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Scott Chapman's  
**Essential z/OS Performance  
Tuning Workshop**  
A 5-Day Virtual Workshop

*An online experience of learning and doing!*

Visit [www.epstrategies.com](http://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, during 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***

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



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## ***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. Because this is a virtual workshop, the instructor(s) will only be available for one-on-one discussion 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 exists. Class materials have extensive notes for later reference.

## ***Workshop Dates and Location and Prices***

Due to current circumstances, this workshop will be held online through Zoom. For dates and prices, please visit [www.epstrategies.com](http://www.epstrategies.com) for details or call our office at 813-435-2297.

## ***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](mailto:Scott.Chapman@epstrategies.com)

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



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## ***For More Information...***

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

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3547 53rd Avenue West, #145  
Bradenton, FL 34210

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Web: [www.epstrategies.com](http://www.epstrategies.com)  
[www.pivotor.com](http://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. We plan to resume in-person instruction in 2022. Please contact us for more information for groups of 5 or more interested students, including for virtual options.



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## ***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**

- Machine Nomenclature and Design
- CPU Types
- Connectivity

### **Mainframe Software Environment**

- System Software Performance Overview
- Performance Complaint Checklist

### **Measurements Overview**

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

### **Software Pricing**

- Pricing Models
- MLC Details
- Controlling MLC with Caps

### **Sharing Processors**

- LPAR Weights
- HiperDispatch
- LPAR Capping

### **Sysplex Configurations**

- Coupling Links
- Sharing CF Engines
- Structure Considerations

### **Processor Design**

- Sub-capacity models
- Cache Optimizations
- HIS Metrics

### **CPU Measurements**

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



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## Memory

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

## SMT

- Measurements
- Recommendations

## Encryption

- CPACF vs. Crypto Cards
- Crypto Card Modes

## Compression

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

## Limiting Performance

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

## WLM

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

## WLM Cursory Review

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

## I/O Introduction

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

## I/O Details

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



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## I/O Measurements

- RMF Measurements
- Queuing and Utilization

## *Additional topics that may be covered based on time and interest*

### Capacity Planning

- Long-term Trending
- Business Metrics

### Planning for an Upgrade

- Laying Groundwork
- Determine Upgrade Reason
- Finding Upgrade Options
- Evaluating Options
- Identifying Hazards
- Evaluate Success

### Critical Path

- Finding the Critical Path