
Shadow Peak
SECURITY TRAINING AND SERVICES
Gateway Performance Optimization
Timothy C. Hall, Shadow Peak Inc.
CHECK POINT™
Check Point mind
Learn from the masters!

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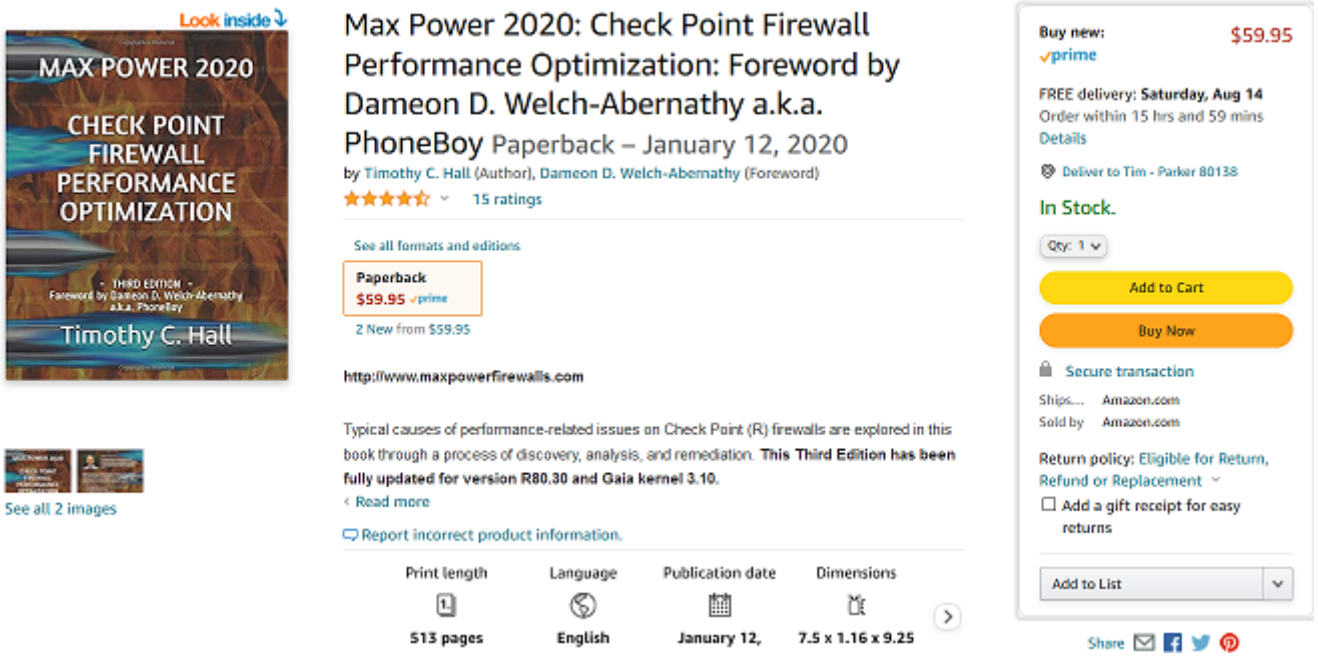
Welcome & Introduction

- Your Instructor: **Timothy Hall, CISSP, CCSM Elite, CCSI**
  - Worked with Check Point™ products since 1997, Check Point™ instructor since 2004
  - Founder of Shadow Peak Inc, a Check Point™ Authorized Training Center (ATC) (http://www.shadowpeak.com)
  - Link to all CheckMates Posts (3,700+), Link to all CPUG.org posts (2,200+)
  - Author of the Book “Max Power 2020: Check Point™ Firewall Performance Optimization”



Gateway Performance Optimization Class Details

- **Prerequisites**: Minimum CCSE certification and at least 3 years of experience working with Check Point™ gateways in a production environment. Preferred: Minimum 5 years of experience working with Check Point™ gateways in a production environment and knowledge of SecureXL and CoreXL.
- We will be working with the R81.20 GA Check Point™ code. Differences in R81.20 vs. older code will be highlighted; about 90% of the total class material also applies to R81.10 and earlier versions, roughly back to version R80.40. R80.30 and earlier code versions are no longer officially supported by Check Point™.
- The latest performance-related features for version R82 are covered in the lecture segments only.
- Your lab exercises are in a break/fix format. Many issues and badly-optimized configurations based on real-world problems were introduced to your lab environment before class and will be rectified as you proceed through the lab exercises, running speed tests along the way to gauge the effectiveness and performance gain of your optimizations.
- The primary focus of this course is the R81.20 code running on Check Point™ appliances (models 2200-28XXX), open hardware, and Maestro/Scalable Platforms (whose differences are covered by an appendix). VSX is not fully covered, but will be mentioned a number of times with linked references provided for further reading. Most class material will also apply to Quantum Spark appliances (SMB models 1200-1800); some limited reference links will be provided for Quantum Spark/SMB appliances. For a great optimization guide crafted explicitly for the SMB/Spark appliances, see this truly excellent CheckMates article by Hristo Grigorov: Brief introduction to SMB performance tuning.
- The material presented in this course will mostly apply to CloudGuard gateways, subject to the specific limitations detailed in sk174965: Check Point™ Quantum R81.20 (Titan) Release Known Limitations, and to a lesser degree, Section 7 of this SK: sk141173: Check Point™ R80.20 with Gaia 3.10 for CloudGuard and Open Server Security Gateways.
- Hyperlinks shown in this document are “hot” and can be clicked to show the specified resource in your web browser.

List of Class Modules

- Module 1 – R81.20 Performance Introduction & Concepts
- Module 2 – Network Level Optimization
- Module 3 – Basic Gaia 3.10/RHEL Optimization
- Module 4 – ClusterXL Performance Tuning
- Module 5 – CoreXL & Multi-Queue
- Module 6 – SecureXL Throughput Acceleration
- Module 7 – Access Control Policy Tuning
- Module 8 – Threat Prevention Policy Tuning
- Module 9 – HTTPS Inspection Optimization
- Module 10 – Heavy Connections/Elephant Flows & HyperFlow/Pipeline Processing
- Appendix A – Intermittent/Historical Performance Issues Investigation & Monitoring
- Appendix B – Maestro/Scalable Platforms Commands
- Appendix C – GEO Updatable Objects - Your Secret Performance Weapon

