

Measuring zFS performance

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1 Introduction

The z/OS File System (zFS) is one of the file systems available in z/OS USS (UNIX System Services). However, it's important to note that zFS is the strategic IBM file system and, in general, it provides better performance than the older Hierarchical File System (HFS).

Similarly to HFS, zFS file systems contain files and directories that can be accessed with USS application programming interfaces and can be used for all levels of the USS hierarchy, including the root file system.

zFS usage was initially limited to innovative applications but it is now extended also to the most traditional z/OS workloads such as CICS and IMS.

This is the reason why measuring zFS performance has become more and more important in the last years. Unfortunately, the available documentation about zFS performance analysis and tuning is not very clear and complete yet.

In this paper, after a short introduction to zFS, we will discuss the most relevant parameters which can be set to tune zFS caches.

Then we will look at some powerful zFS commands which can provide a lot of useful performance information.

Finally, we will focus on the available SMF metrics which can be used to measure zFS performance externally, from the z/OS point of view, and internally, from the USS point of view.