



E-health web services profiles

STANDARDS
Australia

Currently in preview, click buy full version

This Australian Standard® was prepared by Committee IT-014, Health Informatics. It was approved on behalf of the Council of Standards Australia on 3 December 2013.

This Standard was published on 17 December 2013.

The following are represented on Committee IT-014:

- Aged Care Association Australia
- Allied Health Professions Australia
- Australasian College of Health Informatics
- Australian and New Zealand College of Anaesthetists
- Australian Association of Pathology Practices
- Australian College of Nursing
- Australian Commission on Safety and Quality in Healthcare
- Australian Healthcare and Hospital Association
- Australian Industry Group
- Australian Information Industry Association
- Australian Institute of Health and Welfare
- Australian Institute of Radiography
- Australian Medical Association
- Australian Private Hospitals Association
- Commonwealth Department of Health
- Consumers' Federation of Australia
- Consumers' Health Forum of Australia
- CSIRO e-Health Research Centre
- Department of Health (SA)
- Department of Health (Vic.)
- Department of Health (WA)
- Department of Human Services
- Edith Cowan University
- Engineers Australia
- GS1 Australia
- Health Informatics Society of Australia
- Health Information Management Association of Australia
- HL7 Australia
- Integrating the Healthcare Enterprise Australia
- Medical Software Industry Association
- National E-Health Transition Authority
- National ICT Australia
- NSW Ministry of Health
- Queensland Health
- Royal Australian College of Medical Administrators
- Royal College of Pathologists of Australasia
- Services for Australian Rural and Remote Allied Health
- The Pharmacy Guild of Australia
- The Royal Australian and New Zealand College of Radiologists
- The University of Sydney
- University of Western Sydney

Additional Interests:

- ACT Health
- Australian Healthcare Messaging Laboratory
- Buderim Gastroenterology Centre
- CAL2CAL Australia
- Casprel
- Deontik
- DH4
- Flinders University Northern Territory
- Global Health
- Global Informatic Health
- Health Communication Network
- Healthscope
- HL7 Systems and Services
- Kestral Computing
- Lantana Group
- Laughing Min
- Llewelyn Grain Informatics
- MacIsaac Informatics
- Macquarie Health Corporation
- Medical Objects
- MedSecur
- Michael Egg and Associates
- Montage Systems
- Norman Disney and Young
- Ocean Informatics
- Oridashi
- Primary Healthcare
- Semantic Identity
- Smart Health Solutions
- Sullivan Nicolaidis Pathology
- University of Wollongong
- Victoria Avenue Medical Centre

This Standard was issued in draft form for comment as DR AS 5550.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

Keeping Standards up-to-date

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting www.standards.org.au

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

Australian Standard[®]

E-health web services profiles

Originally as ATS 5820—2010.
Revised and redesignated as AS 5550—2013.

COPYRIGHT

© Standards Australia Limited

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968.

Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 74342 639 5

PREFACE

This Standard was prepared by the Standards Australia Technical Committee IT-014, Health Informatics, to supersede ATS 5820—2010, *E-health web services profiles*.

This Standard is designed to be compatible with implementations of ATS 5820—2010. The XML namespace and XML Schema are unchanged and there have been minor corrections and clarifications to the conformance points. The changes are not expected to impact communications between implementations of ATS 5820—2010 and this Standard. WS-Security is an optional element in this Standard. WS-Security has been removed from AS 5552 and will be removed from this Standard at the next release. It is currently included for backward compatibility only.

The objective of this Standard is to define a common set of interoperable mechanisms using SOAP Web services for interconnecting computer systems in e-health applications.

Interoperability is enhanced by refining the Web services specifications. The Web services specifications by themselves are not sufficient to ensure that different systems can be interconnected. The specifications cover a broad range of situations, so they contain optional and implementation defined features.

Interoperability is also enhanced by focusing on mechanisms that can be implemented using existing software toolkits. The toolkits may not implement the full specification, may sometimes implement optional or ambiguous features differently, and may contain bugs. The profiles in this Standard were developed to identify the features that can be implemented using existing toolkits, rather than what is permitted by the specifications but cannot be easily implemented.

This Standard defines three profiles: a base Web services profile, and profiles for securing Web services using either TLS or WS-Security. These profiles are designed to be referenced by specific service interface specifications to enable those services to inherit the interoperability properties built into the profiles. These profiles clarify the optional and implementation defined features from the Web services specifications.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

This publication has been developed with assistance from the Australian Government Department of Health. The Australian Government makes no representation or warranty that the information in this publication is correct and accurate.

Standards Australia wishes to thank the Department of Health for its continued financial support in helping to develop this Australian Standard.

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE AND INTENDED AUDIENCE	4
1.2 OVERVIEW	4
1.3 NORMATIVE REFERENCES	5
1.4 DEFINITIONS.....	6
1.5 ACRONYMS AND ABBREVIATIONS	7
1.6 ARTEFACTS	7
SECTION 2 WEB SERVICES BASE PROFILE	
2.1 INTRODUCTION	9
2.2 CONFORMANCE	9
2.3 WEB SERVICES SPECIFICATION	9
2.4 WEB SERVICES POLICIES.....	12
2.5 HYPERTEXT TRANSPORT PROTOCOL	14
2.6 SOAP PROTOCOL	15
2.7 METADATA	21
SECTION 3 TLS PROFILE	
3.1 INTRODUCTION	28
3.2 CONFORMANCE	28
3.3 PKI FOR TLS	28
3.4 TRANSPORT LAYER SECURITY (TLS)	29
SECTION 4 WS-SECURITY PROFILE	
4.1 INTRODUCTION	32
4.2 CONFORMANCE	32
4.3 PKI FOR WS-SECURITY	32
4.4 WS-SECURITY.....	35
APPENDIX A BASE SOAP RESULTS	56
BIBLIOGRAPHY.....	61

STANDARDS AUSTRALIA

Australian Standard
E-health web services profiles

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE AND INTENDED AUDIENCE**1.1.1 Scope**

This Standard defines profiles of the SOAP Web services specifications. It defines a basic set of specifications for Web services, so that interoperable Web services can be defined for e-health. It also defines profiles that can be used to secure those Web services.

This Standard does not define any service interfaces. Instead, it specifies profiles that provide a set of mechanisms that service interface authors can use to meet their particular requirements. It is outside the scope of this document to know which requirements are needed by the service interface specifications, and to address them.

The profiles defined in this Standard have been designed with the goal of achieving interconnectivity between implementations using Web services toolkits. Compared to the Web services specifications and other Web services profiles, it provides details to improve interconnectivity.

1.1.2 Intended audience

This Standard is intended for—

- (a) authors of service interface specifications who incorporate the profiles into the service interface specifications they produce;
- (b) solution architects who incorporate the service interface specifications into the system specifications they design;
- (c) software developers who create software programs that conform to the system specifications and service interface specifications; and
- (d) conformance testers who test software to determine how it conforms to the service interface specifications, and the profiles that it uses.

The primary user of these profiles is the service interface specification author. Solution architects, software developers and conformance testers will use these profiles because they are referenced by the service interface specifications which they are using.

The reader is expected to have a detailed knowledge of SOAP Web services, WSDL, WS-Addressing, WS-Policy, TLS, WS-Security and PKI.

1.2 OVERVIEW

This Standard defines the following profiles:

- (a) Web Services Base Profile (Section 2).
- (b) TLS Profile (Section 3).
- (c) WS-Security Profile (Section 4).