

Table of Contents

Signalling and Controlling

- A Core-Stateless Utility Based Rate Allocation Framework 1
Narayanan Venkitaraman, Jayanth P. Mysore, Mike Needham
- Resource Management in Diffserv (RMD): A Functionality
and Performance Behavior Overview 17
*Lars Westberg, András Császár, Georgios Karagiannis, Ádám Marquetant,
David Partain, Octavian Pop, Vlora Rexhepi, Róbert Szabó,
Attila Takács*
- Performance Evaluation of the Extensions
for Control Message Retransmissions in RSVP 35
Michael Menth, Rüdiger Martin

Application-Level Mechanisms

- Handling Multiple Bottlenecks in Web Servers
Using Adaptive Inbound Controls 50
Thiemo Voigt, Per Gunningberg
- Dynamic Right-Sizing: An Automated, Lightweight,
and Scalable Technique for Enhancing Grid Performance 69
Wu-chun Feng, Mike Fisk, Mark Gardner, Eric Weigle
- The “Last-Copy” Approach for Distributed Cache Pruning
in a Cluster of HTTP Proxies 84
Reuven Cohen, Itai Dabran

TCP and High Speed Networks

- Modeling Short-Lived TCP Connections
with Open Multiclass Queuing Networks 100
M. Garetto, R. Lo Cigno, M. Meo, E. Alessio, M. Ajmone Marsan
- TCP over High Speed Variable Capacity Links:
A Simulation Study for Bandwidth Allocation 117
Henrik Abrahamsson, Olof Hagsand, Ian Marsh

TCP Westwood and Easy RED to Improve Fairness
in High-Speed Networks 130
Luigi Alfredo Grieco, Saverio Mascolo

Quality of Service

A Simplified Guaranteed Service for the Internet 147
Evgueni Ossipov, Gunnar Karlsson

Improvements to Core Stateless Fair Queueing 164
Cristel Pelsser, Stefaan De Cnodder

A Fast Packet Classification by Using Enhanced Tuple Pruning 180
Pi-Chung Wang, Chia-Tai Chan, Wei-Chun Tseng, Yaw-Chung Chen

Traffic Engineering and Mobility

Traffic Engineering with AIMD in MPLS Networks 192
Jianping Wang, Stephen Patek, Haiyong Wang, Jörg Liebeherr

Performance Analysis of IP Micro-mobility Handoff Protocols 211
Chris Blondia, Olga Casals, Peter De Cleyn, Gert Willems

Working Sessions

High-Speed Mobile and Wireless Networks 227
James P.G. Sterbenz

Peer Networks – High-Speed Solution or Challenge? 228
Joseph D. Touch

Invited Paper

High Speed Networks for Carriers 229
Karl J. Schrodi

Protocols for High-Speed Networks:
A Brief Retrospective Survey of High-Speed Networking Research 243
James P.G. Sterbenz

Author Index 267