

Annual International Conference of the Computer Measurement Group

(CMG 2011)

**Washington, DC, USA
5-9 December 2011**

Volume 1 of 2

ISBN: 978-1-62993-498-3

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2011) by the Computer Measurement Group Inc.
All rights reserved.

Printed by Curran Associates, Inc. (2013)

For permission requests, please contact the Computer Measurement Group Inc.
at the address below.

Computer Measurement Group Inc.
151 Fries Mill Road
Suite 104
University Executive Campus
Turnersville, NJ 08012 USA

Phone: 856.401.1700
Fax: 856.401.1708

cmghq@cmg.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

VOLUME 1

Monitoring Performance QoS using Outliers	1
<i>Eugene Margulis</i>	
Java on z/OS - New Opportunities	9
<i>Scott Chapman</i>	
IT Contingency Planning for a Financial Crisis	23
<i>Fernando Martinez</i>	
When Performance/Capacity Planning Becomes a Performance/Capacity Planning Problem Or, The Emperor Has No Clothes	33
<i>Chuck Hopf</i>	
IT Service Management Reporting	42
<i>Adrian Heald</i>	
Demystifying Extended Distance FICON AKA Persistent IU Pacing	54
<i>Stephen R. Guendert, Gordy Flam</i>	
A Model of Easy Tier® Based upon Deployable Applications	65
<i>Bruce McNutt</i>	
Memory Virtualization and Performance on TLB Misses	72
<i>Chagla M. Saleh-Esa</i>	
Migrating Applications to the Cloud	80
<i>Peter Johnson</i>	
1034: Help! My Application Will Not Scale... Oracle Solaris™ Multi-thread Aware Memory Allocation	89
<i>Rickey C. Weisner</i>	
Capacity Management in a Can (Open, Heat, Serve, and Succeed)	101
<i>Rich Fronheiser</i>	
Instrumentation Strategies for the Cloud	132
<i>David Halbig</i>	
Performance Engineering for MASSIVE Systems	146
<i>Mark Lustig</i>	
Software Performance Engineering A La Carte	164
<i>Alex Syed, Matt Clements, John Yennie</i>	
Case Study: Federal Agency Capacity Planning Success Factors	174
<i>Ellen Birch, Gina Molla</i>	
Custom Code Profiling	186
<i>Chris B. Papineau</i>	
Non-Linear Scaling Of Long Running Batch Jobs: “The Twelve Days Of Degradation”	200
<i>Chris B. Papineau</i>	
Case Study: Optimization and Analysis of a Private Virtual Cloud Computing Environment	215
<i>Robert Woodruff, Frank Lieble, Stephen Sanger</i>	
A Structured Approach to Performance Testing for Efficient Eliminations of Common Bottlenecks	246
<i>N/A</i>	
Performance Testing Challenges & Solutions for Asynchronous Systems	260
<i>Guru Mudujutla, Uppara Hampaiah, Srinivas Jandhyala</i>	
Optimizing Performance and Capacity in Private and Hybrid Clouds	267
<i>N/A</i>	
The Penguins Have Landed - Getting Started with Linux on System z	285
<i>N/A</i>	
Performance Scaling Analysis of Messaging Application	336
<i>Himanshu Kumar, Nishant Agrawal, Manoj Nambiar</i>	
The New Performance Management Paradigm for the IBM zEnterprise System	344
<i>Glenn Anderson</i>	
The New Functions and New Faces of Mainframe and Cross Platform Performance Monitoring	370
<i>Glenn Anderson</i>	
Event Tracing: A Runtime Cost Analysis	411
<i>Nathan Scott</i>	
Performance Models From Theory To Practice “A Case Study”	418
<i>Vaibhav Agrawal, Chintan Vinodray Raval, Vaishali Gulve</i>	

CPU Measurement Inside Virtual Machine	430
<i>Jie Lu</i>	
Estimating the True Cost of Downtime	438
<i>Peter H. J. Van Eijk</i>	
Cloud: Private Cloud Best Practices CMG Session 598: Paper 1078	461
<i>Laura Knapp</i>	
Transitioning to IPv6 - CMG Session 618: Paper 1078	480
<i>Laura Knapp</i>	
To Plan Or Not To Plan, That Should Not Be The Question - A Practical Guide To Planning A Performance Project	502
<i>Robert Jahn</i>	
Capacity Planning Factors: A Guide To Build A Key Element Of Enterprise Capacity	516
<i>Anjan Ruj, Ramapantula Udaya Shankar</i>	
Test Environments: A Challenge to Performance Engineering	526
<i>Mohit Verma</i>	
Minimizing System Lockup During Performance Spikes: Old And New Approaches To Resource Rationing	541
<i>Erik Ostermueller</i>	
Automating Avoiding Application Outages or Poor Performance Due to “Disk Full” or Badly Timed Background Maintenance	552
<i>Ron Kaminski</i>	
Big Data on the Cloud	562
<i>Odysseas Pentakalos, Yimin Xie</i>	
Capacity Management: Guided Practitioner Satnav	568
<i>Adam Grummitt</i>	
How I Used Cloud Computing and Social Media to Run NLCMG and Other Communities	601
<i>Peter H. J. Van Eijk</i>	
Consolidating Database Servers	622
<i>Megh Thakkar</i>	
Automatic Daily Monitoring of Continuous Processes - Theory and Practice	663
<i>Frank Bereznav, M. P. Welch</i>	
Performance Requirements: An Attempt of a Systematic View	705
<i>Alexander Podelko</i>	
Working Kalmly - A Grab Bag Of Performance Tips Part 1	754
<i>Denise P. Kalm</i>	
Performance Evaluation throughout SDLC	763
<i>Abhijit S. Ranjekar</i>	
A Methodology for Combinining GSPNs and QNs	774
<i>Daniel A. Menasce</i>	
To Q or Not To Q: Is Simulation the Question?	784
<i>Tim R. Norton</i>	
Application Signature: A Way to Identify, Quantify and Report Change	847
<i>Richard Gimarc, Kiran Chennuri</i>	
Application Robustness Classification using Perturbation Testing	861
<i>Amol Khanapurkar, Mohit Nanda, Suresh Malan</i>	
A Framework for Enterprise IT Capacity Management	870
<i>Ramapantula Udaya Shankar, Jonathan Shaw, Bhargav Lavu, Dave Machin</i>	
Performance Assurance for Packaged Applications	881
<i>Alexander Podelko</i>	
Quantifying Imbalance in Computer Systems	921
<i>Charles Lobo</i>	
Help Developers (Finally) Find Their Own Performance Defects	932
<i>Erik Ostermueller</i>	
Capacity and Operational Considerations for VDI	945
<i>Ellen Friedman</i>	

VOLUME 2

Specialty Engines and Kneecapped Processors	989
<i>Jim Horne</i>	

Collecting and Using SMF 113 and Other MF Metrics (Part 1)	995
<i>Danilo Gipponi, Fabio Massimo Ottaviani</i>	
Collecting and Using SMF 113 and Other MF Metrics (Part 2)	1027
<i>Danilo Gipponi, Fabio Massimo Ottaviani</i>	
Cognitive Overload!	1045
<i>Elisabeth Stahl</i>	
CICS Ver. 4 Performance and Capacity Management News and Best Practices with z/OS Ver. 1.12 and 1.13 Updates	1062
<i>Ivan Gelb</i>	
Collecting DB2 Metrics in SMF	1090
<i>Fabio Massimo Ottaviani</i>	
CMG-T: VMWare vSphere Performance Analysis - 2010	1125
<i>John Paul</i>	
CMG-T: VMWare vSphere Performance Analysis - 2011	1228
<i>John Paul</i>	
Tools and Application of Those Tools	1284
<i>John Paul</i>	
Network Performance Engineering	1319
<i>Manoj K. Nambiar</i>	
Modeling & Forecasting	1379
<i>Michael A. Salsburg</i>	
Windows System Performance Measurement and Analysis	1457
<i>Jeffry A. Schwartz</i>	
Storage Performance Management	1561
<i>Brett Allison, Gilbert Houtekamer</i>	
Enterprise Storage System Architecture Overview	1590
<i>Brett Allison, Gilbert Houtekamer</i>	
Data Collection and Measurement	1620
<i>Brett Allison, Gilbert Houtekamer</i>	
Big Data. New Physics. And Geospatial "Superfood."	1652
<i>Jeff Jonas</i>	
Are Private Clouds More Than Vapor?	1702
<i>Michael A. Salsburg</i>	
Zen and the Art of Leadership	1725
<i>Stephen R. Balzac</i>	
Teaching the Kids About Performance	1727
<i>Bernie Domanski</i>	
I've Looked at Clouds from Both Sides Now: Measuring Vapors	1753
<i>H. Pat Artis</i>	
Do Not Track: A Guide For Information Technology Professionals	1757
<i>Anna M. Long</i>	
Evaluating the Impact of a Fusion-io ioDrive on a Complex Server Application	1769
<i>H. Pat Artis, John Gatch, Mike Hammock</i>	
Performance Evaluation of FIFO Implementation on Infiniband RDMA	1781
<i>M. Nambiar</i>	
Measuring Processor Utilization in Windows and Windows Applications	1861
<i>Mark B. Friedman</i>	
Digital Infrastructure Planning for Private Cloud	1897
<i>Amy Spellmann, Shawn Novak, Richard Gimarc, Michael Musso</i>	
Using Normalized Headroom (HR) for Design and Analysis	1909
<i>Joe Temple</i>	
Sysplex: Understanding and Using Key Coupling Facility Measurements for Cache Structures	1937
<i>Peter Enrico</i>	
Processor Selection for Optimum Middleware Price / Performance	1962
<i>David Kra</i>	
Author Index	