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Information technology — Reference Architecture for Service Oriented Architecture (SOA RA) —

Part 2: Reference Architecture for SOA Solutions

*Technologie de l'information — Architecture de référence pour
l'architecture orientée service (SOA RA)*

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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
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428 Foreword

429 ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies
430 (ISO member bodies). The work of preparing International Standards is normally carried out through ISO
431 technical committees. Each member body interested in a subject for which a technical committee has been
432 established has the right to be represented on that committee. International organizations, governmental and
433 non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the
434 International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

435 International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

436 The main task of technical committees is to prepare International Standards. Draft International Standards
437 adopted by the technical committees are circulated to the member bodies for voting. Publication as an
438 International Standard requires approval by at least 75 % of the member bodies casting a vote.

439 Attention is drawn to the possibility that some of the elements of this document may be the subject of patent
440 rights. ISO/IEC shall not be held responsible for identifying any or all such patent rights.

441 ISO/IEC 18384 was prepared by Technical Committee ISO/JTC 1, Subcommittee 38, *Cloud Computing and*
442 *Distributed Platforms*.

443 ISO/IEC 18384 consists of three parts, under the general title: Information Technology – SOA Reference
444 Architecture for Service Oriented Architecture (SOA RA):

445 ISO/IEC FDIS 18384-1, Information technology – Reference Architecture for Service Oriented Architecture –
446 Part 1: Terminology and Concepts for SOA

447 ISO/IEC FDIS 18384-2, Information technology – Reference Architecture for Service Oriented Architecture –
448 Part 2: Reference Architecture for SOA Solutions

449 ISO/IEC FDIS 18384-3, Information technology – Reference Architecture for Service Oriented Architecture –
450 Part 3: SOA Ontology

451 Introduction

452 Service Oriented Architecture (abbreviated SOA) is an architectural style in which business and IT systems are
453 designed in terms of services available at an interface and the outcomes of these services. A service (See
454 18384-1 3.20) is a logical representation of a set of activities that has specified outcomes, is self-contained and
455 may be composed of other services but consumers of the service need not be aware of any internal structure.

456 SOA uses services to create and integrate information systems so that they are suitable for a variety of
457 business and application requirements. SOA enables interactions between businesses without needing to
458 specify specifics of any particular business domain. Using the SOA architectural style can improve the
459 efficiency of developing information systems, and integrating and reusing IT resources. In addition, using the
460 SOA architectural style can help enable rapid response of information systems to ever-changing business
461 needs.

462 ISO/IEC 18384 is intended to be a single set of SOA technical principles, specific norms, and standards for
463 the world-wide market to help remove confusion about SOA, and improve the standardization and quality of
464 solutions.

465 ISO/IEC 18384 defines the terminology, technical principles, reference architecture, standard service
466 categories and ontology for SOA. This part of this International Standard can be used to introduce SOA
467 concepts, as a guide to the development and management of SOA solutions, as well as be referenced by
468 business and industry standards.

469 ISO/IEC 18384 contains three parts:

- 470 1. Terminology and Concepts – which defines the terminology, basic technical principles and concepts for
471 SOA.
- 472 2. Reference Architecture for SOA Solutions – which defines the detailed SOA reference architecture
473 layers, including a meta model, capabilities, architectural building blocks, as well as a set of categories or
474 types of services in SOA solutions.
- 475 3. SOA Ontology – which defines the core concepts of SOA and their relationships in an Ontology.

476 The targeted audience of ISO/IEC 18384 includes, but is not limited to, standards organizations; architects,
477 architecture methodologists, system and software designers, business people, SOA service providers, SOA
478 solution and service developers, and SOA service consumers who are interested in adopting and developing
479 SOA.

480 Users of this part of this International Standard will find it useful to read ISOIEC 18384-1 for an understanding of
481 SOA basics. ISOIEC 18384-1 should be read before reading or applying this part of this International Standard.
482 For those new to the SOA reference architecture, clause 4 in this part of this International Standard provides a
483 high level understanding of the Reference Architecture for SOA Solutions. The remaining clauses provide
484 comprehensive details of the architectural building blocks and trade-offs needed for a SOA Solution and a set of
485 common categories (or types) of SOA services to help populate that architecture. ISOIEC 18384-3 contains the
486 SOA Ontology, which is a formalism of the core concepts and terminology of SOA, with mappings to both UML
487 (see Bibliography [16]) and OWL (see Bibliography [17]). ISOIEC 18384-3 can be used independent of or in
488 conjunction with the other two Parts.

489 The content of this part of this part of this International Standard is defined in the following clauses:

490 Clause 1 - Introduction

491 Clause 2 - Scope

- 492 Clause 3 – terminology – defines terms used when discussing or designing service oriented solutions. Terms
493 defined here are used in some unique fashion for SOA. It does not define terms that are used in general
494 English manner.
- 495 Clause 4 – SOA Reference Architecture Framework Overview– documents an overview of a reference
496 architecture for building SOA based solutions. This include introduction to SOA, introduction to the SOA RA,
497 Meta Model and Capabilities, summary of the SOA RA Layers, Aspects and service categories, and finally key
498 concepts and assumptions.
- 499 Clause 5 through 14 document the layers of the SOA RA including capabilities, architectural building blocks,
500 and relationships between them.
- 501 Clause 15 documents common services categories (or types).
- 502 Clause 16 discusses related work and usage of the SOA RA.
- 503 Bibliography
- 504

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