starting from the design and deployment phase and having **at least three months of experience** in a production environment would be beneficial.

## 3. Taking the Exam

The final step in becoming an RCSA-W is to take the exam at a Pearson VUE authorized testing center. To register for any Riverbed Certification exam, please visit <http://www.pearsonvue.com/riverbed>



# RCSA-W Blueprint and Study References

The Riverbed Certified Solutions Associate WAN Optimization exam, and therefore this blueprint, covers the Riverbed products and technologies up to RiOS version 3.6.0 for the SteelHead EX appliances and VSP; version 9.0.0 for the SteelHead and SteelHead (virtual edition); version 9.0.0 for the SteelCentral Controller for SteelHead, and version 4.5.1 for the SteelCentral Controller for SteelHead Mobile.

***This publication does not replace practical experience, nor is it designed to be a stand-alone guide for any subject. Instead, it is an effective tool that, when combined with education activities and experience, can be a very useful preparation guide for the exam.***

## Riverbed Recommended Training Courses

- ***WAN200 Optimization Essentials***

Additional Information on Riverbed Training can be found at: <http://www.riverbed.com/training/index.html>. You can also write to [training@riverbed.com](mailto:training@riverbed.com)

Riverbed authorized training courses and Riverbed Certification are mutually exclusive programs. This means that certification is not directly mapped to specific training courses and vice versa. We recommend certain courses but in no way does that automatically qualify or prepare you for the exam.

To access Riverbed technical documentation and publications please visit Riverbed Support webpage at <https://support.riverbed.com/index.htm>



## Recommended References

### General Knowledge

Subject	Reference
<b>TCP</b>	<ul style="list-style-type: none"><li>• <a href="http://www.ietf.org/rfc.html">http://www.ietf.org/rfc.html</a></li><li>• RFC 793 (Original TCP RFC)</li><li>• RFC 1323 TCP extensions for high performance</li><li>• RFC 3649 (High-speed TCP for Large Congestion Windows)</li><li>• RFC 3742 (Limited Slow-Start for TCP with Large Congestion Windows)</li><li>• RFC 2474 (Differentiated Services Code Point)</li><li>• TCP/IP Illustrated, Volume I, The Protocols by W. R. Stevens (Addison-Wesley, 1994)</li></ul>
<b>NetFlow</b>	<ul style="list-style-type: none"><li>• <a href="http://www.caida.org/tools/utilities/flowscan/arch.xml">http://www.caida.org/tools/utilities/flowscan/arch.xml</a></li></ul>
<b>Embedded NetShark</b>	<ul style="list-style-type: none"><li>• <a href="https://supportkb.riverbed.com/support/index?page=content&amp;id=S16021">https://supportkb.riverbed.com/support/index?page=content&amp;id=S16021</a></li></ul>
<b>Deployment Options</b>	<ul style="list-style-type: none"><li>• <a href="http://tools.ietf.org/id/draft-wilson-wrec-wccp-v2-01.txt">http://tools.ietf.org/id/draft-wilson-wrec-wccp-v2-01.txt</a></li><li>• Riverbed Deployment Guide v9.0 – Chapter 11: WCCP Virtual In-Path Deployments</li><li>• Riverbed Deployment Guide v9.0– Chapter 12: Policy-Based Routing In-Path Deployments</li></ul>
<b>QoS</b>	<ul style="list-style-type: none"><li>• Riverbed Deployment Guide v9.0 – Chapter 6: QoS Configuration and Integration and Chapter 7: QoS Configuration Examples</li></ul>
<b>Data Streamlining, Transport Streamlining, Application Streamlining, Management Streamlining</b>	<ul style="list-style-type: none"><li>• Riverbed Deployment Guide v9.0 – Section 1: Optimization Techniques and Design Fundamentals</li></ul>
<b>Security</b>	<ul style="list-style-type: none"><li>• Riverbed Deployment Guide v9.0 – Chapter 16: VPN Routing and Forwarding</li><li>• Riverbed Deployment Guide v9.0 – Chapter 18: Data Protection Deployments</li><li>• Riverbed Deployment Guide v9.0 – Chapter 20: Proxy File Services Deployment</li><li>• Riverbed Deployment Guide v9.0 – Chapter 22: Authentication, Security, Operations, and Monitoring</li><li>• SteelHead Appliance Deployment Guide v9.0 – Protocols – Chapter 11: SSL Deployments</li></ul>

## SteelHead, SteelHead EX

Subject	Reference
<b>SteelHead Appliance (Installation and Configuration)</b>	<ul style="list-style-type: none"> <li>• SteelHead Appliance Installation and Configuration Guide</li> <li>• Riverbed Deployment Guide v9.0 – Chapter 1: Optimization techniques and Design Fundamentals</li> <li>• Riverbed Deployment Guide v9.0– Chapter 3: WAN Visibility Modes</li> <li>• Riverbed Deployment Guide v9.0 – Chapter 9: Physical In-Path Deployments</li> <li>• Riverbed Deployment Guide v9.0 – Chapter 10: Virtual In-Path Deployments</li> <li>• Riverbed Deployment Guide v9.04 – Chapter 17: Out-of-Path Deployments</li> <li>• Riverbed Deployment Guide v9.0 – Chapter 18: Data Protection Deployments</li> <li>• Riverbed Deployment Guide v9.0 – Protocols Chapter 9: Video Optimization</li> <li>• SteelHead Appliance Deployment Guide v9.0 – Protocols</li> <li>• Riverbed Getting Started Guide v8.6</li> <li>• SteelHead Series EX560 and EX760 Systems Owner’s Manual v3.5.0</li> <li>• Riverbed Training Course: WAN200 Optimization Essentials</li> </ul>
<b>SteelHead (virtual edition) (Installation and Configuration)</b>	<ul style="list-style-type: none"> <li>• Virtual Steelhead Installation Guide v9.0</li> </ul>
<b>SteelHead Mobile Appliance (Installation and Configuration)</b>	<ul style="list-style-type: none"> <li>• Riverbed Deployment Guide v9.0 – Chapter 24: Steelhead Mobile Deployments</li> <li>• Steelhead Mobile Controller User’s Guide v4.5.1</li> <li>• Steelhead Mobile Controller Installation Guide v4.5.1</li> <li>• Riverbed Training Course: WAN200 Optimization Essentials</li> </ul>



## SteelCentral Controller for SteelHead (SCS)

Subject	Reference
<b>Controller Appliance (Installation and Configuration)</b>	<ul style="list-style-type: none"><li>• Riverbed SteelCentral Controller for SteelHead Deployment Guide v9.0</li><li>• SteelCentral Controller for SteelHead User's Guide v9.0</li><li>• SteelCentral Controller for SteelHead Management Console Installation Guide v9.0</li><li>• Riverbed Training Course: WAN200 Optimization Essentials</li></ul>
<b>Controller-v Appliance (Installation and Configuration)</b>	<ul style="list-style-type: none"><li>• SteelCentral Controller for SteelHead Virtual Edition Installation Guide v9.0</li></ul>

## Troubleshooting

Subject	Reference
<b>Troubleshooting</b>	<ul style="list-style-type: none"><li>• Riverbed Deployment Guide v9.0 – Chapter 23: Troubleshooting Steelhead Appliance Deployments Problems</li></ul>

## SteelHead CX (formerly SteelHead SaaS)

Subject	Reference
<b>SteelHead CX</b>	<ul style="list-style-type: none"><li>• SteelHead (in the Cloud) User's Guide <a href="https://support.riverbed.com/content/support/software/steelhead/cx-appliance.html">https://support.riverbed.com/content/support/software/steelhead/cx-appliance.html</a></li></ul>

# Exam Questions

## Types of Questions

The RSCA-W exam includes a variety of question types, including single-answer multiple choice, multiple-answer multiple choice, and scenario based. The question distribution is heavily targeted toward the multiple-choice variety.

## Exam Question Distribution

Subject Area	Approximate Number of Questions from this area
WAN Optimization Technology	15
SteelHead Deployment & SteelHead Control for SteelHead	18
SteelHead Application Features	12
SteelHead Mobile Client	9
SteelHead CX	6
SteelHead Networking Features	5
<b>TOTAL QUESTIONS</b>	<b>65</b>

---

### About Riverbed

Riverbed enables organizations to modernize their networks and applications with industry-leading SD-WAN, application acceleration, and visibility solutions. Riverbed's platform allows enterprises to transform application and cloud performance into a competitive advantage by maximizing employee productivity and leveraging IT to create new forms of operational agility. At more than \$1 billion in annual revenue, Riverbed's 28,000+ customers include 97% of the *Fortune* 100 and 98% of the *Forbes* Global 100. Learn more at [riverbed.com](http://riverbed.com).



© 2017 Riverbed Technology, Inc. All rights reserved.

Riverbed®, SteelConnect™, SteelCentral™, SteelHead™, and SteelFusion™ are all trademarks or registered trademarks of Riverbed Technology, Inc. (Riverbed) in the United States and other countries. Riverbed and any Riverbed product or service name or logo used herein are trademarks of Riverbed. All other trademarks used herein belong to their respective owners. The trademarks and logos displayed herein cannot be used without the prior written consent of Riverbed or their respective owners.

This technical marketing paper is furnished "AS IS" and is subject to change without notice and should not be construed as a commitment by Riverbed. Riverbed does not provide any warranties for any information contained herein and specifically disclaims any liability for damages, including without limitation direct, indirect, consequential, and special damages in connection with this technical marketing paper. This document may not be copied, modified or distributed without the express authorization of Riverbed and may be used only in connection with Riverbed products and services. Use, duplication, reproduction, release, modification, disclosure or transfer of this document is restricted in accordance with the Federal Acquisition Regulations as applied to civilian agencies and the Defense Federal Acquisition Regulation Supplement as applied to military agencies. This document qualifies as "commercial computer software documentation" and any use by the government shall be governed solely by these terms. All other use is prohibited. Riverbed assumes no responsibility or liability for any errors or inaccuracies that may appear in this technical marketing paper.