

z16 Capacity Planning – Extended counters addendum

Fabio Massimo Ottaviani – EPV Technologies

June 2022

1 Introduction

Extended counters, provided by the Measurement Facility in SMF 113, are essential to:

- determine the right benchmark to use in Capacity Planning studies by
- calculating the L1 cache miss and RNI values
- have an overall view of system performance by using the CPI index.

They can also be very useful to track other indexes such as:

- the average number of cycles needed to serve a L1 cache miss;
- the percentage of the total used cycles needed to serve a TLB1 miss;
- the average number of cycles needed to perform a synchronous
- compression/decompression request to the zEDC Accelerator.

We will discuss how to calculate these indexes for z16 machines in this paper