

Practical assignment 1.4

Creating a test environment

Activities

Realizing a test environment on the basis of functional and technical design
Carrying out tests and monitoring the progress of the test phase
Carrying out any adjustments
Reporting and documenting

Qualification dossier	ICT management 2007 - 2008
Position	ICT Manager
Core task 1	Developing (parts of) information systems
Work process 1.4	Creating a test environment



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Introduction

In practical assignment 1.4 you will create a test environment to enable you to test whether the various components of the technical design satisfy the specifications of the functional design.

In this practical assignment *Creating a test environment* you will find the following components:

- an overview of the qualification dossier (QD);
- assignments;
- support in the assignments:
 - *questions;*
 - *the step-by-step plan that you can use in preparing and carrying out the assignments;*
 - *tips carrying out the assignments.*

Overview of the qualification dossier

ICT management

Core task Work process	ICT Manager	Network Manager
1 Developing (parts of) information systems		
1.1 Determining the information needs	x	x
1.2 Producing a design for (part of) an information system	x	x
1.3 Drawing up a plan of action	x	x
1.4 Creating a test environment	x	x
2 Implementing (parts of) information systems		
2.1 Drawing up an implementation plan	x	x
2.2 Carrying out an implementation plan	x	x
2.3 Providing support for acceptance tests	x	x
2.4 Evaluating an implementation	x	x
3 Managing (parts of) information systems		
3.1 Preventing disruptions / malfunctions	x	x
3.2 Localizing and remedying disruptions / malfunctions	x	x
3.3 Dealing with and rounding off incidents reported	x	
3.4 Drawing up and monitoring procedures	x	x
4 Setting up and organizing a service desk		
4.1 Making a service desk operational	x	
4.2 Managing a service desk	x	
4.3 Drawing up users' instructions	x	

Activities

- Realizing a test environment on the basis of functional and technical design
- Carrying out tests and monitoring the progress of the test phase
- Carrying out any adjustments
- Reporting and documenting

Assignment 1: Creating a test environment

In this assignment you will realize a test environment for testing selected components of the technical design to be implemented.

Applications will have to be tested on the new web server version. It is quite likely that the applications will have to be adapted, in which case you will have to ask for the help of the application manager/developer. Anti-spam and anti-virus software will have to be tested on the mail system in use in the organization. It will also be necessary to examine how PDAs should be included in the existing mail system and how they should be synchronized.

In these instances, a test environment will have to be set up and test procedures described. The test results must be carefully documented, and constant monitoring must be carried out to check the extent to which the wishes/requirements set down in the functional design are being satisfied. It may be necessary to modify the technical design in order to achieve this.

Support in the assignments



Questions

You can use these questions in preparing the assignments. The subjects will come up again in the review discussions with your practical tutor.

1. You might be confronted with all sorts of matters that make it difficult to carry out your assignment well. These could be what the work actually involves (for example dealing with confidential information), contacts with others (colleagues, clients) and the circumstances under which you have to work (for example working against the clock). What plays a role in your work situation, and how do you deal with it?
2. What test procedures are there in the organization?
3. What test tools are known about within the organization?
4. What resources are available for you to enable you to create a test environment?



Step-by-step plan

You can refer to this step-by-step plan when preparing and carrying out the tasks required for this practical assignment.

Step 1 Determine which components (computer configurations, network components) of the technical design must be tested.

Step 2 Design the test environment that you think you will need for this, and make a detailed description of the tests to be carried out.

Give consideration to (among other things):

- functionality
- performance
- user-friendliness
- reliability.

Step 3 Determine the preconditions and requirements/standards for the components that are to be tested.

Step 4 Create an overview the materials necessary for the realization of the test environment (hardware, software and testing area).

Step 5 Discuss your plan with your in-house mentor.

Step 6 Keep an accurate record of the test results and compare these with the requirements described in the design.

Step 7 Document your findings and conclusions (including any necessary changes in the technical design).

Step 8 Document your plan of action and discuss it with your in-house mentor.



Tips

- In many instances when software, system settings, network configurations, etc. are tested, much time is lost in continually having to reinstate the original situation. It is also often the case that a large amount of hardware is necessary in order to obtain as complete an operating system as possible. Consider virtualization. By using Microsoft Virtual PC, Virtual Server or similar products from VMware, it is possible to configure a virtual network of different operating systems with the applications to be tested on it within a single host.
- Search the Internet for software for carrying out stress tests. You can quite often find demos that can be downloaded free of charge.