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Energy efficiency metrics and measurement methods for data storage equipment

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ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B
Association à but non lucratif enregistrée à la
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Contents

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Foreword

This European Standard (EN) has been produced by ETSI Technical Committee Environmental Engineering (EE).

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Introduction

The present document specifies:

1) A metric for the assessment of energy efficiency of Data Storage Equipment (DSE).

The metric for energy efficiency of DSE is different from server's. For DSE it is important to evaluate the performance of data operation in the unit of Input/Output operations or data throughput per second, while for servers it is mainly to evaluate the performance of computing.

For comparison, evaluations should be conducted across similar types of categories of DSE. The present document categorizes DSE to address applicability, configuration groupings to represent a family of DSE to address the broad range of custom configurations possible within each family, and tool revision control to ensure comparability and consistency of the resulting metric value.

2) Test and evaluation methodologies for the assessment of energy efficiency of DSE.

The present document formalizes the tools, conditions and calculations used to generate a single figure of merit of DSE. The present document formalizes the methodology for evaluating energy saving level of DSE from the perspective of supported energy saving feature.

The present document considers some benchmark documents on energy efficiency of DSE.