

**Exercise 5 “Server
Configuration, Web and FTP”
Instructions and preparatory questions**

Administration of Computer Systems, Fall 2008

This document is available online at:
<http://www.hh.se/te2003>

Exercise 5 – Server Configuration, Web and FTP

Practical information – Read this first!

This exercise consists of two parts:

1. Preparatory questions in this document that should be answered before coming to the exercise session (before starting the exercise session the assistant will ask you to show and explain your answers)
2. A practical exercise session where you will work with actual equipment in order to answer the remaining questions in this document.

The work on preparatory questions as well as practical exercise work is to be carried out together with your assigned partner.

Before starting the practical part show the assistant that you have finished the preparatory questions, when you are done with the practical part you must notify the assistant so that he/she can check and sign your work. No signature = no credits for the exercise.

If you get stuck on the practical part the assistant is there to assist you, however in order to learn you are of course expected to come up with solutions mainly on your own.

Information necessary to complete both the preparatory and practical part of the exercise will be given at the lectures. Lecture slides are available at the course webpage <http://www.hh.se/te2003/>

Good luck and have fun!

Introduction

In this exercise you will set up web services using Windows 2003 and Internet Information Services (IIS). We want to create a web site with personal web pages for each user on the system. We also want to allow users to upload their web pages using the File Transfer Protocol (FTP) over the network from remote computers. Finally you will configure and use the Event Viewer to analyze a number of situations.

Network configuration

Before we begin, we need to do some basic system configurations, much like we did in exercise 4:

- First, start the virtual machine
 - Navigate to the directory `D:\VMW\te2003_ex5\`
 - Double-click on the VMware configuration file (`.vmx`)
 - This will start VMware Player and boot the guest operating system
 - Log in to the virtual machine as Administrator (**password: ide**)

- Configure the network connection

- Set up the following static IP configuration:
 - Use the virtual machine IP address on the sticker at the front of your computer.

What is the IP number? _____

- The subnet mask is 255.255.255.128
- The default gateway is 192.168.203.1
- The DNS servers are 194.47.0.30 and 194.47.0.23
- Save the settings and verify that you can access the internet

- Configure the computer name

- Change the computer name to match the sticker at the front of your computer.
- The virtual machine hostname is the one containing `virt`

What is it your host name? _____

- Restart the computer

- Create users

- Create two user accounts, one for each member of the lab group (if you work by your self, create two accounts anyway, with different user names and passwords)

Preparatory question 1

What are the main security issues with the FTP protocol? _____

Configuring the FTP service

- We want to allow users to log in to the server and upload files from remote computers. This is made possible by the File Transfer Protocol (FTP). Configure the machine to act as an FTP server.
- From the start-menu, select `Manage Your Server`
- Click on `Manage this application server`. This opens up the `Application server configuration window`
- The application of interest in this lab is `Internet Information Services (IIS)`. To avoid confusion, you can hide the other applications by right-clicking on the `IIS Manager` and selecting `New window from here`
- In the `IIS Manager`, expand the local computer and select `FTP Sites`
- Start the `FTP Site Creation Wizard` by right-clicking and selecting `New -> FTP Site`
- Create a new `FTP Site` with the following configuration:
 - The `FTP server` should be bound to the IP-address of the server and listen to `TCP port 21` (Default for the `FTP protocol`)
 - The `FTP server` should provide user isolation. This allows each user on the system to have a private `FTP home directory`.

Why is it a good idea to isolate the users' home directories?

- The `FTP Site root directory` should be `C:\Inetpub\ftproot`
- Allow read and write access to the `FTP root directory`
- Set up `FTP home directories`
 - Use `Windows Explorer (Or MY Computer)` to navigate to the `FTP root directory (C:\Inetpub\ftproot)`
 - Create a new folder with the name `LocalUser`
 - Create a subdirectory `LocalUser\Public`. This will be the home directory for anonymous users

- For each of your two user accounts, create a subdirectory in `LocalUser` with the same name as the user login name
- For the `Public` home directory, give read permission to everyone (including unknown anonymous users).
- For each of the user home directories, give read, modify and write and permissions to the user in question.

- Test FTP access - Command line client

- Open the `Command Prompt`
- Type `ftp` followed by the IP address of your server
- Log in as `anonymous` (any password is accepted)
- Does it work? If not, try to fix the problem
- type `quit` to close the ftp session
- Try to log in using the login names and passwords of your two user accounts

- Test FTP access - Graphical client

- Open `My Computer`
- In the `Address` field, type `ftp://` followed by the IP address of the server
- Windows will automatically log in as `anonymous`
- Try to create a file or directory.

Is that allowed? Should it be allowed?

- Log in with one of the user accounts instead (select `File -> Login As`)
- Try to create a file or directory.

Is that allowed? Should it be allowed?

Configuring the web service

- Configure the machine to act as a web server

- In the `IIS Manager`, expand the local computer and select `web Sites`. As you see, no sites are configured at the moment
- Create a new web site
 - Use a site description of your choice
 - Use the IP-address of the server
 - Configure the server to listen on TCP port 80 (the default port for the HTTP protocol)
 - Set the site home directory to `C:\Inetpub\wwwroot` and allow read permission to that directory

- If you want to, you can use another home directory. In that case, you need to copy the files in `wwwroot` to the new location. You also need to make shure that all users have read access to the directory you choose

- Test the web site

- Start Internet Explorer
- Enter your IP address.

Describe what the page you see contains:

- Set up virtual directories

- In the IIS Manager, expand the local computer and click on Web Sites
- Right-click on your web site and select New -> Virtual Directory
- Create a virtual directory named `user1` pointing to the FTP home directory of one of your users
- Create a virtual directory named `user2` pointing to the other user's FTP home directory

Preparatory question 2

What is a virtual directory in the context of the IIS web server, why is it useful?

- Change the main web page

- In `C:\Inetpub\wwwroot`, you will find a file named `index.asp`
- This is an example main page for the web site
- In the IIS Manager, right-click on your web site and select Properties
- Use the Documents tab to make `index.asp` the default web page
- `index.asp` is a dynamic webpage. It contains a few lines of embedded VBScript code that looks up the computer name of the server and displays it. Dynamic webpages are not allowed in the default web site configuration. We need to allow it
- Configure the web server to allow script execution and Active Server Pages (ASP) . Do this from the Web Service Extensions folder in the IIS Manager
- Test your new web server configuration to make sure it works.

- Publish user web pages

- Minimize the virtual machine window
 - In the host OS, create a web page for each of your users (in its simplest form, a web page is just a text file with the file extension ".htm")
 - The two files should both be named `index.html` (save the files at different places)
 - Open `My Computer`
 - In the `Address` field, type `ftp://` followed by the IP address of your server
 - Log in as one of your users and upload `index.htm` to the server
 - Repeat the procedure for the other user

- Test the web page
 - In the host OS, open a web browser and enter the IP address of the server
 - Can you access the user web pages? If not, try to fix the problem
 - If there are available computers in the room, try to access the web site from another computer

- Password-protect user pages
 - Let's pretend that one of your users has secret information on his or her web page
 - Configure the web server to prohibit anonymous accesses to that user's directory
 - Try the new configuration. When you access the "secret" page with a web browser, you should see a pop-up window prompting for a login name and a password

Configuring and using the Event Viewer

The Event Viewer is a tool that makes it possible to configure and analyze logs for different events in the system.

- Create a login event.
 - Create the user “Adam” with password “1234”
 - Log out
 - Log in as user “Adam”. Take note of the time.
 - The clock in the virtual machine is _____
 - Log out
 - Log in as user “Administrator”
- Open up the Event Viewer
 - Start
 - Administrative Tools
 - Event Viewer
- Save all present log files
 - Right click
 - Save log file as...
 - Pick a suitable folder and filename
- Change the log configurations
 - Increase the maximum file size to 100 MB
 - Set overwrite events to older than 10 days
 - You will get an error when you click Apply. Explain.

- Create a warning event
 - Open up Notepad and write a few characters.
 - Restart the machine from within the Virtual Machine.
 - Notepad will try to close but realize that you didn’t save the file.
 - Answare “Cancel” to prevent the system from shutting down.
- Analyze events
 - Start the Event Viewer
 - Open up the Security log and try to find the user “Adam”
 - According to the log, at what time did “Adam” log in? _____
 - Open up the Systems log and examine the latest warning.
 - What was the reason for the warning?

 - How many events are there in total in the Systems log? _____
 - Filter out warnings only for the Systems log.
 - How many events are there left now? _____

In Depth Material

http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/event_overview_01.mspix

