



**EXIN
EPI IT Management**

CITO®

Certified by


Preparation Guide

Edition 201903





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1. Overview

EXIN / EPI Certified Information Technology Operator (CITO.EN)

Scope

Certified Information Technology Operator (CITO) is a certification within the EXIN EPI IT Management certification program that validates a professional's knowledge of and competences in key components of the IT business. CITO is part of a larger structure of certifications for professionals working in the IT business.

Summary

Working in the IT industry is a true challenge. The complexity and integration of business processes and the continuous evolvement of information technology have reached levels never seen before and to keep up with all the changes requires true dedication.

With the high demand for skilled IT workers still growing and becoming more critical than ever before, it is imperative that an IT professional has to continue leveraging him/her-self to remain relevant in the industry. EPI has developed the IT Training Framework offering candidates the opportunity to meet these goals and objectives. The IT Training Framework offers a career track at three levels, being professional, specialist and expert. The first level is the CITO (Certified Information Technology Operator).

The Certified Information Technology Operator (CITO) certification is aligned with competence level-1 and 2 of the e-CF. It has been designed to teach the skills, knowledge and competencies required of the modern IT professional working at the entry level of IT. It covers the traditional processes of IT, and the new and converging technologies such as virtualization, cloud computing and big data, all which will play a major role in the near future IT environments.

Certified Information Technology Operator candidates will be able to place themselves above their peers, becoming instantly productive having gained knowledge and understanding of the demands in modern IT infrastructures. Their improved capabilities will deliver instant understanding of today's technologies, efficiency and significantly reduce the margin for errors.



Context

The EXIN EPI IT Management certification program offers a career track at three levels, CITO (Certified Information Technology Operator), CITM (Certified Information Technology Manager) and CITD (Certified Information Technology Director).



EPI IT Training Framework[®]

Governance / Operations

CITD[®]
Certified IT Director

CITM[®]
Certified IT Manager

CITO[®]
Certified IT Operator

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Target group

This certification is most suited for aspiring and existing IT professionals from entry level up to two years of actual working experience in IT. It is best suited for participants with basic knowledge of systems, network and/or applications and service desk operations. This includes individuals re-entering the IT professional world and/or those individuals require re-training in IT.

Requirements for certification

- Successful completion of the EXIN / EPI Certified Information Technology Operator exam.
- Successful completion of an accredited EXIN / EPI Certified Information Technology Operator training. (Candidates receive the courseware before the training.)

To gain the most from this certification, the candidate should have a basic understanding of IT. Candidates who successfully pass the exam will receive the official 'Certified Information Technology Operator' certificate. The certification is valid for three years after which the candidate needs to re-certify.



Examination details

Examination type:	Multiple-choice questions
Number of questions:	40
Pass mark:	65%
Open book/notes:	No
Electronic equipment/aides permitted:	No
Time allotted for examination:	60 minutes

The Rules and Regulations for EXIN's examinations apply to this exam.

Training

Any training leading to the CITO certification must be given by certified trainers. CITO is an instructor-led two-day course that uses a combination of lectures and question-and-answer sessions, to discuss participants' specific needs and issues experienced in their own environment. Participants are able to tap into the trainer's extensive experience to enable them to solve practical problems in their current environment.

Lab exercises

The CITO course is supported with a set of lab exercises which will be distributed to you together with the course manual. Your instructor may run lab exercises during the course, but alternatively the instructor may assign the lab exercises as homework. All students must submit their lab exercises results before the end of the course. The lab exercises will not influence the outcome of the final exam.

Contact hours

The recommended number of contact hours for this training course is 16. This includes group assignments, exam preparation and short breaks. This does not include homework, time for the exam and lunch breaks.

Indication study effort

15-20 hours, depending on existing knowledge. This does not include the hours of the mandatory training.

Training organization

You can find a list of our accredited training organizations at www.exin.com.



2. Exam requirements

The exam requirements are specified in the exam specifications. The following table lists the topics of the module (exam requirements) and the subtopics (exam specifications).

Exam requirement	Exam specification	Weight
1. Plan		10%
	1.1 IT Strategy	10%
2. Build		25%
	2.1 Applications	6%
	2.2 Systems Administration	6%
	2.3 Business Continuity Planning	7%
	2.4 Documentation	6%
3. Run		20%
	3.1 Service Management	15%
	3.2 Systems Administration	5%
4. Enable		20%
	4.1 IT Organization	10%
	4.2 Vendor Selection	10%
5. Manage		25%
	5.1 Project Management	6%
	5.2 Risk	6%
	5.3 Information Security	9%
	5.4 Quality	4%
	Total	100%

Exam specifications

1. Plan

1.1 IT Strategy

The candidate is able to...

- 1.1.1 Conduct a needs analysis
- 1.1.2 Create the IT service catalog
- 1.1.3 Select the appropriate content for a Service Level Agreement (SLA)
- 1.1.4 Review IT services

2. Build

2.1 Applications

The candidate is able to:

- 2.1.1 Distinguish between functional and non-functional requirements
- 2.1.2 Explain activities during software development / engineering
- 2.1.3 Distinguish between types of software tests

2.2 Systems Administration

The candidate is able to:

- 2.2.1 Explain options for storage
- 2.2.2 Select options optimizing storage capacity
- 2.2.3 Distinguish between backup methods
- 2.2.4 Identify the steps for database design
- 2.2.5 Explain the Open Systems Interconnection (OSI) model

2.3 Business Continuity Planning

The candidate is able to:

- 2.3.1 Distinguish replication modes
- 2.3.2 Explain timeline activities
- 2.3.3 Select a site option
- 2.3.4 Explain the types of testing the business continuity plan

2.4 Documentation

The candidate is able to:

- 2.4.1 Explain steps in the documentation life-cycle
- 2.4.2 Identify documentation categories
- 2.4.3 Explain the purpose of the document register

3. Run

3.1 Service Management

The candidate is able to:

- 3.1.1 Distinguish between service desk options / locations
- 3.1.2 Distinguish between event management, request fulfilment and incident management
- 3.1.3 Identify activities in event management
- 3.1.4 Explain request fulfilment request categorization
- 3.1.5 Distinguish between functional and hierarchical escalation

3.2 Systems Administration

The candidate is able to:

- 3.2.1 Distinguish between backup methods, types and targets
- 3.2.2 Summarize common activities of a system administrator

4. Enable

4.1 IT Organization

The candidate is able to:

- 4.1.1 Identify operational divisions in IT applications
- 4.1.2 Explain roles in IT operations
- 4.1.3 Explain roles in data centre operations

4.2 Vendor Selection

The candidate is able to:

- 4.2.1 Identify Request for Proposal (RFP) categories
- 4.2.2 Explain technical due diligence process
- 4.2.3 Explain vendor support activities
- 4.2.4 Select criteria for vendor monitoring and reporting

5. Manage

5.1 Project Management

The candidate is able to:

- 5.1.1 Identify the main project constraints
- 5.1.2 Explain the need for a business case
- 5.1.3 Distinguish project activities estimation techniques
- 5.1.4 Explain project monitoring and control activities
- 5.1.5 Explain activities for project closing

5.2 Risk

The candidate is able to:

- 5.2.1 Identify assets
- 5.2.2 Identify threats
- 5.2.3 Identify vulnerabilities
- 5.2.4 Select risk treatment options

5.3 Information Security

The candidate is able to:

- 5.3.1 Explain the main objective of information security
- 5.3.2 Distinguish between physical, technical and administrative controls
- 5.3.3 Explain log management activities
- 5.3.4 Explain log management activities

5.4 Quality Management

The candidate is able to:

- 5.4.1 Explain the principles of quality assurance
- 5.4.2 Explain the principles of quality control
- 5.4.3 Explain quality metrics

3. List of Basic Concepts

This chapter contains the terms and abbreviations with which candidates should be familiar.

Please note that knowledge of these terms alone does not suffice for the exam; the candidate must understand the concepts and be able to provide examples.

4Ps – People, Process, Product and Partners	Incident escalation
Administrative controls	Incident management
API – Application Programming Interface	Incident prioritizing
Application program	Information security
Asset identification	Information security controls
Availability	Information Technology (IT)
Back-up	Integrity
BCP – Business Continuity Planning	IT infrastructure
Business case	IT organization
Change request	IT service catalog
Closing	IT service portfolio
Cloud storage	IT strategy
Confidentiality	KPI – Key Performance Indicator
Cost	Log analysis
DAS – Direct Attached Storage	Log generation
Data centre	Log infrastructure
Data encapsulation	Log security
DBMS – DataBase Management System	Log storage and disposal
Deployment	Log transmission
Design	Maintenance
Development	Maintenance techniques
DevOps	Monitor and control
Document lifecycle	Monitoring and reporting
Document register	NAS – Network Attached Storage
ELT – Extract, Load, Transform	OSI – Open Systems Interconnection
Enterprise patch management	OSI layers
ETL – Extract, Transform, Load	Outcome, output and benefits
Event management	Physical controls
Existing controls identification	Project constraints
Firewall	Project management
Hypervisor	Quality assurance



Quality control
Quality metrics
Replication modes
Request for Information (RFI)
Request for Proposal (RFP)
Request fulfilment
Risk
Risk analysis
Risk treatment
Router
SAN – Storage Area Network
Scope
Service desk
SIEM – Security Information and Event Management
Site selection
Software Development Life Cycle (SDLC)
Storage
Support
Switch
Syslog
TCP/IP – Transmission Control Protocol / Internet Protocol
Technical (logical) controls
Technical coverage
Technical due diligence
Test and exercise
Testing
Threat identification
Tiered storage
Time
Timeline activities
Virtualization
Vulnerability identification





4. Literature

Before the CITO course candidates receive *Student Courseware*.
For further information we refer to www.epi-ap.com.





Contact EXIN

www.exin.com

