

TOGAF® 9 Foundation Study Guide

Preparation for the TOGAF 9 Part 1 Examination

3rd Edition



Rachel Harrison

TOGAF® 9 Foundation
Study Guide 3rd Edition

The Open Group Publications available from Van Haren Publishing

The TOGAF Series:

TOGAF® Version 9.1

TOGAF® Version 9.1 – A Pocket Guide

TOGAF® 9 Foundation Study Guide, 3rd Edition

TOGAF® 9 Certified Study Guide, 3rd Edition

The Open Group Series:

Cloud Computing for Business – The Open Group Guide

ArchiMate® 2.1 – A Pocket Guide

ArchiMate® 2.1 Specification

ArchiMate® 2 Certification – Study Guide

The Open Group Security Series:

Open Information Security Management Maturity Model (O-ISM3)

Open Enterprise Security Architecture (O-ESA)

Risk Management – The Open Group Guide

The Open FAIR™ Body of Knowledge – A Pocket Guide

All titles are available to purchase from:

www.opengroup.org

www.vanharen.net

and also many international and online distributors.

TOGAF® 9 Foundation

Study Guide

3rd Edition

Preparation for the TOGAF 9 Part 1 Examination

Prepared by Rachel Harrison of Oxford Brookes University

THE
Open
GROUP



Title: TOGAF® 9 Foundation
Study Guide 3rd Edition

Subtitle: Preparation for the TOGAF 9 Part 1 Examination

Series: TOGAF Series

A Publication of: The Open Group

Author: Prof. Rachel Harrison

Publisher: Van Haren Publishing, Zaltbommel,
www.vanharen.net

ISBN Hard copy: 978 90 8753 741 8
ISBN eBook (pdf): 978 90 8753 761 6
ISBN ePUB: 978 90 8753 760 9

Edition: Third edition, first impression, October 2013
Third edition, second impression, January 2015
Third edition, second impression, April 2015

Layout and Cover design: CO2 Premedia, Amersfoort –NL

Print: Wilco, Amersfoort – NL

Copyright: © 2009-2013 The Open Group.
All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of the copyright owner.

The views expressed in this Study Guide are not necessarily those of any particular member of The Open Group.

In the event of any discrepancy between text in this Study Guide and the official TOGAF documentation, the TOGAF documentation remains the authoritative version for certification, testing by examination, and other purposes. The official TOGAF documentation can be obtained online at www.opengroup.org/togaf.

Document Number: B133

Comments relating to the material contained in this document may be submitted to:

The Open Group
Apex Plaza, Forbury Road
Reading
Berkshire, RG1 1AX
United Kingdom

or by electronic mail to: ogspeccs@opengroup.org

For any further enquiries about Van Haren Publishing, please send an email to:
info@vanharen.net.

Contents

Preface.....	XII
About the Author	XVII
Trademarks.....	XVIII
Acknowledgements	XIX
References.....	XX
Chapter 1 Introduction.....	1
1.1 Key Learning Points.....	1
1.2 The TOGAF Certification for People Program.....	1
1.2.1 Certification Document Structure	3
1.2.2 Program Vision and Principles.....	4
1.2.3 TOGAF 9 Foundation.....	4
1.2.4 The Certification Process.....	6
1.2.5 Preparing for the Examination	7
1.3 Summary	7
1.4 Test Yourself Questions	8
1.5 Recommended Reading	9
Chapter 2 Basic Concepts	11
2.1 Key Learning Points.....	11
2.2 Introduction to TOGAF 9.....	11
2.2.1 What is the TOGAF Standard?.....	11
2.2.2 Structure of the TOGAF Document	12
2.3 What is an Enterprise?.....	13
2.4 What is Architecture in the Context of the TOGAF Standard?.....	14
2.5 Why do I Need Enterprise Architecture?.....	15
2.6 What is an Architecture Framework?.....	16
2.7 Why do I Need a Framework for Enterprise Architecture?	17
2.8 Why is the TOGAF Standard Suitable as a Framework for Enterprise Architecture?	18
2.9 What are the Different Architecture Domains that the TOGAF Standard deals with?.....	18
2.10 What does the TOGAF Standard Contain?.....	19
2.10.1 The Architecture Development Method (ADM)	20
2.10.2 ADM Guidelines and Techniques	21

2.10.3	Architecture Content Framework	21
2.10.4	The Enterprise Continuum	21
2.10.5	TOGAF Reference Models.....	21
2.10.6	The Architecture Capability Framework.....	22
2.11	Summary	22
2.12	Test Yourself Questions	23
2.13	Recommended Reading	24
Chapter 3 Core Concepts		25
3.1	Key Learning Points.....	25
3.2	What are the Phases of the ADM?	25
3.3	Deliverables, Artifacts, and Building Blocks	27
3.4	The Enterprise Continuum.....	29
3.5	The Architecture Repository.....	30
3.6	Establishing and Maintaining an Enterprise Architecture Capability...	32
3.7	Establishing an Operational Architecture Capability.....	33
3.8	Using the TOGAF Framework with Other Frameworks.....	34
3.9	Summary	35
3.10	Test Yourself Questions	36
3.11	Recommended Reading	37
Chapter 4 Key Terminology.....		39
4.1	Key Learning Points.....	39
4.2	Key Terms.....	39
4.3	Summary	51
4.4	Test Yourself Questions	51
4.5	Recommended Reading	52
Chapter 5 Introduction to the Architecture Development Method		53
5.1	Key Learning Points.....	53
5.2	The Architecture Development Cycle	53
5.3	What is the Relationship of the ADM to Other Parts of the TOGAF Standard?	58
5.3.1	Relationship to the Enterprise Continuum and Architecture Repository	58
5.3.2	The ADM and the Foundation Architecture	59
5.3.3	The ADM and Supporting Guidelines and Techniques	59

5.4	Key Points of the ADM Cycle.....	60
5.5	How to Adapt the ADM to your Enterprise	61
5.6	The Need for Architecture Governance	62
5.7	Scoping the Architecture Activity for your Organization	63
5.8	Integrating the Architecture Domains for your Organization.....	65
5.9	Summary	66
5.10	Test Yourself Questions	66
5.11	Recommended Reading	68
Chapter 6 The Enterprise Continuum and Tools.....		69
6.1	Key Learning Points.....	69
6.2	Overview of the Enterprise Continuum	70
6.3	The Enterprise Continuum and Architecture Re-Use.....	70
6.4	The Constituent Parts of the Enterprise Continuum	71
6.4.1	The Enterprise Continuum	71
6.4.2	The Architecture Continuum.....	72
6.4.3	The Solutions Continuum	72
6.5	The Architecture Continuum in Detail.....	73
6.5.1	Foundation Architecture	74
6.5.2	Common Systems Architectures.....	74
6.5.3	Industry Architectures.....	74
6.5.4	Organization-Specific Architectures.....	75
6.6	The Solutions Continuum in Detail.....	75
6.6.1	Foundation Solutions.....	76
6.6.2	Common Systems Solutions	76
6.6.3	Industry Solutions	76
6.6.4	Organization-Specific Solutions	77
6.6.5	The Relationship of the Architecture Continuum to the Solutions Continuum	78
6.7	Using the Enterprise Continuum within the ADM.....	78
6.8	The Architecture Repository.....	79
6.8.1	The Architecture Landscape	81
6.8.2	The Standards Information Base	81
6.9	Tools Standardization	82
6.10	Summary	82
6.11	Test Yourself Questions	83
6.12	Recommended Reading	86

Chapter 7	The ADM Phases	87
7.1	Key Learning Points	87
7.2	Preliminary Phase	87
7.2.1	Objectives	88
7.2.2	Approach	88
7.3	Phase A: Architecture Vision	92
7.3.1	Objectives	92
7.3.2	Approach	92
7.4	Phase B: Business Architecture	94
7.4.1	Objectives	94
7.4.2	Approach	95
7.5	Phase C: Information Systems Architectures	96
7.5.1	Objectives	96
7.5.2	Approach	97
7.6	Phase D: Technology Architecture	100
7.6.1	Objectives	100
7.6.2	Approach	100
7.7	Phase E: Opportunities and Solutions	101
7.7.1	Objectives	101
7.7.2	Approach	101
7.8	Phase F: Migration Planning	103
7.8.1	Objectives	103
7.8.2	Approach	103
7.9	Phase G: Implementation Governance	104
7.9.1	Objectives	104
7.9.2	Approach	104
7.10	Phase H: Architecture Change Management	105
7.10.1	Objectives	105
7.10.2	Approach	106
7.11	Requirements Management	108
7.11.1	Objectives	109
7.11.2	Approach	109
7.12	Summary	110
7.13	Test Yourself Questions	110
7.14	Recommended Reading	113

Chapter 8	ADM Guidelines and Techniques	115
8.1	Key Learning Points.....	115
8.2	ADM Guidelines and Techniques Overview.....	115
8.3	Architecture Principles.....	116
8.3.1	The TOGAF Template for Defining Architecture Principles	117
8.3.2	What Makes a Good Architecture Principle?	118
8.4	Business Scenarios	119
8.4.1	What is a Business Scenario?	119
8.4.2	The Use of Business Scenarios in the ADM.....	121
8.5	Gap Analysis	121
8.6	Interoperability.....	124
8.6.1	Interoperability and the ADM.....	125
8.7	Business Transformation Readiness Assessment.....	126
8.8	Risk Management.....	127
8.8.1	Risk Management in the ADM.....	127
8.9	Capability-Based Planning.....	128
8.10	Summary	129
8.11	Test Yourself Questions	129
8.12	Recommended Reading	131
Chapter 9	Architecture Governance	133
9.1	Key Learning Points.....	133
9.2	Introduction to Architecture Governance	134
9.3	TOGAF Architecture Governance Framework	135
9.3.1	Conceptual Structure	136
9.3.2	Organizational Structure	137
9.4	The Benefits of Architecture Governance	137
9.5	Architecture Board.....	138
9.6	Architecture Contracts.....	139
9.7	Architecture Compliance	140
9.7.1	The Meaning of Architecture Compliance.....	140
9.7.2	The Need for Architecture Compliance.....	141
9.7.3	The Purpose of Architecture Compliance Reviews	141
9.7.4	The Architecture Compliance Review Process.....	142
9.8	Using the ADM to Establish an Architecture Capability.....	144
9.9	Summary	145
9.10	Test Yourself Questions	146
9.11	Recommended Reading	149

Chapter 10 Views, Viewpoints, and Stakeholders.....	151
10.1 Key Learning Points.....	151
10.2 Concepts and Definitions.....	151
10.2.1 System	151
10.2.2 Stakeholders	152
10.2.3 Concerns.....	152
10.2.4 View.....	153
10.2.5 Viewpoint	154
10.3 Architecture Views and Viewpoints	154
10.4 The Relationship between Stakeholders, Concerns, Views, and Viewpoints.....	157
10.5 The View Creation Process	157
10.6 Summary	159
10.7 Test Yourself Questions	159
10.8 Recommended Reading	160
Chapter 11 Building Blocks	161
11.1 Key Learning Points.....	161
11.2 What is a Building Block?	161
11.3 Architecture Building Blocks and Solution Building Blocks.....	162
11.3.1 Architecture Building Blocks.....	163
11.3.2 Solution Building Blocks	163
11.4 Building Blocks and the ADM	164
11.5 Architecture Patterns.....	165
11.6 Summary	166
11.7 Test Yourself Questions	166
11.8 Recommended Reading	167
Chapter 12 ADM Deliverables	169
12.1 Key Learning Points.....	169
12.2 The Role of Architecture Deliverables.....	169
12.3 The Purpose of Key Deliverables	170
12.3.1 Architecture Building Blocks (ABBs).....	170
12.3.2 Architecture Contract.....	170
12.3.3 Architecture Definition Document.....	171
12.3.4 Architecture Principles	171
12.3.5 Architecture Repository	172
12.3.6 Architecture Requirements Specification.....	172

12.3.7	Architecture Roadmap.....	172
12.3.8	Architecture Vision	172
12.3.9	Business Principles, Business Goals, and Business Drivers ...	173
12.3.10	Capability Assessment	173
12.3.11	Change Request	174
12.3.12	Communications Plan	174
12.3.13	Compliance Assessment.....	174
12.3.14	Implementation and Migration Plan	174
12.3.15	Implementation Governance Model.....	175
12.3.16	Organizational Model for Enterprise Architecture.....	175
12.3.17	Request for Architecture Work.....	175
12.3.18	Requirements Impact Assessment	176
12.3.19	Solution Building Blocks	176
12.3.20	Statement of Architecture Work.....	176
12.3.21	Tailored Architecture Framework.....	176
12.4	Summary	177
12.5	Test Yourself Questions	177
12.6	Recommended Reading	178
Chapter 13	TOGAF Reference Models.....	179
13.1	Key Learning Points.....	179
13.2	The TOGAF TRM as a Foundation Architecture	179
13.3	The Integrated Information Infrastructure Reference Model	181
13.4	Boundaryless Information Flow	183
13.5	Summary	186
13.6	Test Yourself Questions	187
13.7	Recommended Reading	188
Appendix A	Answers to Test Yourself Questions	189
Appendix B	Test Yourself Examination Papers.....	195
Appendix C	Test Yourself Examination	221
Appendix D	TOGAF 9 Foundation Syllabus	235
	Index.....	247

Preface

This Document

This document is a Study Guide for TOGAF® 9 Foundation. It is based on Version 2 of the TOGAF Certification for People Conformance Requirements and is aligned to TOGAF Version 9.1. This third edition contains minor updates to remove references to the TOGAF 8-9 Advanced Bridge Examination¹ and also adds a second Test Yourself Examination paper to Appendix B.

It gives an overview of every learning objective for the TOGAF 9 Foundation Syllabus and in-depth coverage on preparing and taking the TOGAF 9 Part 1 Examination. It is specifically designed to help individuals prepare for certification.

The audience for this Study Guide is:

- Individuals who require a basic understanding of TOGAF 9
- Professionals who are working in roles associated with an architecture project such as those responsible for planning, execution, development, delivery, and operation
- Architects who are looking for a first introduction to TOGAF 9
- Architects who want to achieve Level 2 certification in a stepwise manner

A prior knowledge of enterprise architecture is advantageous but not required. While reading this Study Guide, the reader should also refer to the TOGAF 9 documentation² available online at www.opengroup.org/architecture/togaf9-doc/arch and also available in book form.

The Study Guide is structured as shown below. The order of topics corresponds to the learning units of the TOGAF 9 Foundation Syllabus (see Appendix D).

- Chapter 1 (Introduction) provides a brief introduction to TOGAF certification and the TOGAF 9 Part 1 Examination that leads to TOGAF 9 Foundation, as well as how to use this Study Guide.

¹ The TOGAF 8-9 Advanced Bridge Examination was withdrawn on November 1, 2013.

² TOGAF Version 9.1 (ISBN is 978 90 8753 679 4 G116), available at www.opengroup.org/bookstore/catalog/g116.htm.

- Chapter 2 (Basic Concepts) introduces the basic concepts of enterprise architecture and the TOGAF standard. This provides a high-level view of the TOGAF framework, enterprise architecture, architecture frameworks, and the contents of the TOGAF standard.
- Chapter 3 (Core Concepts) describes the core concepts of TOGAF 9.
- Chapter 4 (Key Terminology) introduces the key terminology of TOGAF 9.
- Chapter 5 (Introduction to the ADM) introduces the Architecture Development Method (ADM), the objectives of each phase of the ADM, and how to adapt and scope the ADM for use.
- Chapter 6 (The Enterprise Continuum and Tools) describes the Enterprise Continuum and tools; its purpose, and its constituent parts.
- Chapter 7 (The ADM Phases) describes how each of the ADM phases contributes to the success of enterprise architecture.
- Chapter 8 (ADM Guidelines and Techniques) describes guidelines and techniques provided to support application of the ADM.
- Chapter 9 (Architecture Governance) describes Architecture Governance.
- Chapter 10 (Views, Viewpoints, and Stakeholders) introduces the concepts of views and viewpoints and their role in communicating with stakeholders.
- Chapter 11 (Building Blocks) introduces the concept of building blocks.
- Chapter 12 (ADM Deliverables) describes the key deliverables of the ADM cycle and their purpose.
- Chapter 13 (TOGAF Reference Models) describes the TOGAF reference models, including the Technical Reference Model (TRM) and the Integrated Information Infrastructure Reference Model (III-RM).
- Appendix A (Answers to Test Yourself Questions) provides the answers to the Test Yourself sections provided at the end of each chapter.
- Appendix B (Test Yourself Examination Papers) provides two Test Yourself examinations to allow you to assess your knowledge of the TOGAF 9 Foundation Syllabus and readiness to take the TOGAF 9 Part 1 Examination.
- Appendix C (Test Yourself Examination Paper Answers) provides the answers to the examinations in Appendix B.
- Appendix D (TOGAF 9 Foundation Syllabus) provides the TOGAF 9 Foundation Syllabus.

How to Use this Study Guide

The chapters in this Study Guide are arranged to follow the organization of the TOGAF 9 Foundation Syllabus (see Appendix D) and should be read in order. However, you may wish to use this Study Guide during review of topics with which you are already familiar, and it is certainly possible to select topics for review in any order. Where a topic requires further information from a later part in the syllabus, a cross-reference is provided.

Within each chapter are “Key Learning Points” and “Summary” sections that help you to easily identify what you need to know for each topic.

Each chapter has a “Test Yourself” questions section that will help you to test your understanding of the chapter and prepare for the TOGAF 9 Part 1 Examination. The purpose of this is to reinforce key learning points in the chapter. These are multiple-choice format questions where you must identify one correct answer.

Each chapter also has a “Recommended Reading” section that indicates the relevant sections in the TOGAF 9 documentation that can be read to obtain a further understanding of the subject material.

Finally, at the end of this Study Guide are two “Test Yourself” examination papers that you can use to test your readiness to take the official TOGAF 9 Part 1 Examination. These papers are designed to include the same question formats and a similar difficulty level to the official TOGAF 9 Part 1 Examination.

Conventions Used in this Study Guide

The following conventions are used throughout this Study Guide in order to help identify important information and avoid confusion over the intended meaning.

- *Ellipsis (...)*
Indicates a continuation; such as an incomplete list of example items, or a continuation from preceding text.
- **Bold**
Used to highlight specific terms.
- *Italics*
Used for emphasis. May also refer to other external documents.

- *(Syllabus reference: Unit X, Learning Outcome Y: Statement)*
Used at the start of a text block to identify the TOGAF 9 Foundation Syllabus learning outcome.

In addition to typographical conventions, the following conventions are used to highlight segments of text:



A Note box is used to highlight useful or interesting information.



A Tip box is used to provide key information that can save you time or that may not be entirely obvious.

About the TOGAF standard

TOGAF®, an Open Group Standard, is a proven enterprise architecture methodology and framework used by the world's leading organizations to improve business efficiency. It is the most prominent and reliable enterprise architecture standard, ensuring consistent standards, methods, and communication among enterprise architecture professionals. Enterprise architecture professionals fluent in TOGAF standards enjoy greater industry credibility, job effectiveness, and career opportunities. The TOGAF standard helps practitioners avoid being locked into proprietary methods, utilize resources more efficiently and effectively, and realize a greater return on investment.

About The Open Group

The Open Group is a global consortium that enables the achievement of business objectives through IT standards. With more than 400 member organizations, The Open Group has a diverse membership that spans all sectors of the IT community – customers, systems and solutions suppliers, tool vendors, integrators, and consultants, as well as academics and researchers – to:

- Capture, understand, and address current and emerging requirements, and establish policies and share best practices

- Facilitate interoperability, develop consensus, and evolve and integrate specifications and open source technologies
- Offer a comprehensive set of services to enhance the operational efficiency of consortia
- Operate the industry's premier certification service

Further information on The Open Group is available at www.opengroup.org. The Open Group publishes a wide range of technical documentation, most of which is focused on development of Open Group Standards and Guides, but which also includes white papers, technical studies, certification and testing documentation, and business titles. Full details and a catalog are available at www.opengroup.org/bookstore.

Readers should note that updates – in the form of Corrigenda – may apply to any publication. This information is published at www.opengroup.org/corrigenda.

About the Author

Rachel Harrison is a Professor of Computer Science in the Department of Computing and Communication Technologies at Oxford Brookes University. Previously she was Professor of Computer Science, Head of the Department of Computer Science, and Director of Research for the School of Systems Engineering at the University of Reading. Her research interests include systems evolution, software metrics, requirements engineering, software architecture, usability, and software testing. She has published over 100 refereed papers and consulted widely with industry, working with organizations such as IBM, the DERA, Philips Research Labs, Praxis Critical Systems, and The Open Group. She is Editor-in-Chief of the Software Quality Journal, published by Springer.

Prof. Harrison holds an MA in Mathematics from Oxford University, an MSc in Computer Science from University College London, and a PhD in Computer Science from the University of Southampton. She is a Member of the British Computer Society, an Affiliate Member of the IEEE-CS, a Member of the Association of Computing Machinery, and is a Chartered Engineer.

Trademarks

ArchiMate®, DirecNet®, Jericho Forum®, Making Standards Work®, OpenPegasus®, The Open Group®, TOGAF®, and UNIX® are registered trademarks and Boundaryless Information Flow™, Dependability Through Assuredness™, FACE™, Open Platform 3.0™, and The Open Group Certification Mark™ are trademarks of The Open Group.

All other brand, company, and product names are used for identification purposes only and may be trademarks that are the sole property of their respective owners.

Acknowledgements

The Open Group gratefully acknowledges The Open Group Architecture Forum for developing the TOGAF standard.

The Open Group gratefully acknowledges the following reviewers who participated in the review of this Study Guide:

- Geoff Burke
- Steve Else
- Bill Estrem
- Cathy Fox
- Kyle Gabhart
- Howard Gottlieb
- Paul Holdforth
- Henk Jonkers
- Andrew Josey
- Graham Neal
- Kiichiro Onishi
- Arnold van Overeem
- Andras Szakal
- Robert Weisman
- Ron Widitz

References

The following documents are referenced in this Study Guide:

- TOGAF Version 9.1, available online at www.opengroup.org/architecture/togaf9-doc/arch, and also available as TOGAF Version 9.1 “The Book” (ISBN: 978 90 8753 6794) at www.opengroup.org/bookstore/catalog/g116.htm.
- Why Does Enterprise Architecture Matter?, White Paper by Simon Townson, SAP, November 2008 (W076), published by The Open Group (www.opengroup.org/bookstore/catalog/w076.htm).
- Interoperable Enterprise Business Scenario, October 2002 (K022), published by The Open Group (www.opengroup.org/bookstore/catalog/k022.htm)
- ISO/IEC 42010:2007, Systems and Software Engineering – Recommended Practice for Architectural Description of Software-Intensive Systems, Edition 1 (technically identical to ANSI/IEEE Std 1471-2000).
- TOGAF Certification for People: Program Summary Datasheet, 2013, published by The Open Group (www.opengroup.org/togaf9/cert/docs/togaf9_cert_summary.pdf).
- TOGAF 9 Foundation Datasheet, 2013, published by The Open Group (www.opengroup.org/togaf9/cert/docs/togaf9_foundation.pdf).
- TOGAF Certification for People: Certification Policy, February 2009 (X091), published by The Open Group (www.opengroup.org/bookstore/catalog/x091.htm).
- TOGAF Certification for People: Conformance Requirements (Multi-Level), Version 2, December 2011 (X111), published by The Open Group (www.opengroup.org/bookstore/catalog/x111.htm).
- The Clinger-Cohen Act (US Information Technology Management Reform Act 1996). The Sarbanes-Oxley Act (US Public Company Accounting Reform and Investor Protection Act 2002).
- EU Directives on the Award of Public Contracts
- Bill Estrem, “TOGAF to the Rescue” (www.opengroup.org/downloads)

The following web links are referenced in this Study Guide:

- The Open Group TOGAF 9 Certification web site: www.opengroup.org/togaf9/cert
- The TOGAF information web site: www.togaf.info

Introduction

1.1 Key Learning Points

This document is a Study Guide for TOGAF® Version 9 for students planning to become certified for TOGAF 9 Foundation. It will familiarize you with all the topics that you need to know in order to pass the TOGAF 9 Part 1 Examination.

It gives an overview of every learning objective for the TOGAF 9 Foundation Syllabus and in-depth coverage on preparing and taking the TOGAF 9 Part 1 Examination. It is specifically designed to help individuals prepare for certification.

This first chapter will familiarize you with the TOGAF 9 certification program and its principles, as well as give you important information about the structure of the TOGAF 9 Part 1 Examination.

The objectives of this chapter are as follows:

- To provide an understanding of TOGAF certification and why you should become certified
- To learn key facts about the TOGAF 9 Part 1 Examination

1.2 The TOGAF Certification for People Program

(Syllabus Reference: Unit 13, Learning Outcome 1: You should be able to briefly explain the TOGAF certification program, and distinguish between the levels for certification.)

Certification is available to individuals who wish to demonstrate they have attained the required knowledge and understanding of TOGAF Version 9.³

³ This edition of this Study Guide covers Version 2 of the TOGAF Certification for People Conformance Requirements, which are aligned to TOGAF Version 9.1.

There are two levels defined for TOGAF 9 People certification, denoted Level 1 and Level 2, which lead to certification at TOGAF 9 Foundation and TOGAF 9 Certified, respectively. This Study Guide covers the first of these – TOGAF 9 Foundation. Studying for TOGAF 9 Foundation can be used as a learning objective towards achieving TOGAF 9 Certified, as the learning outcomes in TOGAF 9 Foundation are also required in TOGAF 9 Certified.

Table 1: Certification Levels and and Associated Labels

Certification Level	Certification Label
Level 1	TOGAF 9 Foundation
Level 2	TOGAF 9 Certified



Why is TOGAF certification important?

The existence of a certification program for the TOGAF standard provides a strong incentive for organizations to standardize on the TOGAF standard as the open method for enterprise architecture, and so avoid lock-in to proprietary methods. It is an important step in making enterprise architecture a well-recognized discipline, and in introducing rigor into the procurement of tools and services for enterprise architecture.

The two certification levels are summarized in Figure 1 and Figure 2. Figure 1 shows the relationship between Level 1 and Level 2. Level 2 (TOGAF 9 Certified) is a superset of the requirements for Level 1 (TOGAF 9 Foundation).⁴

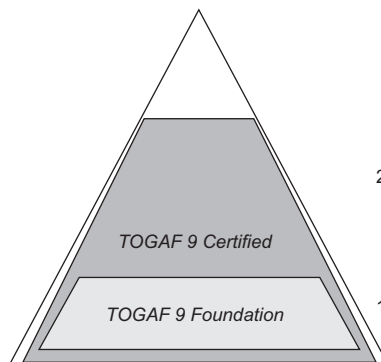


Figure 1: TOGAF 9 Certification Program Overview

⁴ The gap at the top of the pyramid is to signify that additional certification levels may be added in the future.

1.2.1 Certification Document Structure

The documents available to support the program are as shown in Figure 2.

Program description documents, such as this Study Guide, are intended for an end-user audience including those interested in becoming certified. The Program definition documents are intended for trainers, examination developers, and the Certification Authority. All these documents are available from The Open Group web site.⁵



Why become certified?

Becoming certified demonstrates clearly to employers and peers your commitment to enterprise architecture as a discipline. In particular, it demonstrates that you possess a body of core knowledge about the TOGAF standard as an open, industry standard framework and method for enterprise architecture. The Open Group publishes the definitive directory of TOGAF Certified individuals, and certified service and product offerings, and issues certificates.

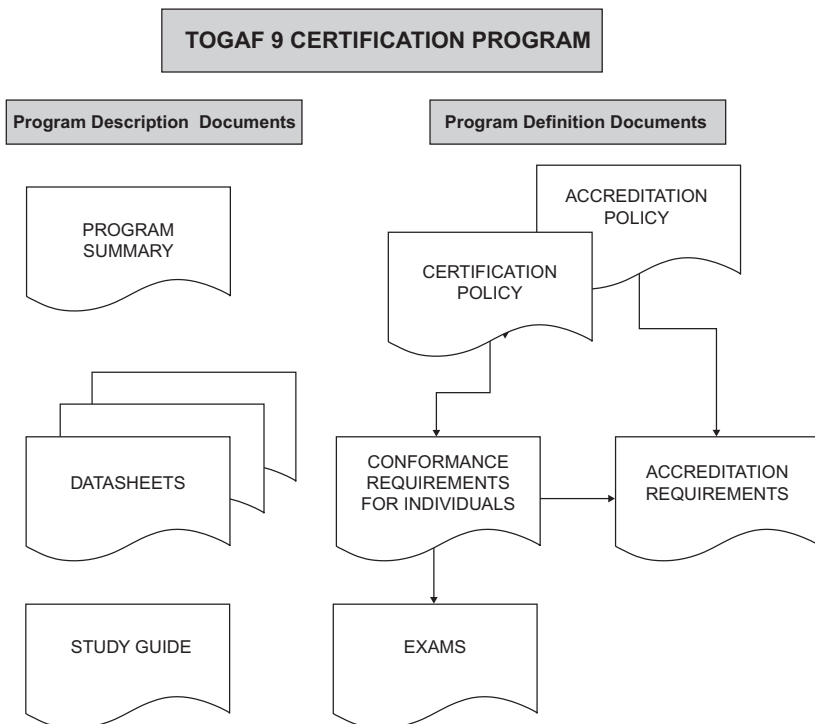


Figure 2: Certification Document Structure

⁵ Available from the TOGAF 9 Certification website at www.opengroup.org/togaf9/cert, or from The Open Group Bookstore at www.opengroup.org/bookstore.

1.2.2 Program Vision and Principles

The vision for the program is to define and promote a market-driven education and certification program to support TOGAF 9. The program has been designed with the following principles in mind:

Table 2: TOGAF Certification Principles

Principle	Certification Aspects
Openness	The program is open to applicants from all countries.
Fairness	Certification is achieved only by passing an examination that is equivalent to that taken by any other candidate.
Market Relevance	The program is structured to meet the needs of the market for conversion from TOGAF 8, as well as for people without prior TOGAF certification, and for certification at two levels. Additional levels may be introduced during the life of the program, as may updated versions of the TOGAF standard.
Learning Support	Training courses are provided by third parties, according to the needs of the market.
Quality	Training course providers may choose to seek Open Group accreditation for their courses. Accredited courses are listed on The Open Group web site.
Best Practice	The program is designed to follow industry best practice for equivalent certification programs.

1.2.3 TOGAF 9 Foundation

The purpose of certification to TOGAF 9 Level 1, known as TOGAF 9 Foundation, is to provide validation that the candidate has gained an acceptable level of knowledge of the terminology, structure, and basic concepts of TOGAF 9, and understands the core principles of enterprise architecture and the TOGAF standard.

The learning objectives at this level focus on knowledge and comprehension.

Individuals certified at this level will have demonstrated their understanding of:

- The basic concepts of enterprise architecture and the TOGAF standard
- The core concepts of TOGAF 9
- The key terminology of TOGAF 9
- The ADM cycle and the objectives of each phase, and how to adapt and scope the ADM
- The concept of the Enterprise Continuum; its purpose, and its constituent parts
- How each of the ADM phases contributes to the success of enterprise architecture
- The ADM guidelines and techniques
- How Architecture Governance contributes to the Architecture Development Cycle
- The concepts of views and viewpoints and their role in communicating with stakeholders
- The concept of building blocks
- The key deliverables of the ADM cycle
- The TOGAF reference models
- The TOGAF certification program

Examination

Certification for TOGAF 9 Foundation is achieved by passing the TOGAF 9 Part 1 Examination. This is a multiple-choice examination with 40 questions.⁶



What is the relationship between TOGAF 9 Foundation and TOGAF 9 Certified?

The learning outcomes for TOGAF 9 Foundation are a subset of those for TOGAF 9 Certified. Candidates are able to choose whether they wish to become certified in a stepwise manner by starting with TOGAF 9 Foundation and then at a later date TOGAF 9 Certified, or alternately to go direct to TOGAF 9 Certified by taking the combined examination.

⁶ For the latest information on examinations, see the TOGAF 9 Certification web site at www.opengroup.org/togaf9/cert.

1.2.4 The Certification Process

This Study Guide is aimed at preparing you to become certified for TOGAF 9 Foundation. The examination for this level is the TOGAF 9 Part 1 Examination, which comprises 40 multiple-choice questions.

The TOGAF 9 Foundation Syllabus for the examination is contained in Appendix D. Certain topic areas are weighted as more important than others and thus have more questions. The 11 topic areas covered by the examination together with the number of questions per area in the examination follows:

1. Basic Concepts (3 questions)
2. Core Concepts (3 questions)
3. Introduction to the ADM (3 questions)
4. The Enterprise Continuum and Tools (4 questions)
5. ADM Phases (9 questions)
6. ADM Guidelines and Techniques (6 questions)
7. Architecture Governance (4 questions)
8. Architecture Views, Viewpoints, and Stakeholders (2 questions)
9. Building Blocks (2 questions)
10. ADM Deliverables (2 questions)
11. TOGAF Reference Models (2 questions)

1.2.4.1 Format of the Examination Questions

The examination questions are multiple-choice questions. These are very similar in format to the Test Yourself questions included in each chapter. Note that the exact format for display is test center-specific and will be made clear on the screens when taking the examination.



Exam Tip

Please read each question carefully before reading the answer options. Be aware that some questions may seem to have more than one right answer, but you are to look for the one that makes the most sense and is the most correct.

1.2.4.2 What do I need to bring with me to take the Examination?

You should consult with the test center regarding the forms of picture ID you are required to bring with you to verify your identification.

1.2.4.3 *Can I refer to materials while I take the Examination?*

No; it is a closed-book examination.

1.2.4.4 *If I fail, how soon can I retake the Examination?*

You should consult the current policy on The Open Group web site. At the time of writing, the policy states that individuals who have failed the examination are not allowed to retake the examination within one (1) month of the first sitting.

1.2.5 **Preparing for the Examination**

You can prepare for the examination by working through this Study Guide section-by-section. A mapping of the sections of this Study Guide to the TOGAF 9 Foundation Syllabus is given in Appendix D. After completing each section, you should answer the Test Yourself questions and read the referenced sections from the TOGAF documentation. Once you have completed all the sections in this Study Guide, you can then attempt the Test Yourself examination papers in Appendix B. These are designed to give a thorough test of your knowledge. If you have completed all the prescribed preparation and can attain a pass mark for the Test Yourself examination papers as described in Appendix B, then it is likely you are ready to sit the examination.

1.3 **Summary**

The TOGAF 9 People certification program is a knowledge-based certification program. It has two levels, Level 1 and Level 2, which lead to certification for TOGAF 9 Foundation and TOGAF 9 Certified, respectively.

The topic for this Study Guide is preparation for taking the TOGAF 9 Part 1 Examination that leads to the TOGAF 9 Foundation certification. The examination comprises 40 simple multiple-choice questions to be completed in one hour.⁷

Preparing for the examination includes the following steps:

- You should work through this Study Guide step-by-step.

⁷ Additional time is allowed for candidates for whom English is a second language where the examination is not available in the local language. For further information see the advice to candidates sheet on The Open Group TOGAF 9 Certification web site.

- At the end of each chapter, you should complete the Test Yourself questions and read the sections of the TOGAF documentation listed under Recommended Reading.
- Once you have completed all the chapters in this Study Guide, you should attempt the Test Yourself examination papers given in Appendix B.
- If you can attain the target score in Appendix C, then you have completed your preparation.

1.4 Test Yourself Questions

- Q1: How many certification levels are there in the TOGAF 9 People certification program?
- A. 1
 - B. 2
 - C. 3
 - D. 4
- Q2: Which one of the following is the entry level certification for an individual?
- A. TOGAF 9 Certified
 - B. TOGAF 9 Foundation
 - C. TOGAF 9 Professional
 - D. TOGAF 9 Architect
- Q3: Which one of the following describes three principles of the TOGAF 9 People certification program?
- A. Integrity, Scalability, Flexibility
 - B. Objectivity, Robustness, Simplicity
 - C. Openness, Fairness, Quality
 - D. Knowledge-based, Valuable, Simplicity
 - E. All of these
- Q4: Which of the following topic areas is not included in the TOGAF 9 Foundation Syllabus?
- A. Architecture Governance
 - B. Basic Concepts
 - C. Building Blocks
 - D. Guidelines for adapting the ADM: Iteration and Levels
 - E. Introduction to the ADM

- Q5: All of the following apply to the TOGAF 9 Part 1 Examination, except which statement?
- A. Candidates who fail cannot take the examination again within one (1) month.
 - B. The examination consists of more than 100 questions.
 - C. The examination has multiple-choice format questions.
 - D. It is a closed-book examination.

1.5 Recommended Reading

The following are recommended sources of further information for this chapter:

- TOGAF Certification for People: Program Summary Datasheet, 2013, published by The Open Group (www.opengroup.org/togaf9/cert/docs/togaf9_cert_summary.pdf)
- TOGAF 9 Foundation Datasheet, 2013, published by The Open Group (www.opengroup.org/togaf9/cert/docs/togaf9_foundation.pdf)
- TOGAF Certification for People: Certification Policy, February 2009 (X091), published by The Open Group (www.opengroup.org/bookstore/catalog/x091.htm)
- TOGAF Certification for People: Conformance Requirements (Multi-Level), December 2011 (X111), published by The Open Group (www.opengroup.org/bookstore/catalog/x111.htm)
- The Open Group TOGAF 9 Certification web site: www.opengroup.org/togaf9/cert
- The TOGAF information web site: www.togaf.info