Scott Chapman's

Essential z/OS Performance Tuning Workshop

A 4.5-Day Workshop

Visit www.epstrategies.com for class schedule and pricing.

A Week of Reviewing Your Own Data!

Prior to class we instruct you on what data to bring to class *from your own systems.* Then, while in class, you will also be spending a week doing a basic system performance basic Health Check® using the data you supplied. So, if you have not done a basic Health Check® in a while, or have some performance nagging questions, this is a perfect opportunity for combined instruction, time doing analysis, and an opportunity to get input and recommendations from experts in z/OS performance – Scott Chapman & Peter Enrico!

Workshop Highlights

- o z/OS Systems & Performance
  - o Metrics & Techniques
    - ▪ Measuring
    - ▪ Analysis
    - ▪ Tuning
  - o Z Processors
  - o Memory
  - o DASD I/O Subsystems
- o WLM Overview
- o z/OS software pricing and its relationship to performance and capacity

Class Participation

During this class you will analyze your own data from your own environment.
Prior to class you will be requested to send us various performance measurements and data. The EPS team will prepare your data to help ensure your active analysis during the entire week of the class. The instructor(s) will available for one-on-one discussions before class, during breaks, and after class. This class is a productive week of doing as well as learning.

Performance measurements, analysis, and tuning considerations are discussed throughout. A key strength of this workshop is that the instructor(s) do not just teach tuning recommendations, but why each recommendation is exists. Class materials have extensive notes for later reference.

Workshop Dates and Location and Prices

For dates and locations and prices, please visit www.epstrategies.com for details, or call our office at 813-435-2297.

Workshops are regularly offered in the USA, Europe, Australia, and more if there is interest.

Instructor: Scott Chapman

Scott has over 25 years of diverse experience in mainframe performance and capacity, having been an application developer, application performance analyst, system programmer and capacity planner. Having taught this class for multiple years, Scott brings a great deal of information to provide students a solid foundation in z/OS performance. Scott is our CIO and co-designer of Pivotor®, our z/OS performance reporting software.

Contact Scott: Scott.Chapman@epstrategies.com

This workshop is constantly being updated with the latest IBM announcements and the latest performance tuning and management techniques.

For More Information...

For more information on this or other workshops, including prices and locations, please contact:

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         www.pivotor.com

Please do not hesitate to call if you would like more information or details on this workshop.

In-house instruction

All workshops are available for in-house instruction. Please contact us for more information for groups of 5 or more interested students.

Workshop Outline

The following is an outline of subjects for this workshop. Since the workshop is constantly being updated, actual workshop content and flow may vary slightly from this outline. **Remember, throughout the class you will be actively analyzing your own z/OS systems and measurements.**

Mainframe Fundamentals Overview

Mainframe Hardware Overview

- o   Machine Nomenclature and Design
- o   CPU Types
- o   Connectivity

Mainframe Software Environment

- o   System Software Performance Overview
- o   Performance Complaint Checklist

Measurements Overview

- o   Different types of Measurements
- o   Interval Recommendations
- o   Analyzing and Visualizing Data

Software Pricing

- o   Pricing Models
- o   MLC Details
- o   Controlling MLC with Caps

Sharing Processors

- o   LPAR Weights
- o   HiperDispatch
- o   LPAR Capping

Sysplex Configurations

- o   Coupling Links
- o   Sharing CF Engines
- o   Structure Considerations

Processor Design

- o   Sub-capacity models
- o   Cache Optimizations
- o   HIS Metrics

CPU Measurements

- o   CPU Time, SU/sec, MIPS, MSUs
- o   Conversion between measurements
- o   Capture Ratio
- o   zIIP Usage and Crossover
- o   LPAR & MVS Busy

Memory

- o Page Size & Dynamic Address Translation
- o Memory Utilization
- o Storage Class Memory

SMT

- o Measurements
- o Recommendations

Encryption

- o CPACF vs. Crypto Cards
- o Crypto Card Modes

Compression

- o z/OS Compression Services
- o Compression Use cases
- o zEDC

Limiting Performance

- o LPAR Limits
- o Resource Groups
- o Latent & Induced Demand
- o Work Units
- o Delay Samples

WLM

- o Terminology
- o Understanding Goals
- o WLM Algorithms
- o WLM in One Page

WLM Cursory Review

- o Policy Structure Review
- o Work by Importance
- o Evaluating PIs
- o Evaluating Goals
- o Promotion

I/O Introduction

- o Historical Basis
- o Today's Architecture
- o Flash
- o Storage Tiering

I/O Details

- o The Life of an I/O
- o I/O Concurrency
- o Cache
- o RAID

I/O Measurements
- o RMF Measurements
- o Queuing and Utilization

Additional topics that may be covered based on time and interest

Capacity Planning
- o Long-term Trending
- o Business Metrics

Planning for an Upgrade
- o Laying Groundwork
- o Determine Upgrade Reason
- o Finding Upgrade Options
- o Evaluating Options
- o Identifying Hazards
- o Evaluate Success

Critical Path
- o Finding the Critical Path