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Information technology — Sustainability for and by information technology — Smart data centre resource monitoring and control

*Technologies de l'information — Durabilité pour et par les
technologies de l'information — Surveillance des ressources et
contrôle des centres de données intelligents*

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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Introduction

Operation of data centres requires management of storage, computation, communication, electrical energy and temperature to achieve the required quality of service and efficiency parameters. Often, however, the separate management of Information Technology (IT), electrical energy (or power) and cooling Resource islands yields a sub-optimal result.

This International Standard provides Messages that facilitate integrated or “smart” monitoring and control of Resources in those islands. The Messages are exchanged between the Management Function and Resources. The International Standard acknowledges that those Resources may be composed of other Resources (e.g. a rack may contain servers, ventilators, etc.). In addition, e.g. those servers may be viewed from their computing, energy consumption or dissipation aspects which this International Standard models as Resource Components and groups into IT, power and fluid Domains, respectively.