

Advanced Data Communications

CNA Certification

Introduction

CNA stands for Certified Novell Administrator. If you're already familiar with Microsoft certification and testing procedures, the CNA certification is similar to a Microsoft MCP certification, although the CNA track tends to give a much broader overview of the network operating system than a single MCP certification.

CNA certification can be achieved in any one of five different Novell products:

- NetWare 5
- IntraNetWare
- NetWare 3
- GroupWise 5
- GroupWise 4

NetWare is Novell's widely used network operating system, and GroupWise is Novell's mail and groupware application for the NetWare environment. This document deals with certification on the NetWare 5 track.

Why CNA?

Anyone who wishes to work with the Novell platform of networking products can benefit from CNA certification. Novell products are found in a variety of organizations today. Although NetWare is currently losing ground to Microsoft's Windows NT line of networking products, Novell NetWare is still widely used, and many organizations that have adopted Windows NT continue to use NetWare in some systems.

In addition to learning the skills outlined in the CNA certification program, you will benefit from certification by the ability to prove your knowledge to potential employers. Hiring managers will see that a) you know your stuff where NetWare is concerned, and b) you have the ability to learn the intricacies of new technologies.

How to Become a Certified Novell Administrator

1. Set up a network.

I know not everyone has access to the hardware needed to actually set up a network, but if you can possibly beg, borrow, or steal two capable computers and networking equipment, I highly recommend it. If you're actually doing the exercises as you read, the information will make a lot more sense to you, and you'll retain much more of it. Your two computers will need to be:

- a) A machine to run the server portion of the NOS. This machine needs to be a Pentium-class machine with at least moderate capabilities. The machine **MUST** have at least 64 megs of RAM. This computer's hard drive will be reformatted.
- b) A client machine, which will be used for administering the network. This can be just about any machine that has a working copy of Win9x or NT installed. You'll need to add the NetWare client to this machine, which won't hurt the existing configuration (much).

You'll also need to obtain a copy of NetWare 5. A 3-user demo is available from either Novell or Dr. Carr. The client software can be downloaded from Novell.

1. Buy a big book.

There are many instructional manuals available from a variety of publishers. The material I used was published by Sybex, although I hear that other books are at least as good, such as the one from New Riders. Novell also offers materials designed for the certification program, though these tend to be much more expensive than third-party materials. I definitely recommend buying a book that is specifically written for the test that you intend to take. A more general book would probably be worth reading for education's sake, but certification tests often cover esoteric and picky topics that don't appear in general books.

2. Read the book.

I'm aware that this is easier said than done, but if you really want to get certified, be prepared to spend some serious hours absorbing a large amount of technical material. If you have a book that is written with certification in mind, it will most likely contain practice test questions. Take the practice tests at the end of each section, and reread any parts that you don't understand. After you've read the whole thing, retake all of the practice tests in the book.

The pace of studying varies so much from person to person that I won't even attempt to address that here. Be serious about it, and study as much as you feel like you can handle. Here's a tip: don't study past the point where you feel like your brain is melting and facts are spilling out of the back of your head faster than you're learning them.

3. Check out Novell's certification requirements.

The official requirements for a Novell certification are always available on the Novell web page (www.novell.com). As of this writing, the criteria for NetWare 5 certification are as follows:

NOTE! Test objectives are subject to change without notice.

- 1) Describe what a network is and list its components.
- 2) Describe what NetWare is and list the types of workstations you can use to access it.
- 3) List the responsibilities of a network administrator.
- 4) List the NetWare resources and services you will learn to administer.
- 5) Describe Novell Directory Services (NDS), including the NDS Directory and NDS objects.
- 6) Explain how the NDS tree affects resource access.
- 7) Describe how a workstation communicates with the network.
- 8) Describe the function of the workstation's hardware.
- 9) Describe the function of the workstation's software.
- 10) Explain how to determine which protocols to use.
- 11) Explain and perform the login procedure.
- 12) Install and configure a browser client.
- 13) Use NetWare Administrator to create and manager user objects.
- 14) Create a user object with the Java-based Console One utility.
- 15) Use the DOS utility UIMPORT to create user objects.
- 16) Manage NetWare user licenses.
- 17) Describe and establish login security, including login restrictions for users.
- 18) Describe the features of NDPS.
- 19) Explain the four NDPS components and their functions.
- 20) List the NDPS printer types and explain the difference between public access printers and controlled access printers.

- 21) Set up NDPS by creating an NDPS Manager, public access printers, and controlled access printers.
 - 22) Install and configure a printer for a workstation.
 - 23) Manage NDPS.
 - 24) Use utilities to perform file system management tasks
 - 25) Access the file system by configuring drive mappings.
 - 26) Select the correct utilities needed to create, delete, rename, and move directories.
 - 27) Select the correct utilities to copy, move, delete, salvage, and purge files.
 - 28) Manage the use of volume space using NetWare Administrator.
 - 29) Describe NetWare 5 file system security, including the concepts of directory and file rights, trustee assignments, inheritance, rights reassignment, Inherited Rights Filters (IRFs), security equivalence, and effective rights.
 - 30) Describe guidelines for planning file system rights.
 - 31) Describe and set the directory and file attributes that can be used to regulate access to files.
 - 32) Based on a scenario, create and implement a file system security plan that appropriately grants directory and file rights to Container, Group, and User objects, and sets directory IRFs.
 - 33) Describe the types of login scripts and explain how they coordinate at login.
 - 34) Design login scripts for containers, user groups, and users.
 - 35) Use the MAP command to map network drives from a login script.
 - 36) Create, execute, and debug a login script.
 - 37) Define NDS security and how it differs from file system security.
 - 38) Control access to an object in the NDS tree.
 - 39) Determine rights granted to NDS objects through NDS rights inheritance.
 - 40) Block an object's inherited rights to other NDS objects using an Inherited Rights Filter (IRF).
 - 41) Determine an object's effective rights to other objects in the NDS tree.
 - 42) Explain guidelines and considerations for implementing NDS security.
 - 43) Troubleshoot NDS security problems using NetWare Administrator.
 - 44) Describe the benefits of Z.E.N.works.
 - 45) Explain the benefits of using NAL.
 - 46) Explain the components of NAL.
 - 47) Distribute applications using NAL and snAppShot.
 - 48) Manage applications with NAL
 - 49) Explain the benefits of using Z.E.N.works to manage workstations.
 - 50) Create policy packages and configure policies in NDS.
 - 51) Register workstation in NDS and import them into the NDS tree using NetWare Administrator.
 - 52) Use policies to configure desktop environment throughout the network.
 - 53) Establish remote control access to workstations on the network.
 - 54) Configure and use the Help Requester application.
 - 55) Identify NDS planning guidelines to follow in sample Directory structures.
 - 56) Set user context to provide users with access to needed resources.
 - 57) Create shortcuts to access and manage network resources.
 - 58) Identify the actions to take and the rights needed to grant a user access to NDS resources.
 - 59) Create login scripts that identify resources in a multicontext environment.
 - 60) Define console command and NetWare Loadable Module (NLM).
 - 61) Perform a basic NetWare 5 server installation.
 - 62) Customize a NetWare 5 server installation.
- (From the Novell web page, www.novell.com)

Read this list of requirements, and think carefully about each one. If there's anything you don't understand well, reread that section of the book. If your book doesn't cover the section in question, either buy a new book or attempt to find the missing information elsewhere, such as on the Internet or within NetWare. Don't take this list lightly; if it's on the list, it's fair game for test questions.

1. Get a lot of practice.

For all of you MCPs out there, don't expect to find braindumps for this test. If your book has a lot of test questions, practice with those. Better yet, buy a practice test program. I used CNEQuizr, and the questions were *very* similar to the ones on the actual test. There are some other programs and study guides out there as well.

2. Pass Test 50-639.

The test is very similar in format to Microsoft tests. The one I took was 30-question standard form, but it's possible that the test will be adaptive. Check with Novell or Cramsession.com for current test information.

Novell tests are a little harder than Microsoft tests. Test 50-639 tests a wider range of topics than any MCSE test, but it covers approximately the same volume of material. One particular aspect of Novell tests that makes them especially difficult is fill-in-the-blank questions. Yes, there are open-ended questions like "What is the correct syntax for mapping the SYS: volume on server XYZ to the local H: drive?" Know your command-line stuff well.

If you study hard and make sure you're prepared for any question, you can pass. When you're finally ready to take the test, call:

Sylvan at 1-800-RED-EXAM, 1-800-RED-TEST, or 1-410-880-8700, or register on the web at <http://www.2test.com/>.
VUE at 1-800-TEST-CNE, 1-800-511-8123, 1-888-834-8378, or 1-612-897-7370, or register on the web at <http://www.vue.com/>.

(From the Novell web page, www.novell.com)

Best of luck.

Larry Croney, MCSE, MCP+I, CNA
March 1, 2000