
Ray Wicks' Capacity Planning and Performance Analysis

(Visit www.epstrategies.com for class schedule.)

Do you have the responsibility of capacity planning of your zArchitecture systems? Are you just beginning to put together a capacity plan and want to learn the latest capacity planning techniques? Or do you have a capacity planning project in progress would like to verify your results with a renowned capacity planning expert? Or maybe you've already done you capacity plan and the upgrade is complete, but now you want to understand how you could have done it differently to help you prepare for next time.

In this class you will learn capacity planning techniques from someone who many in the mainframe computer industry deem as the number one expert; Ray Wicks.

The seminar discusses performance analysis and capacity planning techniques with emphasis on large processor systems (zArchitecture platform). In fact, examples will be largely drawn from the z/OS Operating System.

Although emphasis is placed on large processor systems and examples will be largely drawn from z/OS but the concepts apply to all levels of operating systems and hardware. The lectures on performance analysis and capacity planning include topics such as architecture, queuing theory, sample selection, trending and more. The student exercises are built using EXCEL. Using EXCEL in hands-on lab you will execute some of the examples in the lecture. Data will be provided for the hands-on components.

Audience

This 3 day seminar is designed for capacity planners and performance analysts who are responsible for putting together computer capacity plan for their z/OS systems and sysplexes. Whether you are preparing for a machine upgrade or just a reconfiguration or server consolidation, students will leave the class knowing the key techniques and approaches for putting together such a capacity plan.

This class is for you...

- if capacity planning is a keen area of interest for you and you want to hone your skills by learning from a man many consider the leading capacity planning expert for the z/OS platform
- if you want to learn how to put together a capacity planning
- if you are planning for an upgrade and want to learn effective sizing approaches
- if you are considering a server consolidation and want to ensure that the effects on capacity are understood
- if you already performance an upgrade or server consolidation and you want to validate your capacity planning approach
- if the purse strings are tight and you need to ensure the upgrade you will recommend is going to be sufficient



Class Objectives

This seminar is designed to provide the attendee with a fresh outlook on the performance management of their z/OS systems, sysplexes, and DASD I/O subsystems. It is designed to guide you in learning the basic concepts of z/OS performance management by teaching you a step-by-step approach to z/OS performance evaluation. You will learn how to analyze z/OS performance measurements. You will learn performance management of your own DASD I/O subsystem, processors and LPARs, and z/OS storage.

At the end of the seminar

- Students should understand the basic principles involved in Performance Analysis and Capacity Planning
- be able to identify the data required for the analysis, and
- Be able to produce a quality deliverable detailing the analysis.

Seminar Requirements

It is expected that the attendee will have a laptop with EXCEL already installed. Data files and EXCEL Worksheets to execute class exercises (using the student's own installation data) will be provided during the class.

A basic understanding of z/OS and RMF are assumed.

For More Information...

For more information on this or other seminars, please contact:

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Please do not hesitate to call if you would like more information or details on this seminar. Ray Wicks will be happy to talk with you.

Seminar Dates and Location

Please visit www.epstrategies.com for details.

In-house

All seminars are available for in-house instruction.



Instructor: Ray Wicks

This seminar is taught by Ray Wicks, a world-renowned Capacity Planning expert who has been working in the performance analysis and capacity planning area for over 30 years.

Ray has spent most of his career at IBM in the performance analysis and capacity planning end of the business in Poughkeepsie and at the Washington Systems Center. He is the author and architect of IBM's internal performance analysis and capacity planning tool named CP2000. This tool is used extensively by the services and technical support staff world wide within IBM to analyze existing z/OS configurations (Processor, storage, and I/O) and make projections for capacity expectations.

In support of this effort, Ray has given classes and lectures worldwide. Throughout IBM, Computer Measurement Group (CMG), IBM Expo and SHARE, Ray is widely respected as one of the top experts in this field. He won the prestigious CMG A.A. Michelson award in 2000 placing him among the elite in the field of computer performance analysis and capacity planning. His one-day workshop titled "Topics in Performance Analysis & Capacity Planning" held at a recent CMG conference was filled and well received.

Ray earned a BA in Philosophy and his Masters in Mathematics. Before his tenure at IBM Ray taught at the City University in New York and Marist College in New York. He also was a visiting scholar at the University of Maryland for two semesters lecturing at UMD's Honors College.

Ray is a high regarded and experienced instructor. Ray also lectures at many IBM conferences worldwide and at the annual international Computer Measurement Group (CMG) conference.



Seminar Outline

Performance Analysis

This part discusses the performance factors that determine the responsiveness of a Host system. (z/OS is used as an example in most cases.) Topics include performance factors of the following resources. Indicated is a selection of the topics by resource.

- Queuing Theory Review versus Simulation
- Processor
 - More CPs or faster CPs?
 - Hardware and software factors
 - Performance and capacity thresholds
 - Processor performance data
 - Single system image versus multiple images (LPAR)
 - Performance factors for z/OS Parallel Sysplex
- Processor Storage
 - The storage hierarchy
 - Storage performance data
 - I/O subsystem
 - I/O events tutorial
 - DASD and cache controllers
 - I/O performance data
- Using rules of thumb for a Health Check®

Capacity Planning

The concepts covered here are necessary for anybody engaged in capacity planning and using any capacity model. Concepts taught and enforced in class include:

- I/O-CPU implications of the forced flow law
- Relative I/O Content (RIOC)
- Saturation Design Point
- Resource Metrics
- Sample Selection
- Relative Processor Power (ITRRs, and MIPS)
- Capture Ratios
- Processor storage estimation
- Parallel Sysplex considerations
- Capacity comparisons for Production Systems

