

z15 Capacity Planning - Part 1

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1 Introduction

On September 12th IBM announced its new generation of the mainframe. The new system is called IBM z15 while the family model is 8561

Experienced capacity planners know that every new generation of machines provides a major challenge to their skills. They also know that their best friends are the IBM LSPR benchmarks, the IBM zPCR tool, the Measurement Facility counters provided in SMF 113 and an up to date performance database.

In the first part of this paper we'll have a look at the most important capacity characteristics of the IBM z15. Starting from the IBM LSPR benchmarks we'll then estimate the MIPS capacity of each IBM z15 processor model.

Finally, we will compare z15 single CP capacity and workload variability with previous machine generations.

In the second part we'll compare z14 and z15 processor cache architecture. Then we'll analyse in more detail the new z15 Measurement Facility basic and extended counters provided in SMF 113, using them to calculate the %L1M (percentage of cache Level 1 miss), the RNI and the CPI indexes