The Open Group® Professional Certification Program

Conformance Requirements for the Technical Specialist Profession (Open CTS)

Version 3.0
March 2020

The Open Group® Professional Certification Program:
Conformance Requirements for the Technical Specialist Profession (Open CTS)

Contents

1.   Introduction

The Open Group Professional Certification Program (the Program) is designed to validate the existence of those qualities and skills in a professional that enable the effective development, implementation, and operation of Business or IT-related specializations. The Program is skills and experience-based and goes beyond validating the mastery of any specific knowledge base.

The Program covers multiple Professions. This document is for the Technical Specialist Profession, which leads to certification as an Open Certified Technical Specialist (Open CTS).

The Open Group supports two different routes to certification:

- The first route is Direct Certification by The Open Group

- The second route is Indirect Certification through third-party programs accredited by The Open Group

The Conformance Requirements for each of the Professions in the Program apply equally to Direct and Indirect Certification.

This document is intended for individuals who wish to pursue Direct Certification in the Technical Specialist Profession as Open Certified Technical Specialists, and for organizations that wish to run Accredited Certification Programs internally.

1.1   Conformance Requirements

This document defines the requirements for certification as an Open Certified Technical Specialist (Open CTS), and may also be used as the foundation of a Technical Specialist Profession framework.

These Conformance Requirements define those qualities and skills in a Professional that enable the effective practice of several Specialties in the development, delivery, and operation of IT-related solutions. The requirements are skills and experience-based and do not define or require any specific knowledge base.

This document may be used on its own or, in conjunction with other related documents from The Open Group, as a guide for individual career development as well as a framework for Technical Specialist Profession programs within members of The Open Group and other public and private sector organizations. The Conformance Requirements are designed to be flexible and extensible so that the framework may be adapted and extended to meet the needs of any industry, country, or organization.

1.2   Key Documents

The Technical Specialist Profession is based upon three key documents:

- The Open Group Professional Certification Program Certification Policy, which sets out the policies and processes by which a Technical Specialist may achieve certification

- The Open Group Professional Certification Program Conformance Requirements for the Technical Specialist Profession (Open CTS) (this document), in which are documented the skills and experience that a Technical Specialist must possess to achieve certification

- The Open Group Professional Certification Program Configuration Document for the Technical Specialist Profession (Open CTS), which outlines the specific certification policies and processes for the Technical Specialist Profession

Practical information about the certification process is available through the Open CTS FAQ and other Open CTS documentation on the Certification Authority's website.

1.3 Levels of Certification

The Program recognizes three levels of certification:

Level 1:   A professional who is able to perform with assistance/supervision with a wide range of appropriate skills as a contributing professional.

Level 2:   A professional who is able to perform independently and take responsibility for delivery of solutions as lead professional.

Level 3:   A professional who has significant breadth and depth of impact on the business through the application of their Profession.

Candidates applying for certification at Level 3 are required either to be certified at Level 2, or to have met the Level 2 Conformance Requirements at some time in the past.

1.4 This Document

This document is a major revision to the Open CTS Conformance Requirements. Every effort has been made to ensure that anyone meeting the previous versions of the Open CTS Conformance Requirements will also meet the requirements in Version 3.0.

1.5 Migration and Change History

This section details changes made to the Open CTS Conformance Requirements.

Version No.	Date	Change
3.0	March 2020	This document is a new version that includes significant changes and additions to the Technical Specialist Profession defined in previous versions of the Conformance Requirements.
		Client Focus Area requirements are no longer included.
		The Core Basic skills have been harmonized across the Open Professions program.
		This Version 3.0 is a new baseline for the Profession.

For Specialties/Streams that are derived from those in previous versions of the Conformance Requirements, the new requirements capture the way in which those Specialties/Streams have evolved in response to changes in the work environment and the context of Technical Specialists.

There are also new Specialties/Streams that appear in this document for the first time, as well as those that no longer appear.

This version of the Conformance Requirements no longer includes Client Focus Area requirements.

The following new Specialties have been introduced:

- Data Engineering
- Product Support

The following Open CITS Specialties/Streams continue to be supported in this version of the Technical Specialist Profession (although with modification):

- Application Development
- Application Integration (formerly Application Integration and Middleware)
- Business Analysis
- Data Platform (formerly Data Management)
- Network Systems
- Package Application Implementation
- Server Systems
- Storage Systems
- Security
- Testing

The following Specialties/Streams are no longer included in this document:

- Application Development Products
- Business Information Management
- Content Management
- Cross Systems
- Data Integration
- Infrastructure and Application Management
- Infrastructure Design
- Portal and Collaboration
- Service Management Consulting
- Service Management Delivery
- Service Management Operations

Technical Specialists who were certified to a previous version of this document and are in good standing remain certified. More detailed information on the transition is available in the Open Certified Technical Specialist Profession Configuration Document.

2. Technical Specialist Roles and Responsibilities (Informative)

Technical Specialists support solution construction, implementation, and systems integration to solve business needs using a wide range of technologies. They are capable of working with requirements and designs to ensure successful implementation projects and engagements into production.

Technical Specialists deliver high-quality solutions to clients (internal or external) in response to varying business requirements. They utilize product, technology, industry, architectural, and business skills. Technical Specialists often use tools to manage, analyze, design, and implement solutions and they have an in-depth understanding of products, offerings, and services within their Specialty area.

2.1 Characteristics of the Technical Specialist

The key skills and contributions Technical Specialists bring to their pursuits are multifold. Technical Specialists ensure that IT solutions are designed, implemented, operated, and maintained to suit client needs. Technical Specialists possess a variety of skill sets based on their particular Specialty or area of expertise.

Effective Technical Specialists typically possess and exhibit the following:

Technical skills	Technical Specialists require practical skills and experience with many application and infrastructure (operational) products, technologies, and services. Technical Specialists have the specialized skills required to construct, implement, operate, and maintain all aspects of a client IT infrastructure.
	Beyond that base of technical depth, effective Technical Specialists usually possess additional technical skills in one or more Specialties.
Leadership skills	An effective Technical Specialist is a leader, contributing knowledge, technical expertise, and team leadership skills. This leadership should be demonstrated in their work, to their clients, and within their teams.
Personal and professional skills	The Technical Specialist must have high levels of communication, consulting, and client relationship skills. The Technical Specialist must be able to clearly communicate complex technical and business concepts, both to clients (internal or external) and to team members, to negotiate change. One of the principal roles of the Technical Specialist is problem-solving of client business and technical issues. To accomplish this, they must be capable of effectively identifying and framing problems, leading the collection of elements of information, and integrating this information to produce timely and thoughtful decisions.

2.2 Types of Technical Specialists – The Specialties

The Open Group recognizes that Open Certified Technical Specialists will be expected to demonstrate a higher level of proficiency in one of several areas of technical focus or Specialty in addition to the fundamental skills of a Professional. These skills are defined in this Conformance Requirements document. The types and requirements of the Open Certified Technical Specialist Specialties will evolve with the needs of the industry and will be updated from time to time.

The Open CTS Profession currently includes the following 12 Specialties:

- Application Development – Technical Specialists in this Specialty have expertise in translating IT requirements in the design, development, and assembly of components to create custom information systems

- Application Integration – Technical Specialists in this Specialty have expertise in one or more application and integration middleware-based software product areas

- Business Analysis – Technical Specialists in this Specialty have expertise in analysis and description of business processes, and their translation into functional and non-functional IT requirements

- Data Engineering – Technical Specialists in this Specialty have expertise in making available, integrating, and optimizing structured and/or unstructured data using data integration products, enterprise search and visualization technologies, and methods

- Data Platform – Technical Specialists in this Specialty have expertise in making available, integrating, and optimizing structured and/or unstructured data using database products, technologies, and methods

- Network Systems – Technical Specialists in this Specialty have expertise in one or more networking system technology areas

- Package Application Implementation – Technical Specialists in this Specialty have expertise in implementing, integrating, and customizing commercial Independent Software Vendor (ISV) packages such as Customer Relationship Management (CRM), Enterprise Resource Planning (ERP), Finance, Accounting, or vertical industry-specific packages

- Product Support – Technical Specialists in this Specialty are responsible for providing support on hardware and software products

- Security – Technical Specialists in this Specialty have expertise in planning, implementing, and managing security systems

- Server Systems – Technical Specialists in this Specialty have expertise in one or more mainstream server technologies

- Storage Systems – Technical Specialists in this Specialty have expertise in one or more storage system technology areas

- Testing – Technical Specialists in this Specialty have expertise in the planning, design, management, execution, and reporting of tests using appropriate testing tools, techniques, and standards, to ensure that new and amended systems, together with any interfaces, perform as specified

Throughout the remainder of the document the term *\<Specialty-specific\>* is intended to be substituted by one of the Specialties listed above.

Evidence of compliance with the Conformance Requirements will need to be provided in a Specialty-specific context when required and as indicated in the Milestone and Experience Application Forms.

3. Level 1 and Level 2 Conformance Requirements (Normative)

The Conformance Requirements for a Level 1 or Level 2 Open Certified Technical Specialist are broken down as follows:

- Core Basic skills
- Specialty skills
- Experience Profile requirements
- Professional Development requirements
- Community Contribution requirements
- Experience requirements

3.1 Skill Levels

For the Core Basic skills and Specialty skills, Candidates must meet or exceed the minimum skill level defined for each of the skills.

Table 1 lists the definition of skill levels and associated proficiency levels.

Table 1: Skill Level Definitions

Skill Level	Proficiency	Experience
Limited	Limited or no knowledge	None
General	General conceptual knowledge only	Limited – read about it, some education
Applied	Applied knowledge	Performs with supervision or mentoring
Deep	In-depth knowledge	Mastered the current state-of-the-art and is able to perform without supervision
Expert	Expert knowledge	Advances the state-of-the-art

3.2 Core Basic Skills

Table 2 lists the Core Basic skills for Level 1 and Level 2.

To achieve certification Candidates must be able to document that they have demonstrated these skills at the required level (or higher) repeatedly and successfully.

Table 2: Core Basic Skills for Level 1 and Level 2

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
CBS01	Communicate in Writing	Good written communication of <Specialty-specific> topics, including the use of proper grammar, spelling, document organization, clarity, and use of appropriate content for the audience to meet its purpose.	Open Certified Technical Specialists need to be able to effectively communicate their <Specialty-specific> topics – topics that are critical for the continuation of the work, such as architectural decisions and design decisions.	Applied	Deep
CBS02	Communicate Verbally	Good verbal communication, with responsiveness to questions, ability to stay on subject, use of good feedback, and follow-up questions, etc., leading to effective two-way communication. Culturally-appropriate body language is expected in face-to-face meetings and video teleconferencing.	Open Certified Technical Specialists need to be able to effectively communicate their <Specialty-specific> topics – topics that are critical for the continuation of the work, such as architectural decisions and design decisions.	Applied	Deep
CBS03	Leading Teams	Given a scope of <Specialty-specific> work to be accomplished, plan the work, form a team to perform the work, and guide the team and its members in performing the work to completion.	Open Certified Technical Specialists must be able to take on a leadership role leading to results in the scope of the work and therefore must exhibit leadership skills.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
CBS04	Mediate Equitable Solutions	Given a conflict that jeopardizes the integrity of the solution, mediate differing stakeholder opinions to arrive at equitable resolutions that ensure successful and stable outcomes.	Open Certified Technical Specialists must be capable of maintaining the integrity of their work products while simultaneously serving the needs of multiple stakeholders of diverse needs.	Applied	Deep
CBS05	Understand Business Aspects	Understand the stakeholders' business needs, how they relate to their business and mission, and to the <Specialty-specific> activities.	Open Certified Technical Specialists must have business insight into how <Specialty-specific> activities and work products serve the business needs of a variety of stakeholders and how they relate to the larger business context.	Applied	Deep
CBS06	Develop Solutions	Given one or more business or technical requirements, create the <Specialty-specific> structures of a system or solution that can be validated to meet those requirements while adhering to business and/or technical constraints.	Open Certified Technical Specialists must be skillful in creating solutions that can be demonstrated to solve problems while adhering to business and/or technical constraints.	Applied	Deep
CBS07	Manage Specialty-specific Risks within a Project	Given a project plan, identify those elements of the plan that put the integrity of the <Specialty-specific> aspects of the plan/timeline at risk. Manage those elements through to completion as agreed by the appropriate decision-maker(s).	Open Certified Technical Specialists must be able to work closely with stakeholders to address issues in project plans that put their work at risk. They must be able to communicate the likelihood and the impact of the risks and come to agreement with the appropriate decision-maker(s).	Applied	Deep

3.3 Specialty Skills

This section lists the skills specific to each Specialty for Level 1 and Level 2.

To achieve certification Candidates must be able to document that they have demonstrated these skills at the required level (or higher) repeatedly and successfully.

3.3.1 Application Development

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSAD01	Software Design	Elaborate and translate functional and non-functional requirements into a design.	Application Development Professionals need to be able to design software solutions that meet client requirements.	Applied	Deep
TSAD02	Agile Development	Perform Agile roles and practices throughout the development phase of the project.	Application Development Professionals must be able to deliver project requirements in sprints with sprint-wise playbacks.	Applied	Deep
TSAD03	Secure Coding	Apply secure coding practices during the design and development phase.	Application Development Professionals must apply security practices from the design phase through the development phase until testing.	Applied	Deep
TSAD04	Apply Industry Standards	Demonstrate knowledge of industry standards in their area of work (e.g., SAFe®, or UML®) to meet a customer's development process requirements.	Application Development Professionals should be well informed of the industry standards to enable appropriate choices of standards for a given set of client requirements.	Applied	Deep
TSAD05	Application Development Methods	Use two or more major application development methods; e.g., Waterfall, Rational Unified Process (RUP), Agile, SAFe.	Application Development Professionals need to be familiar with more than one approach to software development.	Applied	Deep
TSAD06	DevOps Tool Chain	Use a DevOps tool chain to automate the build and deployment of your work.	Application Development Professionals need to adopt efficient (automated) practices of building and deploying code.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSAD07	Programming Languages	Given a business and technical context, compare the possibilities, strengths, and weaknesses of two or more programming languages or frameworks to make recommendations.	Application Development Professionals need to understand the strengths and weaknesses of particular languages and/or frameworks in the project context.	Applied	Deep
TSAD08	Software Development	Program in a mainstream programming language, according to project guidelines and coding standards.	Application Development Professionals need to be able to create software that meets coding standards and quality requirements.	Deep	Deep
TSAD09	Solution Development	Given a set of requirements, design, build, test, and package significant aspects of a complete solution required by the client.	Application Development Professionals need to be able to create and deliver complete solutions that meet client needs.	Applied	Deep
TSAD10	Unit Testing	Given a test plan, perform unit test and debug complex software.	Application Development Professionals need to be able to participate effectively in the QA process.	Applied	Deep

3.3.2 Application Integration

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSAI01	SOA Enablement	Given a set of client requirements, select and define the installation and configuration of application integration products that facilitate the enablement of Service-Oriented Architecture (SOA).	Application Integration Professionals must be able to use SOA concepts and tools and understand their different aspects and implications.	Applied	Deep
TSAI02	Data Conversion and Interchange	Advise and support the client (internal or external) on data interchange across disparate systems (e.g., XML, SOAP).	Application Integration Professionals must be able to demonstrate their understating of data conversion and interchange standards.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSAI03	Application Integration Methods	Apply application integration methodologies and architectures, such as SOA and web services.	Application Integration Professionals must be able to demonstrate their understanding of the different methodologies that suit client needs.	Applied	Deep
TSAI04	Implement Adapter Interfaces	Understand client needs regarding adapter interfaces to provide system interconnectivity and design or implement the integration.	Application Integration Professionals must be able to demonstrate their understating of adapters that allow objects with incompatible interfaces to collaborate.	Applied	Deep
TSAI05	Configure Application Integration Products	Implement product configurations based on a complete understanding of the client environment.	Application Integration Professionals need to be able to make effective use of product configuration to meet their customers' requirements.	Applied	Deep
TSAI06	Performance Optimization	Design or implement optimal solution configurations to meet the customer requirements for performance and capacity.	Application Integration Professionals must demonstrate their ability to understand and refine non-functional requirements and use appropriate methods to define solutions that meet them.	Applied	Deep
TSAI07	Application Deployment	Demonstrate understanding of the different deployment options and choose the one that best suits the customer needs.	Application Integration Professionals must be able to demonstrate their understanding of the different deployment options and choose the one that best suits their customers' needs.	Applied	Deep
TSAI08	Configure for Recoverability	Determine the need for logging, recovery, and backup, then demonstrate how best to use the appropriate tools and techniques to meet these requirements.	Application Integration Professionals must be able use relevant resources to report the status of the application at different stages. Logging, auditing, and backup are key requirements for a successful integration. Hence the Candidate must be able to help the customer meet these requirements.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSAI09	Failover and Recoverability	Advise and support the client in the selection and deployment of high availability solutions covering failover capability and redundancy techniques.	Application Integration Professionals must be able to help the client in the selection and deployment of the appropriate methods such as incremental, image copy, mirroring, cross-site, failover, and disaster recovery strategies.	Applied	Deep
TSAI10	Program-to-Program Interfaces and API Management Software	Implement or reuse program-to-program interfaces and API management software across disparate systems.	Application Integration Professionals must be familiar with the use of diverse program-to-program interfaces and API management software.	Applied	Deep

3.3.3 Business Analysis

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSBA01	Understanding of Business	Apply knowledge of the client vertical or horizontal business context to identify, understand, and articulate the client business strategy, problems, and objectives.	Business Analysis Professionals need to be able to identify and understand the client strategy in the context of the client business in order to ensure relevant and appropriate analysis of the business to ensure the value of the solution to the client.	Applied	Deep
TSBA02	Requirements Gathering Strategy	Select the appropriate methods, techniques, and tools for identifying, analyzing, and documenting client requirements.	Business Analysis Professionals need to be able to select and apply tools that are appropriate to the task and the context.	Applied	Deep
TSBA03	Requirements Gathering	Conduct requirements gathering workshops with a client to meet the stated objective.	Business Analysis Professionals need to be able to work effectively with groups of stakeholders to elicit requirements.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSBA04	Requirements Definition	Define requirements using modeling techniques or otherwise to produce deliverables (e.g., use-cases, data flow diagrams, entity relationship diagrams, etc.).	Business Analysis Professionals need to be able to apply recognized techniques to collect, refine, analyze, and present information leading to supportable requirements.	Applied	Deep
TSBA05	Requirements Validation	Validate requirements with the client.	Business Analysis Professionals need to be able to ensure that the identified requirements meet client expectations.	Applied	Deep
TSBA06	Requirements Gap Analysis and Traceability	Validate the proposed solution against requirements (gap analysis).	Business Analysis Professionals need to be able to check that the proposed solution meets the requirements.	Applied	Deep
TSBA07	Business Justification	Articulate business justification (scope, goals, benefits, costs) for proposed solutions.	Business Analysis Professionals need to be able to provide key information to the client to support business investment decisions.	Applied	Deep
TSBA08	Business Impact Analysis	Identify the impact of the proposed solutions to the business process.	Business Analysis Professionals need to be able to identify and describe the impact of the proposed solution on the client business.	Applied	Deep

3.3.4 Data Engineering

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSDE01	Data Analysis	Given a set of business problems, apply data analysis techniques to large data sets to identify patterns and establish relationships.	Data Engineering Professionals must be able to explore data sets, identify patterns, and assist stakeholders to derive useful and actionable insights.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSDE02	Enterprise Search Applications	Design and implement various enterprise search applications such as Elasticsearch/Splunk for client requirements.	Data Engineering Professionals must be able to implement enterprise search applications based on customer requirements.	Applied	Deep
TSDE03	Data Processing Pipelines	Use programming skills like Java®, Python®, Scala, etc. to build pipelines to extract and transform data from a repository to a data consumer.	Data processing pipelines lie at the core of all data activity in a company. As the importance of data grows, Data Engineering Professionals must be able to manage these pipelines so that they are reliable, scalable, and monitored, while maintaining semantic integrity.	Applied	Deep
TSDE04	Data Integration/ Federation Tools	Use and apply Extract, Transform, and Load (ETL) tools and/or data integration or federation tools to prepare and transform data as needed.	Data Engineering Professionals must have skills to use ETL and similar tools to meet the data transformation needs for applications.	Applied	Deep
TSDE05	Unstructured Text Analytics	Derive insights using unstructured text analytics (Natural Language Processing (NLP)).	Data Engineering Professionals must be able to explore data sets and derive insights using text analytics approaches.	Applied	Deep
TSDE06	Data Security and Privacy	Apply the proper data protections as specified by policy or standards.	Data Engineering Professionals should be able to identify data that needs to be secured and work with Information Security Specialists to apply those protections as specified by policy or standards.	Applied	Deep
TSDE07	Data Loss Prevention	Design/implement Data Loss Prevention (DLP) solutions.	Data Engineering Professionals must be able to design and implement DLP solutions to enact the required DLP policies.	Applied	Deep

3.3.5 Data Platform

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSDP01	Data Management Solutions	Implement data management solutions using optimal solution configurations to meet client needs for performance and capacity.	Data Platform Professionals need to demonstrate experience with implementing solutions that meet client needs.	Applied	N/A
TSDP02	Performance Optimization	Execute performance measurement, analysis, and optimization of data management solutions.	Data Platform Professionals must be able to manage performance measurement, analysis, and optimization for data management solutions.	Applied	Deep
TSDP03	Backup and Recoverability	Implement and support backup and recoverability strategy for data management solutions to meet client data retention and regulatory requirements.	Data Platform Professionals must be able to advise, recommend, and implement recoverability methods for data management solutions.	Applied	Deep
TSDP04	Data Recovery	Implement and support data recovery to an alternate data center/location.	Data Platform Professionals must be able to implement and support data recovery to meet their client needs for business continuity.	Applied	Deep
TSDP05	Data Management Design	Advise and support information architects in designing complex data management solutions.	Data Platform Professionals must be able to assist information architects to design complex data management solutions.	N/A	Deep
TSDP06	Data Management Implement-ation	Given a data management solution or migration design, lead the implementation/migration of a complex data management solution.	Data Platform Professionals must be able to lead the implementation/migration of complex data management solutions.	N/A	Deep
TSDP07	Risk Mitigation	Advise and support the client by identifying operational risk and providing best practice recommendations for mitigation.	Data Platform Professionals must be able to identify operational risks for the data management solutions and provide best practice recommendations to client to mitigate those risks.	Applied	Deep

3.3.6 Network Systems

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSNS01	Network Architecture	Advise and support the client on network architecture, and/or design, to meet client needs for new or existing networks, including options and trade-offs for naming and addressing methods, data formats, and protocols/technologies.	Network Systems Professionals must be able to perform network analysis and advise client on the architectural implications and decisions necessary for new or upgraded network infrastructures that not only meets client needs, but also improve the customer and workforce experience while enabling long-term competitive advantage. For example, decisions may involve choices between TCP/IP, Frame Relay, Asynchronous Transfer Mode (ATM), OC-x or DS-x transport, and routing protocols, such as Routing Information Protocol (RIP), Border Gateway Protocol (BGP), Open Shortest Path First (OSPF). An engagement might be to help client transition an existing IPv4 network to IPv6 or dual stack implementation or implement an IPv6-based service such as content-based routing.	Applied	Deep
TSN02	Network Deployment	Plan, implement, and manage network WANs or LANs, or optimize an existing LAN/WAN environment.	Network Systems Professionals must have the skills and experience to employ the components and tools to deploy and optimize target network architectures. Typically, components may be deployed using APIs such as CPI-C, sockets, or equivalent tools; for example, Cisco® or Juniper® network routing or switch management.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSNS03	Network Management	Use network management tools and problem determination techniques to conduct fault analysis, performance management, and provisioning of networks to maintain the quality of service and network integrity.	Network Systems Professionals are expected to have the expertise and experience to determine the root cause of network failures and outages in order to efficiently support network security and availability.	Applied	Deep
TSNS04	Network Security	Apply network security measures to ensure network integrity and confidentiality. Apply three or more of the following technologies: IPSec, Layer Two Tunneling Protocol (L2TP), Point-to-Point Tunneling Protocol (PPTP), public/private keys, Secure Sockets Layer (SSL), or Virtual Private Networks (VPNs) or Virtual LANs (VLANs).	Network security is the first layer of a defense-in-depth cybersecurity strategy. It is essential that Network Systems Professionals have the skills and experience to implement the right security policies and solutions necessary to protect their client.	Applied	Deep
TSNS05	Capacity Planning	Advise or support the client (internal or external) in network capacity planning, performance analysis, and preparation of documented results (WAN, LAN, or client-server end-to-end).	Network capacity planning is the process to determine how the network must change according to the needs of the client and the impact on network utilization. Network Systems Professionals must be able to use the proper tools to communicate their analysis to support their assessment and potential recommended changes.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSNS06	IP Convergence Applications	Advise or support the client (internal or external) in at least one of the following IP convergence applications: VoIP, unified messaging, video streaming, real-time collaboration, or IPTV.	A growing number of applications are considered IP convergence solutions. These applications require direct support from a Network Systems Professional in order to properly design and deploy because of the tight coupling between network services and application functionality.	Applied	Deep

3.3.7 Package Application Implementation

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSPA01	Software Packages	Use ISV products, technologies, and methods to provide a solution to a client (internal or external) problem.	Package Application Implementation Professionals need to be able to solve client problems using ISV products, technologies, and methods.	Applied	Deep
TSPA02	Conversion Techniques	Advise or support the client (internal or external) on which migration or conversion tools, procedures, and products are required to migrate or convert to ISV products.	Package Application Implementation Professionals need to be able to recommend or select tools and approaches to migrate to or between ISV products.	Applied	Deep
TSPA03	ISV Upgrade	Advise or support the client (internal or external) on new ISV product versions, including new features and functions, upgrade process, and any prerequisites that may be needed.	Package Application Implementation Professionals need to understand the current environment and considerations for future upgrades and maintenance and make recommendations.	Applied	Deep
TSPA04	Product Configuration	Advise or support the client (internal or external) on product configuration to run in the client environment.	Package Application Implementation Professionals need to understand how to configure the ISV product to optimize how it runs in the client environment and make appropriate recommendations to meet client needs.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSPA05	ISV Recoverability	Advise or support the client (internal or external) on ISV logging, recovery, and backup capabilities.	Package Application Implementation Professionals need to understand the recovery and backup aspects of the ISV product and make appropriate recommendations to meet client needs.	Applied	Deep
TSPA06	ISV Best Practices	Advise or support the client (internal or external) on deployment techniques and/or best practices of ISV solutions or products.	Package Application Implementation Professionals need to know the best practices for deployment techniques of the ISV product and make appropriate recommendations to meet client needs.	Applied	Deep
TSPA07	Performance Optimization	Configure product to meet client requirements for performance and capacity (e.g., use clustering, mobile and web access, replication and mail routing, multi-lingual).	Package Application Implementation Professionals need to understand how to configure the ISV product to meet client needs for performance and capacity.	Applied	Deep
TSPA08	Failover and Redundancy	Advise or support the client (internal or external) on ISV failover capability and redundancy.	Package Application Implementation Professionals need to understand how to configure and deploy the ISV product to meet client needs for availability.	Applied	Deep

3.3.8 Product Support

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSPS01	Account Management	Develop a working relationship with the client and executives (CEO, CIO, VP, etc.) and influence their IT plans and direction to meet business needs.	Product Support Professionals are responsible for management of customer relationship activities to one or more customer organizations with the intent to build effective relationships and ensure customer requirements are being met.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSPS02	Solution Definition	Capture client needs and requirements and translate them into specific solutions to meet client expectations.	Product Support Professionals need to support the client with strategic thinking about their business, organizations, information strategies, tactics, and how they relate to client business objectives. They lead others in applying client strategy and planning techniques in complex situations across organizational boundaries.	Applied	Deep
TSPS03	Preventative Services	Advise and support the client on developing and implementing proactive and persistent preventive services.	Product Support Professionals need to analyze and position the pros and cons of possible preventive or quality assurance actions. They develop and implement measures for proactive and persistent problem prevention.	Applied	Deep
TSPS04	Lifecycle Management	Advise and support the client on the lifecycle management of their products, service processes, and systems environment technical support functions.	Product Support Professionals need a broad and deep understanding of client products and systems environment technical support functions. They need to advise and help the client develop product lifecycle management strategies in line with competitive and market forces.	Applied	Deep
TSPS05	Problem Determination	Successfully determine problems and identify their sources.	By performing analysis and deploying appropriate troubleshooting strategies, Product Support Professionals identify system components that cause problems for complex client platforms and take corrective actions, gain client support and cooperation in addressing the problem, and communicating its resolution to stakeholders.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSPS06	Reliable Advice	Use knowledge of IT technologies and best practices to provide reliable advice to the client.	Product Support Professionals need to be the trusted advisor and provide reliable guidance on best practices and recommendations that include the latest IT technologies and methodologies.	Applied	Deep

3.3.9 Security

In the Security Specialty it is recognized and understood that because of the breadth of the field and the wide variety of roles in which Security Specialists work, the requirements for milestones and certification are more complex to describe than is possible in a simple table. Please refer to the Configuration Document for details of which combinations of skills are required at what level to achieve Experience Profile Milestone Badges and Certification at Level 1 and 2.

The individual skills and the recognized third-party certifications are documented below.

3.3.9.1 Recognized Third-Party Security Certification Programs

Recognized third-party security certification programs at the time of initial publication are as follows:

- (ISC)[2]:
  — Certified Information Systems Security Professional (CISSP®)
  — Certified Secure Software Lifecycle Professional (CSSLP®)
  — Information Systems Security Architecture Professional (ISSAP®)
  — Information Systems Security Engineering Professional (ISSEP®)
  — Information Systems Security Management Professional (ISSMP®)
- ISACA®:
  — Certified Information Systems Auditor (CISA®)
  — Certified Information Security Manager (CISM®)
- ASIS International:
  — Physical Security Professional (PSP®)
- GIAC®:
  — Security Leadership Certificate (GSLC)
  — Security Expert (GSE)
  — Information Security Professional (GISP)

Recognized third-party security certification programs are evaluated and accepted as part of the certification process. The Certification Authority will maintain and make available a list of recognized certifications that may be cited by Candidates for certification.

Candidates for certification may request security certifications to be included in the list, in which case the certification will be evaluated for recognition and inclusion in the list of recognized third-party security certification programs.

Security certifications may be submitted for recognition with an application for direct certification, or by an Accredited Certification Program.

Characteristic	Explanation	How Demonstrated
Relevance	The certification must be focused on the domain of IT security.	Documentation describing which security domains are covered by the certification.
In-depth or Widespread	The certification should be recognized as either covering at least six (6) of the above security domains or be an in-depth technical certification in one (1) or more security domains.	Documentation describing the depth and/or spread of the certification.
Active	Certification should be currently active and certifications criteria should be regularly updated to reflect the latest state-of-the-art in security.	Proof of the active status of the certification.
International	Certification should be available across geographical areas and have certified people across geographical areas.	Proof of the international availability and recognition of the certification.
Broad Acceptance	Either the certification is available across geographies and has certified people across geographies, or the certification is the leading such certification in its country or region.	Evidence of the international availability and recognition of the certification or its prevalence in the country or region.
Supporting Collateral	The certification must be supported by collateral materials for Candidates who wish to become certified. These materials might include, for example, templates, tools, and examples.	Proof of supporting collateral.
Continued Learning and Use	The certification must be based on continued learning within the domain(s) and practical experience as a Security Professional.	Examples of the proof submitted to the certification body.

3.3.9.2 Skills

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSSC01	Security Governance	Understand security governance principles such as risk, compliance, and various regulations and advise the client on these principles.	Security Professionals need to understand security governance best practices to advise the client on these principles.	Applied	Deep
TSSC02	Risk Management	Identify and define risk control objectives using risk methodologies policy and technical controls to determine client business requirements and associated risks.	Security Professionals must demonstrate their use of risk assessment methodologies to improve client awareness and/or posture.	Applied	Deep
TSCS03	Security Architecture and Design	Design a Security Architecture, translating the control objectives and requirements to best practice principles, perform a fit/gap analysis, and advise the client.	Security Professionals design a Security Architecture for the client.	Applied	Deep
TSSC04	Security Modeling	Use security models, such as Common Criteria,[1] to assure data confidentiality, integrity, and/or availability for client requirements.	Security Professionals use and apply appropriate security models to client business requirements to assure data confidentiality, integrity, and/or availability.	Applied	Deep
TSSC05	Identity and Access Management	Demonstrate knowledge of the access and identity lifecycle, and the business processes and technologies required for managing digital identities.	Security Professionals apply their knowledge of Identity and Access Management (IAM) best practices and technology solutions to client business processes.	Applied	Deep

---

[1] Refer to https://en.wikipedia.org/wiki/Common_Criteria.

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSSC06	Data and Asset Classification	Demonstrate knowledge of data and asset classification methodologies, and the types of data classifications.	Security Professionals advise the client on classification methodologies for data, and how classifications are affected by data type.	Applied	Deep
TSSC07	Communication Security	Advise the client on the security requirements for network communication components and communication channels including architecture, protocols, segmentation, encryption, etc.	Security Professionals need to advise the client on security requirements for network communications.	Applied	Deep
TSSC08	Security Controls	Apply architectural security principles to build technical, process, or organizational security controls, including the design of offerings or solutions.	Security Professionals apply security principles to build secure solutions.	Applied	Deep
T9SC09	Security Testing and Assessment	Design strategies for security testing and assessments covering DevOps, code scanning, penetration testing, or vulnerability scanning. Examples should show your knowledge of the tools and techniques used to assess the systems to discover vulnerabilities or faults related to building/maintaining secure systems.	Security Professionals must be able to demonstrate their knowledge of the tools and techniques used to assess the systems to discover vulnerabilities or faults related to building/maintaining secure systems.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSSC10	Secure Solution Deployment	Define a deployment plan and implement that plan to deploy secure solution.	Security Professionals must be able to define elements of a deployment plan that includes configuration and implementation of security products, documentation of deployed security solutions, and knowledge transfer for handover to security operations.	Applied	Deep
TSSC11	Service Management Security	Demonstrated experience in some aspect of the security management domain such as performing root cause analysis, implementing process or policies, monitoring for or assessing compliance, and the ability to validate effectiveness of controls.	Security Professionals must demonstrate experience in service management – defining, deploying, or managing an aspect of security management services.	Applied	Deep
TSSC12	Security Systems Lifecycle	Demonstrated experience with security systems lifecycle management including change, configuration, incident, threat, vulnerability management, bug fixing, and/or patching.	Security Professionals must demonstrate experience in security systems lifecycle management.	Applied	Deep

3.3.10 Server Systems

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSSV01	Server Architecture	Given a client business problem, select the appropriate server architecture and instance to meet client requirements.	Server Systems Professionals should understand client business and technical requirements in order to determine the appropriate server solution to meet client needs.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSSV02	Server Configuration	Configure server to operate efficiently in the client environment. Show how a balanced system configuration was achieved (e.g., processors, memory, I/O and network resources, disk, tape, switch fabric, I/O paths) and appropriately sized for the workload to be run. Show how sufficient backup and recovery capability for the requirements of the workload was achieved.	Server Systems Professionals should be able to configure and size servers to address client workload to achieve efficient a solution for the client requirement. This should include the provision of appropriate backup and recovery capabilities.	Applied	Deep
TSSV03	Server Integration	Given a customer requirement, integrate new capability with existing systems and/or solutions. Examples might include integration of: • Cloud • Cognitive • Web server • Firewall • Authentication servers • Application servers • Database servers • Messaging systems • Back-end data extraction to data warehouse systems	Server Systems Professionals should understand how to position and integrate their recommended solution in an existing or complex environment.	Applied	Deep
TSSV04	Server Consolidation	Advise on server consolidation, including sizing, configuration, planning, and covering risk management, recovery implications, and deployment options.	Server Systems Professionals should have skills for core/traditional server solutions such as consolidation, sizing, recovery solutions, etc. and can advise on these areas.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSSV05	Backup and Recovery Strategies	Advise in the selection and deployment of the appropriate backup and recovery methods, such as incremental, image copy, mirroring, cross-site, failover, and disaster recovery strategies.	Server Systems Professionals should be in a position to advise on redundancy, backup, and recovery solutions for their Specialty.	Applied	Deep
TSSV06	System Management	Use effectively system and/or operational management tools to achieve availability and operational goals.	Server Systems Professionals should know or have access to resources to advise how to effectively utilize their proposed solution and/or server management tools/software to recommend server availability and operational goals to the client.	Applied	Deep

3.3.11 Storage Systems

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSSS01	Storage Configuration	Configure complex storage systems for optimum performance against client needs; for example, client environments requiring cloud, cognitive, Big Data, or traditional IT solutions.	Storage Systems Professionals should have experience or access to resources to address complex client needs and solutions.	Applied	Deep
TSSS02	Storage Planning	Perform capacity planning including performance analysis and preparation of documented recommendations.	Storage Systems Professionals need to have experience in sizing and capacity planning analysis.	Applied	Deep
TSSS03	Backup and Recovery	Advise on backup and recovery methods/procedures for storage systems.	Storage Systems Professionals should be in a position to advise on redundancy, backup, and recovery solutions for their Specialty.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSSS04	Storage Integration	Given a complex storage environment, select and apply the appropriate techniques, such as synchronous and/or asynchronous mirroring, or point-in-time copy for online backup and recovery and cloud, or cognitive environments.	Storage Systems Professionals should understand how to position and advise use of their recommended solution in a complex environment.	Applied	Deep
TSSS05	Storage Selection	Apply knowledge of competing vendor storage systems, and what differentiates them, to solving a client business problem.	Storage Systems Professionals should either have knowledge of or know where to acquire competitive product information.	Applied	Deep
TSSS06	Cross-vendor Storage	Integrate storage systems from more than one vendor or technology.	Storage Systems Professionals should understand how their solution integrates into other vendor solutions and the client data center.	Applied	Deep
TSSS07	Storage Conversion	Perform storage conversions from one or more vendor products to another.	Storage Systems Professionals should understand how one vendor's solution is equivalent to another vendor, and be able to introduce new storage solutions while maintaining the integrity of the data.	Applied	Deep

3.3.12 Testing

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSTE01	Test Strategy	Develop test strategies which include objectives and scope, documentation formats, test processes, team reporting structure, and client communication strategy to ensure client solutions meet expected objectives.	Testing Professionals need to be able to ensure that the testing approach meets client expectations.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSTE02	Test Planning	Develop comprehensive test plans based on risks and acceptance criteria agreed with the client.	Testing Professionals need to be able to develop test plans that describe the scope, approach, resources, and schedule of intended test activities, balance risks and acceptance criteria, and that are agreed by the client.	Applied	Deep
TSTE03	Test Definition	Build test cases and test scripts based on business requirements, which specify test inputs, execution conditions, and expected results for every component being delivered.	Testing Professionals need to be able to create test cases appropriate to the target.	Applied	Deep
TSTE04	Test Data Creation	Create customized test data based on the system architecture and production environment (e.g., mock data, dummy data).	Testing Professionals need to be able to design and create appropriate test data to meet the needs of the environment and test plan.	Applied	Deep
TSTE05	Test Automation	Translate manual testing procedures and/or test specifications into automated test scripts.	Testing Professionals need to be able to design effective test automation scripts using any functional automation tool such as Selenium, Quick Test Professional (QTP), Rational Functional Tester (RFT), etc.	Applied	Deep
TSTE06	Performance Testing	Develop performance test scripts to provide a correct performance index of the application.	Testing Professionals should understand performance testing and be able to measure the performance of an application using tools such as JMeter™ or LoadRunner®.	Applied	Deep
TSTE07	Test Environment Design	Design a test environment to support the test strategy.	Testing Professionals need to be able to design test environments that enable effective testing.	Applied	Deep

Ref.	Skill	Description	Rationale	Skill Level 1	Skill Level 2
TSTE08	System Testing	Perform testing of a complete and fully integrated software product, solution, or offering.	Testing Professionals need to ensure testing of the fully integrated applications including external peripherals in order to understand how components interact with one another and with the system as a whole.	Applied	Deep
TSTE09	Test Tool Capabilities	Advise and support the client (internal or external) on the choice of tools for the test suite lifecycle and use those tools in support of test selection, configuration, and execution.	Testing Professionals need to be able to select and use accepted test management tools in support of test selection, configuration, and execution, and to provide appropriate advice to the client.	Applied	Deep

3.4   Experience Profile Requirements

An Experience Profile is a coherent written description of a project or technical engagement that provides Candidates with the opportunity to show how they perform as a professional Technical Specialist, and enables a Peer Review Board to understand and question the Candidate's thought processes and decisions.

Each Experience Profile must be completed not more than eight (8) years preceding the submission of the Milestone Application Form to the Certification Authority. Projects over two (2) years long may be used for multiple Experience Profiles under either of the following conditions:

- **The project had clearly-defined work efforts which took place in parallel, each with their own solution development and design activities and their own deliverables**

- **The project had clearly-defined phases that were executed in succession, each with its own solution development and design activities and deliverables**

    Note that a second project phase that constructs and implements the solution developed by the first phase does not meet this requirement.

In either case, each profiled project entity must meet all of the Experience Profile criteria defined in each Experience Profile and must include:

- A description of the business purpose of the project

- A concise description of the project

- The Candidate's role

- The Candidate's period of involvement

Table 3 defines the attributes that must be present within Experience Profiles for Level 1 or Level 2 for attaining a Level 1 or Level 2 Experience Profile Milestone Badge (and hence certification).

Table 3: Required Attributes for Experience Profiles

Ref	Experience Profile Attribute	Rationale	Description: Level 1	Description: Level 2
EXP01	Demonstrated Success	Professional Technical Specialists are expected to be repeatedly successful in developing successful solutions.	Candidates must have participated in their role of Technical Specialist in a successful solution or engagement. Successful means that the Candidate's artifacts were used, or could have been used, in the implementation of the solution or component.	Candidates must have performed in the role of Technical Specialist in a successful solution or engagement. Successful means that the Candidate's artifacts were used, or otherwise met the acceptance criteria.

Ref	Experience Profile Attribute	Rationale	Description: Level 1	Description: Level 2
EXP02	Perform as a Lead Technical Specialist	Professional Technical Specialists are expected to lead the development, implementation, and/or management of those aspects of a major project or subsystem that are within their Specialty.	Not applicable to this level of certification.	Candidates must have performed as a Leader of their Technical Specialty in a major client engagement or the development, implementation, and/or management of a major project or subsystem.
EXP03	Key Decisions Made	Professional Technical Specialists are expected to make thoughtful decisions that take into account the business and technical context.	The Experience Profile must contain a summary of the key technical decisions made by the Candidate, the reasons for the decisions, and the alternatives that were considered.	The Experience Profile must contain a summary of the key technical decisions made by the Candidate, the reasons for the decisions, and the alternatives that were considered.

3.5 Professional Development Requirements

Table 4 lists the Professional Development requirements for Level 1 and Level 2.

To achieve certification Candidates must be able to demonstrate that they have met the following requirements.

Table 4: Professional Development Requirements for Level 1 and Level 2

Ref.	Development	Description	Rationale	Development Level 1	Development Level 2
PD01	Training in Project Management	Candidates must have completed formal training in project management either through attendance at a taught course or through self-study.	Open Certified Technical Specialists are expected to have undergone at least a basic level of training in project management.	Attendance at a taught course or through self-study within the last three (3) years.	Attendance at a taught course or through self-study within the last three (3) years.
PD02	Knowledge of Technology Trends and Techniques	Candidates are required to develop and maintain their knowledge of the technology, trends, and techniques that are relevant to developing solutions for solving business problems.	Open Certified Technical Specialists are expected to develop and maintain an understanding of the technology trends and techniques so that they can leverage that body of knowledge into feasible solutions.	Candidates are required to develop and maintain their knowledge of the technology, trends, and techniques in the IT industry.	Candidates are required to maintain their knowledge of the technology, trends, and techniques in the IT industry.
PD03	Skills and Knowledge in Technical Specialty	Candidates are required to develop and maintain their skills and knowledge in their Technical Specialty.	Open Certified Technical Specialist are expected to continue to develop their skills and to stay up-to-date with the development of their Profession.	40 hours/year of training at a taught course or through self-study in the Candidate's Specialty.	40 hours/year of training at a taught course or through self-study in the Candidate's Specialty.

3.6 Community Contribution Requirements

To achieve certification Candidates must be able to demonstrate that they have met the following requirements.

Table 5: Community Contribution Requirements for Level 1 and Level 2

Ref.	Contribution	Description	Rationale	Contribution Level 1	Contribution Level 2
CC01	Contribution to the Technical Specialist Profession	Candidates must make contributions to the Technical Specialist Profession; for example, publications, teaching, mentoring, research collaboration, or participation in Open Certified organizations.	Open Certified Technical Specialists are expected to contribute to the growth and vitality of their Profession.	None.	Contribute to the Profession. Mentoring in their career progression as Technical Specialists is required.

3.7   Experience Requirements

To achieve certification Candidates must be able to demonstrate that they have at least the following experience.

Table 6: Experience Requirements for Level 1 and Level 2

Ref.	Experience	Description	Rationale	Experience Level 1	Experience Level 2
EC01	Performing as a Technical Specialist	Candidates must perform in the role of a Technical Specialist and demonstrate experience during projects over a specified period of time.	Open Certified Technical Specialists are expected to have substantial experience of projects or engagements in their Specialty. At Level 2, the experience is expected to be as a lead in their Specialty.	At least 24 months, possibly with supervision or mentoring.	At least 36 months, with accountability for the technical aspects within their Specialty.
EC02	Personal Impact Awareness	Candidates must demonstrate an understanding of their decisions and their impact on solutions that have been realized in a project or engagement.	Open Certified Technical Specialists need to have an understanding of the way they interact with other members of their team and other project participants as well as an understanding of the impact upon solutions or the other results of engagements.	Evidence that demonstrates the Candidate's appreciation of the impact of decisions on the design and implementation of a solution.	Evidence that demonstrates the Candidate's understanding of the impact of their decisions on the design and implementation of a solution.
EC03	Different Types of Technologies and Techniques	Experience producing solutions that involve different types of technologies and techniques and architectures.	Open Certified Technical Specialists have had exposure working with different technologies, techniques, and/or architectures. Through this experience, an Open Certified Technical Specialists can make the decisions that most appropriately satisfy requirements and mitigate risks to the project.	Exposure is demonstrated in two (2) or more types of technologies, techniques, or architectures.	Exposure is demonstrated in two (2) or more types of technologies/ techniques and two (2) or more type of architectures.

Ref.	Experience	Description	Rationale	Experience Level 1	Experience Level 2
EC04	Breadth of Business Problem Solved	Candidates must demonstrate their ability to solve a variety of business problems.	Open Certified Technical Specialists must be able to solve a variety of business problems within their Specialty.	Not required.	Demonstrate two (2) or more different business problems solved.

4.   Level 3 Conformance Requirements (Normative)

The Conformance Requirements for a Level 3 Open Certified Technical Specialist are broken down as follows:

- Core Foundation skills
- Experience Profile requirements
- Professional Development requirements
- Community Contribution requirements
- Experience requirements

4.1   Core Foundation Skills

To achieve certification Candidates must be able to document that they have demonstrated these skills at the required level (or higher) repeatedly and successfully.

Ref.	Skill	Description	Rationale	Skill Level
DTS01	Collaborative Influence	Facilitate the implementation of an important business solution by promoting teaming and cross-organizational participation.	Distinguished Technical Specialists achieve results that require support and collaboration of disparate groups with potentially conflicting interests.	Deep
DTS02	Cross-organizational Leadership	Initiate, lead, and influence multi-disciplinary initiatives across organizational or geographical boundaries coordinating the activities necessary to succeed.	Distinguished Technical Specialists lead successful multi-disciplinary initiatives across organizational boundaries.	Deep
DTS04	Executive Communication	Communicate technical vision and strategies to business and/or project/program executives in a way that is appropriate and gains their commitment.	Distinguished Technical Specialists communicate in a manner that convinces at the executive level.	Deep
DTS05	Stakeholder Advocacy	Simultaneous advocate of multiple stakeholders' interests.	Distinguished Technical Specialists understand and advocate the various, and potentially conflicting, interests and views of multiple stakeholders.	Not Required

Ref.	Skill	Description	Rationale	Skill Level
DTS06	Strategic Thinking	Apply strategic thinking to deliver positive impact and results to the business.	Distinguished Technical Specialists apply strategic thinking for the organization in order to identify opportunities that deliver significant positive business impact.	Deep
DTS07	Troubleshooting and Remediation	Perform technical troubleshooting and provide remediation leadership and guidance for cross-team projects.	Distinguished Technical Specialists identify problems in troubled cross-team projects and provide leadership and guidance in resolving them.	Deep
DTS08	Innovative Use of Technology	Provide breakthrough innovation in the use of technology to deliver greater business value.	Distinguished Technical Specialists innovate in the use of technology to deliver business value to the client.	Deep
DTS09	Governance	Establish and maintain processes and policies for governance in those programs or projects for which the Technical Specialist is responsible.	Distinguished Technical Specialists establish and maintain processes and policies for governing the projects and programs for which they are responsible.	Not Required

4.2 Experience Profile Requirements

An Experience Profile is a coherent written description of a project or technical engagement that provides Candidates with the opportunity to show how they perform as a professional Technical Specialist, and enables a Peer Review Board to understand and question the Candidate's thought processes and decisions.

Each Experience Profile must describe a project completed not more than eight (8) years preceding the submission of the Milestone Application Form to the Certification Authority. Projects over two (2) years long may be used for multiple Experience Profiles under either of the following conditions:

- **The project had clearly-defined work efforts which took place in parallel, each with their own solution development and design activities and their own deliverables**

- **The project had clearly-defined phases that were executed in succession, each with its own solution development and design activities and deliverables**

  Note that a second project phase that constructs and implements the solution developed by the first phase does not meet this requirement.

In either case, each profiled project entity must meet all of the Experience Profile criteria defined in Table 7 below.

Each Experience Profile must include:

- A description of the business purpose of the project

- A concise description of the project

- The Candidate's role

- The Candidate's period of involvement

Table 7 defines the attributes that must be present within Experience Profiles for attaining an Experience Profile Milestone Badge (and hence certification).

Table 7: Required Attributes for Experience Profiles for Level 3

Ref.	Experience	Rationale	Description
DEXP01	Leading a Project of Significant Business Value and Impact	Distinguished Technical Specialists have experience leading projects of significant business impact by directing the technical strategy and design.	The Candidate must document a project or activity that resulted in significant, measurable positive business impact. The Candidate should identify the solution, value delivered through financial or other KPIs (performance, reliability, scalability, etc.), and any consequent business opportunities realized.

Ref.	Experience	Rationale	Description
DEXP02	Key Decisions and Contributions	Distinguished Technical Specialists are expected to consider alternatives and to make thoughtful and justifiable strategic decisions that take into account the business and technical context.	The Candidate is required to identify the key strategic decisions they made, their approach to the solution, the alternatives considered, and the reasons for their rejection including risk mitigation considerations.
DEXP03	Demonstrated Success	Distinguished Technical Specialists have repeated experience in successful engagements.	The Candidate must have acted in the role of Technical Specialist in a project that met its acceptance criteria.

4.3 Professional Development Requirements

Table 8 lists the Professional Development requirements for Level 3.

To achieve certification Candidates must be able to demonstrate that they have met the following requirements.

Table 8: Professional Development Requirements for Level 3

Ref.	Development	Description	Rationale
DPD01	Knowledge of the Technology, Trends, and Techniques in the IT Industry	Candidates are required to maintain their knowledge of the technology, trends, and techniques in the IT industry.	Distinguished Technical Specialists are expected to develop and maintain an understanding of the technology trends and techniques so that they can leverage that body of knowledge into feasible solutions.
DPD02	Leadership Skills	Candidates are required to show continual development of their leadership skills.	Distinguished Technical Specialists are expected to continually develop their ability to provide effective leadership in the ever-changing environment in which they must practice.
DPD03	Knowledge of the Client Business	Candidates are required to develop and enhance their knowledge and understanding of the client business and industry context.	Distinguished Technical Specialists develop and maintain an understanding of the client business and context in order to make appropriate recommendations and decisions.

4.4 Community Contribution Requirements

Table 9 lists the Community Contribution requirements for Level 3.

To achieve certification Candidates must be able to demonstrate that they have met the following requirements.

Table 9: Community Contribution Requirements for Level 3

Ref.	Contribution	Description	Rationale
DCC01	Contribution to the Technical Specialist Profession	Candidates must make contributions to the Technical Specialist Profession; for example, publications, teaching, contributions to Open Source, research collaboration, or participation in professional organizations.	Distinguished Technical Specialists are expected to contribute to the growth and vitality of their Profession inside and outside their organization.
DCC02	Development of Professional Technical Specialists	Candidates are expected to develop Professional Technical Specialists through teaching, serving on review boards, coaching, and/or mentoring.	Distinguished Technical Specialists transfer knowledge and experience to the wider Technical Specialist community.

4.5 Experience Requirements

Table 10 lists the Experience requirements for Level 3.

To achieve certification Candidates must be able to demonstrate that they have at least the following experience.

Table 10: Experience Requirements for Level 3

Ref.	Experience	Description	Rationale
DEC01	Innovative Leadership	Lead with impact, successfully introducing innovations by re-imagining existing problems through the application of new Technical Specialist capabilities.	Distinguished Technical Specialists anticipate, create, and define concepts in engagements that lead to innovations, radical thought, (business/operational) shifts, (strategy) changes, breakthroughs, etc.
DEC02	Technical Breadth	Demonstrate technical leadership in conducting special projects or strategic initiatives that span two or more Specialties.	Distinguished Technical Specialists demonstrate technical leadership in conducting special projects or strategic initiatives that span multiple Specialties.
DEC03	Conduct Complex Negotiations	Perform at executive levels, conducting complex negotiations, and reaching sustainable agreements and commitments.	Distinguished Technical Specialists are able to conduct complex negotiations involving senior executives, and able effectively to ensure that workable and sustainable agreements are reached.