
Information technology — Data centres — Guidelines on holistic investigation methodology for data centre key performance indicators

Technologies de l'information — Centres de données — Lignes directrices relatives à la méthodologie de recherche holistique pour les indicateurs de performance clé du centre de données



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Foreword

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The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, SC 39, *Sustainability for and by Information Technology*.

Introduction

The ISO/IEC 30134 series defines key performance indicators (KPIs) for data centre resource effectiveness. There are many aspects to be considered in order to improve data centre resource effectiveness. As for resources, it may include not only energy, but also water and other natural resources. As for data centre components, they include air conditioning, power supply, servers, storages, and network equipment. However, it is difficult to include all aspects into one KPI, so multiple KPIs are under development, which measure each aspects of resource effectiveness improvement. Resource effectiveness improvement in each aspect will be performed by measuring each KPI. On the other hand, there is a need to observe the state and trend of data centre as a whole, or holistically, by monitoring multiple KPIs in a single view. Analysis of the KPIs from the overall perspective is also referred to as a holistic investigation method. This document describes a spider web chart-based method and control chart method extending the functionality of the conventional spider web chart for viewing and analysing KPIs for data centre resource effectiveness. It also investigates considerations for applying holistic investigation methods to resource effectiveness evaluation of multiple data centre KPIs. The usefulness and applicability of holistic methods are discussed using a SWOT analysis. The methods described in this document are intended for analysis and continuous improvement of a specific data centre and not for comparing different data centres.